

Classic Lou Reed \* Ender's Game \* Billie Joe and Norah \* Nine Inch Nails Live

december 2013 \ \ mixonline.com \ \ \$6.99



# MIX

MUSIC LIVE SOUND STRUCTURE

**MASTERING**

STATE OF THE INDUSTRY

AIRSHOW AND  
PARAMOUNT RECORDS

A CAPITOL STORY

# SURROUND NOW

**DTS HEADPHONE:X AND THE 11.1 EXPERIENCE**

**TEC AWARDS NOMINATIONS**

HB01  
P0001

\*\*\*\*\*AUTO\*\*ALL FOR ADC 50092  
ATXB 0283851 APR 2014

**MIX REGIONAL**

★ **NORTHEAST U.S.** ★

*Clockwise from top left: Jimmy Iovine, Terry Lewis,  
Peter Asher, Hans Zimmer, Nathaniel Kunkle,  
and Elliot Scheiner*





# Avid S6

## Mixing redefined

The all-new Avid® S6 leverages the best of the industry-leading ICON and System 5 families in a revolutionary new modular design. From extensive visual feedback to the integrated touchscreen, S6 provides a truly immersive experience for the modern sound engineer.

- Customize and scale the surface to match your workflow
- Experience superior ergonomics that feel like a true physical extension of Pro Tools®
- Take intelligent control of Pro Tools and other EUCON™-enabled applications
- Tackle the most demanding productions with proven and trusted technology

Get the performance you need to complete projects faster and deliver the best sounding mixes possible.

Take a closer look: [avid.com/s6](http://avid.com/s6)

© 2013 Avid Technology, Inc. All rights reserved. Product features, specifications, system requirements, and availability are subject to change without notice. Avid, the Avid logo, EUCON, and Pro Tools are trademarks or registered trademarks of Avid Technology, Inc. or its subsidiaries in the United States and/or other countries. All other trademarks contained herein are the property of their respective owners.



"...Audio-Technica has taken a fresh approach to how a mic can truly capture sound ... resulting in what might just be the best vocal mic ever produced!"

**Audio Media** August 2013

"The most unique design I've seen in mic construction in a long time—perhaps ever."

**Tape Op** May/June 2013

"The AT5040 impressed, and seemed like a mic that will be considered a classic."

**RecordingHacks** July 10 2013

**"...what this mic does  
to the human voice  
is a thing of beauty."**

**Recording** May 2013

"The AT5040 certainly grabs the attention. It is full-bodied at the bottom, but also very clean and airy at the top, with a superbly detailed mid-range and an effortless sense of presence and vitality....The AT5040 is an impressive microphone, both in terms of its innovative design and its gloriously smooth and detailed sound character."

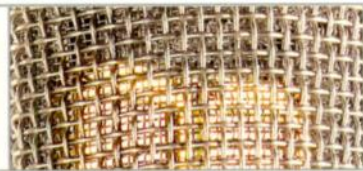
**Sound On Sound** December 2012

"All together, this is the best microphone package A-T has ever made.... The fit and finish of the AT5040 are superb."

**Pro Audio Review** August 2013

"The AT5040 offers the elegance and natural sound of a well-designed large-diaphragm condenser microphone with the precision, wide frequency response and high SPL handling of a small-diaphragm microphone. The AT5040 is like super high-definition video—it captures everything in truthful resolution."

**Mix** June 2013



#### Specifications

**Polar pattern** Cardioid

**Frequency response** 20 – 20,000 Hz

**Open circuit sensitivity** –25 dB (56.2 mV) re 1V at 1 Pa\*

**Maximum input sound level** 142 dB SPL, 1 kHz at 1% T.H.D.

**Signal-to-noise ratio**<sup>†</sup> 89 dB, 1 kHz at 1 Pa\*

**Noise**<sup>†</sup> 5 dB SPL

**Impedance** 50 ohms

**Dynamic range (typical)** 137 dB, 1 kHz at Max SPL

Specifications are subject to change without notice

\* 1 Pascal = 10 dynes/cm<sup>2</sup> = 10 microbars = 94 dB SPL

<sup>†</sup> Typical, A weighted, using Audio Precision System One

The critics have spoken. The debut mic in Audio-Technica's 50 Series is pure innovation, not emulation. A premier studio vocal microphone, the AT5040 represents a milestone in condenser design, offering remarkably musical high-fidelity performance, with profound realism and depth, presence and purity of sound. Wherever your passion for music takes you, listen for more.

[audio-technica.com](http://audio-technica.com)

**audio-technica.**  
always listening



# Get the Gear You Want This Holiday at Sweetwater!

## 24 Months Special Financing Available on over 80 Select Brands!

WITH USE OF YOUR SWEETWATER MUSICIAN'S ALL ACCESS PLATINUM CARD,  
THROUGH DECEMBER 31, 2013\*



**WE'LL HELP YOU CREATE A CUSTOM SOUND STUDIO SETUP. CALL US TODAY!**

- > Professional Sales Engineers
- > Factory-authorized Service
- > Free 2-year Warranty\*\*

- > Industry-standard Tech Support
- > Best Online Resources
- > Fast, Free Shipping

\*Subject to credit approval. Minimum monthly payments required. Call your Sweetwater Sales Engineer for details or visit [Sweetwater.com/financing](http://Sweetwater.com/financing).  
\*\*Please note: Apple products are excluded from this warranty, and other restrictions may apply. Please visit [Sweetwater.com/warranty](http://Sweetwater.com/warranty) for complete details.

World Radio History



# Sweetwater

Music Instruments & Pro Audio

## Gift Certificates

**THE PERFECT GIFT  
FOR ANY MUSICIAN  
ON YOUR LIST**



Value Added  
Reseller  
Professional Audio

# Sweetwater

Music Instruments & Pro Audio

**(800) 222-4700  
Sweetwater.com**

**We Offer Many Flexible  
Payment Options.**  
[Sweetwater.com/financing](http://Sweetwater.com/financing)



World Radio History



# 12.13 Contents

Volume 37, Number 12



## FEATURES



### 30 Mastering on the Cutting Edge

BY BARBARA SCHULTZ

### 36 Capitol Engineer Ron McMaster Cuts His Own (40-Year-Old) Tracks to Vinyl

### 38 Sound for 'Ender's Game'

BY BLAIR JACKSON



### 42 Heavyocity for Heavy Melodies

BY GARY ESKOW

### 46 29th Annual TEC Awards Nominees

## MUSIC



### 11 The Rise and Fall of Paramount Records

### 14 News & Notes

### 16 Classic Tracks: "Dirty Boulevard," Lou Reed

BY BLAIR JACKSON

## MIX REGIONAL: NORTHEAST U.S.

### 50 News & Notes

### 52 Session & Studio News

### 54 Professional Audio Design, Boston

## LIVE



### 20 All Access:

Nine Inch Nails

BY STEVE JENNINGS

### 22 News and Notes:

Michelle Sabolchick

Jessie Ware

Thunder Audio

## DEPARTMENTS

### 6 from the editor

### 8 current

### 24 On the Cover: DTS Headphone:X

BY TOM KENNY

### 75 marketplace

### 77 classifieds

## TECH

### 56 The Robair Report: Special Delivery

BY GINO ROBAIR

### 58 New Products

### 66 Review: KRK Rokit G3 Series Monitors



### 70 Review: Sample Magic Magic AB Plug-in

### 72 Review: Sonic Farm Creamer Plus Preamp

### 80 TechTalk: Top Gear of the Year

BY KEVIN BECKA

**On the Cover:** Jimmy Jam, Terry Lewis, Peter Asher, Hans Zimmer, Elliot Scheiner and Nathaniel Kunkel at the Yamaha/Steinberg Nuage console in the multiple-surround-format DTS Studio, Calabasas, Calif. **Photo:** Art Streiber.

Mix, Volume 37, Number 12 (ISSN 0164-0957) is published monthly by NewBay Media LLC, 28 East 28th Street, 12th floor, New York, NY 10016. Periodical Postage Paid at New York, NY, and at additional mailing offices. POSTMASTER: Send address changes to Mix, P.O. Box 8518, Lowell, MA 01853. One-year (12 issues) subscription is \$35. Canada is \$40. All other international is \$50. Printed in the USA. Canadian Post Publications Mail agreement No. 40612608. Canada return address: BleuChip International, P.O. Box 25542, London, ON N6C 6H2.



# TRUE AUDIO PRECISION.



## SE846 Sound Isolating™ Earphones QUAD HIGH-DEFINITION MICRODRIVERS WITH TRUE SUBWOOFER

The SE846 from Shure delivers extended high-end clarity and unparalleled low-end performance. Its design includes a groundbreaking low-pass filter that enables low-end performance of a true subwoofer without sacrificing clarity or detail. Customizable frequency response, detachable cable and a wide variety of accessories ensure an unequaled, perfectly tailored listening experience.

[www.shure.com/Americas](http://www.shure.com/Americas)

© 2013 Shure Incorporated

**SHURE**  
LEGENDARY  
PERFORMANCE™



## EARLY ADOPTERS

**T**here used to be a relatively simple delineation among creatives who use technology in their daily lives: those who are “early adopters” and those who take a “wait-and-see” approach. Each camp has their reasons, generally having to do with the way their overall system is set up, their workflow needs and their general take on the expected bugs and fixes and what they are willing to live with in order to have the newest version, most recent rev, or all-new product of the year.

But the delineation is actually more fundamental than that. Some people simply have to have the new. They're just wired that way. On the consumer side, that's perhaps most evident in the lines outside Apple stores for each new iPhone release, or in the game market, where a new console release like the recent PS4 draws midnight mania, even though the number of titles is still somewhat limited.

On the professional side, the early adopters are not so easily defined. Yes, there are people who will “virtually” camp out for the new Tracklist Version in Cubase 7.5, or upgrade to Pro Tools 11 HDX the second it comes out, plug-in availability be damned. If it works for them, and it fits into their needs, then they should do that. Absolutely. But that's not what I consider a true early adopter. A true early adopter—someone who sees a new technology on the horizon and imagines its possibilities, then makes the leap—is rare. These are the people who saw the potential for MIDI in its nascent stages and began writing. Or the people who saw the first iteration of a digital audio workstation back in the '80s, with a mind-boggling 8k of memory, and made the jump from tape.

The role of the early adopter has been on my mind lately because of two recent interviews. The first was with Herbie Hancock, discussing his collaboration with Meyer Sound in a live multichannel performance, controlled in real time through SpaceMap technology and incorporating multiple keyboards, sample-based effects, controllers and iPads. Hancock—early into MIDI, music video, composing with computers and countless other technology firsts—is 73 and still loads all his own presets and maintains his system. On the day we visited, he had an iPhone in one hand, an iPad in the other, figuring out how to set up his new Eventide H9 stompbox to work with his Yamaha piano. Then he just flat out played, and he was brilliant.

The second conversation was with Hans Zimmer, a mad genius by all accounts, one of the few people who lives in a unified left-brain/right-brain world. From the day he bought a Roland MC8 MicroComposer in 1977, his first real computer, he hasn't looked back. “I'm not an early adopter. No. I prefer to go to these technology companies and say, ‘Can you build me this?’” he says, without a hint of arrogance. “By the time something gets to market, it's already compromised. Artists do this all the time, guitarists. They go to the manufacturers and say, ‘I want this. Can you do it?’”

And finally, early adopters come to mind because of this month's cover. DTS Headphone:X is a surround technology, so that's not new. And it's not quite ready for primetime as the tools are still being worked out. But it is in use, and it's being used by a whole host of top-level audio professionals, those I would consider early adopters. A handful of them are right there on the cover.

Early adopters can look at an emerging technology, or even a variation on existing technology, and see a future that most of us just don't see. Once they were called visionaries. But since we live in a world dominated by Moore's Law, we'll settle for early adopters.

*Thomas AD Kenny*

Tom Kenny  
Editor

## MIX

### EDITORIAL

EDITOR Tom Kenny tkenny@nbmedia.com  
SENIOR EDITOR Blair Jackson blair@blairjackson.com  
TECHNICAL EDITOR Kevin Becka kbecka@me.com  
MANAGING EDITOR Lori Kennedy lkennedy@nbmedia.com  
ASSISTANT EDITOR Matt Gallagher mgallagher@nbmedia.com  
FILM SOUND EDITOR Larry Blake swelltone@aol.com  
SOUND REINFORCEMENT EDITOR Steve La Cerra  
CONSULTING EDITOR Paul D. Lehrman lehrman@pan.com  
CONTRIBUTING EDITORS Barbara Schultz Michael Cooper Eddie Ciletti Gary Eskow Barry Rudolph Matt Hurwitz

### ADVERTISING

SENIOR ACCOUNT EXECUTIVE, WESTERN REGION  
Janis Crowley jcrowley@nbmedia.com  
EUROPE/EASTERN SALES DIRECTOR  
Paul Leifer pliefer@media-sales.net  
SPECIALTY SALES ASSOCIATE  
Doug Ausejo dausejo@nbmedia.com

### ART & PRODUCTION

ART DIRECTOR Todd Berkowitz tberkowitz@nbmedia.com  
PHOTOGRAPHY Steve Jennings  
PRODUCTION MANAGER Heather Tatrow htatrow@nbmedia.com

### MARKETING

MARKETING PROJECT MANAGER Tyler Reed treed@nbmedia.com

### CIRCULATION

GROUP DIRECTOR, AUDIENCE DEVELOPMENT Meg Estevez

### NEWBAY MEDIA AUDIO GROUP

EXECUTIVE VICE PRESIDENT/GROUP PUBLISHING DIRECTOR  
AV, CONSUMER ELECTRONICS & EDUCATION DIVISIONS  
Adam Goldstein

WEB DIRECTOR Ragan Whiteside

ONLINE PRODUCTION MANAGER Robert Granger

WEB PRODUCTION SPECIALIST Ashley Vermillion

### NEWBAY MEDIA CORPORATE

PRESIDENT & CEO Steve Palm  
CHIEF FINANCIAL OFFICER Paul Mastronardi  
CONTROLLER Jack Liedtke  
VICE PRESIDENT OF DIGITAL MEDIA Joe Ferrick  
VICE PRESIDENT OF AUDIENCE DEVELOPMENT Denise Robbins  
VICE PRESIDENT OF CONTENT & MARKETING Anthony Savona  
VICE PRESIDENT OF INFORMATION TECHNOLOGY  
Anthony Verbanac  
VICE PRESIDENT OF HUMAN RESOURCES Ray Vollmer

REPRINTS AND PERMISSIONS For article reprints, please  
contact our Reprint Coordinator at Wright's Media: 877-652-5295  
EDITORIAL OFFICES: 1111 Bayhill Dr., Suite 125,  
San Bruno, CA 94066

SUBSCRIBER CUSTOMER SERVICE: To subscribe, change your address or check on  
your current account status, go to mixonline.com and click on "Customer Service"  
for fastest service. Or, e-mail newbay@computerfulfillment.com, call 800/466-3828,  
or write to P.O. Box 8418, Lowell, MA 01853

BACK ISSUES: Back issues are available for \$10 each by visiting  
www.mixonline.com

ARCHIVES AND MICROFORM: This magazine is available for research and retrieval  
of selected archived articles from leading electronic databases and online search  
services, including ProQuest. For microform availability, contact National Archive  
Publishing Company at 800/521-0600 or 734/761-4700, or search the Serials in Mi-  
croform listings at napubco.com

REPRODUCTION: This publication may not be reproduced or quoted in whole or  
in part by printed or electronic means without written permission of the publishers

LIST RENTAL: Lauren Marchese lmarc@meritdirect.com



28 East 28th Street, 12th Floor, New York, NY 10016

COPYRIGHT 2013, NewBay Media

ALL RIGHTS RESERVED.

FOUNDED IN 1977

BY DAVID SCHWARTZ, PENNY RIKER AND BILL LASKI

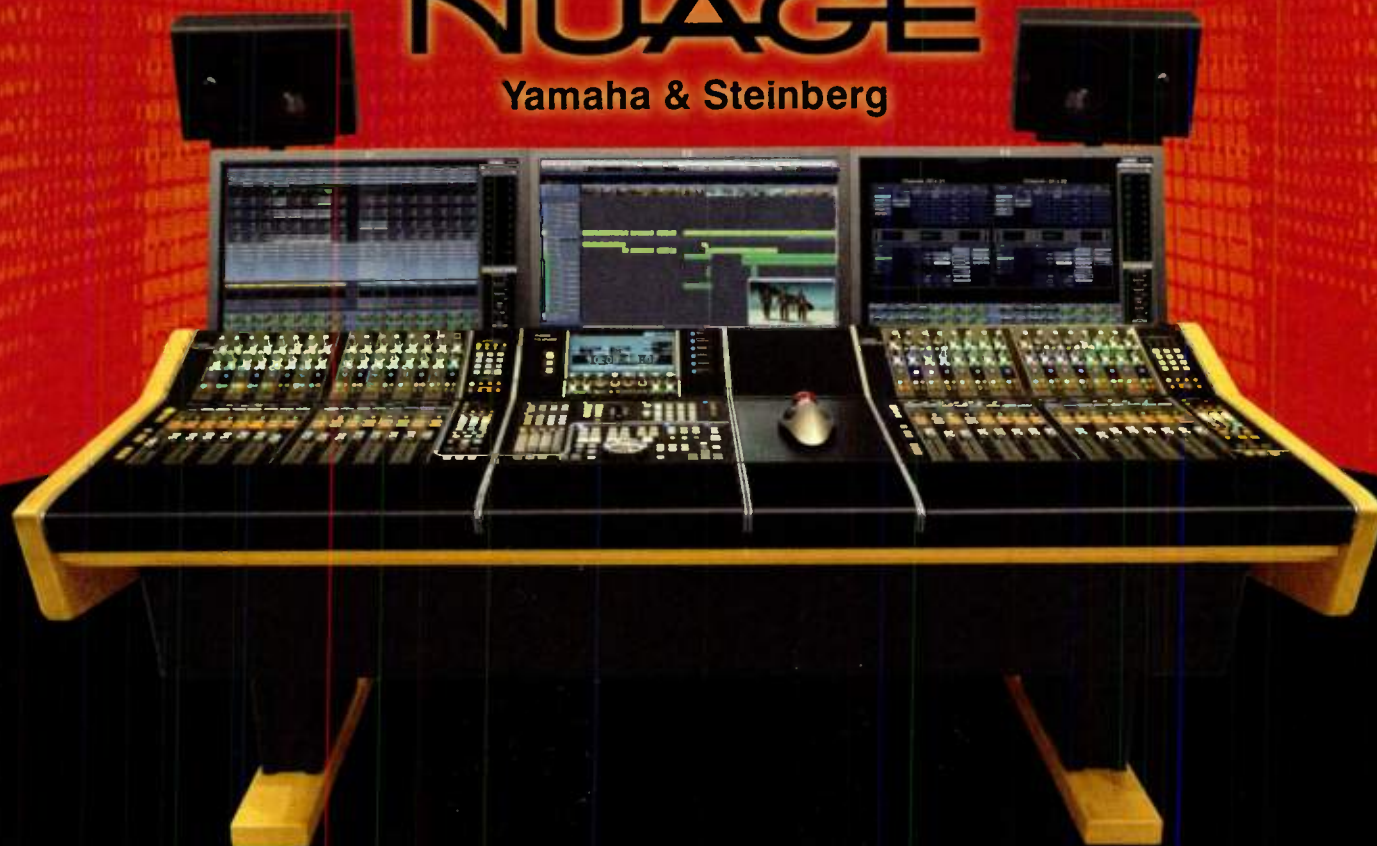
Mix magazine is affiliated with





# NUAGE

Yamaha & Steinberg



## A Change Has Come

And the timing couldn't be better. We've worked long and hard to perfect the NUAGE Advanced Production System, and are excited to unleash it to the recording/post-production world. A collaboration between Yamaha and Steinberg, NUAGE is the brainchild of workflow efficient hardware, Nuendo 6 software, and Dante™ networking operating together in perfect harmony. Offering unprecedented productivity and flexibility as well as premium audio quality in an innovative design, NUAGE is not just making a change, it's starting a revolution.

*For more information, visit [www.yamahaca.com](http://www.yamahaca.com)*



Yamaha Commercial Audio Systems, Inc. P. O. Box 6600, Buena Park, CA 90620-6600 • ©2013 Yamaha Commercial Audio Systems, Inc.

### Participating Premier Dealers:

#### U.S.A.

##### California

Hollywood Sound Systems  
Hollywood, CA  
323-466-2416  
[www.hollywoodsound.com](http://www.hollywoodsound.com)

RSPE Audio Solutions  
Universal City, CA  
855-632-1032  
[www.rspeaudio.com](http://www.rspeaudio.com)

##### Maryland

Washington Professional  
Systems  
Wheaton, MD  
301-942-6800  
[www.wpsworld.com](http://www.wpsworld.com)

##### Massachusetts

Parsons Audio LLC  
Wellesley, MA  
781-431-8708  
[www.paudio.com](http://www.paudio.com)

##### Ohio

Eighth Day Sound  
Highland Heights, OH  
440-995-5900  
[www.8thdaysound.com](http://www.8thdaysound.com)

##### Tennessee

CTS Audio  
Brentwood, TN  
615-337-8808  
[www.ctsaudio.com](http://www.ctsaudio.com)

##### Utah

Poll Sound  
Salt Lake City, UT  
800-898-2508  
[www.pollsound.com](http://www.pollsound.com)

##### Washington

LIFT AV  
Renton, WA  
425-970-3641  
[www.liftav.com](http://www.liftav.com)

##### Wisconsin

Full Compass Systems, Inc.  
Madison, WI  
608-831-7330  
[www.fullcompass.com](http://www.fullcompass.com)

#### Canada

##### Quebec

Solotech Inc.  
Montreal, QC  
514-526-7721  
[www.solotech.com](http://www.solotech.com)



## Masterdisk Remembers Lou Reed

[Editor's Note: The following is excerpted from a post at [masterdisk.com](http://masterdisk.com) written by James Beaudreau. Visit the Website to see an accompanying video.]

I joined Masterdisk in 2010. I knew the legacy of the studio, the work of the engineers, and the parade of stars whose music had passed through the Masterdisk mastering consoles.

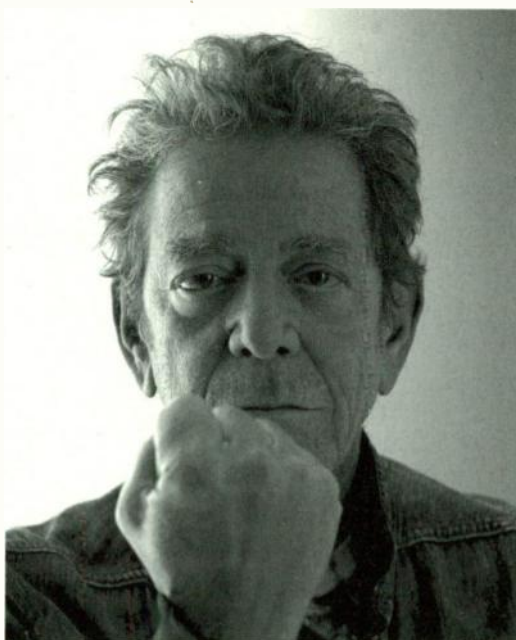
In my first week on the job—it might have been the first day—I was going into the men's room, and who's coming out but Lou Reed. He had not been in great health for a while, and he looked a bit frail. He still looked cool, though. On that occasion he was working with Scott Hull on a video soundtrack. I would see him again a number of times over the next few years.

I saw him once around the time of his Metallica collaboration, *Lulu*, that he mastered with Vlado Meller. Same Lou, maybe moving a little slower, still cool. And then in the last few months I saw him a few times again, as he returned for some extensive remastering work with Vlado. One day I was working in the back lounge of the studio, which was then next to Vlado's room...and after a little while some of the most iconic sounds in all of rock and roll started vibrating out of the walls. A famous bass line. Vocal lines that have become part of all our DNA. It was an eerie feeling knowing that the creator of those sounds was in that room next door, reviewing them. Revisiting them. Full songs were played all the way through. Some were played a few times in a row. I felt like I was eavesdropping on a very intimate moment.

Later that afternoon, after Lou left, I popped in to Vlado's studio. "What happened in here today?" I asked. "Lou's very happy," Vlado said. "He said he thought his CDs sounded like shit, and he wanted it done right. We got new transfers off the master tapes, and they sound great. You want to hear an A/B?" Yes I did.

Vlado played me "Walk on the Wild Side." The old CD against the new transfer. And the difference was astounding. The old CD sounded so thin compared to the vastness of the sound in the new transfer. The bass sounded like a BASS. It sounded like a Miles Davis or Mingus record. You could hear fingers on the strings. You could sense the size of the instrument and the size of the room it was in. It had physical force, air and space around it. I asked Vlado about his experience working with Lou.

"Lou was gracious. He had a sense of humor, too," Vlado said. "He was appreciative. He thought the sound was amazing and he was so happy. He said, 'Nobody will probably buy them but I don't give a shit.' He was a true



artist." Lou Reed remastered 15 albums with Vlado over the past few months.

Scott Hull worked with Lou on a number of projects over the years, as well, starting with the *Mistrial* album in 1986. Scott at that time was primarily a digital editor—that's before DAWs, when digital editing was a specialized skill.

"The call came in in the afternoon that Lou wanted an editor, and it needed to be done that evening," Scott recalled. "He had been working on the record at another studio and they had made a digital copy of their edit. Lou listened to the original edit and the copy, and was hearing a difference in the tone. The engineer insisted that it was impossible, because the numbers were the same; there's no degradation and no difference in a digital copy. Well, Lou didn't agree. He heard a difference. And that was the end of that working relationship. He called us that day and he finished the record at Masterdisk with Bob Ludwig."

The next record Scott worked on was *New York* (1989). "For Lou, it was his guitar tone," Scott said. "It was everything. Lou's acoustic reference, for years after, was the first minutes of 'Dirty Boulevard.' [See this month's "Classic Track" story on page 16.] Just like an engineer has a reference recording to bring to a new room, Lou had that. He only needed to hear a few seconds of the guitar part and he understood the room he was working in."

The last major project Lou worked on with Scott was the remastering of *Metal Machine Music* (2010) in both stereo and quad formats. "When we compared the new transfers to what had been released, we realized that so much of the low-frequency information had been eliminated when they cut the record," Scott said. "For whatever reason. So it was a new experience. What do we do with it? Is it good? It certainly changed the impact. So we spent a fair amount of time going over how that change in tone impacted the listener."

"The original was stereo," Scott continued. "Lou and Bob [Ludwig] had worked on a quad master way back. The thing is that *Metal Machine Music* was a live two-track [stereo] record, so there were no other assets to put into channels 3 and 4. So what they decided to do was to take the entire recording and record it backwards, and THAT became tracks 3 and 4. We manipulated the relation between these channels quite a bit when we did the quad remaster."

"What I remember most about those sessions," Scott said, "is how emotionally draining it was to listen to the album at a decent level. Even Lou wasn't really able to listen to the whole thing with intense focus. It just took



so much energy as a listener. It's taxing. The QC [quality control] guys had to listen to it all the way through — two passes. It wasn't easy work. You had to stay really focused. But when you did, it took you on a journey, maybe a once-in-a-lifetime journey."

"Lou knew that nine-tenths of the population would dismiss *MMM* as noise," Scott continued, "but he opened a lot of listeners to new concepts in music. Minimalism. Maximalism. The avant-garde."

"I remember when we were working on Laurie [Anderson's] album *Homeland* in 2010," Scott said. "Lou attended the sessions. It was a more relaxed Lou, but he was really involved in the process. It was clear that Laurie and Lou worked well together. I remember around that time their dog was having some medical problems and it was really stressful...and so there's another completely different side of Lou. Collaborating, offering support. Worrying over his dog. He was a three-dimensional guy."

The sadness around the Masterdisk offices, and the city, and the whole music world has been palpable in the weeks since Lou's death. There'll never be another one like him, but we can be glad he was here. And we can continue to listen to the legacy he left behind—listen, feel and learn.

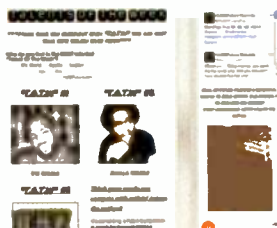


## AES Welcomes Dr. Sean Olive

Dr. Sean Olive is the Audio Engineering Society's new President, taking over from outgoing president Frank Wells. Dr. Olive is Director, Acoustic Research, for Harman International in Northridge, Calif. He has a bachelor's degree in Music from the University of Toronto, a master's degree

in sound recording from McGill University, and a Ph.D. in sound reproduction from McGill. He served as an audio research scientist for the National Research Council of Canada before joining the Harman team in 1993. Dr. Olive occasionally teaches classes at UCLA, and has been involved in the AES' technical committees and research initiatives.

"The recording industry has been at times resistant to change, and we are still feeling the effects of the failure to fully embrace digital technology," Dr. Olive says. "The ways that consumers are experiencing music are evolving at a rapid rate, with audio as a mobile experience now being much more common than a living room with a hi-fi system. Headphone sales are through the roof, and the AES has a chance to help improve the consistency and quality of the mobile experience. There is also huge room for AES member expansion into Brazil, Russia, India and China."



## Hall of Future

Jermaine Battle is a senior at Old Dominion University with a major in Music Business. He's also an artist looking for ways to cut through the clutter, and like a lot of young musicians who are well versed in tech, he's looking to do it on his own—at the same time bringing along other young artists in a music-making/music-exposure Web-based community he founded called Hall of Future.

"Over the past five years I've recorded and released numerous projects and performed at countless open mics, trying to gain exposure," Battle says. "I've learned guitar and added instruments, but it's difficult to get noticed by a record label these days. So I decided to create a platform for aspiring artists who have had similar experiences."

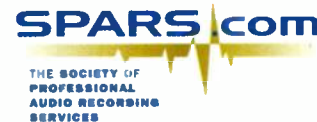
Battle is by no means the first to try such a venture, but he has the energy, and he's jumped into Kickstarter to fund live events to boost the online presence, adding contests each week and upping the numbers each month.

Visit [halloffuture.com](http://halloffuture.com) for more.

## SPARS Sound Bite

### Always at the Ready

By Drew Waters



As a former professor and now VP of Studios and Archives at Capitol Records, I receive many applications and inquiries for internships, temp positions and full-time positions. I always spend time talking to these people about their goals and their strengths. I believe that it is critical to develop a diverse skill set to prepare yourself for any opportunity that may be presented to you. These skills make you a commodity to your employer and your client and result in more enriched experiences.

Assuming that they have already mastered most DAWs and recording techniques, I stress the importance of being fluent with both Macs and PCs, getting around Microsoft Word, Outlook and Excel, being able to write a memo and form an argument. I've had successful employees who have a service industry background—it's something I search for on résumés. We work in an industry that provides recording services, and clients' demands and expectations can be rather high.

Your education does not stop with the completion of your degree. It can be argued that your education is just beginning with the application of the theories you have learned in class. Finding the right mentor or mentors can accelerate your education: Find a professor who is respected in the industry through your own connections, through visiting artists who lectured at your school, or through organizations such as AES or SPARS. Ask for feedback on your work and brace yourself (with hope) for some honest answers.

Dig deeper into the recording industry tradition to increase your skills and inform your digital audio recording and editing abilities. Understand failing formats and their playback devices. Learn how to future-proof the assets you work on now to ensure accessibility in the future.

The archiving of media assets will never cease as companies continually re-monetize their cataloged assets (hence Catalog A&R). Know your own assets and those that you manage—make them more easily accessible and identifiable with proper metadata tagging and you will beat the competition to an opportunity for exploitation.

Developing a diverse skill set and knowing your industry's traditions can aid you in finding a position with room for growth.





FULL SAIL UNIVERSITY.

Campus & Online Degrees Available

Music Business

Music Production

Recording Arts

Show Production

BRING  
YOUR

SOUND  
TO  
LIFE

The sounds, the shows, the songwriting, and the business deals that make it all come together – Full Sail University's music programs are designed for the many diverse paths within the industry. If you've got something to bring to the music world, a Full Sail degree can help you get there.

