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Jay-Z, LL Cool J, T.I., Method Man

Read the complete story on the Apogee website

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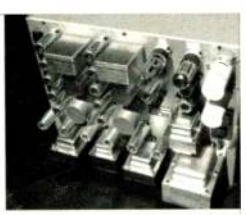

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On the Cover: Top engineer Chris Lord Alge in his studio, Mix L.A. (Tarzana, Calif.), surrounded by racks and guitars. To find out about his facility and techniques, see page 10. Photo: Jung Kim.

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