3300 University Boulevard • Winter Park, FL

Financial aid available for those who qualify • Career development assistance • Accredited University, ACCSC  
To view detailed information regarding tuition, student outcomes, and related statistics, please visit [fullsail.edu/outcomes-and-statistics](http://fullsail.edu/outcomes-and-statistics)

800.226.7625  
[fullsail.edu](http://fullsail.edu)



# Music



PARAMOUNT RECORDS  
By Barbara Schultz **11**

NEWS AND NOTES **14**

CLASSIC TRACKS: LOU REED  
By Blair Jackson **16**

NEW WEBCAST NOW ON DEMAND: PRO TOOLS 10 AND HDX // VISIT [MIXONLINE.COM/WEBCASTS](http://MIXONLINE.COM/WEBCASTS) FOR DETAILS



David Glasser and Anna Frick

## 'THE RISE AND FALL OF PARAMOUNT RECORDS'

Remastering American Voices, in Mass Quantities // BY BARBARA SCHULTZ

**P**aramount Records, above and beyond any label from the time period, had the very worst sound quality and the very worst pressing technology available," states restoration/remastering engineer Christopher King of Long Gone Sound Productions. "Most of the recordings were done using the cheapest materials; I think they even ground up chairs and tables and threw them in with the shellac mix to make it go a little further."

King is talking about the Paramount label founded by the Wisconsin Chair Company in

1917. Music was a cheap sideline for the manufacturer, but what those Midwestern spendthrifts lacked in sonic quality, they made up for in quantity. During their first 10 years of operation, the label recorded more than 800 sides, comprising wonderful performances by greats such as Louis Armstrong, Ma Rainey and Blind Lemon Jefferson, as well as other luminaries and relatively unknown jazz, blues and folk artists.

Now, for the first time, these recordings are being remastered and released en masse. John Fahey's Revenant Records has joined with Jack White's Third Man label to issue the

Paramount catalog in two giant batches. The first, *The Rise and Fall of Paramount Records, Volume One* (1917-27), is available now in a magnificent oak cabinet containing six vinyl albums and a USB drive with 800 songs.

"The package includes a custom player that people can use to construct playlists and sort songs by artist and date, or you can import files into your iTunes player," explains David Glasser, chief engineer at Airshow Mastering, Boulder, Colo. Glasser, along with engineer Anna Frick, mastered the collection from .wav files provided by King.





"The original metal-part masters have, by and large, been lost," King explains. "They were either used for the war effort [for scrap materials during World War II], or they were junked. I think one or two have turned up over the years. I heard a long time ago, somebody found a chicken coop in Wisconsin that was made of Paramount metal parts! But in general, resurrecting the company's catalog meant going to a lot of the different collectors in the world and amassing as many 78s of this material as possible."

King works out of his home studio, where he operates a McIntosh Mac C20 tube preamp, patched from a Technics variable-pitch turntable, to transfer those 78s to digital format. "I use a Manley Massive Passive," he says, "not as an EQ, but more as a limiter, and that goes through my TL Audio Tubetracker, which is a tracking board, but I use it as an EQ board. After that, the signal is more or less the way I want it; it goes through the [Apogee] Rosetta A/D converter, and then I burn a disc from there."

King loads batches of files onto thumb drives, which then go to Airshow. "We primarily used iZotope RX as a stand-alone program, and did a final pass in Sonic Studio," Glasser says. "We didn't use any broadband noise reduction, but we did a lot of declipping and a lot of work using the [iZotope] spectral editor to take out anomalies and repair dropouts in the audio. At the end, we would gather groups of songs together—about 100 at a time—and level-match and do any kind of touch-up EQ that was needed."

"That spectral editor is the coolest tool, because you can really see the hot spots, dial in, and use the pencil tool to cut a lot of stuff out easily," adds Frick. "You can see the whole spectrum, see where the noises are coming from, and how much you are actually taking out. Oftentimes, on this project, we had to leave things dirtier than we would have liked, but that's what we needed to do to keep the musicality."

Frick also emphasizes that an essential ingredient

to accomplishing such a voluminous project was attention to file management. "We manage most of our projects in Filemaker," Frick says. "We're able to custom-build tangents from our primary database to handle large projects like this. We did this for the *Grateful Dead Europe '72* set, and it worked out really well to manage our workflow and keep it on track. So Dave always knows what songs I'm working on, and I always know what songs he's working on."

The final, giant package is a somewhat mixed bag sonically, because of the varying quality of source material. But all three of these engineers share the belief that preserving as much of the original musical performance as possible is a critical and richly rewarding undertaking.

"I worked on the *Anthology of American Folk Music*, which was a similar collection in intent," says Glasser, whose long-successful company celebrates 30 years in business this year. "It's a window into the past that might otherwise be forgotten. You hear songs in the Paramount set that are still being played today."

"We just remastered all of the Grateful Dead's studio albums, and then I heard a cool version of 'Samson and Delilah' on the Paramount collection; that was a Grateful Dead staple," Glasser continues. "Or 'Goin' Down the Road Feelin' Bad' from 1920. It's pretty remarkable that, without having any grand plan, this one record label covered the vernacular music of America so thoroughly." ■

## LEWIS WATSON RECORDS 'SOME SONGS WITH SOME FRIENDS'

**T**his four-song EP from singer Lewis Watson features the guitar-and-vocals-focused opening track "Even If," which was engineered by Jonathan Gilmore, and produced and mixed by Mike Crossey (Arctic Monkeys, Foals). All other songs were produced, recorded and mixed by Richard Wilkinson, whose credits include Adele, Kaiser Chiefs and others.

Wilkinson worked in his space within The Church studios (London). "I built it as a production, writing and mix room to allow me to work on projects with less pressure on the artist's budget," Wilkinson says. "I've ended up doing about 60 percent of my work here over the past three years."

The space features a Focusrite Studio console that was originally built for Metropolis. "The console is cut down smaller now," Wilkinson says. "I have a fair amount of outboard and a small but versatile collection of mics. I'm a big fan of Dave Smith synths and have a Mopho and Poly Evolver and an E-mu Emax 1. I also use Native Instruments and spend a lot of time making my own sample patches in Kontakt."

Watson collaborates with guests on three tracks (Gabrielle Aplin, Kimberly Anne, duo Hudson Taylor), but the centerpiece is Watson's own clear, sweet voice. "My vocal mic of choice for Lewis at the moment is an RFT 7151, modified by Andreas Grosser," Wilkinson says. "It's a German 1930s bottle mic with interchangeable capsules. I use it with a [Neumann] M 7 cardioid capsule. For this EP, I went through an Apogee Trak 2 preamp with A/D conversion." Compression was via a Manley mono Vari Mu.

"We normally start with a guide vocal and acoustic guitar," Wilkinson says. "I build the track up rhythmically, and then we get takes of acoustic or piano to give us something solid musically to sing the main vocals to. Lewis knows his voice well, so I look to him to recognize when he's giving me his better performances. Lewis is always involved in making sure we got the take."

—Barbara Schultz





# "IN 22 YEARS OF TOURING, I HAVE NEVER HAD A BETTER MIC"

—ART ALEXAKIS, EVERCLEAR

## XD-V75

More musicians choose Line 6 digital wireless systems because they actually sound like a cable. Designed by musicians in pursuit of great tone, Line 6 digital wireless systems offer full dynamic range and unparalleled audio quality, so you always sound your best. And since Line 6 has been making digital wireless systems longer than anyone else, you can trust your voice to the most advanced technology on the planet.



Full-frequency, uncompressed 24-bit audio

10 mic models (handheld), 9 EQ filter models (bodypack)

14 channels, 300-foot range

License-free operation, worldwide

**STAGE.** YOUR REVOLUTION.

**LINE 6**

© 2013 Line 6, Inc. Line 6 is a trademark of Line 6, Inc. All rights reserved. Photo Credit: - Mercenary Media # 24197

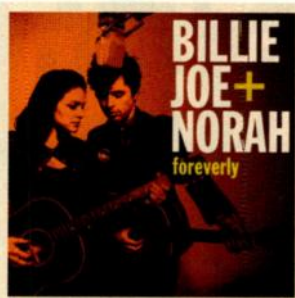


## BILLIE JOE AND NORAH'S HARMONIOUS 'FOREVERLY'

"Billie had been listening to this record and had grown attached to it," explains Chris Dugan, the go-to engineer/mixer for Billie Joe Armstrong's projects, with and without Green Day. The album referenced is The Everly Brothers' *Songs Our Daddy Taught Us*, a collection of folk standards originally released in 1958. Armstrong was so enamored that he decided to make his own faithful version of the entire album.

"And then he had to decide who he would sing along with—who would be the other 'brother,' so to speak," Dugan says. Armstrong made the inspired decision to pair with Norah Jones. "He told me she was in, and so I tried to envision what kind of sound we would end up with. Once I heard them singing together, it all made sense!"

Last May, Armstrong and Dugan headed to New York to meet with Jones, drummer Dan Rieser (who also plays with Jones on solo records and in the Little Willies), and bass player Tim Luntzel (who also played on the Chapin Sisters' Everly Brothers tribute, *A Date With the Everly Brothers*). During pre-production, this core band developed arrangements that are true to the spirit of the Everlys' versions but are a little



more percussive and gritty, with some more forceful drumming, piano and harmonica parts.

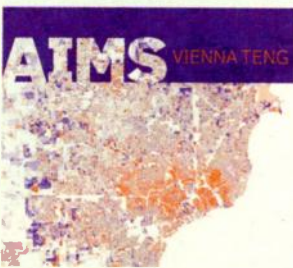
They laid down the tracks in Studio A of The Magic Shop (New York City), which features a 1,000-square-foot tracking room and a custom wraparound 56-input Neve console. "Norah recommended the studio. It was our first time there, and we loved it. Good people, great vibe. They have an amazing 80 Series Neve desk that is one of a kind," says Dugan, who mixed on a Neve 8068 in Studio A of Armstrong's home base, Jingtown Studios in Oakland, Calif.

Magic Shop assistant Kabir Hermon helped Dugan keep the tracking running smoothly and find all the equipment he needed. For the centerpiece of the project, however—those Everly-esque vocal harmonies—Dugan brought in a pair of Didrik De Geer mics, rented from Stephen Jarvis Audio.

"Billie and Norah ended up facing one another, playing and singing," Dugan says. "Most of the time, their [vocal] mics just went through the Neve. I would occasionally use a little compression, but for the most part it was a basic signal chain. The important thing was to make sure their voices were clear and pristine-sounding, and those mics did that for us." —Barbara Schultz

### COOL SPIN

## VIENNA TENG: AIMS SOLTRUNA RECORDS

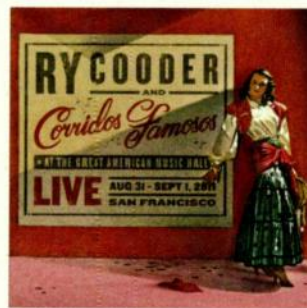


For her fifth studio album, singer/songwriter/keyboardist Vienna Teng has paired with producer/musician Cason Cooley to create a texturally rich and stylistically diverse album that's heavier on electronics and sampling than her previous efforts, but is still carried by her pleasingly elastic vocals and compelling songwriting.

This album is all about layers—of vocals, which are stacked to magnificent effect on many songs (and completely carry the a capella "The Hymn of Acxiom," along with subtle electronic treatments), and both loops and instruments, from keys to guitars to strings (real and library versions), all used cleverly as building blocks to make certain passages soar and others to intrigue. There are many moods on this album—from tuneful excursions such as "Level Up" and "Landsailor" (featuring Glenn Phillips), to the grand ballad "Close to Home," the electro percussion-driven "In the 99," the quietly beautiful "Oh Mama No" and the gentle and affirming concluding track, "Goodnight New York." There's much variation in the production from song to song (and even within each song). Try headphones! —Blair Jackson

Producers: Teng, Cason Cooley. Engineers, Cooley, Buckley Miller, Bobby Shin. Mixing: Justin Gerrish. Studios: St. Cecilia (Nashville), Sound Emporium (Nashville), 178 Moultrie (Brooklyn). Mastering: Joe LaPorta/Sterling Sound (NY)

## RY COODER AND FRIENDS CAPTURED LIVE



Ry Cooder recorded his first live album, *Showtime*, back in 1976 at San Francisco's intimate Great American Music Hall. His latest, *Live in San Francisco*, comes from a pair of shows at the same venue in the summer of 2011, fronting a dynamite band that includes Cooder band alumni Terry Evans and Arnold McCuller as backup singers and the incomparable Flaco Jiménez on accor-

dion, Ry's son Joachim on drums, a 10-piece Mexican banda, and others. It's a spirited romp through a dozen folk, gospel-flavored R&B and Tex-Mex numbers, from "Dark End of the Street" to "Wooly Bully."

Capturing the shows on a laptop running Pro Tools was Cooder's FOH engineer for the past several years, Martin Pradler. "It was not really planned to be a recording," he says, "but I had a feeling maybe it was going to be something, so I borrowed an interface card from Avid and plugged my laptop into the Profile desk at the venue." Besides using the mics that were already in place for the instruments' P.A. feed, "I also put a couple of new [AKG] 414s at front of house to get the room, and there were also a couple of shotgun mics on the stage pointing up to the balcony [where the banda was situated on each side].

Pradler mixed the recordings in the box at his L.A.-area studio supplemented by "a whole bunch of analog gear—analogue reverbs, a Fairchild, RCA BA6As, an old Gates radio console Ry has, whatever I needed to make it sound warm and punchy." —Blair Jackson



GC Pro carries the gear you want from the world's most respected brands

A-Designs  
ADAM Audio  
Allan & Heath  
Antares  
Aphex  
API  
Apogee  
Apple Computer  
Audient  
Audix  
Auralex  
Avalon Design  
Avid  
Avid Venue  
BAE  
Benchmark  
Blue Microphones  
Bock Audio  
Brauner Microphones  
Bricasti Designs  
Burl Audio  
Cakewalk  
Chameleon Labs  
Chandler  
Crane Song  
Crown  
Dangerous Music  
DAS  
dbx  
DPA  
Drawmer  
Dynaudio Acoustics  
Earthworks  
Elysia  
Empirical Labs  
Euphonix  
Eventide  
Focal  
Focusrite  
Furman  
Genelec  
Glyph  
GML  
Grace Designs  
Great River  
JBL  
JDK Audio  
KRK  
LaChapell  
Lexicon  
Lucid  
Lynx  
Manley  
Martinsound  
McDSP  
Millennia  
Monster Power  
MOTU  
Neumann  
Neve 500 series  
Neve Genesys  
Ocean Way  
Peavey  
PreSonus  
Purple Audio  
QSC  
Radial  
RME  
Royer  
Rupert Neve  
Schoepps  
Sennheiser  
Shure  
Sonnox  
Sony  
Sterling Mics  
Slate Audio  
Summit Audio  
Tannoy  
TC Electronics  
Thermionic Culture  
True Systems  
Unity Audio  
Universal Audio  
Vintech  
Waves  
Yamaha

... and more!

# NO MORE OBSTACLES BETWEEN YOU AND YOUR DAW

The **RAVEN MTX** is a Multi Touch Production Console that allows your creative process to flow without obstruction. Its seamless integration with your DAW will allow you to work faster and more efficiently, and have access to tons of modern day features that only the **RAVEN** can offer.



RAVEN MTX pictured in center with RAVEN MTi to left & right, mounted in custom furniture by Malvicino Designs. All sold separately.

RAVEN MTX: \$15,999.99, Surround Version: \$17,499.99

[www.gcpro.com](http://www.gcpro.com)  
877-70-GCPRO

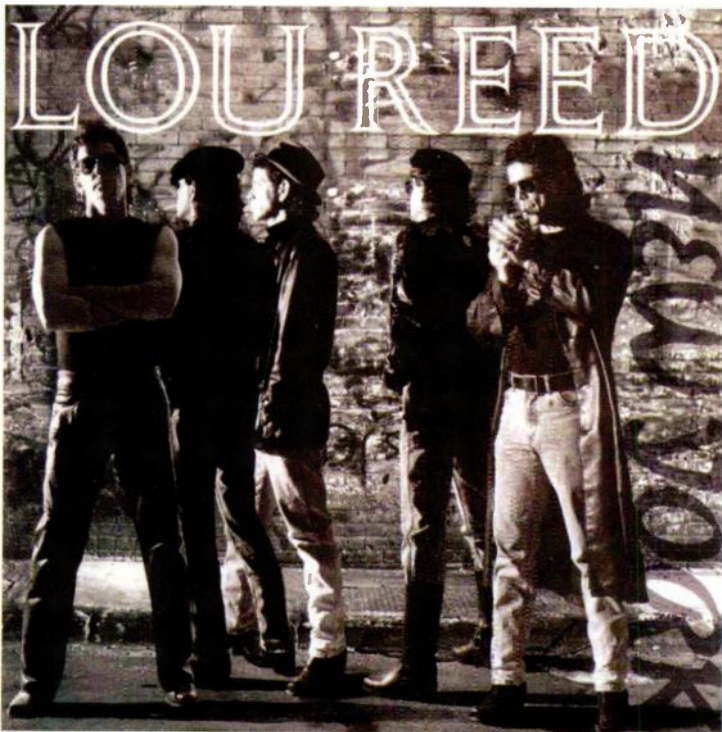
# GCPRO

World Radio History



# Classic Tracks

By Blair Jackson



## "DIRTY BOULEVARD"

Lou Reed

**F**ew songwriters have captured the spirit of New York City better than the late, truly great Lou Reed. Okay, it wasn't always the most flattering portrait of the city—no carriage rides in Central Park—but it was always honest and true; the dark underbelly rendered in frank minimalist poetry. Of course he's best-known for the music he created during the first 10 years of his career: leading the immortal and influential Velvet Underground during the late '60s, and on such early '70s solo triumphs such as *Transformer* (which contained his most famous song, "Walk on the Wild Side," covered in Classic Tracks in December 2008), the brilliant and underrated concept album *Berlin*, and the crunching live disc *Rock 'n' Roll Animal*. But he made vital, uncompromising music throughout his career—you'll find genius on *Street Hassle* (1978), *The Blue Mask* (1982), *Magic and Loss* (1992), *Ecstasy* (2000), the ambient very un-Lou-like *Hudson River Wind Meditations* (2007), and nearly everything in between.

My favorite "middle period" Lou Reed album is unquestionably 1988's *New York*, source of this month's Classic Track, "Dirty Boule-

vard." Though it doesn't have a central story, as *Berlin* did, *New York*'s songs are all vivid and at times hard-hitting portraits of the city and its people, from street hustlers, to poor working stiffs, to rich folk and celebrities. "Dirty Boulevard" contrasts the life of Pedro, a downtrodden denizen of a cheap hotel "where no one dreams of being a doctor or a lawyer or anything," with movie stars arriving by limo at Lincoln Center. "Give me your hungry, your tired, your poor, I'll piss on 'em," Reed spits. "That's what the Statue of Bigotry says." Stressing the notion that all 14 songs on the album were thematically connected, Reed urged in the liner notes that *New York* be listened to in a single hour-long sitting "as though a book or movie."

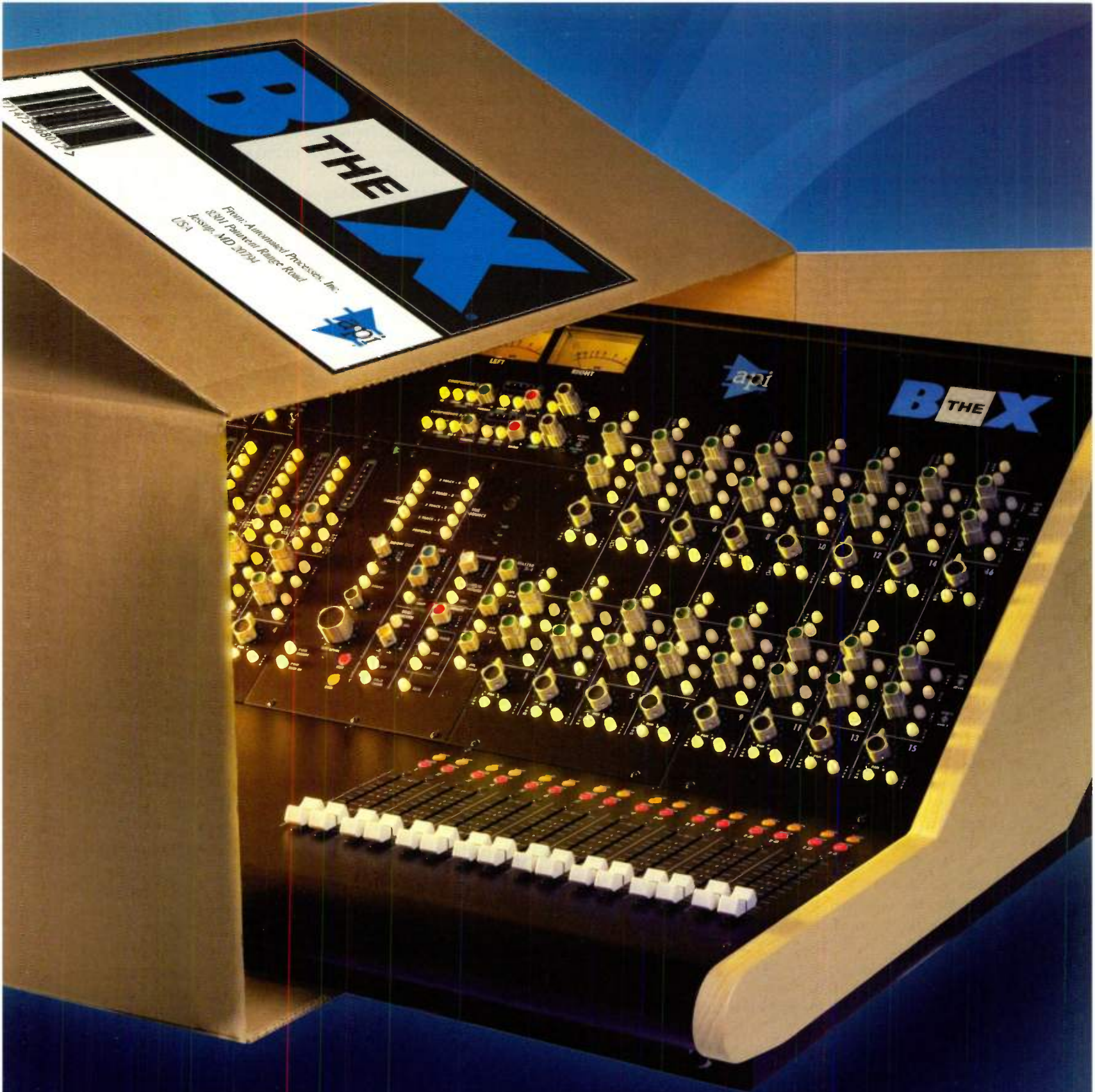
The arrangements throughout the album are stripped-down—elemental—with very few overdubs or effects. Nothing is allowed to intrude on Reed's powerful words. "It's a very, very simple record," Reed told MTV's Kurt Loder in 1989. "Trying to do something with two guitars, bass [and] drums with all the technology that's around today—all the synthesizers and all the instruments you could bring in—it's hard to resist the temptation."

"Way before we started recording the album, I got a call from Lou through a mutual friend," comments *New York* engineer Jeffrey Lesser, whose stellar career as an engineer/mixer/producer up to that point had included albums with such diverse artists as Kool & the Gang, The Straws, Pat Travers and Barbra Streisand. He had met Reed earlier in the year on a session for a Ruben Blades album. "Lou was looking for someone to work with in New York, and at the time he wanted someone who was clean and sober—and I filled that role, too. We got to talking and discussing our philosophies of recording, and then he invited me out to his workspace, his writing studio out in Northern New Jersey.

"Of course I was thrilled to go, and he took me into the room where he wrote most of his songs; his getaway. He also had a place in the city. So with just a guitar and a little amp, he played and sang early versions of these songs. I was an audience of one. At one point he said, 'Jeffrey, how come my records never sound like this? I love the way I sound right in this room, but never sounds like this in a studio. I've been trying for years and years to reproduce this sound.' I took a note in my brain of what it sounded like, of what kind of amp he was using, how far away he was sitting from his amp and the size of the room. He had no amplification of his voice there. But it did sound really great. I said, 'I think I have a room in mind that sort of duplicates your space, and I think we can get it to sound like you're talking about.'"

The room Lesser had in mind was Studio B at Mediasound, one of the most famous and busiest studios in Manhattan since it opened in 1969 in a former Baptist church of West 57th Street. The enormous Studio A, with its stained-glass windows and marvelous live sound was the main calling card for the facility, but the more intimate Stu-





## THE BOX®

4 Mic/Line/Instrument Inputs • 2 built-in 550A Equalizers • 2 API 500 Series Slots • 16 channel Summing Mixer (20 line inputs total) • Full Center Section Control • Stereo Bus Compressor (with channel switching) • Solo, Mute, Insert • Stereo Panning • Direct Out • 4 Aux Sends – 2 Mono, 1 Stereo • 1 Stereo Program Bus • DB25 Connectivity



[APIaudio.com](http://APIaudio.com)





Lou Reed, Dion Dimucci and Jeffrey Lesser

dio B downstairs—like “A,” equipped with a Neve console—was also a popular recording destination, and perfect for Reed’s small-group, no-frills approach. “Acoustically, it was really easy to hear everyone in the room,” Lesser says, “and it had a very warm quality to it. You could see every inch of the studio from the control room. It didn’t have isolation booths, it didn’t have parallel walls.”

Before the formal sessions began, Lesser says, “Lou would send me cassettes of various grooves and in the same package would be several pages of lyrics; not so much married to each other yet. He had a pretty good idea of which grooves might go with which lyric, but the lyrics, too, were works in progress. I felt honored that he was interested in my opinion.” Reed and guitarist Mike Rathke, who at that time was near the beginning of what turned out to be a long tenure working with Reed, further developed the songs into workable form before the other two players on the album, drummer Fred Mather (who is also listed as a co-producer on the album) and bassist Rob Wasserman joined the fray. “Mike was a very big part of it, almost like the music director,” says Wasserman, who first met Reed a year earlier when Lou agreed to be part of the bassist’s *Duos* album (on the track “One More for My Baby, One More for the Road.” “I really locked into his rhythm guitar playing, and it was basically like a trio in the beginning.” Wasserman, too, would go to play on many of Reed’s projects over the next two decades.

From the outset at Mediasound, Lesser tried to recapture some of the vibe that Reed had liked so much in his own workspace. Amp volume was kept low, and “one experiment I tried, which ended up working out really well, was to put a mic near the pick of his electric guitar. That did two things—it picked up the sound of the pick breaking across the strings, which added a nice humanness to it, and it also gave a little ambience to the amp, which was four or five feet away, and also close-miked. [For the pick mic] I used a Beyer M150 ribbon, because one of the characteristics of a ribbon mic is it only picks up what’s directly in

front of it and anything coming in from the side is mostly eliminated. We also had room mics set up, so with those options we were able to get what he was looking for.”

Lesser says that most of album was recorded live to Studer 24-track, with Reed even singing keeper lead vocals on some songs through an AKG 414 the studio had. “We tried a couple of different mics,” he says, “but the 414 had that nice edge and cut through everything, without being harsh.”

Partly at Reed’s insistence, Wasserman exclusively played his Clevinger electric standup bass on the sessions. “He was always trying to get people to use new instruments, new effects, new gear,” he says, “and he was always trying to get people to go beyond their comfort zone. Like, if I wanted to do some slides on the bass, he would say, ‘Try not sliding.’ And if I didn’t slide, he might say, ‘Can you try that sliding thing?’ He always challenged me to be a better musician and play at a higher level.” Wasserman played his Clevinger through an Ampeg B-15 amp that Mediasound had, and Lesser used a combination of the miked amp and a DI on the bass.

Wasserman notes that his bass part of “Dirty Boulevard” “is very simple. Normally a rock bass part for that song would have been all over, constant and repetitive, but Lou wanted to keep it so the words could sparkle and come out. It’s sparse, but playing it that way makes it more supportive to the words, which is what we were always trying to do on that album.” The sound of the album in general is minimalist; the parts all well defined and contained, with the vocals always out front.

Lesser recalls, “In the middle of listening to one of the first playbacks of ‘Dirty Boulevard,’ I’m sitting next to Lou and we’re all in awe of this record—we knew there was something special about that song. The playback stops and he looks over to me and he says, ‘Jeffrey, what do you call what I’m doing? Am I singing? Am I talking? What is this?’ I don’t know if was trying to be totally serious or if he was being cute.”

“Dirty Boulevard” also benefits from backing vocals at the close of the song, courtesy of Lesser, Reed and Dion Dimucci—one of Reed’s idols, who happened to be working on an album upstairs at Mediasound Studio A. Reed reciprocated by contributing background vocals to a song on Dion’s *Yo Frankie* record.

Lesser mixed the album, with plenty of input from Reed, on the Neve in Studio B. He used almost no reverb, “and all the rides were done in real time; we didn’t use automation,” he says. “We’d tweak it together, often with several hands on the board.”

When *New York* came out at the end of 1988, “Dirty Boulevard” became an instant radio favorite, even hitting Number One on *Billboard*’s Modern Rock Tracks chart. The album peaked at Number 40 in 1989 (high for a Lou Reed album) and it hit Number 14 in the UK. It was so popular in NYC that in the spring of 1989, Reed and the band played a week of shows on Broadway at the St. James Theatre, re-creating the album in its entirety. The album was Reed’s last major commercial success. ■

**“ONE EXPERIMENT I TRIED, WHICH ENDED UP WORKING OUT REALLY WELL, WAS TO PUT A MIC NEAR THE PICK OF HIS ELECTRIC GUITAR. THAT DID TWO THINGS—IT PICKED UP THE SOUND OF THE PICK BREAKING ACROSS THE STRINGS, WHICH ADDED A NICE HUMANNES TO IT, AND IT ALSO GAVE A LITTLE AMBIENCE TO THE AMP, WHICH WAS FOUR OR FIVE FEET AWAY, AND ALSO CLOSE-MIKED.”**

**—JEFFREY LESSER**



# Chosen by Ear

Chosen by ear, Dynaudio monitors are found in the world's leading broadcast and production studios.

We encourage you to choose by ear.

Wondering how?

Visit [www.dynaudioprofessional.com](http://www.dynaudioprofessional.com) to get our free guide to choosing monitors by ear and free audio test files.



Above: The Dynaudio Air Series - a complete and networked solution for critical monitoring

World Radio History

**DYNAUDIO**  
Professional

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



## NINE INCH NAILS



Mix caught up with Nine Inch Nails (Trent Reznor, vocals, guitar, keyboards; Robin Finck, guitars; Pino Palladino, bass; Ian Rubin, drums; Alessandro Cortini; keyboards, synths, guitar; Josh Eustis, electronics; Lisa Fischer, background vocals; Sharlotte Gibson, background vocals) in mid-November at the 1st Bank Center in Broomfield, Colorado.



"I'm mixing on a DiGiCo SD7, which has been my preferred console for some time," says **front-of-house engineer Gary Bradshaw**, pictured at left with **system engineer Jamie Pollock**. "I like the sound. It's warm and accurate and very easy to operate. The fact that the channel banks are in groups of 12 as opposed to eight means it's easier to accommodate larger setups and lay the inputs out logically. The number of inputs and outputs and the amount of onboard processing is almost limitless.

"Although I am using a fair bit of onboard EQ, compression and multiband compression, I have the Waves SD7 Pro package with dual SoundGrid Servers," he continues. "I'm using the CLA-2A on vocals, H-Delay for vocal repeats, OneKnob Driver for vocal effects, PuigChild on the bass guitar, REDD across the drums, and Aphex Aural Exciter to brighten up one of Pino's vintage bass guitars. I'm also running a number of SoundToys plug-ins via a DiGiCo UB MADI connector and a laptop. These were recommended by Trent after they were used extensively in the studio. Decapitator is used for Trent's vocal distortion; Tremolator and EchoBoy are also used for various specific vocal effects."

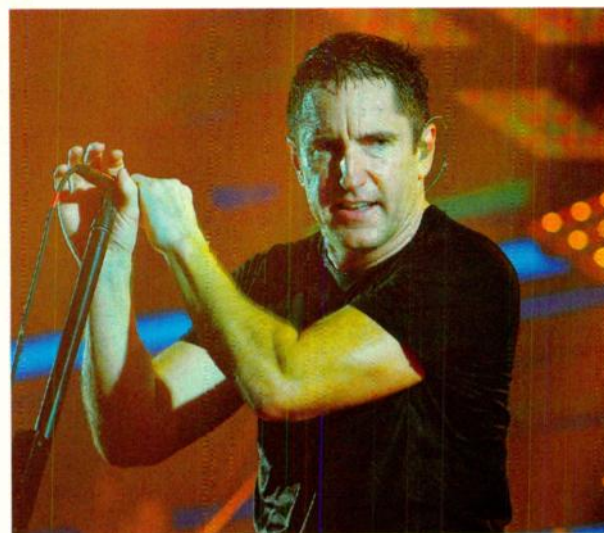




"I'm mixing the band with the Avid Profile," says **monitor engineer Michael Prowda**, at right, with **monitor tech Timothy Fraleigh**. "It's been reliable, and I get a large selection of plug-in software to select from. I use a ton, but notably I use the Oxford Reverb for my vocal sound. Also the Waves CLA 2 Compressor/Limiter for vocal compression and the Impact bus compressor on my group buses."

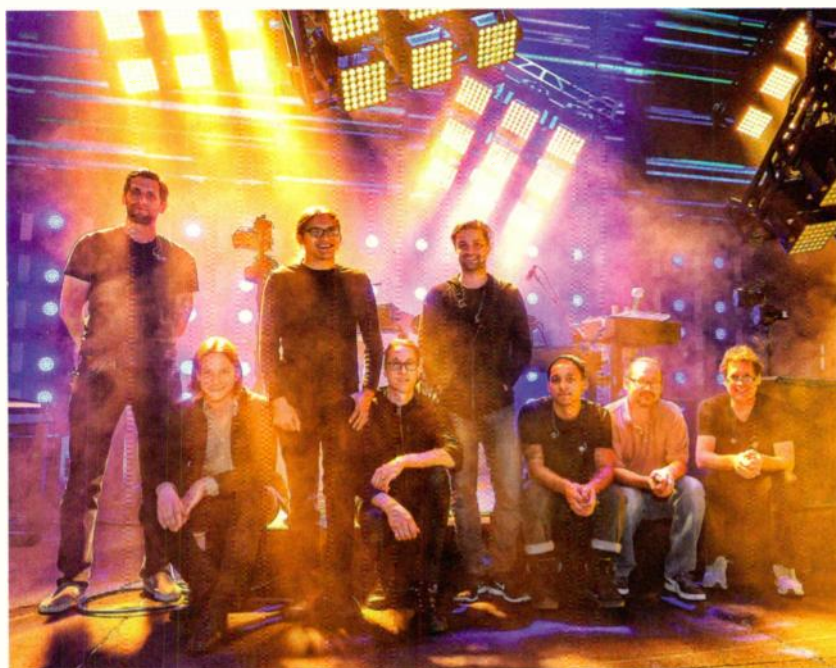
"I mix the show by creating buses, processing the buses and then returning those back into my EFX return channels," he continues. "It's a different way of approaching the workflow, but much more efficient than the way most people approach mixing monitors. Once you try it you won't do it any other way as long as you have the extra buses. I use every Aux and Group output on the desk and then use Matrix and PQ outputs as additional mixes. All the musicians are using the Shure PSM1000 wireless monitors systems and listening to JH16 in-ear monitors. There are four D&B B2 subs onstage for tactile interface."

"**Trent** has often said that the music and the mix do not have to be identical to the studio versions...they just have to be right!" FOH engineer Bradshaw says. "I have two channels assigned to Trent's vocal. One is essentially straight with normal EQ, compression and reverb/delay effects. The second is for the more extreme vocal effects like on 'Gave Up' or 'The Wretched,' or if the vocal sound swaps from effects to clean within a song as in 'Disappointed' or 'March of the Pigs.'"



"Our sound company for the tour is Firehouse Productions," says systems engineer Jamie Pollock. "We are carrying an L-Acoustics K1 system. Our typical setup is a main hang of 14 K1 with six KARA downfills. Eight K1-SBs are flown adjacent to the main. Side hang is 10 K1 with 6 KARA downfills. On the ground, 24 SB28s arranged as spaced pairs of three wrapping the stage. Six dV-DOSC are used as lip-fills facing forward, and two ARCS point to the sides for outfill."

"All of our shows are modeled in L-Acoustics Soundvision beforehand, which gives a great starting point and a way to look at what challenges we might have at that day's venue," Pollock continues. "The system shaping is done with LA Network Manager, and then we use Lake software to handle changes in room acoustics. I use Smaart 7 with a few microphones to get information from around the room. Gary and I both prefer to EQ by ear, so after balancing the system we listen to a few tracks and make adjustments."



The NIN backline techs, from left: Jeremy Berman, Drum Tech; Duane Burda, Trent Reznor's Tech; Steve Ryan, Electronics Tech; Justin McGrath, Keyboards/Synth Tech; Chris Holmes, Audio Coordinator; Damian Burns, Audio Assistant; Victor Munoz, Bass Tech; Chris Whitemyer, Guitar Tech.



# On the Cover

By Tom Kenny

## DTS HEADPHONE:X

An 11.1 Experience That Brings the Consumer Into the Mix Room



Photo: Art Streiber

Fred Maher of DTS with Peter Asher, Nathaniel Kahn and Hans Zimmer, the creative-technical team behind the Headphone:X release of music from Man of Steel and Rush.

**I**t's one of the most impressive demos you will hear. Stellar, dynamic, full-range music. Familiar-yet-somehow-all-new technology. And a Wow! factor that keeps professionals and passers-by alike talking long after they walk away.

It was almost a year ago that DTS debuted Headphone:X by ringing a demo space at CES with 11 Focal speakers and setting up seats with Sennheiser 239 headphones. First, listen to the speaker callout: top left, top right, left, left-center, center, right-center, right, left-surround, right-surround, top-rear-left, top-rear-right. Then put on the headphones and repeat. The

effect is astounding. The discrete signals live in "a room," externally, outside the head. Nothing feels direct to the ear. Most listeners at some point pull one cup off, to see if they are being duped. Then the music plays and it becomes true immersion. It's much, much more impressive than can be described in print.

There will be skeptics, there always are, especially when the conversation involves music and surround. Over the years there have been many attempts to reach the consumer, from Quad in the '70s on through Holophonics, Q Sound, SRS, multiple Dolby formats, DTS themselves and many others. There have also been many

attempts to market "surround headphones," some much better than others, all relying on some variation of processing, spatialization or upmixing. The real difference this time around, aside from more powerful processing and app-based delivery/decoding, is that Headphone:X was developed with the entire R&D focus and energy on mobile delivery—gaming, music, film, and streaming broadcast for smartphones, tablets, computers and...much more to come.

"We have been thinking about portability for nearly 15 years," says DTS chairman and CEO Jon Kirchner. "The challenge has been that you couldn't really deliver the experience we had in



# SOUND SUPERIOR.



- **MTR231**  
MULTI-PATTERN CONDENSER MIC

- Dual large, 1-inch gold-sputtered diaphragm studio condenser mic
- 3 selectable pickup patterns: cardioid, omnidirectional and bidirectional
- Handles SPLs of up to 134dB
- 10dB attenuation switch
- Includes pop filter, shockmount and carry case



- **MTR201**  
CONDENSER MIC

- Large, 1-inch gold-sputtered tension diaphragm studio condenser mic
- Cardioid pickup pattern for increased isolation
- Handles SPLs of up to 132dB
- 10dB attenuation switch
- Includes pop filter, shockmount and carry case



- **MTR101**  
CONDENSER MIC

- Large, 1-inch diaphragm studio condenser mic
- Cardioid pickup pattern for increased isolation
- Handles SPLs of up to 137dB
- Also available: MTR101a Studio Mic Kit with pop filter and shockmount



- **VR88**  
VELOCITY RIBBON MIC

- Low mass, 2.5-micron aluminum ribbon mic
- Bidirectional pickup pattern with excellent off-axis rejection
- Strong neodymium magnets, precision electronics provide increased sensitivity, low self-noise
- Handles SPLs of up to 135dB
- Includes shockmount and carry case

Bringing exceptional performance and high quality to studios everywhere.





Standing: Elliot Scheiner, Rick Egan and Matt Murrin, with Jimmy Iannini and Jerry Lewis. The creative team behind the upcoming 11.1 Headphone:X project, mixed by Scheiner in 11.1 for Headphone:X.

fessional community and from within our own organization.”

But, perhaps the biggest difference this time around? “You don’t have to go out and buy speakers, set up your living room and run pink noise,” says composer Hans Zimmer, whose soundtrack to *Man of Steel* last spring was the first commercial release in 11.1 Headphone:X, followed by the fall release of his score for *Rush*. “It was really important to me that anyone can use it. I believe in the democratization of surround, that surround should be made easy.”

Zimmer, pictured with a few of his colleagues on this month’s cover, has proven a key figure in the launch; currently, the one way to really hear an 11.1 Headphone:X mix on headphones is by downloading his Z-Plus app and the *Man of Steel* or *Rush* soundtrack.

Which brings up the ongoing paradox holding back consumer acceptance of music in surround: Which comes first, the Technology or the Content?

mind due to processing power issues and other factors. It has only been in the last few years that all the necessary pieces have come together to allow us to deliver a Headphone:X experience. We started discussing consumer consumption in our strategic planning process nearly a decade ago, and we can now deliver a truly compelling experience across all different devices and consumer-use cases—whether in the home, in the car or on mobile devices.

“We have always focused on innovative R&D, with a specific emphasis on high-quality experiences,” he continues. “In the case of Headphone:X, quality also involved lots of iteration, and candid feedback from the pro-

## THE TECHNOLOGY

The technology behind Headphone:X is part and parcel of what DTS has been developing over the past 20 years, involving Head-Related Transfer Function, room modeling and encoding for discrete playback, among many other contributors. For Zimmer’s release, both his 11.1 mix room and his unique head/ears at the mix position were fitted with mics, then modeled and incorporated into the metadata for playback. The possibilities, as can be imagined, seem endless. This is not a Concert Hall preset on a Pioneer receiver.

# PowerTools for Studio



## Gold Digger™ mic selector

Instantly select and compare your four favorite microphones to find the one that best suits a particular vocal or instrument track. The Gold Digger features built-in 48V phantom power generator, trim controls for a fair comparison and solid wire connection to ensure the pure mic signal arrives without coloration.



QR VIDEO LINK



## Cherry Picker™ preamp selector

Plug in your favorite mic and instantly compare between four mic preamps to find the one that best suits the instrument or vocal track. The Cherry Picker features 100% pure copper signal path with gold contact relays for absolute signal integrity. You’ll love the way it improves your workflow and efficiency!



QR VIDEO LINK

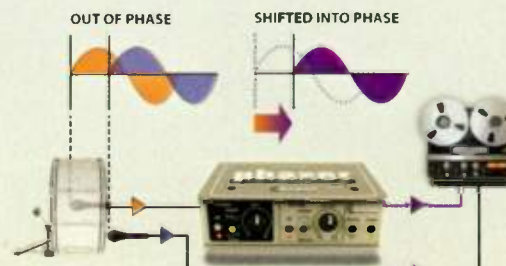


## Phazer™ phase alignment tool

Add realism and depth to every instrument! The Phazer is an analog tool that let’s you adjust the phase relationship between two sources such as two mics in a room so that the fundamentals arrive at the same time. Think inside and outside the kick drum, top and bottom of a snare, or near and far with an acoustic guitar.



QR VIDEO LINK





"How do you want to model the acoustic playback environment the consumer is going to experience?" asks Geir Skaaden, DTS senior vice president of products and platforms and former CEO of Neural Audio, which DTS acquired in 2009. "It can be a lot of things, but choosing the room gives you a foundation that you can then model the rendering for playback on the correct number of channels. Without that, you are sort of blindly placing sound images without a reference. Of course the room can be changed, either by the creative side or the consumer. But the key is to have a predictable result, to know that every user will have a similar experience."

"If you are distributing content that is mixed in Headphone:X and want predictable results, then the information is embedded in the DTS HD bitstream," he continues. "The bitstream then gives an indication so that the device, whether in an app or on a phone with embedded technology, would know exactly what to do and render it correctly. So the metadata has a couple of functions. It tells the end device what to do, and it can also connect to various room models—the profiles."

For the gaming community, which is a huge part of the mobile market, things are slightly different. The audio engine sits in the game console and provides a real-time mix, so in a sense, no bitstream is being sent. That's one of the reasons Turtle Beach partnered with DTS last spring to release the first headphone with the metadata and processing built into the cans. For all other uses, any headphone should suffice, with optimization per type and model on the way.

Fred Maher has toured with Lou Reed, played drums with Scritti Politti,

and produced Matthew Sweet, among countless others. Over the past 10 years at DTS, as consultant and then employee, he has become one of the audio industry's leading proponents of surround music and a de facto liaison between creatives and technologists. Most days you will find him in one of the company's three multichannel mix studios, working with visiting engineers/producers or on his own material. Part of his job is to put quality, yet easy-to-master tools into the hands of producers and engineers.

"Mixing for Headphone:X means quite literally that the mixer listens to confidence monitoring through the algorithm," he explains. "Whatever your DAW is—and this is not the commercialized version but what we're doing right now—you take, say, an AES output from Pro Tools and send it to a second computer where our algorithm is running. Then listen in real time."

"What's interesting for me, and for Nathaniel Kunkel, Eddie Kramer and others who have worked with us, is that the mental model is to start on your speakers and check in on the headphones," he continues. "But what happens is that you find that mixing in the headphones gives you more control in terms of point source stability and recognition. It's the inverse of what you would think."

## THE CONTENT

DTS has always known that without content, they have no business. The company was launched with the release of Jurassic Park in theaters, and through the 1990s and the initial push for surround music, they

# Professionals...



## EXTC™ guitar effects interface

Add excitement and uniqueness to every track by incorporating funky sounding guitar pedals to your signal chain. Imagine... adding a wah to a kick drum, distortion to a vocal or a jet flanger to the keyboards. The EXTC makes it easy by unbalancing the signal, adjusting the impedance and then re-balancing it for you.



QR VIDEO LINK



## MC3™ monitor controller

Select between two sets of monitors without adding any form of buffering electronics in between your recording system and monitors. The MC3 features a pure copper connection to eliminate distortion. Turn on or off a sub and adjust the level, collapse the mix to mono and monitor your mix using headphones or ear buds.

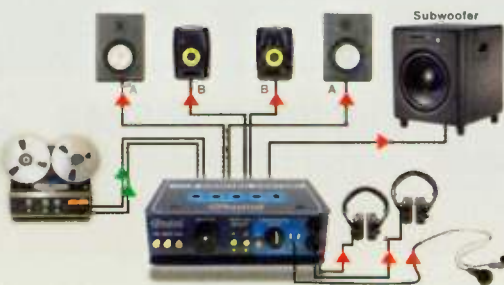
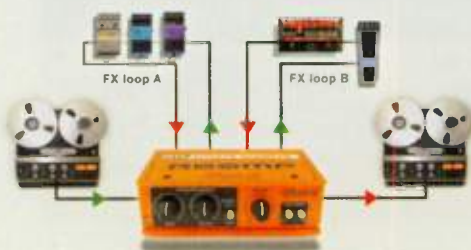


QR VIDEO LINK



## Radial's new 'Studio Essentials'

...are made for making great music. Five unique PowerTools that help you streamline your music production, improve productivity and enhance recording quality. Each tool is carefully designed to optimize the signal path for minimal coloration where it matters and maximize your tonal universe when following that creative spark.



**Radial**  
engineering  
...PowerTools for power players™

**radialeng.com**

1588 Kebut Way Port Coquitlam BC V3C 5M5 tel: 604-942-1001

\* Specifications and appearance subject to change without notice.



partnered with both manufacturers like AMD and Steinberg, and with creatives like Rory Kaplan, Elliot Scheiner, Chuck Ainlay and many others. For the release of Headphone:X, the two primary links have been through Hans Zimmer and the production powerhouse of Jimmy Jam and Terry Lewis.

Zimmer, the first out of the gate with Headphone:X content, was, ironically, the last to the starting line. He was introduced to the technology by producer Peter Asher, who was helping on the score for *Man of Steel* at the time. Asher, in turn, was introduced to it by engineer Nathaniel Kunkel, at the P&E Wing Grammy party at The Village Studios last February, a few weeks after the launch.

"I was heading for some food and drink," Asher recalls, "when Nathaniel pulled me into the DTS room and told me I had to hear this. I thought it was amazing, and I saw the creative possibilities in my head right there. Hans was in the middle of Superman (Man of Steel), and I told him I had heard this brilliant invention. We could be the first. At that time, we were recording 12 drummers on a soundstage—Junkie XL arrangements. It was the perfect all-around-your-head material. We got the team at DTS to come down to the soundstage, and it all happened pretty quickly."

"When Peter brought the idea to me, I found it attractive because it was at a stage where we could still have input," Zimmer adds. "DTS was very much for it, and encouraged us to push for what we wanted. You want to work with people who are obsessive and quirky and nerdy.

You can see that they have a commitment. But for me it really began on some sonic experiments we did with Christopher Nolan on *Inception* a few years ago. We built a cool interactive app, a free download that provided an interesting way of playing with the sound. So the subject matter of Superman—the height, the flying, the power—the timing just worked out brilliantly. I saw it as an opportunity to break down the wall between the performer and the audience, where everyone can sit in with the band."

Zimmer, being Zimmer, took it one step further and developed the Z-Plus app for playback. "I like the idea of an app," he says, "because it's ever-evolving. You can append and change it, and it will mature over the years as technologies change and processing improves."

From the music-only side, the DTS association with Jimmy Jam and Terry Lewis came about through an 11.1 CES demo—but pre-Headphone:X. The duo had signed and was working with The RoneyBoys, and DTS, in conjunction with Panasonic on the picture side, was looking for material to showcase in 11.1 for a 3D video demo. An a cappella 11.1 Boys II Men track was thrown in for good measure.

"We were introduced originally by Rory Kaplan, a great connector," Jimmy Jam recalls. "Then we stayed in touch over the next year, and they came back and asked, 'What do you think of this? Early Headphone:X?' At the time they had a number of demos, but the one that blew me away was James Brown. We had only ever heard it in mono, of course, and this

*Continued on p. 55*



**YOUR SESSION IS OUR OBSESSION**

Your Source For Low Prices  
On The Best Recording Gear

COMPUTER AUDIO INTERFACES • DAW SOFTWARE • MICROPHONES • PREAMPS • SIGNAL PROCESSING • MIXERS

**FULL COMPASS**  
PRO AUDIO | VIDEO | AV | LIGHTING  
MUSICAL INSTRUMENTS

Call a Sales Pro Today!

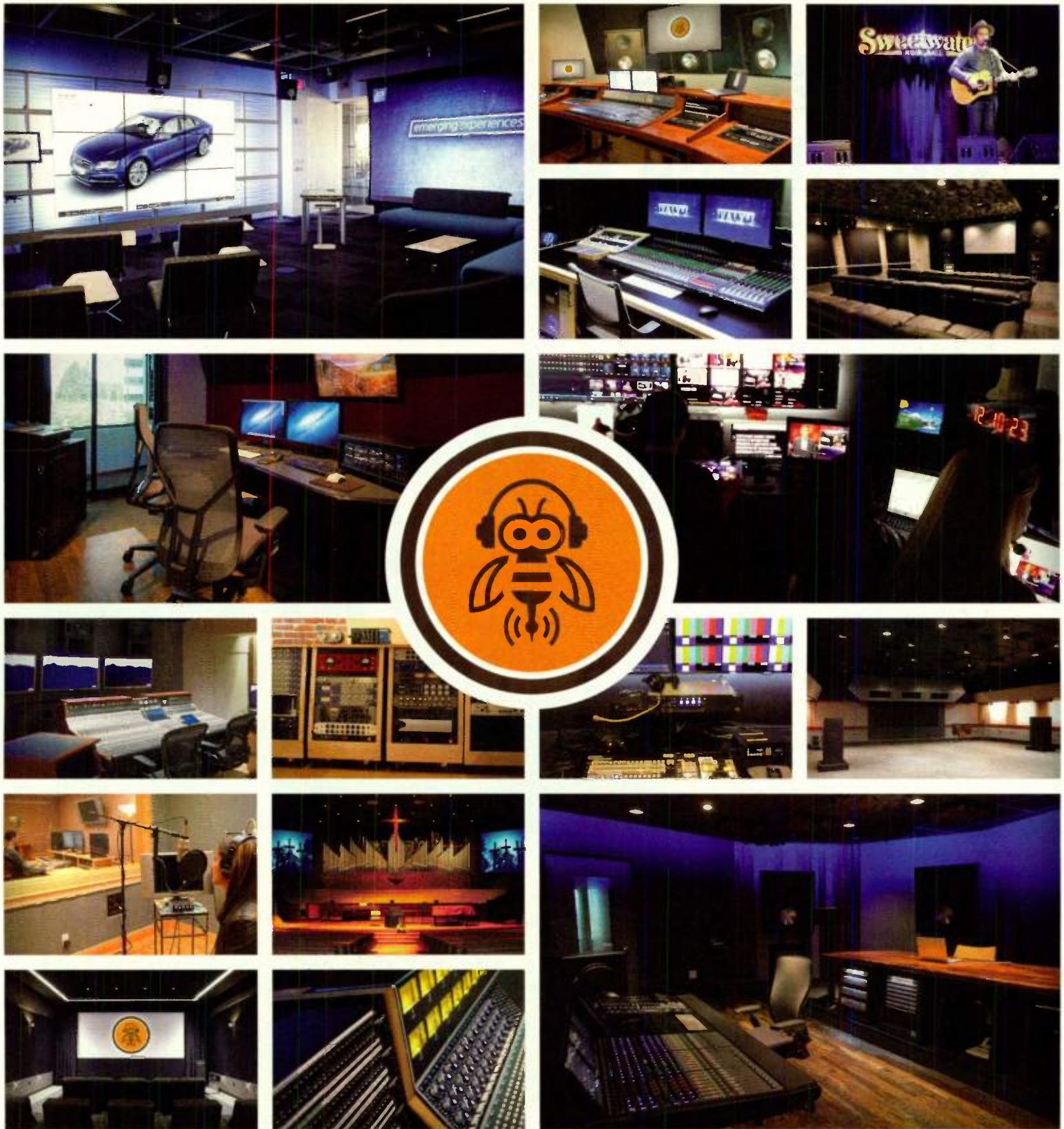
**Call 800-356-5844**  
or visit [fullcompass.com](http://fullcompass.com)

Leading The Industry For Over 35 Years

Follow Us  
Facebook Twitter YouTube Instagram

View our Recording E-Catalog online!  
[bit.ly/2013RecCatalog](http://bit.ly/2013RecCatalog)





Media System Design & Integration for Studios,  
Screening Rooms, Editorial Suites, and Broadcast Facilities.



[www.bugid.com](http://www.bugid.com) | (415) 331-3115

© 2013 BugID, Inc.

World Radio History

# BugID

Pronounced [bug-eyed] — Established 1997



# Mastering on the Cutting Edge

QUALITY IN THE AGE OF LOW-RES,  
LOW BUDGETS AND MULTIPLE FORMATS

BY BARBARA SCHULTZ

*We should all give thanks for mastering engineers.* Despite small budgets, low-resolution distribution, level wars and the DIY democratization of the recording business, the engineers on the back end of record making are still on the front lines in the fight to protect the sonic integrity of our music. It's inspiring to see the ways these pros serve as leaders, helping to develop standards and practices for high-res downloads, mentoring newer engineers, and educating clients about ways to make their music the best it can be.

Last year, *Mix*'s annual mastering issue focused on the then-new Mastered for iTunes encoding method (MFIT), which is now standard-issue for the five iconic engineers we talked to this year to get an image of the mastering industry today: Doug Sax of The Mastering Lab, Bernie Grundman of Grundman Mastering, Hank Williams of MasterMix, Greg Calbi of Sterling Sound and Bob Ludwig of Gateway Mastering.

All of these engineers are working on the cutting edge of the business, dealing with many of the same issues in their daily work. Here, we focus on the topics they consider critical to mastering, and the state of music listening in general.

## GREG CALBI: REAL-WORLD MASTERING

Sterling Sound co-owner Greg Calbi has been mastering in New York City for more than 40 years, so he's seen the industry at its highest and lowest points, financially speaking. As someone whose projects range from The Beatles to home recordists, he thinks it's essential to remember that no matter what the format *du jour* is, the mastering engineer's job remains the same—especially when the client has limited experience and funds.

"The nuts and bolts of this business are artists who need to enhance the quality of a recording that is usually under-budgeted



and has been worked on by people who are possibly not particularly experienced and need that next level of help," Calbi says. "They may not be able to take their hand into a commercial recording studio. They may not even be able to have a professional mix it, but usually there's enough budget to be able to come to a professional mastering studio.

"We have clients who are Lady Gaga-level, Adele-level, but I do maybe 150 to 200 albums a year, so the 10 albums that will sell over half a million are one thing, but the other 150 or so records that come out are a different story. To me, this is the most significant change in our business in recent years: It's an entirely different type of person coming to us. It's a guy and his girlfriend who are managing themselves. They're producing themselves. They're recording themselves, but they're not engineers. The person who's trying to develop now as a songwriter and a music creator in this environment—you have to know that it's a very taxing and high-energy and low-paying situation that these kids come into and try to be successful."



FOR YOUR CONSIDERATION

The New York Times  
**"AMAZING."**

A. O. SCOTT

**USA TODAY**

**"REALISTICALLY CREATES  
STORM-TOSSED WATERS AND  
AUTHENTIC SOUND DESIGN**

that we notice mainly when it stops.

Redford's character is thrown  
overboard and the noisiness of the  
waves slapping against the boat  
suddenly ceases, reminding us of  
just how powerful the din was."

CLAUDIA PUIG

**npr**

**"THE MOVIE'S VISCERALLY  
TERRIFYING, ENNOBLING  
LANGUAGE IS ALL  
SIGHT AND SOUND.**

We hear the creak of ropes and the gentle  
lapping of waves around his bunk.  
The whisper swells into a roar, accompanied  
by whistling wind as a storm bears down  
on his rudderless boat. Loudest of all  
is the deep silence that tells Our Man  
he's all alone, his only compass  
an animal instinct to endure."

ELLA TAYLOR

**BEST SOUND EDITING**

RICHARD HYMNS • STEVE BOEDDEKER

**BEST SOUND MIXING**

Re-Recording Mixers  
STEVE BOEDDEKER • BRANDON PROCTOR

Production Sound Mixer  
MICAHA BLOOMBERG

ALL IS LOST

LIONSGATE

[www.allislostfilm.com](http://www.allislostfilm.com) [www.roadsideawards.com](http://www.roadsideawards.com)

Motion Picture Artwork © 2001 Roadside Attractions, LLC. All Rights Reserved.





For these reasons, and others, Calbi feels that educating clients has never been more important. To whatever degree is necessary, he explains the mastering process to clients who will then take the knowledge he's given them and go into their next project better informed. "It's an entirely fluid situation of trying to understand what the client's need is and trying to have a critical yet positive reaction to the work, and trying to enhance it to the best of my ability without really discouraging the client," Calbi says. "But it's so satisfying when people call you up and say they can really hear the difference you made in their recordings, and they feel they really got value for the money that they put in, often at a real sacrifice."



#### BERNIE GRUNDMAN: FIGHTING THE GOOD FIGHT

With locations in Hollywood and Tokyo, Bernie Grundman's longtime mastering business serves a huge variety of clients. His long career has made him a bit philosophical about the lowered standards of listeners, who he says seem mainly to put music in the background of their busy lives. "It's the fast-pace lifestyle. People have so many distractions, and music has become a different thing in their lives," he says.

This appears to be one of the reasons that artists and labels are so desperate to be noticed, and consequently turn the volume up, and up. "They figure if it gets people's attention, there's a better chance of selling the recording," Grundman says. "So let's make everything really loud and use all the processors to just slam this thing against the ceiling as loud as we can get it. It jumps out and, boom, it's harsh and bright and it gets your attention, but before long—after two or three tunes—you're exhausted."

"This isn't new, but it's ongoing," he continues. "All the mastering engineers complain about it, but the industry and the artists and producers are concerned. If their song doesn't come on as strong as somebody else's, they're afraid they won't be heard. The problem is, sometimes there's so much processing that even when you turn it down, it's too aggressive, too harsh, too metallic, too grainy, too smeary. Many recordings actually

sound mechanical now—like a machine. It's a real conflict between the commercial side—people feeling that they need to be aggressive—and what the public would actually enjoy hearing."

"Of course, these recordings are examples of what happens if things get out of hand. There are also many recordings on which good judgment was used, and they retain their musicality and are still competitive. Good mastering that serves the music is where the priority should be."

"I tell them, as a mastering engineer, there's a limitation on how loud I can make this," he says. "I can do a lot of processing, but that will squash everything and make it less musical. If level is important, I tell mixers to put on a CD they really like—something that plays well everywhere. Put that up and look at the same meters that you used and see what the different parameters are: the peak level, the average level, etc. Ask yourself: 'How's it reading?' Then set a comfortable listening level. Now, here is the key: Take down the monitor level control. You're not going to touch that level control again. You're going to say, 'I'm going to make my record sound like this, with the same volume control setting.' Keep in mind: you will want to be a little lower in average level to leave room for the needed limiting and compression in mastering."

"This is why I call mastering the sobering part of the business. When you crank your music up loud, you get a physical tension and a sense of power and excitement that you could mistakenly attribute to the music. When your recording is out in the world, you won't be there to turn it up to get extra excitement; it has to stand on its own, next to all the others."



#### HANK WILLIAMS: A WORLD OF MUSIC

When we contacted Hank Williams in his Nashville studio, one of his projects—Blake Shelton's album *Based on a True Story*—had just won the CMA for album of the year. Williams has mastered releases for some of the biggest stars of country and beyond, and more and more, his work comes from far beyond the friendly confines of Music City.

"I'd have to say that for me, the thing that has been the most exciting and the most interesting development over the past three or four years has been that the world has gotten so much smaller," Williams says. "It's just so much fun to be able to work with people from all over the world



now. Today, the project I'm working on comes from Vancouver. The market has really opened up for us. It's no longer just about the Southeast or even the U.S. for us. Our work is coming from continental Europe and Canada—all over."

Williams isn't thrilled with all of the industry changes he's seen, however. He says that though mastering engineers celebrate the public's interest in high-res downloads, his best efforts are sometimes undone by poor quality control and/or communication from labels.

"For example, I more often than not find out on the back side that something I mastered has gone to vinyl," Williams says, "and we miss the opportunity to provide a better-resolution version to the disc-cutting people. That's really frustrating for me and frustrating on behalf of my clients that the record company did not give them the opportunity to provide something higher-resolution than a 44.1/16-bit CD master. It's especially annoying to me, because at MasterMix, there's always a 24-bit version here of the project that could yield better resolution, and on some projects there's higher-resolution sample rates also. I love working in high-res, but I don't love working in high-res and then having it dumbed down at the end."

Between pushing back on loud mixes and struggling for better communication from labels (which are likely as understaffed as any type of business these days), Williams and his colleagues here admit that they can find themselves somewhat at odds with clients—walking a line between standing up for quality and simply giving clients what they want. "We try to educate our clients on some of the issues that mixing extremely hot mixes can bring," Williams says. "But in the end I'm here to serve my clients. I will always voice my opinion, but they may not always take it."

#### BOB LUDWIG: FORMATS ON THE VERGE


Our interview with Bob Ludwig took place a few weeks after fall AES, where Ludwig led his annual Platinum Mastering Panel to discuss issues and developments that affect all mastering engineers. Like the other pros included here (Calbi and Sax were also on the panel), Ludwig has long embraced a leadership role in the industry, consulting with developers on new technologies, and advocating for high-quality music delivery. High-res downloads may still be finding their footing in the market, but Ludwig is more than ready to turn them out whenever there's public interest.

"Since 2005 at least, I've always mastered everything at the same resolution that was sent to me, so I have a big archive of high-res files of projects I've done," Ludwig says. "The record companies are thrilled to hear that they don't have to pay me to re-master something—they can use the high-res files I created five years ago. I'm thrilled that consumers



Bob Ludwig with the band Lucius


Mick & Demetri



**d:facto™**




STUDIO QUALITY SOUND ON STAGE

# SET IT FREE



**Wired or wireless? You decide!**

With the DPA adapters you can connect your DPA d:facto II to all major wireless systems

www.dpa-microphones.com/dfacto



who are interested can go and spend the extra money on high-res digital, and I'm also really thrilled about the Mastered for iTunes initiative, because that has brought the possibility of really good sound for downloads among the 450 million iOS devices that are out there in the world."

However, Ludwig has a message for engineers who are new to mastering for iTunes: "The Mastered-for-iTunes process, which is called 'afclip,' measures the amount of distortions, or clips, as a result of the encoding process, which leads to lowering the level into the encoder from a 24-bit source instead of 16," he says. "In addition to just making sure that there's no distortion from the clip, it turns out that there's an aesthetic that a lot of mastering studios seem to not be aware of, which is that just because there's no clipping doesn't mean it's making the best-sounding encode. Sometimes lowering it another half dB or another dB into the encoder gives you a lot more air around, ironically, the low frequencies—the bass and the kick drum—which makes for a less squashed-sounding download. During my panel I found out that a lot of people would simply lower the level until there was no clipping without realizing that further lowering it made it sound yet better.

"Apple is trying to do good," he continues. "They're definitely trying to make the masses' experiences as good as they can. Right now all your iPhones and iPads and iPods only play either 48k or 44.1 natively. They'll play higher-resolution files, but it down-samples to either 44.1 or 48. But things are going to keep improving, and I'm sure Apple would be delighted to resell 450 million iOS devices that can play 96k, natively, you know?"

## DOUG SAX: THE VINYL WORD

When he was invited to sit on Ludwig's Platinum Mastering Panel this year, Doug Sax suggested they discuss mastering for multiple formats. "Ten years ago, you made a CD master and you were done," Sax says. "Now you do a CD master, a master for iTunes, a high-resolution master for HDtracks, and a cutting master for vinyl."

To Sax—who has weathered every shift in his business since opening his first Mastering Lab studio in 1967—the slow but steadily growing vinyl business has been the most surprising part of the format equation.

"I had parked my lathes in storage in 2000," Sax says. "Then several years ago, some clients started ordering cutting masters for vinyl. I had to feel that it was real [before bringing back the lathes], though, because the amount of money we had to spend to restore them and build a room for them was considerable. But it is real."

Sax brought those custom lathes back to his studio in 2009. At first, they mainly saw reissue work, which is still part of the vinyl attraction. Last year, Sax remastered Pink Floyd's *The Wall*, which he mastered originally in 1979. This year, he remastered a Doors limited-edition LP (on Rhino Records) for Record Store Day.

"But now we're also doing vinyl for new groups," Sax says. "Jaymes Quirino, who books our studio, says it's about 50 to 60 percent of our clients, in all genres, that say, 'I want a CD master, I want it mastered for iTunes, and I want vinyl.'"

Sax recently toured the Rainbo Records duplication/pressing plant,

### AUDITION CODECS

codec	mode	bitrate
MP3	CBR	256
AAC LC	VBR	
HE AAC		
HE AAC V2		
HD AAC		
iTunes+		

### EDIT METADATA

metadata	
Title	Elevation
Artist	Street Fair
Album Artist	Street Fair
Album	Other Side of the World
Composer	B.ington, J-E, W.Woo
Genre	Pop
Comments	Add ID3 tags here to appear in iTunes or...

### BATCH ENCODE

Remember the morning	mp3	11.3
Bleeper	wav	36.6
Snowing in Eden	mp3	8.3 M
Tables Turning	wav	50.0
White House	mp3	11.3
Winging It	wav	47.3

input 7 files selected for encoding

**Sonnox**

**Fraunhofer**  
IIS

## Quality Encoding For All

Codec Toolbox is an affordable yet invaluable solution for encoding your music for the web. Audition codecs in real-time, batch encode multiple files and add metadata such as track name and artwork.

The best part? It's just £35 GBP (approx. \$59 USD + sales tax).

**Codec**  
**TOOLbox**

[www.sonnox.com/ctb](http://www.sonnox.com/ctb)





Doug Sax

where general manager Steve Sheldon suggested that the vinyl increase Sax has observed is not unique to The Mastering Lab. "Billboard predicts, based on SoundScan numbers, that there will be about 5 million vinyl units sold this year," Sheldon says. "But we pressed about 6 million in the past year, and that's just our plant."

Mastering for vinyl still comprises a fraction of The Mastering Lab's business, but it's an area of growth where Sax is uniquely qualified. "I'm hoping to increase the amount of vinyl cutting we do from other houses," he says. "This is unusual, but we're reaching out to other mastering studios, saying, 'If you need to put out vinyl, and you don't want to lose the quality once you make a great-sounding file, we're your guys.'"

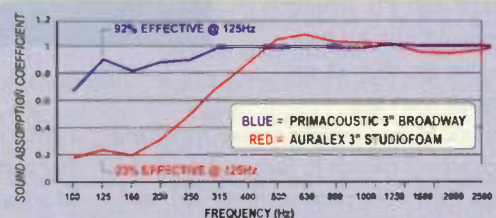
"I think it's exciting times," Sax continues. "I don't think it would mean anything to anybody if it was people my age all of a sudden deciding to play phonograph records again. But we're hearing that the buyers of new turntables are 18 to 25 years old, and that's the demographic that everyone would like to reach. When I talk to kids who are doing this, they'll say, 'I don't know what it is, but I get more into the music.' And of course, I'm thinking it's because you're not playing a videogame at the same time. It's because you're actually sitting down and devoting time to listening to music."

Visit [mixonline.com](http://mixonline.com) to read more from our mastering experts and to learn more about mastering for iTunes. ■

# Clean up your room!

The single most important thing you can do to improve the sound of your recordings is to address the acoustics in your room... and Primacoustic makes it easy.

Start with your choice of Broadway™ panels or one of our easy-to-install London room kits. Then add MaxTrap corner traps and Stratus ceiling clouds to suit. Primacoustic has all the tools you need to get your recording space up and working quickly and affordably — with uncompromising quality. Compared to foam, Primacoustic delivers nearly 500% greater absorption in the critical bass region. This delivers a balanced mix that translates properly when you play your recordings on other systems.



Tests performed by Riverbank Labs on 3" Primacoustic Broadway panels and common acoustic foam. Both absorb high frequencies, but as sound shifts to bass, the foam stops working.

Simple, modular and affordable – Primacoustic delivers spectacular performance for cleaner, more professional sounding results every time.

Clean up your room... with Primacoustic!



London™ 12 room kit

- A Stratus™ ceiling clouds
- B Broadway™ Broadband panels
- C MaxTrap™ corner bass traps
- D Easy-to-mount impaler system
- E Broadway™ Control Columns
- F Recoil™ Stabilizers



~ Rob Wells  
(Backstreet Boys, Cyndi Lauper, Mika, Justin Bieber, Selena Gomez)

"I am not a handy guy, believe me when I tell you how easy it is to install. Now my room sounds great."

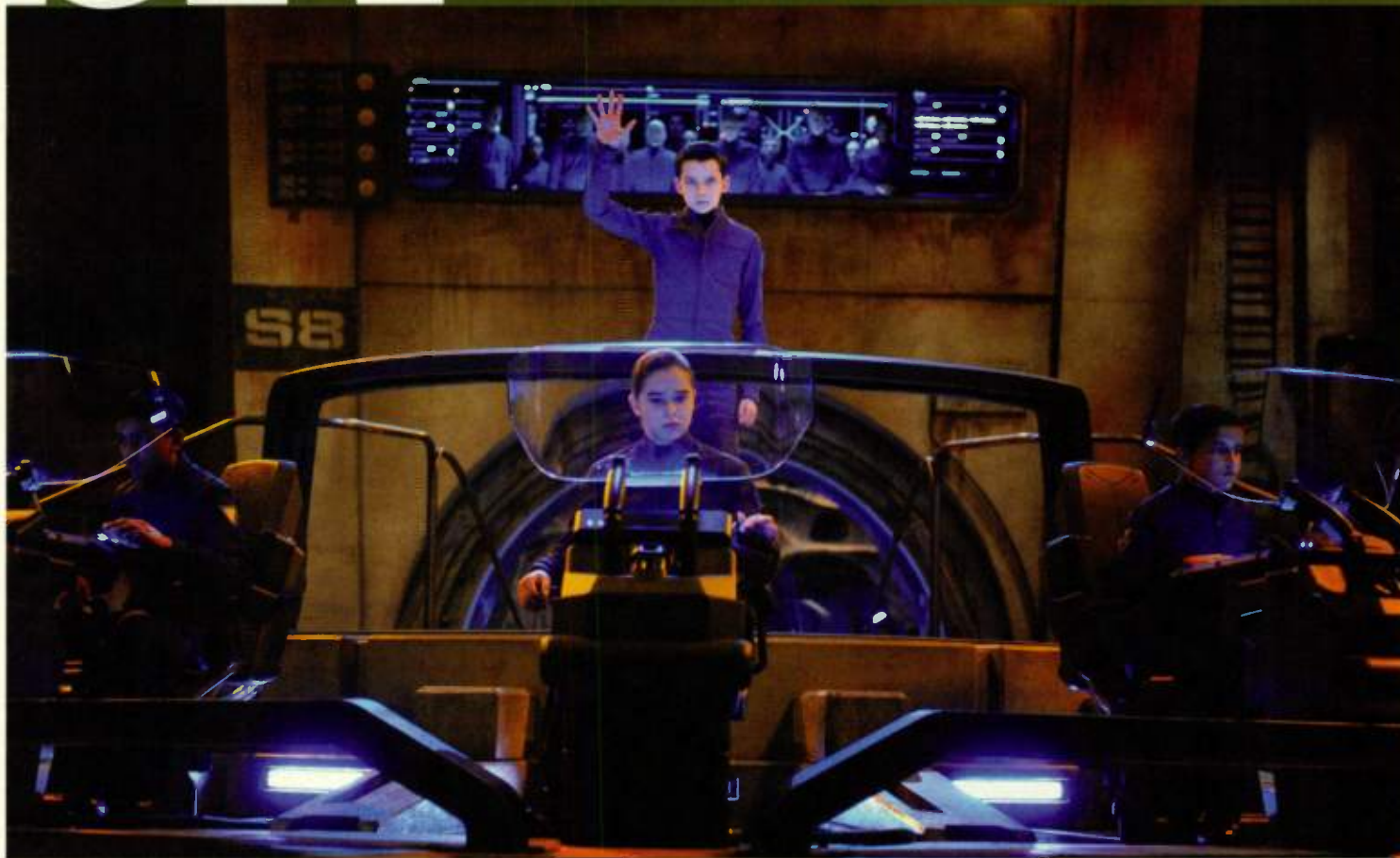


**PRIMACOUSTIC®**

A division of Radial Engineering Ltd. - 1588 Keblet Way, Port Coquitlam BC V3C 5M5  
[www.primacoustic.com](http://www.primacoustic.com)

Specifications and appearance are subject to change without notice





# ENDER'S GAME

## EARTH VS. ALIEN CREATURES IN FUTURE SPACE WARS

By Blair Jackson

**E**nder's Game, director/screenwriter Gavin Hood's ambitious and arresting film version of the best-selling 1984 science fiction book of the same name, has deservedly received rave notices for its imaginative depiction of life on enormous space stations, mock battle exercises in a zero-gravity geodesic sphere and intergalactic wars involving thousands of spaceships. Those are just three of the environments and situations that challenged the sound team. Then there's also the fiery destruction of a planet, a wild videogame within the story, a prominent insectoid figure, futuristic weapons and vehicles, implications of mental telepathy, and scads of assorted rooms, chambers and atmospheres in space and, briefly, good ol' planet Earth. This was most assuredly a CGI designer's playground, but it was also an amazing sound canvas to work upon, too.

Spearheading the sonics on *Ender's Game* was supervising sound edi-

tor and sound designer Dane Davis, who is perhaps best known for his Oscar-winning (and highly influential) work on *The Matrix* and its two sequels, but whose long resume includes dozens of feature films in many genres—from *Boogie Nights* to the two-part *Twilight: Breaking Dawn*—as well as documentaries, shorts and even videogames. Working in consultation with director Hood and noted film editors Lee Smith and Zach Staenberg, Davis and his sound-editing crew at Danetracks, now on the Warner Bros. lot in Burbank, began their design work long before anything approaching completed visuals was available. Taking their cues from paintings on Hood's iPad, animatics, the script, and the original book, they spent countless hours conceiving of ways to make every ambience interesting, every action piece somehow believable.

Central to the story is an imminent war between humans and a super-species of large bug-like aliens known as Formics, who had attacked Earth





Doug Sax

where general manager Steve Sheldon suggested that the vinyl increase Sax has observed is not unique to The Mastering Lab. "Billboard predicts, based on SoundScan numbers, that there will be about 5 million vinyl units sold this year," Sheldon says. "But we pressed about 6 million in the past year, and that's just our plant."

Mastering for vinyl still comprises a fraction of The Mastering Lab's business, but it's an area of growth where Sax is uniquely qualified. "I'm hoping to increase the amount of vinyl cutting we do from other houses," he says. "This is unusual, but we're reaching out to other mastering studios, saying, 'If you need to put out vinyl, and you don't want to lose the quality once you make a great-sounding file, we're your guys.'"

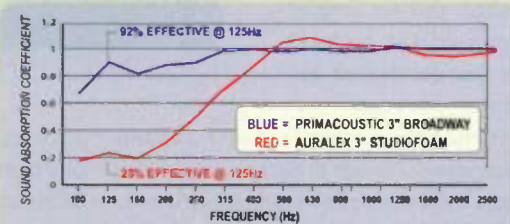
"I think it's exciting times," Sax continues. "I don't think it would mean anything to anybody if it was people my age all of a sudden deciding to play phonograph records again. But we're hearing that the buyers of new turntables are 18 to 25 years old, and that's the demographic that everyone would like to reach. When I talk to kids who are doing this, they'll say, 'I don't know what it is, but I get more into the music.' And of course, I'm thinking it's because you're not playing a videogame at the same time. It's because you're actually sitting down and devoting time to listening to music."

Visit [mixonline.com](http://mixonline.com) to read more from our mastering experts and to learn more about mastering for iTunes. ■

# Clean up your room!

The single most important thing you can do to improve the sound of your recordings is to address the acoustics in your room... and Primacoustic makes it easy.

Start with your choice of Broadway™ panels or one of our easy-to-install London room kits. Then add MaxTrap corner traps and Stratus ceiling clouds to suit. Primacoustic has all the tools you need to get your recording space up and working quickly and affordably — with uncompromising quality. Compared to foam, Primacoustic delivers nearly 500% greater absorption in the critical bass region. This delivers a balanced mix that translates properly when you play your recordings on other systems.



Tests performed by Riverbank Labs on 3" Primacoustic Broadway panels and common acoustic foam. Both absorb high frequencies, but as sound shifts to bass, the foam steps working.

Simple, modular and affordable — Primacoustic delivers spectacular performance for cleaner, more professional sounding results every time.

Clean up your room... with Primacoustic!

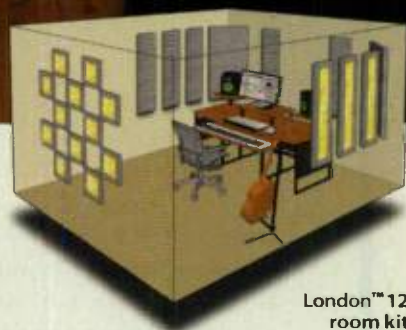


**PRIMACOUSTIC®**

A division of Radial Engineering Ltd - 1588 Keblet Way, Port Coquitlam BC V3C 5M5

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

Specifications and appearance are subject to change without notice



London™ 12 room kit

- A Stratus™ ceiling clouds
- B Broadway™ Broadband panels
- C MaxTrap™ corner bass traps
- D Easy-to-mount impaler system
- E Broadway™ Control Columns
- F Recoil™ Stabilizers



~ Rob Wells

(Backstreet Boys, Cyndi Lauper, Mika, Justin Bieber, Selena Gomez)

"I am not a handy guy, believe me when I tell you how easy it is to install. Now my room sounds great."





# When Musician Becomes Master

**40 YEARS LATER, CAPITOL ENGINEER CUTS HIS OWN TRACKS TO VINYL**

**Ron McMaster's life has come full circle twice over**, intersecting in the intimate setting of the George Augspurger-designed room he has worked in for almost 30 years at Capitol Mastering. First, the resurgence of vinyl has made Capitol's sole disc-cutting engineer as busy as he was when he started cutting lacquers in the 1980s. This past year, he worked on a project he never would have dreamed of doing for Jack White's label, Third Man. Namely, he got behind his lathe and cut lacquer for songs he recorded at 19 years old with his band Public Nuisance, for an album that got shelved and forgotten by the music industry 40 years ago.

Formed in the mid-1960s, Public Nuisance was a garage-rock band McMaster started with his high school friends in Sacramento, Calif. They toured mostly in Northern California, playing shows with such bands as The Grateful Dead, Buffalo Springfield, Janis Joplin and the Doors. In the late '60s, they signed to Terry Melcher's Equinox label and cut a record with famed producer Eirik Wangberg. Public Nuisance seemed to be heading toward success, until the Manson murders altered their course.

"The story goes that Charlie Manson was trying to get signed to a record deal," McMaster recalls. "Terry turned him down, and it really ticked him off. So Manson wants to go to his house to take care of him, but he was no longer living there. Manson goes in and does this terrible thing, it freaks Terry out, and he just dropped everything. We were on the desk ready to go, and everything just stopped."

The band broke up and in 1971, and McMaster moved to Los Angeles to become a session drummer, working by day with an engineer at Sound Recorders. "In those days, studios of that caliber all had

a disc-cutting room," McMaster says. "That is when I first discovered disc mastering and what it was all about. When I had some free time, I'd go watch him cut records and just really thought it was fascinating how he did it, and the variety he got in a typical work day. He would do a rock album in the morning and a Hawaiian album in the afternoon. I wasn't the type of individual who could be in the same room for three or four months with a band. That didn't interest me. This interested me because of the turnaround and the variety and the challenge of getting the recording from tape onto disc."

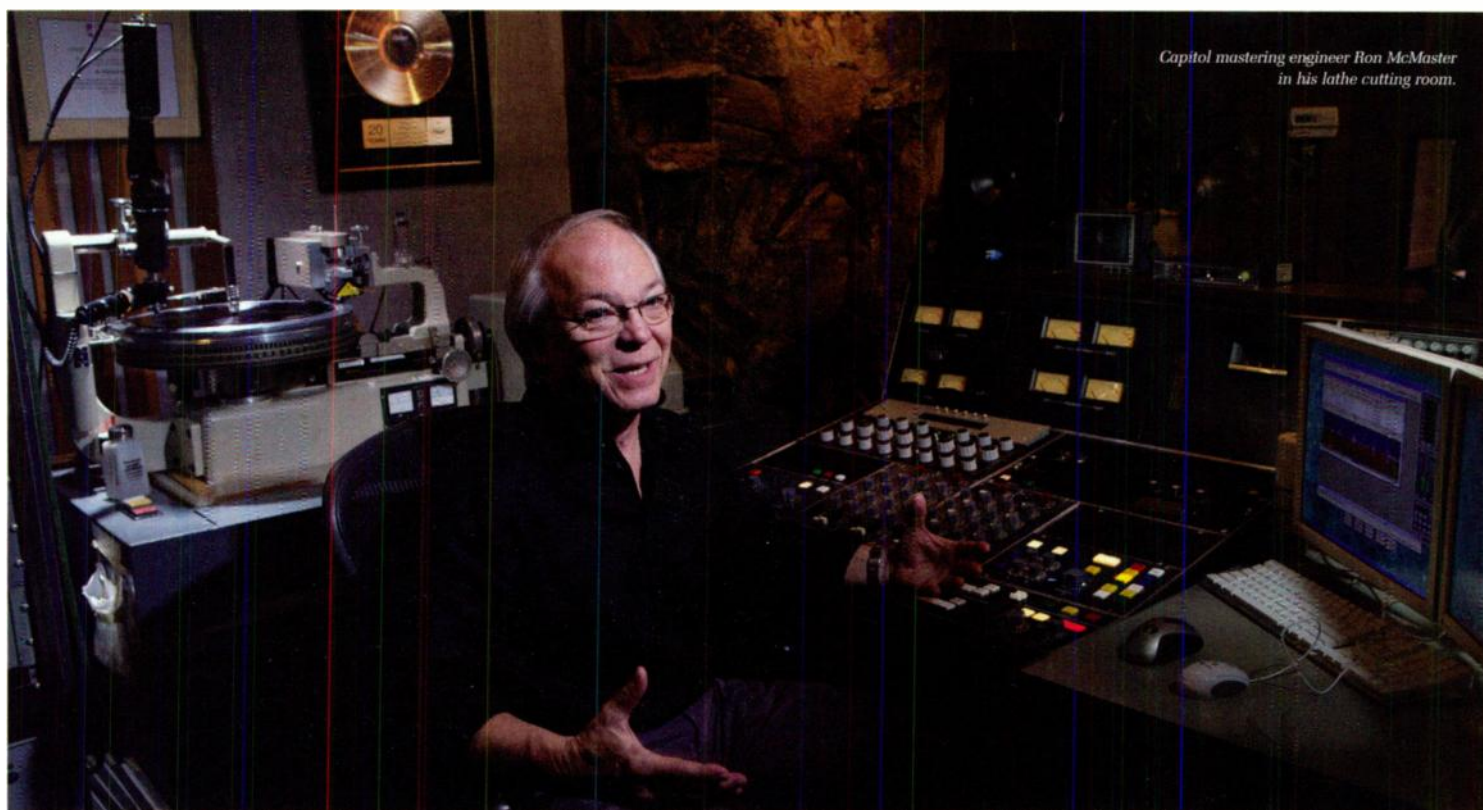
So McMaster began to pursue an engineering path more seriously, getting a job selling tools during the day to pay the bills, and spending his nights at A&M Records being taught the craft by a friend who was a disc-cutting engineer at the label. He landed his first job as an engineer at United Artists working for Dino Lapis, and then moved over to Capitol in 1986.

Public Nuisance and the record they recorded remained a distant memory until early 2000 when a tiny label called Frantic got hold



*Mastering engineer Ron McMaster gets into the groove on a recent vinyl project.*





Capitol mastering engineer Ron McMaster in his lathe cutting room.

of some of their material for a “Best of Garage Bands in the ‘60s” compilation and released a full-length album of their songs. The CD sold a few thousand copies, then went out of print. Almost a decade later, Jack White got his hands on a copy and began tracking down the members of Public Nuisance. He signed the band, released the album, and gave Public Nuisance a long-awaited chance in the spotlight. Of course there was only one person to look to for mastering and cutting the lacquer for the aptly titled *Gotta Survive*.

“Part of this deal was that I didn’t want anyone else cutting this record,” McMaster laughs. “I had all the master tapes at home, so I said I would do it and I had the experience of being my own worst client! There are some people who will just labor over something, and now I found myself doing the same darn thing! I was in here all day cutting my own parts. And I had a blast doing it.” The album was mastered directly from the original 2-track analog masters using essentially the same tools, updated with modern mastering elements. The tape machines he uses are a Studer A-80 Disc Mastering machine with ¼-inch and ½-inch head stacks, and an ATR 4-channel machine with ¼-inch and ½-inch head stacks. Signal is passed through a Capitol/Neve custom mastering console with dual Neve 1081 mastering equalizers and the custom-built Capitol 5511 tube limiter compressor. The lathe is a Neumann VMS 70, installed in the 1970s at the request of the Beatles. “The story goes that when we ended up cutting a lot of Beatles stuff here for America, they wanted to cut on the same lathes that were being used over at Abbey Road,” McMaster says.

Capitol Mastering has a long history of quality vinyl mastering, with the first stereo disc being cut by EMI engineers on an in-house system built in 1933 and the Neumann lathes housed at the Tower in

Hollywood, which have been running since the mid ‘50s. Cutting lacquer is an artisan’s craft that takes years to master, and depends on a refined skill set that incorporates musicality, precision skills, math and science. Possessing all of this, McMaster has been a key player in maintaining Capitol’s stellar vinyl-cutting history.

“I do the best job I can, keep the music as transparent as possible and make it sound as good as it should,” McMaster states. “People come here because they like the warmth of the room, and they like the sound I get out of it. I’ve been here a long time, and I can work this room pretty good.”

The landscape of the Capitol Mastering is again shifting to answer to the increase in demand for vinyl products. Another Neumann lathe is being pulled out of storage, dusted off, and set up in an additional room dedicated to mastering and cutting discs. The demand for McMaster himself continues to increase on a daily basis.

“It’s a pretty narrow field I am finding out as I get older,” he says. “There are not many of us around that do this. Now that it’s got this second life, all of a sudden I’m busier. I feel like I got my old job back. I’m even training someone new, and it is working out great. I am so happy because I wanted to be able to pass this art on. It was bumming me out that it looked like there wasn’t going to be anyone here to take this over. So I am getting great satisfaction out of the fact that I am now able to pass on this craft.”

With this veteran engineer “getting his old job back” and Jack White helping him to realize a youthful dream he had long given up on, the most important message to take from the changes and rediscoveries over the past few years is clear. “My new mantra is ‘never give up,’” McMaster says. “I tell all my clients and friends that if I can be in my 60s and be signed to a record deal for something I did when I was 19, there is always hope at the end of the tunnel.” ■





# ENDER'S GAME

## EARTH VS. ALIEN CREATURES IN FUTURE SPACE WARS

By Blair Jackson

**E**nder's Game, director/screenwriter Gavin Hood's ambitious and arresting film version of the best-selling 1984 science fiction book of the same name, has deservedly received rave notices for its imaginative depiction of life on enormous space stations, mock battle exercises in a zero-gravity geodesic sphere and intergalactic wars involving thousands of spaceships. Those are just three of the environments and situations that challenged the sound team. Then there's also the fiery destruction of a planet, a wild videogame within the story, a prominent insectoid figure, futuristic weapons and vehicles, implications of mental telepathy, and scads of assorted rooms, chambers and atmospheres in space and, briefly, good ol' planet Earth. This was most assuredly a CGI designer's playground, but it was also an amazing sound canvas to work upon, too.

Spearheading the sonics on *Ender's Game* was supervising sound edi-

tor and sound designer Dane Davis, who is perhaps best known for his Oscar-winning (and highly influential) work on *The Matrix* and its two sequels, but whose long resume includes dozens of feature films in many genres—from *Boogie Nights* to the two-part *Twilight: Breaking Dawn*—as well as documentaries, shorts and even videogames. Working in consultation with director Hood and noted film editors Lee Smith and Zach Staenberg, Davis and his sound-editing crew at Danetracks, now on the Warner Bros. lot in Burbank, began their design work long before anything approaching completed visuals was available. Taking their cues from paintings on Hood's iPad, animatics, the script, and the original book, they spent countless hours conceiving of ways to make every ambience interesting, every action piece somehow believable.

Central to the story is an imminent war between humans and a super-species of large bug-like aliens known as Formics, who had attacked Earth



years ago and were beaten back, but are believed to now be gearing up for a full-scale invasion. Davis approached the task by constructing the sounds for the Formic spaceships and the human-piloted ones from different fundamental materials—for the Earth's vessels, he used metal sounds exclusively, while for the Formic crafts, "I think of their spaceships as being secreted by these insects; not manufactured from materials," Davis says from Chicago, where he's been working on *Jupiter Ascending*, his sixth film for *Matrix* directors Andy and Lana Wachowski. "They're exoskeletal shells, and the way they move and the spaceships and the weapons—it all feels like it's evolved biologically. It's also the physics of the materials that help define how I approach the sound. It's part of the storytelling.

"So I thought: 'How about if the Formic ships are made entirely out of insect sounds?' By and large, I used single individual insects: a single locust, a couple of single crickets, some grasshoppers. It had to scale—one, 200, 50,000, 200,000—but always still sound organic, like they were living things. So obviously there was a lot of manipulation and a lot of layering. I wanted [the Formic ships] to sound sort of anti-metal—humans tend to use metal for all this stuff; even if it's a composite material. I made everything with the human ships out of metal sounds, including the thrusters—metal slowed down a lot and modulated and overloaded."

What are the initial metal sounds coming from? "Just the sound of metal being stimulated or struck," Davis says. "Like, I recorded a bunch of candlestick holders, pots and pans and wind chimes and then manipulated those sounds in a lot of ways. I would bang a metal candlestick holder that was on the Foley stage really hard with a mallet and then layer that up around 30 times on itself in Pro Tools. I'll create a longer resonance out of it that's varying, and not so mathematically simple as a reverberation algorithm, and overload them a little bit to give them more real-space acoustics, and also modulate them. I love using MondoMod, a great old Waves plug-in I use all the time, and I also use SoundToys' Tremolator, and the GRM Doppler, in particular, to create this virtual acoustic space, where sounds change when they shift in the environment."

Among the other plug-ins he employed for the sound design were SoundToys' Decapitator, PSP Audioware Vintage Warmer2, Wave's Kramer Tape, the Massey TapeHead and Serato Pitch 'n Time (which he called "indispensible"). He adds, "Outside of Pro Tools, I use several custom programs from Mike Schapiro of Schapiro Audio, who also makes the beautiful Skillet controller I employed extensively for panning and automating plug-ins. For *Ender's Game* I used his prototype, but he will be selling Skillets at the end of the year."

The base metal recordings were made using a variety of microphones into Sound Devices 722 recorders. To best capture what Davis calls the



Ron Bartlett (dialog/music mixer), Chris Alba (Foley supervisor), Alex Gibson (music editor), Lee Smith (picture editor), Eric Lindemann (sound designer), Dane Davis (sound designer/supervising sound editor), Stephanie Flack (co-supervising sound editor), Matt Kielkopf (first assistant sound editor) and Doug Hemphill (FX mixer).

"perturbed upper harmonics" of the struck metal, "We needed mics that are extremely high frequency-sensitive, including the Schoeps XTs, but there are also some others that I'm really proprietary about that go much higher. I always record with several different mics to see what's up there [in the higher frequencies], because as you're pitching stuff way down, you want a lot of that. I usually record at 192, and we also had a True [Systems] preamp that's really clean when we recorded directly into Pro Tools HD."

Interestingly, for the sound of a planet being incinerated, he relied entirely on human sounds—namely, his own voice, again seriously manipulated. "I use voices a lot," Davis says. "I wanted it to be a sympathetic sound that wasn't cold, because it was important for there to be an emotional connection to this. Fire itself is a difficult material to work with [sound-wise]. In movies that use fire, you usually have to use other things to make the fire sound interesting and emotionally evocative.

"Also, when you're on the Eros planet [once a Formic colony], I used human screams to make all the exterior and interior ambiances, because I wanted them to have an emotional, empathetic quality. Before the humans put a command base on this planet, they basically had to kill off all the Formics, and I wanted it to always feel like it's haunted; like the ghosts of these insects—their enemies—are haunting the people there."

On the other hand, the deep space battle school where the young hero of the film, Ender Wiggin, joins with an elite group of kids and teens to learn about becoming space commanders, called for a much different treatment. "The school looks shiny and new; it's not like something out of *Alien*," Davis says, "But Gavin wanted to suggest that there's also this sense that it's maybe starting to wear out, because time is running out. Maybe the axle at the core of this rotating school is wearing out, so I created ambiances in every room where you sort of hear this deep thud, and even the air-handling life support systems are all looping in the same intervals all the time. We're trying to subtly suggest that things are not that stable," which adds to the overall tension of the build-up to war.

Eric Lindemann, who has worked with Davis since the first *Matrix* film,



was tasked with designing the weapons and explosions, and sound designer/mixer Tom Ozanich handled the FX predubs. Typical of these sorts of CGI-heavy films, the design work didn't stop when the final mix began, as late-arriving visuals required constant sonic updating. "Our lives are always enslaved by the visual effects schedule," Davis says, with absolutely no hint of bitterness. "The schedule was even extended six months, but everything still ended up being last-minute. By the time we finally had something onscreen, we had very little time to build these battle scenes from what I had through all the temps to what was now on the screen. It was a huge job. At one point I didn't leave my studio for six days."

Ron Bartlett came onboard as re-recording mixer for dialog and music, while Doug Hemphill handled FX. The duo is one of the most respected teams in L.A., having worked together on such recent films as *Life of Pi* (for which they were Oscar-nominated), *Prometheus*, *Rise of the Planet of the Apes*, *X-Men: First Class* and *Sherlock Holmes*, along with dozens of others both together and with other mixers. (Next up for the team: *The Maze Runner* and *X-Men: Days of Future Past*.) *Ender's Game* was mixed on the John Ford post stage at Fox in L.A. using the enormous Neve DFC console and also an Avid Icon.

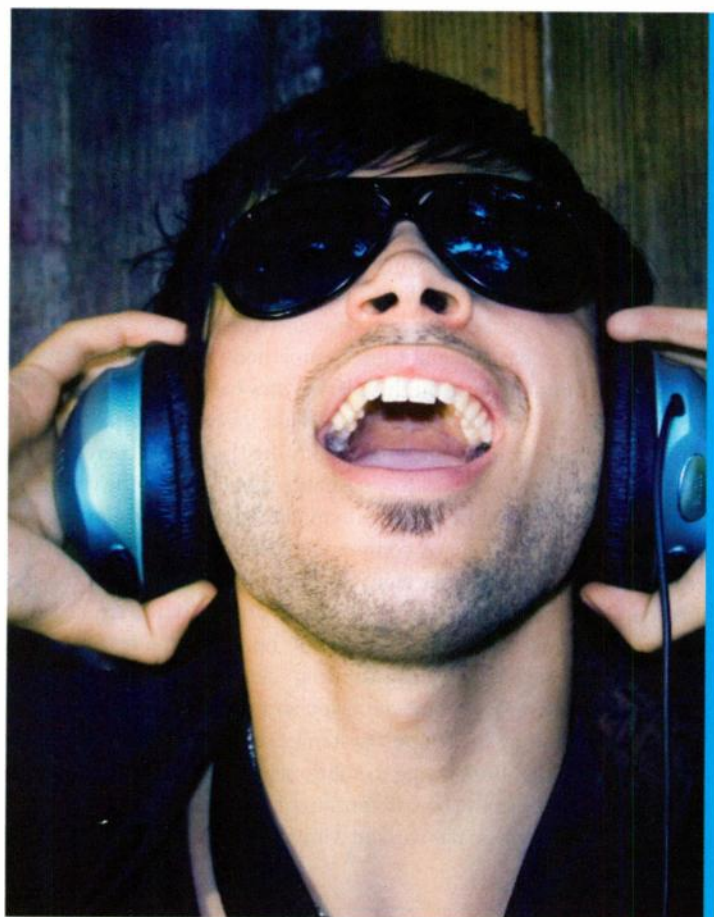
"This mix was very challenging, and a lot of it had to do with the way films are mixed now," Hemphill comments. "The way Ron and I mix, our first order of business is you have to hear what the actors are saying. Lee Smith was running the mix, and like us he lets the performance dictate. That is, you're not sitting there looking at the back of the mixer's head while

he stops constantly and analyzes every detail; you're rolling forward at 90 feet a minute. So we were constantly moving ahead in real-time mixing.

"We wanted a fast tempo to see what ideas came out of working quickly. I know a lot of people like to work that way now—from Michael Mann to Ridley Scott to Peter Weir; it's a long list. What that means as mixer is you're almost watching as an audience member and you want it to sound a certain way. Dane is very good at that and so is Lee—they're both very instinctual and very quick."

Bartlett certainly had his hands full keeping the all-important dialog clear in a multitude of unusual settings. "I used every trick in the book," he says with a chuckle. "I used a lot of different reverbs and IRs [impulse response recordings that match particular ambiances]. There are obviously a lot of different spatial environments to deal with. There's the giant geodesic dome they battle in, and we had several different things going on there: a delay that would bounce off the walls, and a couple of different reverbs. I would use certain reverbs [on the dialog] when they were closer up, so it gave more of an intimate feel—like when Ender and Bean are talking among themselves, you hear the other kids battling off in the distance with a much longer reverb and more delays to give a lot of perspective. I wanted to make that place seem interesting and huge because it's so amazing visually. Then, later, when they're in that huge [battle] simulator room, you've got all the admirals and everybody behind the glass watch-

*Continued on p. 62*



## YOUR CAREER IN AUDIO IS ONLY 12 MONTHS AWAY!

Contact us to learn how you can quickly become skilled in studio recording, live sound engineering, audio production/post production for film and television, and video game sound. **Grab your seat before it's too late.**



CONSERVATORY OF RECORDING  
ARTS & SCIENCES

Expanded  
Curriculum

Learn More at [CRAS.edu](http://CRAS.edu)

*Financial Aid and Veterans' Benefits available for those who qualify.*

1.888.604.4075 | [CRAS.edu](http://CRAS.edu) 2300 East Broadway Road, Tempe, Arizona 85282

Consumer information available at: [www.audiorecordingschool.com/consumer.html](http://www.audiorecordingschool.com/consumer.html)







Abbey Road Studios

# CFX CONCERT GRAND

VIRTUAL PIANO

EXPERIENCE THE **PASSION REFLECTED IN EVERY DETAIL** AT [GARRITAN.COM](http://GARRITAN.COM)

COMING SOON

garritan. |  **YAMAHA** |     

makemusic 



# HEAVYOCITY FOR HEAVY MELODIES

Sound Design, Composition  
and VI Creation



Ari Winters, Neil Goldberg, and Dave Fraser

By Gary Eskow

**I**n a previous life, Neil Goldberg, a founding member of Heavy Melody Music, was a guitarist with the cult metal band Annihilator who once turned down Sharon Osbourne when she offered him an audition for Ozzy's band. The time wasn't right.

In another previous life, Goldberg was a staff composer for Sunday Productions, a jingle house that was a staple in the Manhattan advertising community for decades. There, along with business and composing partner Dave Fraser, he wrote music for a number of Gillette Super Bowl spots as well as ad music for GE, The NFL, Sony, AT&T and others.

Today, he and Fraser, along with two other staff composers/sound designers, produce tracks for movie trailers and video games under the moniker Heavy Melody Music, while also developing virtual instrument libraries under the name Heavyocity. So we'll start with the obvious: How does one square producing commercial music with the image of a beast, armed with a six-string hammer and a warrior mentality?

"That's a good question!" says Goldberg, who grew up in Massachusetts, the son of two social workers, before heading off to nearby Berklee College of Music. "My days of touring with a speed-metal band ended many years ago, but I still love crunchy guitar. Film and game soundtracks and electronic music also attract me. The emotion of contemporary film-trailer music is a perfect outlet for us to combine the many styles that influence us in unique ways. We like to mix

in sound-design elements for the tracks we release. With both Heavyocity and Heavy Melody, we take a 'music-meets-sound-design' approach."

Heavy Melody Music, located on 7th Avenue, just below midtown Manhattan, is home to four composers, all of whom mix the tracks they write and produce, often with input from their colleagues. Co-founder Fraser met Goldberg when both were Berklee students. He is, according to Goldberg, the one who decided that Heavy Melody Music should expand into the virtual instrument library field.

Composer/sound designer Ari Winters has been a core member of the team for years, with work featured on motion picture and game trailers, including *Zero Dark Thirty* and *Dead Space 3*. The fourth and newest member of the team, composer/sound designer George Valavanis, is also a DJ and record producer; many of his songs have been released on KD Music, Suara, Buddha Bar and other labels.

Mix spoke to Goldberg about his writing and the libraries that Heavyocity designs.

## How are the Heavy Melody Music studios laid out?

"We have four composing/studio rooms, two of which share a live room. I have a small room off of my studio where I record my guitar work. Digital Performer 8 is my workstation—I know that DAW inside and out, so I don't have to think about anything when I fire it up."



# modern meets classic

Sterling Audio has earned a permanent place in the microphone lockers of studios around the world for our meticulous integration of traditional and modern technologies. Perfect for vocals, instruments, percussion and more, Sterling Audio microphones capture what others leave behind.



#### **ST6050 Classic FET Condenser**

A classic and simple FET design, voiced by legendary recording engineer Allen Sides. This 2012 TEC nominee delivers "an impressive, larger than life sound", noted for stunning clarity, a rich, warm, open sound and silky top end that exquisitely captures vocals and acoustic instruments. **\$999.99**



#### **ST69 Modern TUBE Condenser**

An artful blend of modern and traditional technology. This 2009 TEC nominee delivers extremely accurate transient response without compromising richness and warmth. Loaded with advanced features and includes shock mount, power supply, and hard-shell case. **\$599.99**

#### **ST55 Modern FET Condenser**

Affordable, versatile, and flexible. Incredible smoothness, detail, and articulation with a uniquely warm FET preamp that yields outstanding results on a variety of voices and instruments. Features high-pass filter and -10dB pad. **\$199.99**

ST55

ST6050

ST69

Find the entire family of Sterling microphones at these preferred resellers.



**Musician's Friend**



# **STERLING**

capture the moment

World Radio History



# Sonic Farm

"It could make the difference between a thank-you-note and a Grammy!"

## Creamer Plus Pentode Preamp



"What an amazing box! I now have two of them!"  
**Rafa Sardina, Los Angeles, 12 Grammys**

"I used it to record all guitars on the new Lady Antebellum CD. A must have tool!"  
**Carl Schleicher, Nashville, 3 Grammys**

## Silkworm series 500 Preamp



2Di4 pentode DI

## Creamliner Line Preamp



"The Creamliner across the stereo bus of the DiGiCo has given me exactly—and I mean that literally—what I've always wanted in that regard."

**Chris Rabold, FOH engineer for Beyonce, Lady Gaga and Kenny Chesney.**

**FREE SHIPPING WORLDWIDE FOR MIX readers until Jan 15 2014!**  
Use coupon code **MIX1312**

The gear for the discriminating audio professionals. Only direct from our site:

**www.sonicfarm.com**

## CHECKING OUT THE LIBRARY

In 2004 Dave Fraser came up with the concept of aggressive, unusual-sounding sample libraries, which worked its way into EVOLVE, Heavyocity's first library. The company's two newest libraries, AEON Rhythmic and Melodic, were released earlier this year.

Rhythmic and Melodic share similar-lookingskins and many common features. Plenty of presets are offered for both. They're universally excellent, but watch out: if you rely too heavily on them, you could sacrifice your individuality. The arpeggiation presets in particular are extremely attractive—they sound great but have a powerful gravitational pull. Instead of building tracks around them, start out with Melodic's Aeon Hits or Rhythmic's Single Loops and dive under the hood.

The composers at Heavyocity used ReCycle during their surgical procedures. If you're looking to customize a Rhythmic loop, a good place to start is the Advanced Loop page. All REX files are laid out as slices on the keyboard and in the display. Experimenting with tuning, panning, and the levels of individual slices can yield interesting results. The loops—aggressive to begin with—can punch harder or be toned down to taste by accenting or clamping down on the most radical sounds.

The effects package (Trigger FX) consists of Distortion, Lofi, Filter, Panner and Pitch Mod devices, and is identical in both instruments. The first page houses a simple set of controls for each effect, but if you want to dig deeper, the Advanced page gives access to step sequencers that let you customize the sounds further by auto-modulating the parameters. A very cool feature allows you to turn the five effects on and off in real time by invoking the keys F6-A6. The tippy-top keys, Bb6-C7, engage an Amp Sequencer; you'll use it to modulate an instrument's output at multiples of the original tempo, which is locked to your host. Set your DAW to 120 bpm, the rate of the amp sequencer to 16th notes, and press C7, which "pattern-gates" the output at 64th-note steps (this sounds complicated but isn't). There you are...Stutter Step!

The Punish control beats the hell out sounds beautifully. The manual says that Punish is a "combination of compression and saturation controlled from a single knob." You'll be tempted to crank this one all the way up, but a more judicious application can yield pleasing results as well. Twist, "an animated, tone-altering effect," does just that. Assign MIDI CC controllers to these two controls and you'll taper the effects to taste as your track evolves.

The MIDI data that drives Melodic's loops can be drag-and-dropped to your sequencer for further editing. These commands select slices for playing in the manner that Spectrasonics does with Stylus RMX. According to Goldberg, a Kontakt 5 limitation doesn't allow for the transfer of Rhythmic's arpeggiation information, which is a drag since the sequences these folks came up with are excellent. Of course, nothing prevents you from studying this material, setting your sequencer to a hard quantize value of 16th notes, say, and playing the identical patterns. You could then set all MIDI velocities to 64, lengths to 16th notes and edit to your heart's content.

Sampled instruments fall into categories. Those that reproduce "real" instruments are short on sound-sculpting tools. Libraries that fall into the post-Buchla realm must balance ease of use with power. Heavyocity has done a great job in this regard.

Bottom line: AEON Rhythmic and Melodic are outstanding instruments and very reasonably priced. AEON Rhythmic (\$299); AEON Melodic (\$199); Bundle price: \$399. Purchased as downloads from [www.heavyocity.com](http://www.heavyocity.com)

## Do you use any of DP's internal instruments or effects?

"Not too much. I have lots of third-party instruments—I love iZotope, for example, and have most of their stuff. I also use a number of plug-ins from Waves, PSP and SoundToys, and I have two UAD cards. Their stuff is modeled extremely well.

"I'm running a pair of 8-core Mac Pros and a 12-core Mac Pro. All of them have 32 gigs of RAM. Genelec 8040s are main monitors, and I have a Focal CMS subwoofer. For video output, I use an Apple 27-inch monitor on my main machine. I also run an HP 27-inch video monitor that can switch between that Mac and one of my slaves. The second slave has a Dell 23-inch monitor on perma-

nent assignment. Both slaves run Vienna Symphonic Library's VE Pro and a number of other virtual instruments."

**The AEON virtual instruments include quite a few filtering and EQ features. How would you compare the signal processing that you use when you're recording and editing a sample library with the tools available to the end user inside the software?**

"That's an interesting question. Our initial goal is to capture the sound using great outboard equipment. Then we bring the material into the DAW for editing. We're not shy when it comes to using plug-ins to alter and improve audio—our sounds can be aggressive. I have

*Continued on p. 63*



# stand•ard [ 'stan-dərd ]

noun

1. an object that is regarded as the usual or most common form of its kind
2. something established by authority, custom, or general consent as a model or example
3. the stuff no studio is complete without



**0% INTEREST FINANCING**

*with the Vintage King G.A.S. Card*

More info at [www.vintageking.com/creditcard](http://www.vintageking.com/creditcard)

## TELEFUNKEN U47

For 60+ years, the U47 has been the mic every great singer deserves



## ROYER LABS R-122V

Classic Royer design, tube-powered – the ultimate ribbon mic experience



## BOCK AUDIO IFET

Two mics in one with classic FET and VOCAL modes, built in LA



## BEYERDYNAMIC MC 840

Extremely versatile with 5 polar patterns, 3-position HPF & great transient response



## PELUSO P-67

Vintage U67 character: full, rich and smooth sound; solid, well-focused mid-range





# 29th ANNUAL TEC AWARDS

(TURN THE PAGE FOR A COMPLETE LIST OF NOMINEES)

Presented by the NAMM Foundation, the 29th Annual TEC Awards will be held at The NAMM Show in Anaheim, Calif., on Friday, January 24, 2014. The TEC Awards recognizes the individuals, companies and technical innovations behind the sound of recordings, live performances, films, television, videogames and other media. TEC Awards nominations are made by a panel of industry professionals and voted upon by members of various professional organizations and audio industry media, including NewBay Media publications. A

special TEC Awards Voter's Guide will be distributed digitally to eligible voters in early December.

The 29th Annual TEC Awards marks the first TEC Awards to be presented by the nonprofit NAMM Foundation, which, as the charitable arm of the NAMM organization, seeks to advance active, lifelong participation in music making by supporting scientific research, philanthropic giving and public service programs of the music products industry.

## LES PAUL AWARD

### Todd Rundgren



The term "renaissance man" is thrown around fairly indiscriminately these days, but Todd Rundgren truly is a renaissance man—a singer, songwriter, composer, multi-instrumentalist, producer, engineer, video artist, tech pioneer and visionary.

The Philly native first opened eyes nationally when he fronted the rock band The Nazz in the late '60s, but it wasn't until he started making solo albums a couple of years later that he earned his first hit, "Hello, It's Me" (which he originally had cut with The Nazz) on his ambitious 1972 double-album, *Something/Anything*. That record was also notable because on three of the four sides, Rundgren played all the instruments.

Since then, he's recorded albums in every conceivable way—with bands (Utopia is his most famous), without bands, layering instruments one at a time, live in the studio with no overdubs, live onstage...you name it. Rundgren also has an extremely impressive career behind the board. By the time he left The Nazz in 1969, he had learned so much about recording and production that he became an in-demand engineer and producer.

Rundgren has continued to do vital and compelling work.—Blair Jackson

## HALL OF FAME

### John Meyer



John Meyer, president and CEO of Meyer Sound Laboratories, Inc., was born in 1943 in Oakland, Calif. John had already worked on the Steve Miller Band's sound at

the Monterey Pop Festival in 1967 when he attracted public attention with his invention of the intriguing Glyph loudspeaker, which Stewart Brand described in *The Last Whole Earth Catalog* as "the first loud sound I ever heard that didn't make me want to run."

After installing a quadraphonic Glyph system at a San Francisco Bay Area nightclub, Meyer was offered a position as an in-house loudspeaker designer at San Francisco's McCune Sound Service (now McCune Audio/Video/Lighting), where he gained valuable experience about the realities of live sound reinforcement. In the mid-'70s, Meyer was invited to help establish an acoustics laboratory at the Institute for Advanced Musical Studies in Switzerland, where he began his pioneering work on low-distortion horns and integrated, large-scale loudspeaker systems.

Since founding Meyer Sound in Berkeley, Calif., in 1979, Meyer has focused on research and development projects surrounding the design, manufacture, and use of loudspeakers.

## HALL OF FAME

### Hal Blaine



Hal Blaine first became known to the ears of America as the heartbeat, as well as the locomotive, in Phil Spector's Wall of Sound. Blaine—born Harold Simon Belsky in

Holyoke, Mass. on Feb. 5, 1929—is legendary for his work as the core element of the famed Wrecking Crew, so named because of their ragtag and new-generation habits. As the Wrecking Crew's reputation grew, so did the number of headline artists that wanted to get in on the special fairy dust. Elvis, Frank and Nancy Sinatra, the Tijuana Brass, Sonny and Cher, The Beach Boys, the Fifth Dimension...the list was growing faster than they had time to lay down the tracks.

Blaine is on record as having performed on more than 350 Top 10 singles, including more than 40 that went to Number One. During one seven-year stretch, Blaine played drums on six Grammy Records of the Year. He holds the world's record as most recorded musician of all time, logging more than 35,000 recording sessions in his more than 50-year career as a top session drummer. He is a member of the Rock & Roll Hall of Fame, the Musicians Hall of Fame and Museum, and the Percussive Arts Society Hall of Fame.

SPONSORED BY

broadjam.com®  
connect to independent music

HAL • LEONARD  
CORPORATION

HARMAN



Solid State Logic  
SOUND || VISION

SHURE



"Sounds superb... The combination of Aeon Melodic and Rhythmic is a sample-based winner for sound designers and musicians alike."  
- COMPUTER MUSIC (September, 2013)



"...the best of many worlds is mixed together to create presets that are sonically rich and interesting."  
- MUSIC TECH (September, 2013)



# INTRODUCING THE AEON COLLECTION



INSPIRATION REDEFINED

## HEAVYOCITY

SAMPLE YOUR FUTURE

VIRTUAL INSTRUMENTS TO REDEFINE YOUR SOUND



DAMAGE



EVOLVE



EVOLVE  
MUTATIONS



EVOLVE  
MUTATIONS 2

DOWNLOAD TODAY AT [HEAVYOCITY.COM](http://HEAVYOCITY.COM)



## OUTSTANDING TECHNICAL ACHIEVEMENT

### Ancillary Equipment

Access Products Triad-Orbit Advanced Mic Stand  
IsoAcoustics ISO-L8R130 Speaker Stands  
iZotope Insight Metering Suite  
Radial Engineering StageBug SB-5 DI Box  
Rational Acoustics Smaart v.7-Di Analysis Software  
Whirlwind Power Link 3-Phase AC Power Distro

### Audio Apps Technology for Smartphones & Tablets

Focusrite Tape  
JoeCoRemote  
Propellerhead Thor  
Soundcraft/Studer Audio Calc Toolkit  
TC Electronic TonePrint Editor  
Yamaha CL StageMix

### Hardware/Peripherals For Smartphones & Tablets

Akai MPC Fly 30  
Apogee Quartet  
iK Multimedia iRig HD  
Line 6 Sonic Port  
Peavey AmpKit LiNK HD  
RØDE iXY iOS Mic

### Microphone Preamplifier Technology

AMS Neve 1073N  
Aphex Project Channel  
Earthworks 521 ZDT  
Millennia Media HV-37  
RME OctaMic XTC  
Rupert Neve Designs Portico 511

### Studio Monitor Technology

Emotiva Pro Stealth 8  
Eve Audio SC200 Series  
Genelec M Series  
JBL Professional M2  
Neumann KH 310 A  
Pelonis Signature Series 4288 MK II

### Recording Devices

Allen & Heath ICE-16  
iZ Corp. RADAR 6  
JoeCo BlackBox BBR64-MADI Recorder  
Roland R-88 v 1.1  
TASCAM DR-60D  
Zoom H6

### Musical Instrument Amplifications & Effects Technology

Ampeg Heritage B-15N Combo  
Eventide H9 Harmonizer Stompbox  
Fender Excelsior Pro  
Line 6 POD HD500X  
Orange OR100  
TC Electronic Ditto Looper

### Amplification Hardware/Studio & Sound Reinforcement

Ashly Audio nX Series  
Crest Audio CLh 5000  
Drawmer MC2.1 Monitor Controller  
Lab.gruppen IPD Series  
QSC Audio PLD Series  
Sennheiser HDVD 800 Headphone Amplifier/DAC

### Computer Audio Hardware

Antelope Audio Orion32  
Apogee Symphony 64 | ThunderBridge  
Audient iD22  
Focusrite Scarlett 18i20  
Merging Technologies Horus DSD-DXD Edition  
Universal Audio Apollo 16

### Musical Instrument Technology/Hardware

Dave Smith Instruments Prophet 12  
Fishman TriplePlay

Moog Music Sub Phatty  
Nord Lead 4  
Roland Integra-7  
Tronical TronicalTune

### Musical Instrument Technology/Software

Arturia Analog Lab  
Native Instruments COMPLETE 9  
Propellerhead Radical Keys  
Sound Magic Imperial Grand v2.9  
Steinberg Padshop Pro  
Waves Element

### Signal Processing Technology/hardware

CEDAR DNS 8 Live Dialogue Noise Suppressor  
Crane Song Falcon Compressor  
Lake Controller 6.1 for LM/PLM Series  
PreSonus ADL 700 Tube Channel Strip  
Rupert Neve Designs Portico 542 Tape Effects  
Solid State Logic 500 Series Buss Compressor

### Signal Processing Technology/Software

Eventide H3000 Factory Native  
iZotope Trash 2  
Kush Audio Clariphonic DSP  
Slate Digital Virtual Buss Compressors  
SoundToys Radiator  
Universal Audio Teletronix LA-2A Classic Leveler Collection

### Sound Reinforcement Loudspeaker Technology

Electro-Voice ZLX Series  
JBL Professional PRX700 Series  
Line 6 StageSource L2t  
QSC Audio AcousticPerformance Series  
Tannoy VLS Series  
VUE Audiotechnik al-8

### Microphone Technology/Sound Reinforcement

AKG D12VR  
DPA d:facto II  
Holophone Super C  
Lewitt DTP 640 REX  
Shure KSM9HS  
Telefunken Elektroakustik M82

### Microphone Technology/Recording

AKG C451 Limited Edition Classic  
Audio-Technica AT5040  
Blue Microphones Nessie  
JZ Microphones J1  
Lewitt LCT 940  
Royer Labs SF-2

### Headphone/Earpiece Technology

AKG K712 Pro Headphones  
Audio-Technica ATH-M50RD Headphones  
Aurisonics AG-2 In-Ear Monitors  
beyerdynamic Custom One Pro Headphones  
CAD Audio The Sessions MH510 Headphones  
Shure SE846 Sound Isolating Earphones

### Wireless Technology

AKG WMS4500 Series  
Audio-Technica System 10  
Line 6 Relay G55  
Sennheiser Digital 9000  
Shure GLX-D Handheld Systems  
Sony Electronics DWZ Series

### Workstation Technology

Ableton Live 9  
Apple Logic Pro X  
Avid Pro Tools 11  
MOTU Digital Performer 8  
PreSonus Studio One Professional 2.6  
Propellerhead Reason 7

### Sound Reinforcement Console Technology

Avid S3L  
DiGiCo SD7T  
Midas Pro1

Solid State Logic LIVE  
Soundcraft Si Performer  
Studer Vista 1

### Small-Format Console Technology

Allen & Heath Qu-16  
Behringer X32 Compact  
Mackie DL806  
Rupert Neve Designs 5060 Centerpiece  
Soundcraft Si Expression  
Solid State Logic Sigma

### Large-Format Console Technology

Calrec Artemis with Automixer  
Harrison MPC5  
Lawo mc²56 MKII  
Slate Pro Audio Raven MTX  
Solid State Logic Duality Pro-Station  
Studer Vista 5 M3

## OUTSTANDING CREATIVE ACHIEVEMENT

### Record Production/Single or Track

"Get Lucky," Daft Punk  
"I Will Wait," Mumford & Sons  
"Locked Out of Heaven," Bruno Mars  
"Mirrors," Justin Timberlake  
"Skyfall," Adele

### Record Production/Album

*Girl on Fire*, Alicia Keys  
*Old Yellow Moon*, Emmylou Harris and Rodney Crowell  
*Psychedelic Pill*, Neil Young & Crazy Horse  
*Random Access Memories*, Daft Punk  
*Unorthodox Jukebox*, Bruno Mars

### Tour/Event Sound Production

*Bruce Springsteen & the E Street Band—Wrecking Ball Tour*  
*Paul McCartney—Out There! Tour*  
*Peter Dinklage—Back to Front*  
*The Rolling Stones—50 & Counting*  
*Sting—Back to Bass Tour*

### Remote Production/Recording Or Broadcast

*12-12-12 Concert for Sandy Relief*  
*35th Annual Kennedy Center Honors*  
*55th Annual Grammy Awards*  
*Carnegie Hall Live: Chicago Symphony Orchestra, 'Carmina Burana'*  
*Centric Live: Fantasia at The Fillmore*

### Film Sound Production

*Argo*  
*Les Misérables*  
*Life of Pi*  
*Skyfall*  
*The Hobbit: An Unexpected Journey*

### Television Sound Production

*Boardwalk Empire*  
*Downton Abbey*  
*Game of Thrones*  
*Homeland*  
*Treme*

### Interactive Entertainment Sound Production

*Assassin's Creed III*  
*Battlefield 3: End Game*  
*Halo 4*  
*The Last of Us*  
*The Unfinished Swan*

### Studio Design Project

*Berklee Valencia, Spain*  
*Kaleidoscope Sound—The Patio, Union City, NY*  
*Sony PlayStation Sound Studios, San Mateo, CA*  
*Strange Weather, New York City*  
*Vintage King Nashville, Nashville, TN*





// **DTP 640 REX**



**DYNAMIC // CONDENSER**  
**- AND EVERYTHING**  
**IN BETWEEN**

The **DTP 640 REX** features a dynamic and a condenser element on two separate channels that can be mixed for a balanced, high-quality sound. Its slide control-activated Enhanced Frequency Response emphasizes the ranges of 70–150 Hz and 3–5 kHz for an unbeatably powerful sound on kick drums.

- // Dual-element design
- // 5-pin XLR split into 2x 3-pin XLR
- // Switchable frequency response
- // 3-position pre-attenuation
- // 9 dB self noise
- // 150 - 170 dB max. SPL



**MAKE YOURSELF HEARD. UNALTERED. AUTHENTIC. MEMORABLE.**

For sales inquiries contact [sales@trunorthmusicandsound.com](mailto:sales@trunorthmusicandsound.com) // +1 855 878 6668 105 // [www.trunorthmusicandsound.com](http://www.trunorthmusicandsound.com)

[www.lewitt-audio.com](http://www.lewitt-audio.com)  
visit us on Facebook and YouTube



// **LCT 940**



**TUBE // FET**  
**- AND EVERYTHING**  
**IN BETWEEN**

The **LCT 940** combines the specific characteristics of both Tube and FET condenser microphones in a single housing. Two independent signal paths can be blended in any ratio for unmatched tonal flexibility.

- // Tube and FET sound together in one housing
- // 9 polar patterns for maximum versatility
- // 4-step switchable attenuation
- // 4-position high-pass filter
- // Up to 135 dB dynamic range
- // 8 dB self noise (FET)
- // Noiseless pushbuttons
- // Illuminated user interface

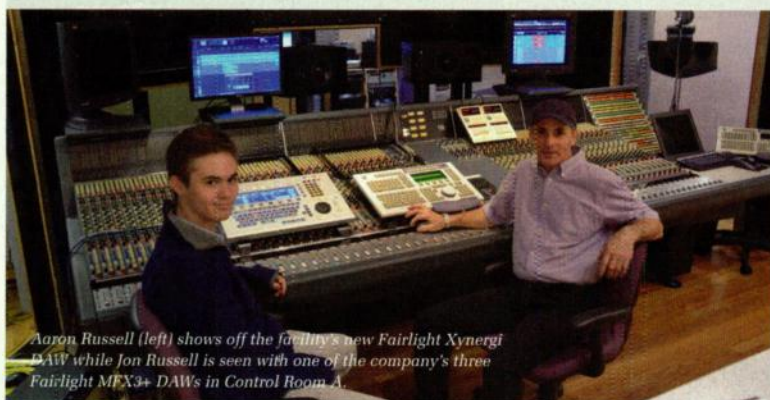


World Radio History



# MIX REGIONAL: NORTHEAST

## PRESENCE STUDIOS — WESTON, CONN.



Aaron Russell (left) shows off the facility's new Fairlight XYNERGI DAW while Jon Russell is seen with one of the company's three Fairlight MFX3+ DAWs in Control Room A.

Now in its 35th year, Presence Studios keeps moving forward with next-generation technology and personnel.

Owner Jon Russell recently brought on his son Aaron to work in the company's artist development division as video project coordinator. "We were in Edinburgh, Scotland, this past summer filming a new music video," recounts Jon, "and Aaron captured the song's most dramatic segment by literally hanging with a harness out of a twin engine Eurocopter traveling 150 miles an hour, 300 feet over Tantallon Castle. His visual sense and intense dedication to the shots are really quite special."

Besides being behind the camera, Aaron has been involved in the operation of the latest technology installed at Presence: Fairlight's latest generation XYNERGI DAW.

"The major sports and sports entertainment networks set the standard in the broadcast world, which is why the NBA, MLB, NFL and WWE all use Fairlight systems for everything from live broadcast, post-production and ADR to music recording and in our case, even our Forensic Audio division," he says. "We opened in 1980, and we've been running Fairlight systems since 1982."

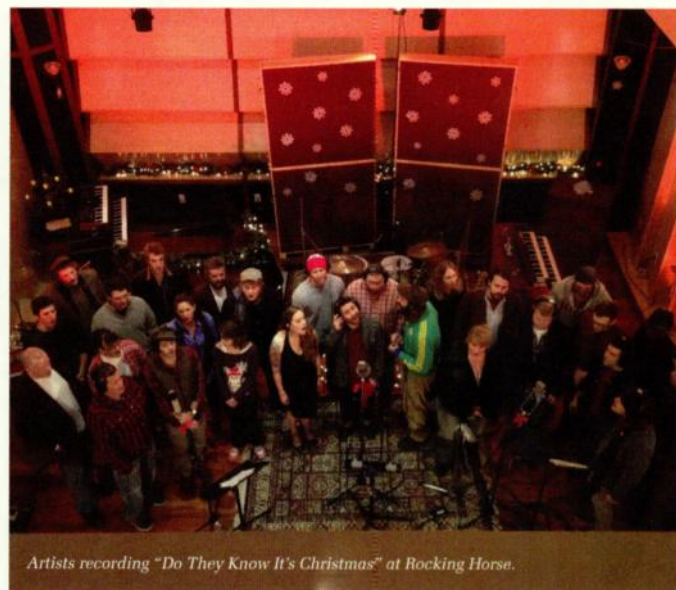
Also pictured is the facility's Neve VRL 60 Console along with ATC-SCM 300 monitors, SCM 20 near-fields and both Lexicon 480L and 224XL controllers.

Studio B, equipped with a Fairlight Prodigy digital workstation, offers audio recording/editing along with Final Cut Pro video editing services, video and audio archiving, and analog-to-digital transfers. Studio B also keeps busy with the company's successful Legal Forensic Audio group, providing law firms across the U.S. with expert analysis and testimony of all media-related evidence.

## Rocking Horse Studio — Pittsfield, N.H.

Over the past two years, Rocking Horse Studio has become an integral part of the burgeoning New Hampshire music scene, promoting concerts and working with radio to raise the profile of local artists.

Producer/engineer/studio owner Brian Coombes contributes weekly to the *Cail and Company* show on WTPL-FM in Concord, N.H. Host Ken Cail and Coombes select local artists as a Pick of the Week. The artists are played on-air and invited to the station to perform and discuss their careers. The Pick of the Week feature began in early March 2013 and has become one of the most successful segments on the station.



Artists recording "Do They Know It's Christmas" at Rocking Horse.

The studio is also working with ABC-TV's Manchester affiliate, WMUR, on a one-hour Christmas special to air in December. The show, which features the best of the New Hampshire music scene performing traditional and modern holiday favorites, was recorded and filmed at Rocking Horse Studio in November. The music was recorded by Rocking Horse house engineer Josh Kimball and produced by Coombes. Artists include the Dusty Gray Band, Pat Gocher & the Hats, Will Kindler, Rachel Vogelzang, Karen Grenier, Chris Peters, the Four Legged Faithful, MB Padfield, and Tristan Omand, among others. Rocking Horse session musicians Eric Wagley (drums), Joey Pierog (bass), Myron Kibbee (guitar), Matt Jensen (guitar), Rick Black (piano), Coombes (Hammond/Mellotron), Richard Gardzina (woodwinds), Tim Gray (percussion), and Jordan Tirrell-Wysocki (fiddle) acted as the house band for the show.

In other studio news, former Tower of Power lead singer William Edward McGee is currently in the studio working on a new solo album with Coombes, featuring appearances by Rocking Horse Studio session men Wagley, Pierog and Kibbee on drums, bass and guitar, respectively.

Additionally, Rocking Horse Studio's Control Room B went online in July 2013. The new control room/editing suite features Pro Tools HD Native, a Soundcraft Ghost console, and outboard gear from Focusrite, Retro and Chandler.





## THE GEARBOX – PARAMUS, N.J.

The Gearbox is a two-room, mid-scale studio built into the home of owner-engineer Ryan Ball. The Gearbox prides itself on a handpicked collection of outboard gear, featuring pieces by Avalon and Summit, as well as an extensive collection of vintage

keys, including a Fender Rhodes Stage 73, Hohner Clavinet, Sequential Circuits Pro-One and Hammond CV. Tape is also popular, with the Toft ATB24 being a central part of tracking and mixing on every project.

Recently, The Dirty Sock Funtime Band—one of the nation's top children's music acts, who have been featured on Nickelodeon's *Jack's Big Music Show*—visited The Gearbox to work on *The Dirty Socks Come Clean*. The project was produced by Mike Messer and engineered by Messer, Sean Dixon and Ball (with Ball also on mixing duties), mixed to 1/4-inch tape using a hybrid technique via Digital Performer, three Apogee Rosetta 800s and the Toft ATB24 console.

## WATER MUSIC RECORDING STUDIOS – HOBOKEN, N.J.



Water Music Recording Studios recently acquired a legendary piano to replace its former legendary piano, which was lost due to flooding from Hurricane Sandy. "We do a lot of high-end jazz, classical and film scoring, so the piano is a big deal to our clients," says Rob Grenoble, Water Music owner. "Finding a replacement took many

months. It was an international search. We finally found an incredible piano in New Orleans—thanks to John O'Brien—that has been widely praised since it arrived. It was legendary in New Orleans: Herbie Hancock used it. Allen Toussaint wouldn't record on anything else. Dr. John, Jon Cleary, Fats Domino, Ellis Marsalis, David Torkanowsky...everybody used it."

John O'Brien has been rebuilding/restoring/taking care of pianos for more than 30 years, and is the chief go-to piano guy for the likes of Daniel Lanois, Paul Allen, Roberta Flack, and the New Orleans Jazz Festival. When Grenoble was in need of a new, stellar piano, he reached out to O'Brien. "Years ago, I was out in L.A. looking for a Disklavier," O'Brien says. "The dealer I went to had at least 20 C7 pianos, including used ones. I'd decided on a used one, and for three days I kept going back to the showroom to play all the Yamahas there, and I was set on buying a used one. The new ones were very expensive, and the sales guy kept suggesting I try a new one. Finally, I sat down to play a new one, and within 30 seconds, it destroyed the one I'd been eyeing. This one had something really special, so I knew I had to get it."

## Showplace Studios — Dover, N.J.



Showplace Studios recently completed a tribute to Les Paul titled *Thank You Les*, a collaborative effort between Lou Pallo and Showplace Music Productions (a subsidiary of Showplace Studios). Pallo had performed with Les weekly in New York City for more than three decades. "These were the infamous 'Les Paul Mondays,' which took place in a small jazz club and continually drew A-listers from Tony Bennett to Jimmy Page," says Ben Elliott, producer/engineer and co-owner of Showplace. "Together with Lou and my business partner, Joni Forte, we decided to create a recording and documentary that would give fans insight to the genius and humor of Les Paul through the eyes and ears of those who knew him best. Almost all of the 21 tracks recorded, plus interviews, took place at Showplace Studios. Sound was everything to Les Paul. We recorded and mixed analog using mainly vintage equipment to produce the best possible sound, in Les' spirit.

"Once we had the concept, it snowballed," Elliott continues. "Every member of Les Paul's Trio, during Lou's 30-year tenure, provided rhythm for the recording. This included four upright bass players, one pianist and a guitarist. It was quite an experience to have the wide array of artists participate that we did. Some, like Steve Miller [Les' godson, who provided the album's liner notes], had never been to Showplace. Being a well-respected musician's musician, Lou was able to get everyone on the phone, and session dates were set with a film crew. We covered more than 100 hours of video and edited it down to a 60-minute documentary with bonus features and music videos." In addition to Miller and Richards, other artists featured include Slash, Billy Gibbons, Eddie Brigati (The Rascals), Jose Feliciano and Bucky Pizzarelli. The documentary and the CD won three 12th Annual Independent Music Awards, and the documentary has been and will continue to be broadcast on PBS.



# PROFESSIONAL AUDIO DESIGN

## A Systems Approach to Outfitting the High End

BY TOM KENNY

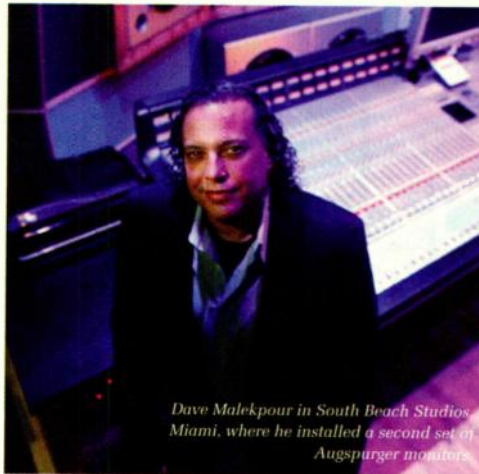
It's good to check in with Dave Malekpour, founder and president of Professional Audio Design in Boston, every couple of years. He's an equipment dealer, yes, and while he sells a lot of gear regionally, and he does sell plenty of black boxes, his primary focus for the past 20 years has been on the high-end studio market, particularly the core of Room Design, Monitors and Consoles.

While Malekpour is a born salesman and has learned to speak the language of Engineered Solutions fluently, he's really just a guy who likes to build and equip studios. "I come from being a guitar player and an engineer," he says, "then got into this world of studio design, console refurbishment, equipment integration and custom speaker systems in the mid-'80s. The speaker business has been part of what I have focused on since the company's inception.

"I remember the company was just getting going, and I was in London and heard some Dynaudio Acoustics M1s and thought, 'Wow! I need to get some of these to try out for clients!'" he continues. "I spoke with Andy Munro, who owned Dynaudio Acoustics and designed the speakers, and that led to us becoming the U.S. distributor from late 1993 until about 2000. Through working with Andy, I got a great understanding of how speakers and rooms were intimately connected. We later designed custom systems for NRG in L.A., leading to creation of the successful C4A still installed there, as well as custom speakers for many other studios. Then I began building custom Augspurger systems around 2000 because of client requests, and it's been a growing part of our business ever since. Now we manufacture Augspurger mains, and it's one of the things we consider part of the PAD fabric."

Though PAD sells and installs monitor systems from Genelec, Quedstedt, Dynaudio, ADAM and others, recent sales of Augspurger systems have been noteworthy: South Beach Studios added a second Augspurger 215 system with 18-inch subs for studio A, Tom Lord Alge's room; Dr. Dre added two Augspurger Active DSP mains—one for Record One, the other for his home; Strange Music in Kansas City, the home of rapper Tech9, installed two systems in their new facility; Ginger Studio in Melbourne, Australia, purchased newly designed Augspurger GA215/18 tower, finished in Dozer Pearl Metallic paint; TC Zhou put in Augspurger GA215-A3 three-way mains in his new Beijing studio; and Georgia Dream in Tbilisi, in the former Soviet republic of Georgia, installed new GA215VS-A3 three-ways.

It's interesting to note that while PAD has an active facility design busi-



*Dave Malekpour in South Beach Studios, Miami, where he installed a second set of Augspurger monitors.*

ness, the company works regularly with top acousticians and designers around the world. To help facilitate the connections even further, the company recently hired noted designer/acoustician Michael Blackmer, son of David Blackmer (dbx, Earthworks) to oversee all design and installation projects.

Blackmer has been busy lately with systems design and integration in Jeddah, the second largest city in Saudi Arabia, for SAE Institute. Expected to open next month, the school will include three control rooms, with associated studios and iso booths. The equipment package includes a 48-channel AMS Neve Genesys

console, Avid S5MC 32-fader console, and a live sound lab with Avid Venue SC48 and a 4-way QSC P.A. system.

Despite a penchant for big monitors, large consoles and system packages, Malekpour knows that he must also continually stay current. He sells a lot of Pro Tools systems and Avid console/controllers, and PAD recently furthered its relationship with the company by creating a pre-owned Avid channel for customers worldwide, whereby anyone who wants to trade in their Avid console (or any other console, for that matter) for a new Avid S6 can work the deal through Boston.

In his career, Malekpour has introduced such manufacturers as Aurora Audio, Shep Audio, Inward Connections, Cartec and others to the U.S. market. His most recent project has been building the Sontronics microphone brand here in the States through his Pro Audio Distribution channel.

"I met the owner of Sontronics, Trevor Coley, a couple of years ago at NAMM and asked him to send me some of their mics," Malekpour explains. "He sent me the Apollo stereo active ribbon mic, and I was so impressed by its sound—its unique color and character—that I wanted to be involved. As it turns out, they make 20 different models, each with a specific use in mind. I would put the Saturn up against any large-diaphragm FET mic out there. It is silky smooth, very natural-sounding, and perfect for maintaining the top end in this age of digital recording. And they're affordable!"

"I think PAD's expertise has a value to both customers and high-end manufacturers," he continues. "We are a regional, yet worldwide, dealer, and while other companies might be focusing focusing on boxes and volume, we are focusing on projects, engineered solutions and helping clients use their budgets wisely to insure the project results in the vision they have. We don't want to help them cobble something together and hope it works. We want our clients to be successful."





## THE GEARBOX – PARAMUS, N.J.

The Gearbox is a two-room, mid-scale studio built into the home of owner-engineer Ryan Ball. The Gearbox prides itself on a handpicked collection of outboard gear, featuring pieces by Avalon and Summit, as well as an extensive collection of vintage

keys, including a Fender Rhodes Stage 73, Hohner Clavinet, Sequential Circuits Pro-One and Hammond CV. Tape is also popular, with the Toft ATB24 being a central part of tracking and mixing on every project.

Recently, The Dirty Sock Funtime Band—one of the nation's top children's music acts, who have been featured on Nickelodeon's *Jack's Big Music Show*—visited The Gearbox to work on *The Dirty Socks Come Clean*. The project was produced by Mike Messer and engineered by Messer, Sean Dixon and Ball (with Ball also on mixing duties), mixed to 1/4-inch tape using a hybrid technique via Digital Performer, three Apogee Rosetta 800s and the Toft ATB24 console.

## WATER MUSIC RECORDING STUDIOS – HOBOKEN, N.J.



Water Music Recording Studios recently acquired a legendary piano to replace its former legendary piano, which was lost due to flooding from Hurricane Sandy. "We do a lot of high-end jazz, classical and film scoring, so the piano is a big deal to our clients," says Rob Grenoble, Water Music owner. "Finding a replacement took many

months. It was an international search. We finally found an incredible piano in New Orleans—thanks to John O'Brien—that has been widely praised since it arrived. It was legendary in New Orleans: Herbie Hancock used it. Allen Toussaint wouldn't record on anything else. Dr. John, Jon Cleary, Fats Domino, Ellis Marsalis, David Torkanowsky...everybody used it."

John O'Brien has been rebuilding/restoring/taking care of pianos for more than 30 years, and is the chief go-to piano guy for the likes of Daniel Lanois, Paul Allen, Roberta Flack, and the New Orleans Jazz Festival. When Grenoble was in need of a new, stellar piano, he reached out to O'Brien. "Years ago, I was out in L.A. looking for a Disklavier," O'Brien says. "The dealer I went to had at least 20 C7 pianos, including used ones. I'd decided on a used one, and for three days I kept going back to the showroom to play all the Yamahas there, and I was set on buying a used one. The new ones were very expensive, and the sales guy kept suggesting I try a new one. Finally, I sat down to play a new one, and within 30 seconds, it destroyed the one I'd been eyeing. This one had something really special, so I knew I had to get it."

## Showplace Studios — Dover, N.J.



Showplace Studios recently completed a tribute to Les Paul titled *Thank You Les*, a collaborative effort between Lou Pallo and Showplace Music Productions (a subsidiary of Showplace Studios). Pallo had performed with Les weekly in New York City for more than three decades. "These were the infamous 'Les Paul Mondays,' which took place in a small jazz club and continually drew A-listers from Tony Bennett to Jimmy Page," says Ben Elliott, producer/engineer and co-owner of Showplace. "Together with Lou and my business partner, Joni Forte, we decided to create a recording and documentary that would give fans insight to the genius and humor of Les Paul through the eyes and ears of those who knew him best. Almost all of the 21 tracks recorded, plus interviews, took place at Showplace Studios. Sound was everything to Les Paul. We recorded and mixed analog using mainly vintage equipment to produce the best possible sound, in Les' spirit.

"Once we had the concept, it snowballed," Elliott continues. "Every member of Les Paul's Trio, during Lou's 30-year tenure, provided rhythm for the recording. This included four upright bass players, one pianist and a guitarist. It was quite an experience to have the wide array of artists participate that we did. Some, like Steve Miller [Les' godson, who provided the album's liner notes], had never been to Showplace. Being a well-respected musician's musician, Lou was able to get everyone on the phone, and session dates were set with a film crew. We covered more than 100 hours of video and edited it down to a 60-minute documentary with bonus features and music videos." In addition to Miller and Richards, other artists featured include Slash, Billy Gibbons, Eddie Brigati (The Rascals), Jose Feliciano and Bucky Pizzarelli. The documentary and the CD won three 12th Annual Independent Music Awards, and the documentary has been and will continue to be broadcast on PBS.



# SESSIONS: NORTHEAST



## MILKBOY THE STUDIO – PHILADELPHIA

Owner/composer Jamie Lokoff has been writing commercial scores for NBC Sports, Century 21, Planet Fitness, Thomson Reuters and Stetson in Studios B and C, with co-owner Tommy Joyner producing...Pegi Young and the Survivors worked on new material in Studio A with Joyner

engineering and Niko Bolas producing in Studio A at an SSL 4048 E/G Console onto a Studer A-827...String arranger Larry Gold recorded strings for Pink, R. Kelly, Daughtry, Justin Timberlake and Kanye West in Studio A...Pop star Miley Cyrus cut vocals in Studio B with engineers Joe Gallagher and Karl Petersen...R&B/soul artist and Missy Elliott protégée Jazmine Sullivan has been working on her follow-up album with engineer Joe Gallagher.



Eugene Uman, Sebastian Cruz and Satoshi Takeishi

## GUILFORD SOUND – GUILFORD, VT.

Jazz pianist/composer Eugene Uman worked on *The Convergence Project*, with Uman also producing and Dave Snyder engineering...Indie-pop band North Highlands was in the studio working on new material with producer Matt Marinelli, engineered by Marinelli and Snyder...Reggie Wilson and the Fist and Heel Performance Group worked on *Moses(es)* as part of a Vermont

Performance Lab Artist Residency. The project was produced by Wilson and engineered by Snyder.



Engineer Pat DiCenso and J. Geils Band keyboardist Seth Justman

## Q DIVISION STUDIOS – SOMERVILLE, MASS.

Singer-songwriter Eli "Paperboy" Reed recorded new material in Studio A, with producers Ryan Spraker and Pat DiCenso (Reed also produced, DiCenso also engineered)...Roots/rock/pop artist Will Dailey recorded *National Throat* in Studio A, with engineer DiCenso (Dailey also produced)...Porcelain worked on new tracks (and also produced) in Studio B with engineer Steve Flynn...J. Geils

Band mixed the video for the *Boston Strong Live Concert* in Studio A, with Peter Wolf and Seth Justman producing and DiCenso engineering.



## SINE STUDIOS – PHILADELPHIA

Singer-songwriter Katie Barbato recorded *Revolution* with producer Obie O'Brien and engineers Matt Teacher and Mike Lawson...Producer Harry Weinger and engineers O'Brien, Teacher and Lawson worked on the *Martha Reeves & The Vandellas 50th Anniversary Singles Collection*...

Buried Beds tracked (and produced) *In Spirit* with engineers Teacher and Lawson...O'Brien produced the *Bon Jovi 12-12-12 Concert* for Hurricane Sandy, with Teacher and Lawson editing the upcoming documentary.



## THE WILD ARCTIC – PORTSMOUTH, N.H.

Producer/engineer Dean Baltulonis worked on several projects, including tracking a full-length album for grunge/alt-rockers Those Mockingbirds, mixing a new EP for The Connection, tracking full-length for New York hardcore band Supertouch, mixing an album for rockers Goddamn

Draculas, recording and mixing an album for hardcore metal band Death Threat, and work on the score for the movie *American Muscle*.

## GATEWAY MASTERING STUDIOS – PORTLAND, MAINE



Adam Ayan in his room at Gateway Mastering Studios.

Mastering engineer Adam Ayan has been busy at Gateway working on a number of projects, including Carrie Underwood's *Sunday Night Football* theme for the NFL (produced by Mark Bright, mixed by Derek Bason), Rush's *Clockwork Angels Tour* DVD/BluRay/CD (stereo and 5.1 surround; mixed by Mike Fraser), Cassadee Pope's *Frame by Frame* album (produced by Dann Huff, Max Martin, Nathan Chapman and Shell-

back; mixed by Justin Niebank), Sammy Hagar's *Sammy Hagar & Friends* (produced by Hagar, John Cuniberti and Fraser; mixed by Cuniberti and Fraser), The Animals' *The Mickie Most Years & More* remasters five-CD set (remastered from hi-res digital transfers of the original mono analog tapes), Danielle Bradbery's self-titled album (produced by Huff; mixed by Niebank), Sarah McLachlan's *The Essentials*, and Def Leppard's *Viva Hysteria: Live at the Joint, Las Vegas*.

The following projects were mastered by Gateway owner Bob Ludwig: John Mayer's *Paradise Valley* (produced by Don Was; mixed by Michael Brauer and Manny Marroquin), Nirvana's *In Utero Box Set Live and Loud* DVD stereo & 5.1 (mixed by Nate Kunkel), Eric Clapton's *Crossroads Guitar Festival 2013*, Disney's *Frozen* soundtrack (produced by Andrew Page; engineered by Dave Boucher and Christophe Beck), Bastille's *Bad Blood* (produced by Mark Crew and Dan Smith; engineered by Mark "Spike" Stent and Crew), The Civil Wars' self-titled album (produced by Rick Rubin).



Will Holland and Nathan Sabanayagam

## CHILLHOUSE STUDIOS – CHARLESTOWN, MASS.

Guitarist/songwriter Van Gordon Martin tracked his latest album (he also produced) with engineer Will Holland...Ska band The Toasters tracked and mixed two songs with producer Rob Hingley and engineer Holland...Naya Sound System worked on material with producers Nathan Sabanayagam and Nate Edgar, with Sabanayagam and Holland engineering...Lloyd Robinson worked with Sabanayagam (producing and engineering) and Holland (engineering) on transfers and mixes of 2-inch reels from Channel One Jamaica sessions from the mid '80s.

## CARRIAGE HOUSE STUDIOS – STAMFORD, CONN.



Southern rock jam band Gov't Mule recorded its latest release, *Shout!*, with engineer Brendan Muldowney, assisted by Ian Callanan...Bill Laurance and Michael League from instrumental fusion band Snarky Puppy worked on Laurance's upcoming record, with Ruddy engineering, assisted by Callanan. Laurance and League also produced...Blues guitarist/singer/producer Johnny Winter worked on his upcoming record with engineer Muldowney, assisted by Callanan. Paul Nelson is producing...Jazz guitarist Oz Noy has been tracking his upcoming album with engineer Ted Spencer, assisted by Callanan...Jazz/Latin/classical pianist Michel Camilo worked on his album *What's Up*, with engineers Phil Magnotti and Callanan.



Mike Davidson in the Control Room

## MIKE DAVIDSON RECORDING – ALLSTON, MASS.

Studio owner Mike Davidson has been producing and engineering new material for a number of projects, including folk-rockers The Ballroom Thieves, songwriter Pablo Picker, folk-rockers Leftover Dynamite, dance-party band Bella's Bartok, and singer/songwriter Peck Sounds, which was produced by both Davidson and Peck.



Products on command, knowledge on cue.

**www.BandH.com**

**PRODUCT DEMOS**

**PODCASTS**

**LIVE HELP**

**SEARCH CAPABILITIES**

**CUSTOMER REVIEWS**

A wealth of options at the tip of your finger. Find exactly what you need through advanced search filters and Live Help. With in-depth product demos, podcasts, and customer reviews, you'll know exactly what you're getting. Knowledge is expansive. Get more of it at B&H.



Download from  
Android Market



Available on the  
App Store



Subscribe to the B&H catalog  
[www.BandH.com/catalog](http://www.BandH.com/catalog)

**Visit Our SuperStore**  
420 Ninth Ave, New York, NY 10001  
**800-947-5508**  
Speak to a Sales Associate



The Professional's Source™



# PROFESSIONAL AUDIO DESIGN

## A Systems Approach to Outfitting the High End

BY TOM KENNY

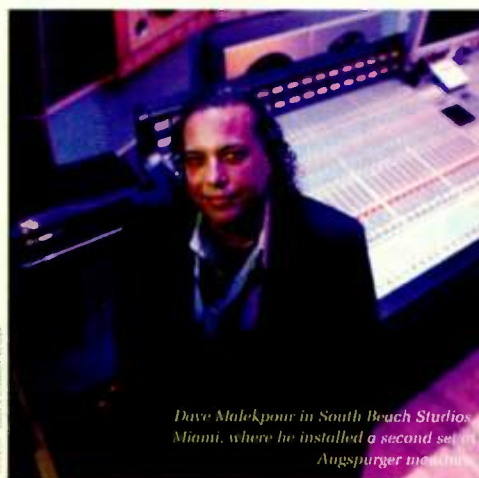
It's good to check in with Dave Malekpour, founder and president of Professional Audio Design in Boston, every couple of years. He's an equipment dealer, yes, and while he sells a lot of gear regionally, and he does sell plenty of black boxes, his primary focus for the past 20 years has been on the high-end studio market, particularly the core of Room Design, Monitors and Consoles.

While Malekpour is a born salesman and has learned to speak the language of Engineered Solutions fluently, he's really just a guy who likes to build and equip studios. "I come from being a guitar player and an engineer," he says, "then got into this world of studio design, console refurbishment, equipment integration and custom speaker systems in the mid-'80s. The speaker business has been part of what I have focused on since the company's inception.

"I remember the company was just getting going, and I was in London and heard some Dynaudio Acoustics M1s and thought, 'Wow! I need to get some of these to try out for clients!'" he continues. "I spoke with Andy Munro, who owned Dynaudio Acoustics and designed the speakers, and that led to us becoming the U.S. distributor from late 1993 until about 2000. Through working with Andy, I got a great understanding of how speakers and rooms were intimately connected. We later designed custom systems for NRG in L.A., leading to creation of the successful C4A still installed there, as well as custom speakers for many other studios. Then I began building custom Augspurger systems around 2000 because of client requests, and it's been a growing part of our business ever since. Now we manufacture Augspurger mains, and it's one of the things we consider part of the PAD fabric."

Though PAD sells and installs monitor systems from Genelec, Quedstedt, Dynaudio, ADAM and others, recent sales of Augspurger systems have been noteworthy: South Beach Studios added a second Augspurger 215 system with 18-inch subs for studio A, Tom Lord Alge's room; Dr. Dre added two Augspurger Active DSP mains—one for Record One, the other for his home; Strange Music in Kansas City, the home of rapper Tech9, installed two systems in their new facility; Ginger Studio in Melbourne, Australia, purchased newly designed Augspurger GA215/18 tower, finished in Dozer Pearl Metallic paint; TC Zhou put in Augspurger GA215-A3 three-way mains in his new Beijing studio; and Georgia Dream in Tbilisi, in the former Soviet republic of Georgia, installed new GA215VS-A3 three-ways.

It's interesting to note that while PAD has an active facility design busi-



Dave Malekpour in South Beach Studios Miami, where he installed a second set of Augspurger mains.

ness, the company works regularly with top acousticians and designers around the world. To help facilitate the connections even further, the company recently hired noted designer/acoustician Michael Blackmer, son of David Blackmer (dbx, Earthworks) to oversee all design and installation projects.

Blackmer has been busy lately with systems design and integration in Jeddah, the second largest city in Saudi Arabia, for SAE Institute. Expected to open next month, the school will include three control rooms, with associated studios and iso booths. The equipment package includes a 48-channel AMS Neve Genesys

console, Avid S5MC 32-fader console, and a live sound lab with Avid Venue SC48 and a 4-way QSC P.A. system.

Despite a penchant for big monitors, large consoles and system packages, Malekpour knows that he must also continually stay current. He sells a lot of Pro Tools systems and Avid console/controllers, and PAD recently furthered its relationship with the company by creating a pre-owned Avid channel for customers worldwide, whereby anyone who wants to trade in their Avid console (or any other console, for that matter) for a new Avid S6 can work the deal through Boston.

In his career, Malekpour has introduced such manufacturers as Aurora Audio, Shep Audio, Inward Connections, Cartec and others to the U.S. market. His most recent project has been building the Sontronics microphone brand here in the States through his Pro Audio Distribution channel.

"I met the owner of Sontronics, Trevor Coley, a couple of years ago at NAMM and asked him to send me some of their mics," Malekpour explains. "He sent me the Apollo stereo active ribbon mic, and I was so impressed by its sound—its unique color and character—that I wanted to be involved. As it turns out, they make 20 different models, each with a specific use in mind. I would put the Saturn up against any large-diaphragm FET mic out there. It is silky smooth, very natural-sounding, and perfect for maintaining the top end in this age of digital recording. And they're affordable!"

"I think PAD's expertise has a value to both customers and high-end manufacturers," he continues. "We are a regional, yet worldwide, dealer, and while other companies might be focusing on boxes and volume, we are focusing on projects, engineered solutions and helping clients use their budgets wisely to insure the project results in the vision they have. We don't want to help them cobble something together and hope it works. We want our clients to be successful."



Continued from p. 28

made me want to listen to the song! I went in thinking this was blasphemy, then my reaction was completely the opposite. I wanted to hear all of James Brown in surround!"

It so happened that Jam and Lewis were in the early stages of their dream project, their own record, celebrating 30 years of making amazing music, with selections from artists they've worked with and important musical moments in their career. Artists like Morris Day and The Time, SOS Band, Alexander O'Neal and Chirelle, Sounds of Blackness, Mint Condition, Heather Hidley, Usher, Mary J. Blige, Mariah Carey and, of course, Janet Jackson. Some unreleased tracks from way back, some all-new, a majority of it analog. Why not go 11.1? Have some fun?

"Having the room as part of the surround changes the way you think, how you produce, and it may change how people write," Jimmy Jam says. "We have always tried to re-create the way we heard it in our studios, or in the rooms we know and love. But we never thought we would be able to share that experience with the consumer. Now we even have the ability to change it up for any song. You can have the Jimmy Jam room, the Terry Lewis room, the Elliot Scheiner room. We're still experimenting and DTS is still tweaking. I can't wait until this gets in the hands of all creative people. People will find new ways to do things. Turn it on and go for it."

Elliot Scheiner, who is currently finishing up the mix on the *Jam & Lewis Project, Volume 1*, is no stranger to surround or to DTS, having first hooked up with the company in 1997 for a 5.1 release for the Eagles' *Hell Freezes Over*. A few years later, Acura was selling cars with his signature

on the side panel, the mark of a quality surround audio system inside. On the day of the cover shoot, he was working on some rough 11.1 mixes for Jam and Lewis, at the Yamaha/Steinberg Nuage in the DTS Studio, listening on A-T 35 headphones.

"Listening to this material on headphones in 11.1 is startling," Scheiner says. "This is not spatialization. This is not upmixed stereo. These are discrete signals, mixed in 11.1. I've been mixing in headphones first, then checking on the speakers, and it's as close to discrete surround as possible, where you can feel it all around you and feel the height. DTS has always made a commitment to presenting surround properly, and with younger people listening primarily on headphones, they are on the right path."

#### MORE TO COME

The technology behind Headphone:X is out and available—but not entirely, not quite yet. It still requires a DTS visit and hardware encoding, but that will change very soon with software-based tools for room modeling and plug-ins for producers. For playback, there will soon be EQ curves to optimize for specific headphone types and models, a universal app that isn't tied to a specific release, and licenses for devices and material that we haven't even heard of yet.

For now, consumers can listen to Zimmer's scores, a handful of demos, and await this month's release of a Dave Stewart video shot in 4k, with an 11.1 Headphone:X mix, with the promise of Jam and Lewis in the spring of 2014. Content is king. Consumers know it. DTS knows it. It's coming. ■



## Improve any studio monitor!

IsoAcoustics® stands are built with a unique, patented isolation technology that allows your speakers and instrument amplifiers to "float" in free space, letting you hear clear, authentic sound. These remarkable stands include tilt adjustments to help achieve the best listening position possible.

*I found when using the IsoAcoustics stands under my NS10s that I had an easier time mixing due to a more stable stereo image and clearer bass frequencies.*

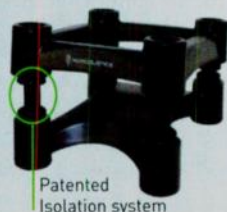
**Elliot Scheiner**, Grammy Award Winning Recording & Mixing Engineer

*...I haven't found a situation yet where your stands do not increase by a substantial amount the performance of the loudspeakers they are supporting.*

**Andre Perrault**, Technicolor - Paramount, Los Angeles

*I noticed immediately a clarity in the stereo image and the frequency response that had been missing in my NS10's... The IsoAcoustics generally made them more enjoyable to listen to, no small feat as I am sure you know...*

**Vance Powell**, Grammy Award Winning Chief Engineer, Blackbird Studios



### NEW ISO-L8R430 Isolation Stand and ISO-L8R200Sub for Subwoofers

Hear the AMAZING demo at [www.isoacoustics.com](http://www.isoacoustics.com)



# RobairReport

## SPECIAL DELIVERY



By Gino Robair

**"H**ey, I have something for you." As I'm leaving a recent music industry event in San Francisco, a colleague reaches into the inner pocket of his coat and produces a chocolate bar wrapped in bright, yellow psychedelic paper. The name of a mutual friend is printed on the wrapper, along with the title and artwork from his new album.

"Turn it over."

On the back is a QR code with the words "scan to download" next to it. Beneath it is the label name and URL, as well as an alphanumeric code to type in when I am ready to grab the music files. Later, my iPhone's Quick Scan app takes me to the artist's Website where I enter the data and get immediate gratification.

Yet, as I ride home on the train that night, I have mixed feelings. (Not about the artisanal chocolate or the music itself.) But has it really come to a point where we have to surreptitiously convince our fans to purchase our music?

The concept of a download card is not new to me. As a gigging musician and indie label owner, I'm in touch with the trends: My friends and I still sell our recordings at shows; see our tunes pop up on Pandora, Spotify, and illegal torrent sites; digitally distribute our tracks through all the usual suspects using an aggregator.

Yet there was something about getting music as part of a food purchase that was eating at me.

Maybe it's because we are now being asked to disguise what we do as artists in order to successfully navigate the uncharted territories of the so-called digital economy. As we work to diversify our income between various royalty streams, merch, sync rights, and so forth, it's hard *not* to consider schemes such as offering download cards with novelty products. It's something that we all have joked about for years.

Except that the joke has become a paradigm. One Bay Area band is even selling underwear with the download code printed on the tag. It'll be difficult for fans to separate the band's songs from that particular delivery system, because the conditions under which we first hear a tune are imprinted in our memory.

Remember when you bought an artist's new LP or CD and stared at the artwork as you listened to it? The fact that music is now delivered as a generic file may be one of the reasons why listeners today do not get as attached to the music they download or stream: Nothing else related to the artist's vision of the project is involved. Perhaps there's a video for the single. Beyond that, it's disposable.

Similarly, the wrapper of the chocolate bar is discarded once the contents are consumed. But an article of clothing—with or without a download code on the tag—remains useful, and the fan will remember the band every time he or she wears it.

Still, there is something undeniably attractive about connecting music with something delicious. The label (who requested anonymity while they finalize their Website) explained that the upfront cost is under \$3 per bar in the smallest quantity, and artists have been selling them for \$7 to \$10 a piece at shows. That's a smaller markup than you got from a CD during its heyday, but not bad considering that *everybody loves chocolate*.

As I picture myself lugging boxes of chocolate through airport customs or in the back of a hot van during a summer tour, I am reminded that the modern musician is expected to be part retail outlet, offering a full line of branded products at every price point. But the chocolate bar isn't simply about promotion. It represents a desperate search for ways to monetize our career—something, anything—at a time when fewer people than ever want to pay for just the music. If it's purely for promotion, hell, just give the chocolate away like we do with low-bitrate MP3s.

As I am writing this, I stumble across the article exposing the myth that "everyone knows musicians make all their money selling T-shirts." Kristin Thomson and Jean Cook of the Future of Music Coalition (<http://money.futureofmusic.org/mythbusting/5>) explain that that statement "... is one of the most disheartening comments to hear routinely—that society sees more value in a band's name on a T-shirt than in their creative output, and that it also thinks that this is the preferred way for artists to be compensated."

But it is cellist Zoe Keating who sums up my feelings about this, in the trailer of the film *Unsound: How Musicians and Creators Survive in the Age of Free*: "I'm a musician. I'm not a T-shirt maker. I'm not a designer. I want to sell music. I believe that my music is worth something."

The music industry hopes so as well, as it prepares to open the floodgates for high-res audio delivery in 2014. Many in the biz believe that listeners will want to pay for music when it actually sounds good. Perhaps. But the challenge remains: how do musicians engage their audience to the degree that they used to, offering a complete artistic vision of a project when the music is no longer delivered from a physical object?

As I ponder that question, I plan to enhance the experience of a recent download by enjoying it with a bar of my favorite dark chocolate and a glass of red wine. ■



# se·lec·tion [ səˈlekSHən ]

noun

1. the action or fact of carefully choosing someone or something as being the best or most suitable
2. a number of carefully chosen things
3. what you get with Vintage King

## MOOG THE LADDER

Dynamic filter/EQ,  
harmonic saturator/  
enhancer

## STANDARD AUDIO LEVEL-OR

60s-inspired aggressive  
limiter/distortion processor

## DAKING MIC PRE 500

Class A discrete, +24  
headroom, variable high  
pass filter to 200Hz



## NEVE 1073LB

The quintessential mic  
pre repackaged for your  
500 Series rack

## GRACE DESIGN M501

Transparent and detailed  
pre, brings out the best  
in any mic

## INWARD CONNECTIONS THE BRUTE

Luscious and smooth  
opto-cell compression

**0% INTEREST FINANCING**  
*with the Vintage King G.A.S. Card*  
More info at [www.vintageking.com/creditcard](http://www.vintageking.com/creditcard)



# Tech // new products



## AUDIO PRECISION APX 3.4 SOFTWARE

### New Measurements/Tests

Audio Precision has expanded the features of the electro-acoustic test suite for APx audio analyzers via the APx v3.4 software upgrade.

The upgrade adds Thiele/Small parameters,

Complex Impedance, and Loudspeaker Production Test to the APx platform. The APx electro-acoustic suite also includes an Energy Time Curve (for quasi-anechoic measurements), Impulse Response, Frequency Response, Relative Level, Phase, Distortion Product Ratio, Distortion Product Level, Rub and Buzz, and Modulated Noise (for air-leak detection). Output options include waterfall charts and polar plots via APx utilities. Upgrade prices are APX-SW-SPK-RD (for R&D) at \$1,500 and APX-SW-SPK-PT (for production test) at \$750.

## SSL LMS-16 TRUE PEAK METERING

### Turnkey Loudness Compliance Solution

Created in partnership with NuGen Audio for use with SSL's digital broadcast consoles (www.solid-statellogic.com, \$TBA), the SSL LMS-16 True Peak Metering System features NuGen's MultiMonitor software for use where loudness compliance is essential. The software is pre-installed and configured on a dedicated 1RU PC, fitted with SSL's MadiX-treme 128 audio interface with metering information displayed on virtually any connected flat-screen monitor. The system offers 16 individual meters, each capable of mono, stereo or 5.1 formats (providing metering of up to 96 audio channels simultaneously), with each meter showing a LUFS momentary display alongside a True Peak display. Each meter also has a dedicated numeric Short Term and Integrated LUFS data display, with the option to color-code meters to aid grouping. Each meter also features a minimum and maximum short-term alerts function. MultiMonitor is fully compliant with CALM Act legislation, ITU-R BS1770/1, ATSC A/85, EBU R128 and other worldwide localizations.



## DK T7 LOUDNESS METER

### Portable Multitouch Display

DK-Technologies' DK T7 (www.dk-technologies.com, \$5,400) is a high-precision, multitouch interface, audio and loudness meter that features Bargraphs, Moving Coil Emulation, DK-technologies' proprietary StarFish and JellyFish display technology, FFT spectrum analysis and industry-compliant Loudness and Logging. The new DK T7 also includes 3G SDI Picture Preview, as well as the ability to read and log against SMPTE timecode—a feature that has only recently been added to the DK Meter range.



## IZOTOPE AUDIO REPAIR WITH RX 3

### Free Guide

IZotope has released a free, 100-plus page digital guide titled Audio Repair with RX 3: Tools, Tips, and Techniques. Audio Repair with RX 3 outlines the most common types of audio problems in recordings and covers the fundamental concepts of audio repair, while providing helpful tips from professionals for salvaging previously unusable audio. Readers can navigate through a wealth of tips and techniques from professionals including Emmy Award-winning sound mixer Bill Jackson, Pro Tools Expert deputy editor Mike Thornton, and others. The guide is downloadable free from the iTunes store or www.izotope.com.





## EXPONENTIAL AUDIO SURROUND VERBS

**Ambience  
Up to 7.1**

Exponential Audio has released two surround reverb plug-ins: The PhoenixVerb

Surround and R2 Surround. Both support AAX, AU, VST and RTAS on both Mac and Windows in 32- and 64-bit forms ([www.exponentialaudio.com](http://www.exponentialaudio.com), PhoenixVerb \$359, R2 Surround \$459). The PhoenixVerb Surround is a pure, natural reverb that subtly blends with any source material, while the R2 Surround is a more active character reverb that makes any track stand out. Both reverbs feature a reflection section followed by the reverberator and include hundreds of well-organized presets. Effects include halls, rooms, exteriors, plates, fuzes and more. Both plug-ins integrate with Avid and Euphonix consoles by means of Eucon.



## COLEMAN AUDIO RED48

**Summing Superstar**

The RED48 from Coleman Audio ([www.colemanaudio.com](http://www.colemanaudio.com), \$2,500) offers three balanced stereo inputs, mix bus with insert, and gain provided by a passive, stepped attenuator with dim switch. The communication section includes a talkback button, mic and level control (which feeds the cue system), a separate slate output, remote switches for both of these functions, and an extra remote jack for a talkback switch. The mix section provides 48 balanced inputs, left/right switch, and P&G stereo master fader, all in a 2U rackspace. Other features include a cue feed to headphones selectable from the cue feed or control room feed, and an engineer's headphone out with a separate level control.



## FABFILTER PRO-MB PLUG-IN

**Multiband Dynamics Processor**

FabFilter has taken multiband processing up a notch with the Pro-MB, which provides up to six processing bands, freely place-able anywhere in the spectrum ([www.fabfilter.com](http://www.fabfilter.com), \$229). Bands can be easily snapped together to form a conventional crossover system, while the Dynamic Phase processing mode promises zero latency, no static phase changes and no pre-ringing artifacts. Features include highly transparent compression, limiting and expansion to pumping upward compression and punchy gating. All bands are fully custom and include threshold, range, attack, release, output gain, ratio, variable knee, look-ahead (up to 20 ms), variable stereo linking, mid- or side-only processing, external side-chain input, and triggering on a separate frequency range. The steepness of each crossover slope can be freely adjusted between 6 dB per/octave and 48 dB per/octave. Both 32- and 64-bit hosts are supported.

## SOUND DEVICES 664 UPGRADE

**Firmware Brings New Capabilities**

The Sound Devices 664 mixer features six low-noise, high-dynamic-range preamps that accept mic- or line-level signals and include analog peak limiters, highpass filters, input trim control and direct outputs per channel ([www.sounddevices.com](http://www.sounddevices.com)). Firmware version 1.05 features front-panel button shortcuts, including "LCD Daylight Display" mode and Phrase list for fast entry of metadata notes. Version 1.05 also incorporates the shortcut for activating different setup tone modes. Users also have new Track Names in Meters options (without color gradient/ramp) that are selectable for either right- or left-side display. Other improvements include Monophonic Broadcast WAV file support and Headphone Volume or Headphone Preset default option, which sets the HP encoder to operate as headphone level or to select HP presets when rotated. The upgrade is a free download for current 664 owners.







# M82 DYNAMIC

ENGINEERED FOR KICK DRUM  
AND BROADCAST VOICALS



TWO SWITCHES YIELDING  
FOUR UNIQUE VOICINGS

KICK EQ

HIGH-BOOST

WWW.T-FUNK.COM

*Continued from p. 40*

ing, and their voices are coming from a P.A., so I wanted them to have a real commanding presence. When Harrison Ford [playing stern Colonel Graff] speaks, it really fills the room. I wanted Ender to feel alone and isolated, and Harrison to have a big, authoritative voice." What tools would accomplish that? "Mostly plug-ins: [Audio Ease] Speakerphone and Altiverb. I used a P.A. amp and a slapback delay with another reverb on top of that to create that effect.

"I have a whole Pro Tools rig just for processing, and then I send it through the board," Bartlett continues. "I've been doing that for quite a while now, because it takes so much horsepower. I don't play other tracks off it or do anything else with it. I use a bunch of plug-ins, like the ones I mentioned, plus Waves, Eventide and even some guitar stomp boxes at times."

One unexpected challenge for Bartlett was dealing with some of the ADR lines of the 15-year-old actor playing Ender, Asa Butterfield: "His voice changed a little over the course of making the film, so when it was time to record his ADR, the looped lines were a little deeper, so we did some pitching and EQing to help match him up." Butterfield also grew two inches during the film's production.

Bartlett also notes, "Stephanie Flack was the dialog editor [and co-supervising sound editor, with Davis] on this film, and her attention to detail was amazing. I've had the pleasure of working on many films with Stephanie, and she always brings a high level of compassion and craft to her work." Flack also worked very closely with Foley supervisor Christopher Alba.

Steve Jablonsky's evocative music score is another key part of the soundtrack, eerily and effectively combining FX-like tones and textures with orchestral passages. "Steve is a fantastic composer," Bartlett says. "It was a real pleasure mixing his score. He's one of the few composers out there who really blends the electronic and synth-type sounds with the orchestra. A lot of times you'll find a score that has a real strong orchestral sense, and then they'll add a few synth tracks on top, and it doesn't always blend that well. But Steve really integrates his into the score. Steve is also a master of writing around dialog lines and certain action moments, so he really knows how

to sculpt a score. I also must give Alex Gibson, the music editor, a lot of credit for that, as well. He's one of the best at that—shaping a score and helping his composer out. Alex really helped elevate the film."

As on all films, the final mix for *Ender's Game* was a massive, intense and time-consuming balancing act among dialog, music and FX. Sacrifices are made for the sake of the storytelling; egos are checked at the door for the greater good of the film. That slaved-over effect might be lost under a newly emphasized music cue—and vice-versa, depending on what the director wants to emphasize at a given moment. It's all about choices.

Take the climactic battle scene for instance. "In a film, a battle is an impression," Hemphill says. "There's so much information going by, particularly in a film like this set in space, there's no way an audience member can process all those visuals and sounds to the nth degree, so you create an impression of what's going on. That's what an audience wants. No one wants to feel as though they have all the TV channels on at once and they're being bombarded. So we were very selective with the FX, interleaved the music—which is gorgeous—and in that scene there's also a lot of dialog and it's very important to hear it. We did a pass where we listened to it and Lee said, 'I want to pump the FX up a little bit, because at this point the audience wants that.' But the music is still very important all through that, too. Peter Weir once told me, 'I want the music to fight for its right to be here.' But Jablonsky always let the actors shine through; he never overwhelmed them."

Because so many of the settings in *Ender's Game* have a hyper-dimensional aspect to them—limitless space, weightless environments, a humongous underground cavern, etc.—it's a film that lent itself beautifully to a 9.1 Dolby Atmos mix. The galactic battles come alive more when the spaceships can soar above the audience, too, though, Bartlett notes, "Sometimes the more subtle sounds actually work better in that format. We found that the denser the sound field gets, the less you understand where it's coming from. But I think we did a good job of sorting things out to where it wasn't overwhelming, because it easily could have been. You have to really take a clear stance on what tells the story best in whatever format you're mixing for." ■



Continued from p. 44

a decent amount of outboard gear, including a pair of Neve 33122 broadcast mic pre/equalizers that I love. They blow up nicely; they can be clean, but you can overdrive them and get a very cool saturated sound.

"I also have a pair of Wunder Audio mic pre/EQs, model PEQ1R. They're kind of like the classic Neve 1073—great for recording guitar, bass and drums. They're not super quiet, but they're meaty. Being a guitarist, I can't help but love them! When we need an über-clean signal path we'll pull out our Grace Audio M201 stereo mic pre. It's great for recording quiet material that needs a low noise floor. We also rely on the Universal Audio 2-1176 stereo unit.

"Like I said, goal number one is to capture the sounds perfectly. Then we work on developing them inside the workstation. We're all composers first, and our library work grew out of our production experience. We're always looking for new sounds that will capture the listener's ear.

"It's also important that our products offer sound-sculpting tools that let the user morph the material we present and make sounds that have an individual character. We use the FX filters and EQ capabilities within Kontakt 5, our release platform, which we customize quite deeply. As for EQ and roll-off, if you're looking to put a master EQ on the presets, there are probably a dozen third-party manufacturers that have plug-ins that will do the job equally well, and that includes your DAW.

"But sure, when you're getting deeper into the details, looking to add punch to a sound, some tools will be better than others. We believe that the work we do, plus the tools that we build into the instruments, like our signature 'Punish Knob,' give the user a great set of sounds and the ability to further tailor them."

#### Do you use outboard faders or mix inside the box?

"I have a Euphonix MC Mix that's a few years old; Avid owns them now. It's a cool unit, but I end up mouse mixing most of the time."

#### What's your go-to reverb?

"I use Altiverb. I own the Waves IR-1 'verb, but prefer Altiverb. I like its features and layout, and their Impulse Responses are excellent."

#### Anything else on the hardware side that you lean on?

"My old Berklee roommate John Ellis has a company called Dramastic Audio. They make a stereo bus compressor, Obsidian, that glues a mix together really well—it's similar to the SSL bus compressor. I use it all the time. I'm also a Dangerous Audio fan. I have their D-Box, 2-bus LT and BAX EQ module." ■

## Capitol MASTERING

### Master Your Music At The Iconic Capitol Tower

5 Mastering Rooms Including 2 Neumann Disk Cutting Lathes  
Access To Capitol's Legendary Echo Chambers



Call us for rates and inquiries

Phone: 323.871.5003 | Email: Ryan.Simpson@umusic.com

[capitolstudios.com/mastering](http://capitolstudios.com/mastering) | [facebook.com/capitolmastering](https://facebook.com/capitolmastering)

Capitol Mastering, Hollywood, CA

**Prism Sound**

Everybody's talking about  
**Lyra**

The ultimate USB interface for music production.

Contact us now to arrange YOUR Lyra demo.



Join the chat #ruprismsound

**Lyra**

21 Pine Street | Rockaway | NJ 07866  
sales@prismsound.com | [www.prismsound.com](http://www.prismsound.com)  
Tel: 973-983-9577





A flexible active monitor design that lets you switch speaker configurations on the fly



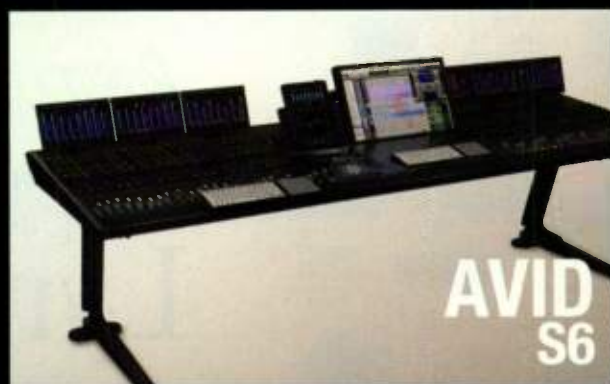
Two-channel tube/solid state hybrid compressor great for tracking & perfectly suited as a mainstay on your mix bus



Mic pre/DI that utilizes radical all-tube tone-shaping without added EQ circuitry - hear your mics in a whole new way!



Best described as "surreal," the REQ has character without unwanted color - tight, powerful lows with clear, defined highs



Mix faster and easier with intelligently designed controls, touchscreen, and intuitive modular layout



Experience unparalleled quality and detail with signature Neumann sound in a pencil condenser package

## VINTAGE KING APPROVED

If it's on our site, it's Vintage King Approved. That's more than a thumbs up, it's a vote of confidence. At Vintage King, we select only the best of the best gear — equipment you can rely on to get the job done. More than that, we include a free extended warranty and ship most items free to your door. The bottom line is, we're big on tone and huge on service. Check us out online today.





## SSL AWS 916

Perfect for private and commercial studios, the AWS 916 brings the feature-rich AWS experience to a much wider audience



## STERLING MODULAR MULTI-STATION

Elegant yet affordable; accommodates Artist Series components, keyboards or a flat desk surface



## ANTELOPE ORION 32

The world's first 32-channel AD/DA converter and master clock neatly housed in a 1u rack with USB & MADI connectivity



## UNIVERSAL AUDIO APOLLO 16

16 x 16 analog I/O & UAD-2 QUAD processing make this the new standard in professional high-resolution audio recording



## PMC TWO TWO™

The PMC twotwo™ series active monitors; new standards for critical reference monitoring



## MANLEY VOXBOX®

Four tubes, five custom-wound transformers and a little magic: the ultimate studio and touring vocal channel

**0% INTEREST FINANCING**

*with the Vintage King G.A.S. Card*

More info at [www.vintageking.com/creditcard](http://www.vintageking.com/creditcard)



**VINTAGE KING .COM**

NEW | USED | VINTAGE

888.653.1184

20<sup>th</sup>  
Anniversary  
1993 - 2013



# Tech // reviews

## KRK ROKIT G3 SERIES

Sonically Improved, Affordable Monitors



of offering accurate sound without breaking the bank. Rather than doing a complete overhaul, the G3s incorporate some structural improvements and some changes under the hood.

The Rokit G3 Series are all two-way, active near-field studio monitors. Each has a 1-inch soft-dome tweeter whose redesign is one of the key improvements to the line. Where previous incarnations boasted a frequency response that topped out at 20 kHz, the G3 line has a stated extended response all the way up to 35 kHz. The three different models in the line are each named for the size of their woofers, with the Rokit 5, Raokit, 6 and Rokit 8 having 5-, 6- and 8-inch glass-Aramid composite woofers, respectively. Their composition and yellow color are KRK signatures.

The low-frequency response is significantly improved, too, though this could largely be attributed to the redesign of the cabinet. At first glance, the size, shape and construction of the box appeared to be identical to the previous version. A closer look, however, reveals that the edges have been resculpted, with a slicker, more aerodynamic-looking design. This was done to control the way sound bends around these corners, minimizing the resultant diffraction. The edges of the cavity where the tweeter sits were also modified to help widen the sweet spot. The extended low-frequency performance, however, could certainly be due to the newly redesigned port on the front of the cabinet. The shape is different, more of a trapezoid than the rectangular shape of the previous generation.

The Class A/B bi-amplification system also got some attention. KRK monitors are popular choices for studios, but they have also made a home for themselves at

**W**hen it comes to reasonably priced studio monitors, KRK has been a market leader for years. While competing companies make affordable monitors in addition to product lines in a dozen other categories, KRK focuses solely on making high-quality speakers and headphones. The third generation of the company's popular Rokit series monitors aims to continue a tradition

### TRY THIS

When placing your monitors, remember that high frequencies are much more directional than low speakers, so it is more important that the tweeters are pointed directly at your ears than that woofers. At the same time, it is a good idea to elevate your monitors so that the first early reflection off of your desk bounces over your head, rather than arriving out of phase from the direct sound of the monitors.



**IT WAS SURPRISING TO HEAR SUCH A COMPLICATED STEREO FIELD HOLD UP SO WELL ON SUCH AFFORDABLE MONITORS. FOLK MUSIC WITH A SOLO SINGER/ GUITARIST SOUNDED ALMOST LIKE IT WAS BEING PERFORMED RIGHT IN FRONT OF ME.**

front of house and in DJ booths. Because of this, special care has been taken to make sure that the new G3 Rokits maintain a clear sound, free from distortion, even at high enough volumes to compete with a P.A. in the same room. To that end, they've upped the wattage, especially to the high-frequency amplifier on each model, though the low-frequency amplifiers each got a small boost, too. Despite increasing in power by about 10 percent, each of the three designs maintains the same maximum SPL, with the total power ratings registering at 50 watts, 73 watts, and 100 watts for the Rokit 5, Rokit 6 and Rokit 8, respectively. To that end, the added power seems to have been used to make them cleaner rather than louder.

The back-panel connections feature something for everybody. All connections are analog, with unbalanced RCA, balanced ¼-inch TRS and balanced XLR jacks all represented. The back panel also features a standard IEC-C14 power connector with a fuse. There is a volume control that provides up to +6 dB of boosting or as much as -30 dB of attenuation with a continuously variable control. There are also individual controls for low-frequency boost/cut and high-frequency boost/cut. Neither is extremely dramatic, though, with the low boosting or cutting up to ±2 dB, and the high boosting +1 dB or cutting to -2 dB. The low-frequency control is a new feature in G3.

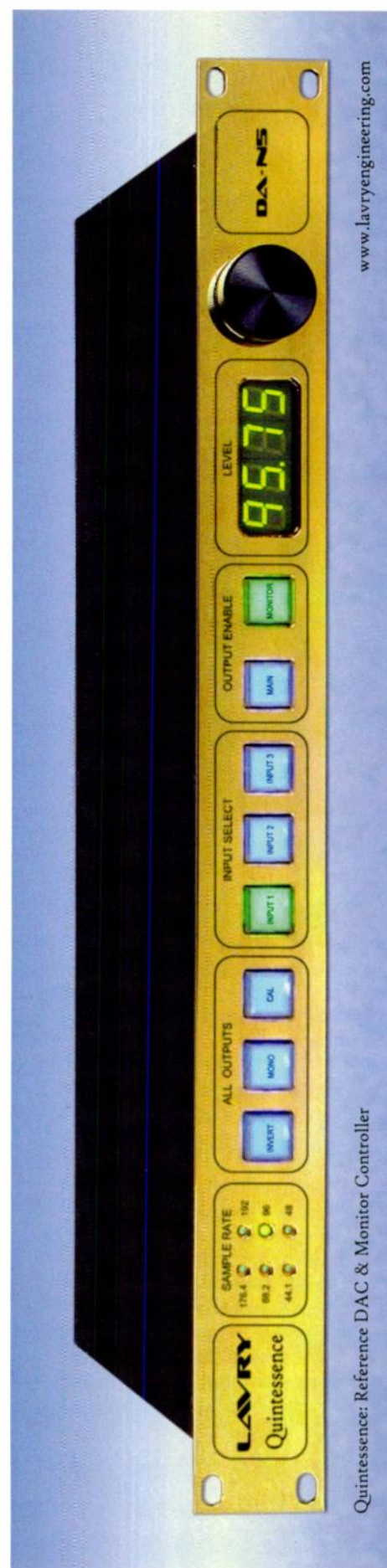
#### LISTENING TEST

I received a pair of the Rokit 6 G3s for review

and right away appreciated their considerable weight as a good sign. I also like the symmetrical design of each housing. With the tweeter being centered and aligned directly over the woofer, either speaker could be a left or right. This makes them a favorable option for creating a surround system. After I powered them up and fed signal, it seemed like they took a bit to warm up. Apparently they power up in a standby mode, and once signal is present, this is turned off. Likewise, after a half-hour of idling, they enter standby again. While I appreciate this power-saving consideration, it was bothersome at times when I would step away, come back and hit play, and turn up the control room level because I heard nothing. Then the speakers would wake up and blast me. I wish the illuminated KRK logo on the front indicated the standby status.

When listening to modern club-type music at high volumes, it was really impressive how the beat punched through with tight bottom, and the snare maintained its crack while a myriad of synths opened up with a pleasantly wide stereo image. The vocal stayed well-centered, and I was able to move my head a considerable width while the center image still held up. I could separate the individual instruments in the mix nicely and that clarity was not compromised even when driving the speakers extremely hard. Any type of hip-hop, EDM or indie dance music sounded right at home on these monitors. Though they bottomed out at 38 Hz, the bottom end didn't seem overwhelmingly lacking. My only complaint would be that the top end could be slightly harsh at times, especially at high volumes. A/B-ing against a pair of much more expensive Focal monitors whose top end was very smooth and comfortable, the KRKs just had a certain edginess to them.

I listened to Beatles and Jimi Hendrix mixes that really explored the possibilities of stereo, and those mixes sounded very wide and exciting. I listened at much more reasonable levels and was pleased with the new tweeter design. It sounded nice and airy, and clearly provided the psychoacoustic cues necessary to produce an impressive image. All through the upper midrange, again, there was a fantastic clarity where nothing muddled up in the mix. Modern indie rock produced a similar experience as I noticed



Quintessence: Reference DAC & Monitor Controller





## Royer SF-2

"We have many wonderful microphones in the Skywalker Sound locker, but once I tried the SF-2 I knew we had to add a pair. It is a beautiful sounding microphone, especially for orchestra instruments like timpani."

**Leslie Ann Jones** – Multi Grammy-winning Engineer, Director Music Recording and Scoring at Skywalker Sound

"Who would have thought such a little ribbon mic as the Royer SF-2 would have such a magnificent, smooth, AND detailed sound? I've used these babies as main orchestra mics, main chorus mics, solo vocal and instrument mics, and even on Leslie cabinets. The SF-2 is an essential tool in MY bag of tricks!"

**Michael Bishop** – Multi Grammy-winning Engineer, Telarc, Five/Four Productions



**Royer Ribbons**

818.847.0121

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

## PRODUCT SUMMARY

**COMPANY:** KRK

**PRODUCT:** Rokit G3

**PRICE:** \$149.99 Rokit 5, \$199.99 Rokit 6, \$249.99 Rokit 8 (street)

**WEBSITE:** [www.krksys.com](http://www.krksys.com)

**PROS:** Clear sound, even at high volumes.

**CONS:** Speaker's output not entirely honest.

a different sound every few degrees from left to right. It was surprising to hear such a complicated stereo field hold up so well on such affordable monitors. Folk music with a solo singer/guitarist sounded almost like it was being performed right in front of me. My one complaint would be that the lower midrange felt a little lacking, leaving the body of drums or acoustic guitars sounding a little thin, but you would have to expect some sort of trade-off with budget monitors.

### IN USE

Once I felt like I had a pretty good impression of these monitors, I got to mixing on them. The midrange was extremely honest and provided an accurate depiction of my mix decisions. When I would double-check on trusted headphones, though, or switch over to higher-end monitors, it seemed like my mixes often came across as a bit dark, and lacking top end. When I would correct the mix and switch back over to the KRKs, the mix didn't seem dramatically brighter. It seemed that the KRKs weren't necessarily boosting top end but merely enriching it



somehow, as if they were resonating and producing harmonics. I was hearing highs that weren't really there, and it was tough to learn and compensate for this. I typically wound up just hyping the top end of mixes and hoping for the best.

The other thing that I noticed was that my mixes from the KRKs sounded a bit bottom-heavy when played on other monitors. I tried turning up the low-frequency boost to +2 dB, but it didn't make much of a difference. I

wound up just mixing bass conservatively and accepting that it would be louder on other speakers. I think it was the lack of low-mids that actually contributed to the top end seeming unnaturally bright, as well. If I played the mixes considerably louder, the bass was much fuller and balanced with the rest of the frequency spectrum better.

Besides the two bumps in the road, I would say that the Rokit 6s are certainly impressive. When it comes to building speakers on a budget, there are always going to be trade-offs, and one of the most common is to sacrifice clarity for big bottom end and crisp, punchy mids. While listening to finished products on speakers like that can be enjoyable, the ability to decipher individual elements in a busy midrange absolutely takes precedence when mixing. KRK seems to have gone in that direction here and put clarity first. If the bass at low levels had to take it hit to make that happen, that seems to be a fair trade.

### NEW AND IMPROVED?

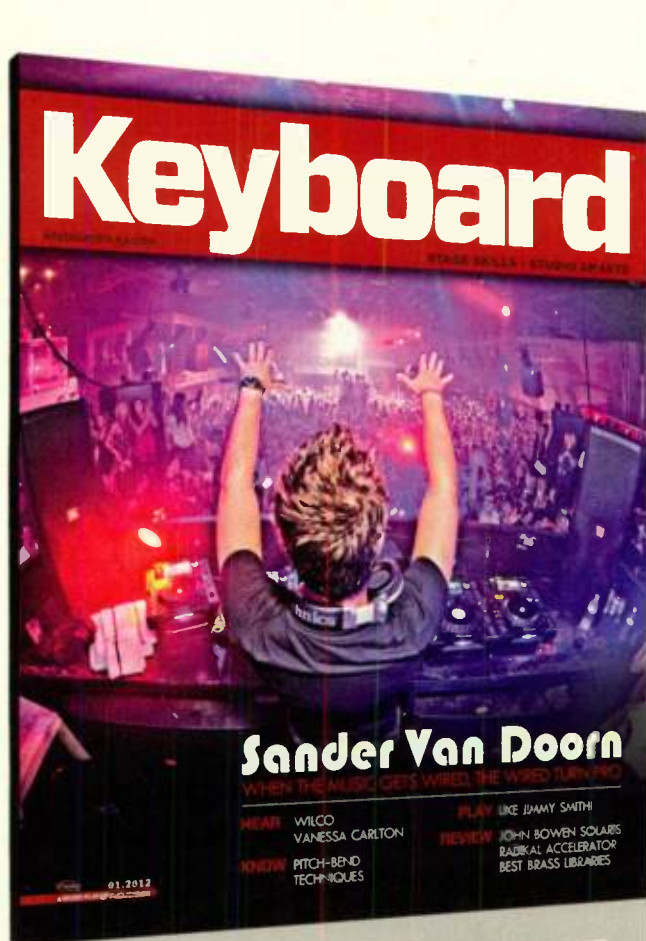
If the biggest aims at improvement were the added clarity at the amplifier stage, and detail provided by the tweeter, I would say that their effort was a success. Compared with other monitors in the same price range, the overall sound and midrange detail of the Rokit 6s give them a definite edge. Altogether, it seems that KRK has succeeded in producing a studio monitor that sounds much more expensive than it is, and will surely be a popular choice for recording engineers, DJs, live-sound mixers and audio enthusiasts. ■

*Brandon Hickey is a freelance engineer who works in indie film production and audio education.*



Read your copy of **Keyboard** the way you want!

*Keyboard* is now available in print and can also be found in your iTunes store. Choose your subscription to *Keyboard* today – print **OR** digital!



Go to [www.mykeyboardmag.com](http://www.mykeyboardmag.com) for a print subscription

For the iPad version you can either search in your iTunes store OR go to [www.keyboardmag.com/ipad](http://www.keyboardmag.com/ipad)

*From lessons penned by music's brightest stars, to hands-on workshops that help layers master the latest tools, to the most heavily-cited equipment reviews in the business, Keyboard is the only place to learn which notes to play and which knobs to turn—empowering musicians of all styles and skill levels to use music technology the way they want to. Choose your subscription method to Keyboard today—print OR digital!*



## SAMPLE MAGIC MAGIC AB

Must-Have Plug-in Makes Program Comparisons a Snap



Magic AB lets you zoom in on a reference track's waveform display and set up a loop for playback.

**W**hether you're a mix or mastering engineer, making A/B comparisons has always meant creating and navigating alternate signal paths and possibly DAW markers—a hassle at best, and a perception-warping distraction at worst. No more. Sample Magic's Magic AB plug-in lets you compare your current mix with up to nine other tracks—at timeline locations you specify and with optional level balancing and looping—using simple mouse clicks. And the price is a bargain-basement \$39.07. The cross-platform plug-in is available in Audio Units, VST, RTAS and AAX formats and accommodates both 32- and 64-bit hosts. I tested Version 1.1 in Digital Performer 8.05, using an 8-core Mac Pro running OS X 10.8.5.

### IT'S A SETUP

Magic AB alternately routes two stereo sources—your DAW's output (current program) and one of nine reference tracks—to its output. To use Magic AB, place the plug-in on the last insert of your DAW's master bus; this signal path becomes source A. Load up to nine reference tracks into the plug-in by clicking on each of nine text boxes in turn. Click on the power button for one of the loaded reference tracks to select it as the current reference, or source B. Now you can click on the plug-in's A button to output the current program playing on your DAW's mix bus, or click on the B button to mute the current program and simultaneously route the currently selected reference track to the plug-in's

output. You can instantaneously switch between A and B sources or program a crossfade up to two seconds long in the plug-in's preferences window.

Each reference track has a fader you can use to balance its level with that of the A stream. This important feature removes level bias from your AB comparisons (tracks that are louder often psychologically sound better) and nullifies the Fletcher-Munson effect (bass and high frequencies sound more prominent as volume increases).

Clicking on a reference track's display button shows the track's waveform in the main edit window at the top of the GUI. Click on the waveform to select where you want the reference track to begin playback. Below the waveform display are transport and navigation buttons for the B stream (reference tracks). You can toggle play and pause functions at the current timeline location, or rewind playback to a

loop-start point.

When you activate Magic AB's loop function, two graphic loop handles appear in the waveform view; drag them along the timeline to set loop start and end points. Use the zoom tool to set your loop points with greater precision. Clicking on one of four buttons quickly sets an alternative loop length— $\frac{1}{4}$ ,  $\frac{1}{2}$ , 2x or 4x—foregoing the need to mouse-drag loop handles.

L/R stereo and crest-factor meters—provided separately for A and B signal paths—grace the right side of the GUI. Faders independently adjust the output level for each stereo signal path. (To avoid these affecting your master, click on Magic AB's bypass button before rendering audio.) Meter readouts show peak and RMS levels and the faders' gain settings.

Magic AB can save as a preset a playlist of all your currently loaded reference tracks along with their fader, loop and zoom settings. You can also import external audio files (such as those on a CD) to a dedicated Magic AB folder on your hard drive for easy retrieval at a later time. Magic AB generally supports stereo AIFF and WAV (up to 24-bit/96kHz), MP3 and AAC audio files. But because the plug-in uses local OS audio decoders for playback, some PCs might not play WAV files with bit depths exceeding 16 bits.

### TRY THIS

Save custom presets in Magic AB, filling each preset exclusively with standout tracks in a specific genre such as country, rock or pop. No matter what style music is handed to you for mixing or mastering, you'll be able to recall a stack of appropriate reference tracks with the click of a mouse.



## EXERCISING MY ABS

Magic AB couldn't rename reference tracks. I also couldn't delete a reference track without replacing it with another or loading a new Magic AB preset.

It's fairly common for a client to bring in another artist's album to use as a benchmark for mastering. After loading a couple benchmark tracks in Magic AB, I could use their slots' faders to equalize their levels with those for the client's project (to remove level bias) while A-B'ing respective spectral balances. As long as adjusting a reference track's fader didn't cause clipping, I could simultaneously use Magic AB's crest-factor meters to compare dynamics. (Clipping would reduce the reference track's inherent crest factor.)

Zoom mode was useful when setting up a loop. I clicked and dragged up and down on the zoom function's + or - button (they apparently have the same function) to progressively zoom in and out, respectively. Toggling the zoom button alternately returned the waveform view to full program length and back to my last zoom setting.

The loop multipliers reset the current (not the original) loop length. For example, after setting up an 8-bar loop, I clicked on the 1/2 button. This set the loop length to 4 bars. Clicking subsequently on the 1/4 button changed the loop length to 1 bar (1/4 of 4 bars), not 2 bars (1/4 of the original 8-bar loop). The loop multipliers didn't change the loop's start point, just the end. They were especially helpful when my reference tracks were recorded at steady tempi during the sections I wished to compare, as they allowed me to, in effect, expand and shrink the sections under comparative analysis in musical terms (whole bars, half notes and so on) with the click of a mouse.

When I switched from one reference track to another, the first track automatically paused playback until I switched back to it, at which point it resumed playback. This is a great feature because it allows you to, for example, play all the way through the subchorus for each reference track in turn (switching right before their chorus begins) and then repeat the process to compare their choruses—all without having to click on timeline markers or transport (stop and play) controls.

Magic AB also worked great while remixing a track. After making a few changes during the song's chorus (raising faders for cymbals and the vocal double), I imported the original mix into a reference slot and looped the choruses for both A and B streams. Magic AB made it a snap for me to compare both mixes and

## PRODUCT SUMMARY

**COMPANY:** Sample Magic

**PRODUCT:** Magic AB

**WEBSITE:** [www.samplemagic.com](http://www.samplemagic.com)

**PRICE:** \$39.07

**PROS:** Facilitates easy, fast and flexible AB comparisons. Provides level balancing and looping. Meters show crest factors. Presets load custom playlists.

**CONS:** High-res audio files might not play on some PCs. Can't rename or delete reference tracks.

tell if my changes were an improvement.

Reference tracks and their control settings were retained when I saved a project in DP. Even better, I could save custom presets in Magic AB for use in all my future mixing and mastering sessions (see Try This).

Magic AB makes short work of A/B comparisons. Every mix and mastering engineer should own this terrific plug-in. ■

*Mix contributing editor Michael Cooper has written more than 400 articles about pro audio over the past 25 years.*

# The Mic Stand. Reinvented.



Are mic stands the weak link in your studio or stage setup? TRIAD-ORBIT changes everything. Weighted, articulating legs and a cutaway base allow TRIAD® Stands to be closely grouped in positions not possible with conventional stands. Orbital ball swivels give ORBIT® Booms unrivaled adjustability and range-of-motion. IO® Quick-Change Couplers offer fast, easy and secure mounting for mics and hardware. TRIAD-ORBIT is the first real innovation in mic stand design in over 50 years. At last, microphone stands for the Digital Age.

**TRIAD-ORBIT**  
ADVANCED MICROPHONE STAND SYSTEMS  
**TRIAD-ORBIT.COM**

© 2013 ACCESS Products Group. All rights reserved. 1-888-846-8776





## SONIC FARM CREAMER PLUS

Unconventional Preamp Produces Exquisite Timbres

**M**ost preamps have a distinct sonic signature. The Sonic Farm Creamer Plus has several, and they're all gorgeous. The 2-channel tube preamp offers multiple I/O topologies, filters and impedance controls for coloring mic, line and instrument signals in sundry ways.

To preclude phase shift and oscillation that would soften transients, the single-rackspace Creamer Plus shuns input-gain pots, using for each channel one EF86 pentode tube as its sole active gain stage. The tradeoff in this design is that input levels—and tube saturation—can't be finely adjusted to the decibel inside the box.

Each of Creamer Plus' mic inputs is balanced using an oversize, Mu metal-shielded Cinemag transformer that passively boosts the signal 20 or 26 dB, depending on a switch setting. The Class-A EF86 tube can operate in either triode or pentode mode, each providing a distinctive sound and additional gain (33 dB for pentode mode and 24 dB for triode).

To preserve its euphonious harmonic distortion (which can exceed 1 percent before clipping), the tube stage is followed by a discrete, high-voltage transistor buffer (an IC). A second (discrete) transistor buffer drives the channel's output transformer. The preamp's line input feeds a separate 1:1 (unity-gain), Mu metal-shielded transformer (a Cinemag CML1-15/15B), bringing the total number of transformers for each channel to three.

Each channel's output transformer has a nickel-iron alloy core on standard units, but you can order a pure nickel or iron transformer for both channels or substitute an iron transformer for only channel 2. Compared to nickel transformers, iron cores—which my review unit sported on both channels—typically produce softer high frequencies reminiscent of vintage timbres. For a cleaner but less creamy tone, you can switch the output transformer out of the circuit, substituting a solid-state IC for balancing.

### ABUNDANT CONTROLS

Each channel of the Creamer Plus (see Fig. 1) features pushbutton switches that activate 48-volt phantom power, pad the mic-input signal 15 dB, select transformer or solid-state output balancing, choose triode or pentode mode, flip phase (at the output, affecting all inputs) and boost the input signal an extra 6 dB. The 6dB-boost setting, effected by the mic input's transformer, also reduces impedance by 75 percent, changing the mic's tone.

Depressing a Gain Up pushbutton switch bypasses the tube



Figure 1: Creamer Plus packs a legion of sound-sculpting controls across its beautiful front panel.



Figure 2: Creamer Plus' rear panel sports connections for mic inputs and line I/O.

circuit's cathode with a capacitor, increasing musical non-linearity and adding roughly 5 dB of gain in triode and 9 dB in pentode mode. A large, plastic, chicken-head knob controls a pot that attenuates gain driving the output buffer and transformer; it doesn't affect tube gain. All told, the Creamer Plus can provide up to 74 dB of gain—more than most other preamps.

A line/instrument pushbutton switch alternately selects mic (switch set to out position) and line or instrument input (switch in). When you plug an instrument into a channel's 1/4-inch unbalanced instrument jack on Creamer Plus' front panel while the line/instrument switch is pushed in, the line input is disabled.

Each channel also provides five three-way switches. The Impedance switch selects one of three different impedances—modified further if you activate the pad or +6dB switch—for mic input. A Fat switch kicks in shelving-EQ boost below either 400 or 600 Hz, depending on its position, and an Air switch effects shelving boost above 2.2 or 7 kHz; the center position for each filter switch bypasses its filter. The shelving filters have 6dB/octave slopes and use the tube gain stage. You can adjust their boost by turning two trim pots—accessed by tiny holes in the chassis' top panel—using a mini-slot or hex screwdriver; maximum gain is approximately 4.5 dB in triode mode and 9 dB in pentode. Another switch selects 160 Hz, 80 Hz or bypass for a 6dB/octave, passive highpass filter. One more switch attenuates the output of the tube 0, 6 or 12 dB. Attenuating the tube's output precludes having to use the output-level pot near the bottom of its range—where its

### TRY THIS

When recording an extremely sibilant, shrill-sounding singer, try activating Creamer Plus' Gain Up circuit. High-frequency detail will be dramatically softened, taming fricatives and creating a creamy sound.



action is imprecise—when negotiating hot signals; that's especially important for use in mastering sessions.

When lit, the preamp's LEDs indicate the unit is powered up, 48V phantom power is applied, signal is present (green LED) or clipping the tube (red), and pentode mode is selected. The power switch is on the front panel.

On the rear panel, each channel sports a mic and line input and an output by way of balanced XLR connectors (six connections in total for the two channels; see Fig. 2).

Maximum output level is 32 dBu. The frequency response is stated to be 10 Hz to 50 kHz,  $\pm 3$  dB.

### MAKING TRACKS

I deliberately recorded tracks using solid-state mics so I could see what Creamer Plus' glowing tubes added to their sound. A woolly-sounding male vocalist—recorded using an AKG TL11 condenser in omni mode—sounded incredible in pentode mode with solid-state output. The sound was remarkably clear and detailed for sounding so extraordinarily lush—this is Creamer Plus' hallmark. The Air 1 (2.2kHz) filter setting added sweet and silvery highs.

The Gain Up circuit smoothly rounded the sound of my electric guitar, a '62 Strat played through a Roland MicroCube amp miked with a Shure SM57. For this track, I preferred the subtly thicker-sounding triode mode over the pentode mode and chose the creamy-sounding transformer output. The result sounded wonderfully lush and spotlighted the midrange, discarding any high-frequency glassiness.

I got a wide variety of DI'd electric bass tones—all superb—using Creamer Plus' instrument input. Selecting Fat 1 (boost below 400 Hz), Gain Up, pentode mode and solid-state output produced a burpy growl and thunderous yet tight low end—possibly the best tone I've ever heard using this particular instrument (a 30-year-old passive Kramer Pioneer).

### LINE INS AT MIXDOWN

Even set to the lower-gain triode mode, Creamer Plus' tubes overloaded when its line inputs were fed roughly 24 dB (2 dB below full scale) from my digital mixer's stereo bus. Raising the output-level knob past the 3:15 o'clock position disguised clipping indi-

## PRODUCT SUMMARY

**COMPANY:** Sonic Farm

**PRODUCT:** Creamer Plus

**WEBSITE:** sonicfarm.com

**PRICE:** \$2,550 (factory-direct)

**PROS:** Sounds superb. Highly versatile and feature-packed. Plenty of gain and only one-rack-space high.

**CONS:** Can't finely adjust input levels. Line inputs might distort with hot mix-bus levels.

cation by unjustifiably turning the overload LED's color from red to green. Sonic Farm explained that cranking the pot when the tube is clipping makes the tube buffer clip at a lower level, causing the overload LED to falsely indicate signal is under the clipping threshold. This can cause you to overlook clipping if you're not listening intently.

Routing subgrouped drums through Creamer Plus' line inputs, the effect was subtle until I drove the tubes to saturation by goosing the subgroup's send level. With the overload LEDs barely flickering red on some peaks, Creamer Plus lent wonderful tube compression to the sound. The drums sounded more aggressive and colorful, and I could make them much louder in the mix without snare hits clipping my mix bus. Despite the added glue, transients remained remarkably crisp and punchy through the preamp's solid-state outputs; transformer outputs tended to round the traps' transients too much for my taste. Kick drum sounded a hair more focused in pentode mode, while triode mode lent a bit more upper-bass heft to snare hits. The Fat filters' corner frequencies were too high to allow bolstering the kick's punch without also blurring the low-midrange.

If you only need a preamp for tracking, consider Creamer Plus' two-channel sibling, the more affordable Creamer Standard. Creamer Standard lacks the Plus' line inputs, shelving filters and tube-output attenuator switches.

Chockablock with sound-sculpting features and spawning tones that brim with saturated color and detail, Creamer Plus is one of the most musical and versatile tube preamps available today. If I could buy only one tube preamp for my studio, Creamer Plus would be the one. ■

Mix contributing editor Michael Cooper is the owner of Michael Cooper Recording in Sisters, Oregon.



MERCURY RECORDING EQUIPMENT CO.



**!NEW! Mercury GrandPreQ15s**

**"Once you hear it you will want to use it on everything" - MIX MAGAZINE**



**Mercury EQ-P1 MKIII**



**Mercury EQ-H1 MKIII**

**"The Mercury EQs are a quite original. All the tone of a classic tube equalizer but without the noise and much more power... Mercury EQs are one of the best sounding Tube Equalizers on the Planet".**

**- JOE CHICCARELLI**



**Mercury M72s MKIII**

**"The Mercury M72s sounds every bit as good as an original V72s."**

**TapeOp Magazine**



**Mercury M76m MKIII**

**"...ultimate 'vintage-style' mic preamp available today."**

**TapeOp Magazine**



**Mercury 66 MKIII**

**"If tone was a drug the M66 would be Heroin"**

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



Follow Us on Facebook & Twitter

510-581-3817





**HIGH END SOUND  
LOW END PRICE**

OVER 60 PRO AUDIO MANUFACTURERS  
EXCEPTIONAL CUSTOMER SERVICE  
EXPERIENCED TECH SUPPORT



**SWEETWAVE AUDIO**  
WWW.SWEETWAVEAUDIO.COM  
877.258.0563



"It all comes down to the room. Everything else will be different. It's paramount you have a room you can trust and I can trust my GIK Acoustics room."

Stephen Marsh, Marsh Mastering

**GIK Acoustics**  
"Bringing your sound to life"

www.GIKAcoustics.com Toll Free- (888) 986-2789

**BE A RECORDING ENGINEER**

**★ ONLINE COURSE**

BRAND NEW online practical training In Multi-track Recording. Join our successful working graduates or build your own studio. Career guidance. Diploma. Registered School.

**FREE INFO:**

**ATA Audio Institute of America**  
from San Francisco - USA  
www.audioinstitute.com

# MIX

MASTER DIRECTORY

## The Mix Master Directory is back!

Log on now to explore thousands of listings of business services and production facilities in the professional audio industry — the most comprehensive resource of its kind in the world.

Search by keyword, category, or location.  
Listees: Access your listing anytime to revise and maintain your contact info.

**Not listed yet or need to update  
an existing listing?**

**Contact Doug Ausejo for assistance:  
650-238-0298,  
dausejo@nbmedia.com**

**Want to make your listing  
stand out more?**

Opt for one of our Listing Enhancement Packages to attract the eyes of potential buyers. Add your company logo and a short company profile, and increase your visibility with premium positioning at the top of your category.

For more info, contact us today!

**directory.mixonline.com**



MIX Classified Ads are the easiest and most economical means to reach a buyer for your product or service. The classified pages of MIX supply our readers with a valuable shopping marketplace. We suggest you buy wisely; mail-order consumers have rights, and sellers must comply with the Federal Trade Commission, as well as various state laws. MIX shall not be liable for the contents of advertisements. For complete information on prices and deadlines, call Doug Ausejo (650) 238-0298.

## Classifieds

### ACOUSTIC PRODUCTS

**Acoustics First®**  
[www.acousticsfirst.com](http://www.acousticsfirst.com)  
 Materials to Control Sound  
 and Eliminate Noise™  
**Toll Free 888-765-2900**

making the world  
**sound better**  
 one room at a time  
**REALTRAPS**  
**ACOUSTICS**  
[www.realtraps.com](http://www.realtraps.com)

**WhisperRoom INC.**  
 SOUND ISOLATION ENCLOSURES  
  
 Reducing Sound to a Whisper Since 1990!  
**WhisperRoom, Inc.**  
 (423) 585-5827 • FAX: 423-585-5831  
[www.whisperroom.com](http://www.whisperroom.com)

**SILENT Source**  
 58 Nonotuck St., Northampton, MA 01062  
 Info: (413) 584-7944 Fax: (413) 584-2377  
**ORDER: 800-583-7174**  
 Silentcore Fabric Panels •  
 Sound Barrier • Isolation Hangers  
 Tube Traps • Primacoustic •  
 WhisperWedge • ProFoam • Clearsonic  
 • Hushfoam • R.P.G. Diffusers •  
 Sonex • Sound Quilt • More  
[www.silentsource.com](http://www.silentsource.com)  
[info@silentsource.com](mailto:info@silentsource.com)  
 QUALITY • PRICE • RIGHT • INTEGRITY

**STUDIO FURNISHINGS**  
  
 NEW DUAL15L  
 your gear  
 right  
 at your  
 fingertips  
 studio furniture  
**ARGOSY.**  
[www.ArgosyConsole.com](http://www.ArgosyConsole.com)

For the latest news and web-only  
 exclusives, visit [mixonline.com](http://mixonline.com)

### REAL ESTATE

#### Recording/Band Rehearsal Studio for Lease, NYC AREA




Former Whitney Houston State of the Art Studio  
 15 Wallace St., Elmwood Park, NJ  
 6,000 SF. 3 tracking rooms, performance stage, soundproofing. 4 offices.  
 Kitchen & Lounge. Private yet convenient, 20 min to NYC.  
 Contact: Richard Brock, 201.845.6606, [rbrock@niantionalrealty.com](mailto:rbrock@niantionalrealty.com),  
<http://bit.ly/1eHM2Mn>

### RECRUITMENT

Drexel University's Music Industry Program seeks applications for  
 a full-time teaching faculty member (technology concentration)  
 beginning September 2014.

To apply, go to: [www.drexeljobs.com/applicants/Central?quickFind=77775](http://www.drexeljobs.com/applicants/Central?quickFind=77775)  
 or visit [www.drexeljobs.com](http://www.drexeljobs.com) and search for  
Assistant Teaching Professor-Music Industry. The requisition number is 5666.

### EQUIPMENT FOR SALE

**Enhanced Audio**  
 Enhanced Microphone  
 & Speaker Mounting Technology  
  
**Revelation 600 Series**  
**New Price**  
 Purchase Direct Online  
 A Revolution In Performance & Design [www.enhancedaudio.ie](http://www.enhancedaudio.ie)

**Subscribe  
 to Mix**  
[mymixmag.com](http://mymixmag.com)

#### VINTECH AUDIO 573



**1-877-4-MICPRE**

Advertise in  
 MIX Classifieds  
 & Marketplace  
 Contact  
 Doug Ausejo -  
 (650) 238-0298  
[dausejo@nbmedia.com](mailto:dausejo@nbmedia.com)



# Advanced technology for your MOTU Studio

Run Digital Performer 8 and MachFive 3 on the sleek MacBook Pro, record up to eight mics simultaneously with the new 8pre USB, then polish your recordings with the latest studio technology.



## Apple MacBook Pro with Retina Display

### The highest resolution notebook ever

A groundbreaking Retina display. All-flash architecture. The fastest mobile processors. Remarkably thin and light 13-inch and 15-inch designs. Together, these features take the notebook to a place it's never been. And they'll do the same for everything you create with it in your MOTU studio.

## MOTU 8pre USB

### 16x12 USB interface and optical expander

The new 8pre USB provides eight mic inputs with pristine preamps, individual 48V phantom power and pad, and plenty of gain. Connect to any Mac or PC with USB, or to any digital mixer or other interface equipped with ADAT optical. Flexible combo jacks take mics, balanced line inputs and even hi-Z guitar inputs.



## Novation Launchkey

### Next-gen USB/iOS controller

The Launchkey 49 gives you cutting-edge control over your MOTU mobile studio with 49 smooth, synth-weighted keys, and 50 physical controls including 16 velocity-sensitive multi-color trigger pads. Produce and perform music instantly with powerful integrated free Novation apps for iPad. Launchkey is Mac, PC or iPad powered and available in 25, 49 and 61 key versions.



Value Added  
Reseller  
Professional Audio

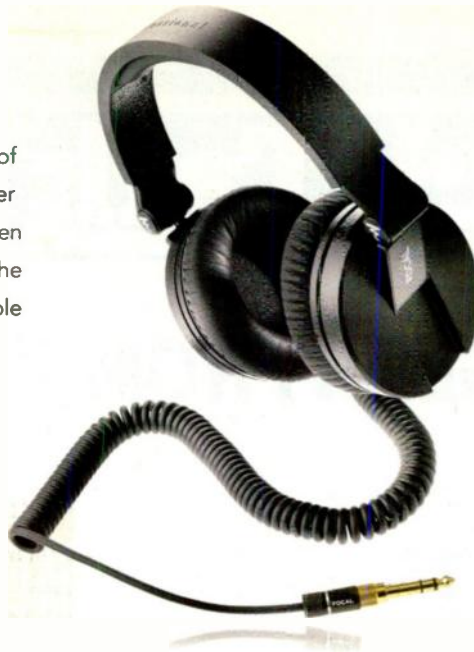
# MOTU

World Radio History



## **Focal Spirit Professional Closed Studio Headphones**

The Spirit Professional headphones benefit from Focal's years of expertise. Focal has been designing and manufacturing speaker drivers and loudspeakers since 1979. These headphones have been designed for sound engineers and musicians. The neutrality of the sound combined with the dynamics of the transducers will enable you to work with great precision. The memory foam ear cups provide excellent insulation and outstanding comfort.



## **Shure Beta 181 Stereo Set Ultra-compact side-address instrument mics**

Designed for discreet placement and control in live or studio environments, the Sweetwater-exclusive Beta 181 Stereo Set includes interchangeable cardioid, supercardioid, omnidirectional, and bidirectional capsules for superior versatility. The small-diaphragm design provides superior performance in tight spaces. High SPL handling, ultra-smooth frequency response, and interchangeable polar patterns make this a must-have mic bundle. Includes two mic bodies and eight capsules in a custom case.



## **Mackie MRmk3 Series Powered studio monitors**

Mackie MR8mk3 Powered Studio Monitors will help you make better sounding music, with innovations like an enhanced waveguide for a wider sweet spot, custom-tuned rear porting for smooth, extended bass response, and customizable frequency controls to let you dial in the perfect response for your space. Now offered as a full-range series, choose the size that's perfect for your MOTU studio and budget: from 5", 6", or 8" full-range models, as well as a brand new, hard-hitting 10" subwoofer. The MRmk3 series are Mackie's latest assault on the state of the monitoring art.



# Sweetwater®

Music Instruments & Pro Audio

**(800) 222-4700**  
**www.sweetwater.com**





## TOP GEAR FROM 2013



By Kevin Becka

**T**he last 12 months have been an interesting ride for our business. Dealers I questioned at Winter NAMM were lukewarm about business, but just eight weeks ago at AES, the news was more upbeat and the show revealed a lot of great new gear. No matter how 2013 treated you or your business, it's been a great 12 months for gawkers and buyers alike.

Slate Pro Audio, the company mostly known for its software products, wowed Winter NAMM with the Raven MTX multi-touch DAW controller. I first saw this idea more than 10 years ago at Digital Sound and Picture in Culver City. DS&P's owner/mixer John Ross's "glass console" was a breakthrough idea in Pro Tools control that now seems way ahead of its time. Raven MTX, and the smaller, recently bowed MTi, have taken Ross's idea much further, taking advantage of new touchscreen technology and computer speed, and even optimizing the user's tactile experience with the surface. Whether you buy it or not, it's still cool.

PreSonus looked to change the conversation between its products by announcing the licensing of Audinate's Dante networking technology into proposed network cards. Winter NAMM also brought the StudioLive 32.4.2AI 32-channel performance and recording digital mixer and StudioLive AI Series Active Integration Loudspeakers to the company's product line.

Avid used April's NAB show to launch Pro Tools 11, the next chapter for the 24-year-old, industry-changing software. PT 11 brings a new look and AAX to fruition, a two-year process promised at AES 2011 with the launch of Pro Tools|HDX hardware and Pro Tools 10. Although many users are waiting until their favorite plug-in manufacturers jump onboard the AAX train before they take it to 11, it's still a big deal for DAW users.

Soundcraft's Si Expression series of consoles looked to bring a wealth of high-end features to an affordable level. Three Si Expression versions feature 16, 24 and 32 faders and mic inputs, and can be expanded to 66 inputs via any Soundcraft stagebox, including two new Mini Stagebox 16 and 32 models.

Antelope shipped the Orion32 converters this year, which provide 32 channels of AD/DA conversion in a single rackspace. *Mix* reviewer Chris Grainger called it "highly competitive with units that would cost twice as much to have as many channels." The Orion32 is iOS compatible featuring a custom-built USB chip that streams data up to 480 Mbits/192 kHz, and offers Antelope's 64-bit AFC technology (Acoustically Focused Clocking) and Oven Controlled

Oscillator. It's good to see converter companies breaking the mold this way. For instance, Lynx Studio showed the LT-TB, two-port Thunderbolt expansion card for its Aurora and Hilo converters, along with other Thunderbolt devices. It brings Lynx's high-end products to desktop and portable producers.

The still-wambly economy brought some sensibly priced products to market as manufacturers rethink their lines. Drawmer released the affordable MC 2.1 monitor box for controlling three pairs of speakers and a sub. It provides two headphone outs, talkback and a mini-jack for integrating portable devices into the studio. AEA, known for high-quality and high-dollar ribbon mics, showed its first sub \$1k model, the N22. The phantom-powered active ribbon benefits from the company's big engines from other mics in its line. Coles waved the affordability banner with its 4030L lollipop ribbon mic. It features a wide frequency response and ships in a sturdy case with a standard stand mount, for just under \$1k.

Those envying Sonnox's Pro Codec saw much of its functionality brought in for less than \$65 via the Fraunhofer Sonnox Codec Toolbox, which just bowed at AES. Features include real-time codec auditioning; support for MP3, iTunes, AAC, HE AAC, HD AAC and more; metadata editing; batch processing; and so on. Radial Engineering's Peter Janis, who I like to call "the guy who makes stuff you didn't know you needed—until you see it," showed the USB Pro DI, a high-performance 24-bit/96k stereo DI for Mac OSX, Windows XP, Vista and Windows 7. It offers a headphone amp and balanced Lo-Z outputs with switchable isolation for under \$200.

The 500 Series market saw many new units this year, including Rupert Neve Designs' Silk-enabled 511 mic preamp. Aphex showed a great new USB 500 Series interface at NAMM and many new 500 Series modules, including a single- and dual-channel preamp, EQ, and optical compressor. *Mix* reviewer Brandon Hickey called elysia's xfilter 500 "a great-sounding equalizer with a personality all its own." It features switchable high and low shelf bands, two mid-peak filters with switchable Q and a fixed LC filter producing some magic at high frequencies. I just got my hands on the Bettermaker EQ502P, a delicious-sounding doublewide 500 Series EQ with local or USB/plug-in control from your DAW.

While that's a lot, I've barely scratched the surface. The drag about the end of the year and these types of roundups is that there's just not enough room to mention all my favorites, nor enough dinero to buy them! Happy holidays everyone, and thanks for reading *Mix*. ■



# The Audix SCX25A

"... destined to become a classic."

Dennis Leonard, Supervising Sound Editor, Skywalker Sound

The Audix SCX25A large diaphragm condenser mic is perfect for live or studio. The SCX25A delivers a pure, open-air sound with exceptional detail and realism. With its patented internal suspensions system, wide cardioid polar pattern, frequency response of 20Hz - 20kHz and SPL levels up to 135dB, there's virtually no live or studio miking challenge that the SCX25A can't handle.

"We used two SCX25As to mic Peter's Bösendorfer piano for the acoustic section of the 'Back To Front' tour. To my ear, it was the best live acoustic piano sound I have achieved to date."

**Ben Findlay - Front of House, Peter Gabriel**

"I have owned a pair of the SCX25A lollipops since they were introduced. It is one of my favorite microphones for acoustic guitar and jazz guitar. Its ability to capture the essential sonic detail of guitar, piano and any other stringed instrument makes the SCX25A perfect for high-resolution 24-bit/DSD recording."

**John Gatski - Everything Audio Network**

"On any night in the Forbes Center's Concert Hall we might be presenting a soloist with piano, opera, large ensemble jazz, or the Mozart Requiem with symphony and chorale. Across this musical spectrum I can count on our SCX25A's to give me outstanding definition with every recording. They really are amazing."

**Tom Carr - Recording Engineer/Sound Designer, Forbes Center for the Performing Arts**

"Whenever I go to a new studio, I always ask the in-house guy to put up his best pair of piano mics. Then I put up the Audix SCX25A's. They always out-perform. They're my go-to piano miking solution."

**Paul Mitchell - Front of House, Joe Sample, Jazz Crusaders**



"Having played the roles of artist, engineer, and producer; there is a fine balance between the technical and the artistic side of music. I find that the SCX25A has really helped to bridge that gap as it faithfully reproduces vocals and acoustic guitar regardless of the style or content of the music."

**Phil Keaggy - Legendary Guitarist, Artist, Producer and Engineer**

The Audix SCX25A is available as a single mic, matched pair or as a bundled piano miking kit. Try the Audix SCX25A for yourself and see why so many agree that it is a premium choice for any task.

**AUDIX**  
MICROPHONES

www.audixusa.com

Tel: 503-682-6933 Fax: 503-682-7114

Audix Corporation, P.O. Box 4010 Wilsonville, Or 97070

© 2013 Audix Corporation All Right Reserved.

Audix and the Audix Logo are trademarks of Audix Corporation



Why is the new **8PRE USB** two products in one?  
It's a **USB audio interface** and an **optical expander**.



Introducing the...

## 8PRE USB

16 x 12 USB audio interface and optical expander with eight mic inputs

- **8 studio-grade mic preamps** — with pristine sound, plenty of gain, individual 48V power, and 20 dB pad.
- **USB or optical** — connects to any Mac or PC with USB, or to any digital mixer or audio interface with ADAT optical.
- **Flexible combo jacks** — connect mics, balanced line inputs, and (hi-Z) guitars.
- Individual mic gain, 48V power and pad
- 16 inputs and 12 outputs
- 96 kHz recording
- 8-channel optical, even at 96 kHz
- 16 channels of MIDI input/output
- On-board CueMix DSP mixing
- Separate control of mic gain & mix vol
- Five-segment metering for mic inputs
- On-board SMPTE generator/sync
- Across-the-board driver compatibility
- CueMix software for Mac and PC
- Tuner, oscilloscope and other tools
- AudioDesk® Workstation software
- Removable brackets for desktop use

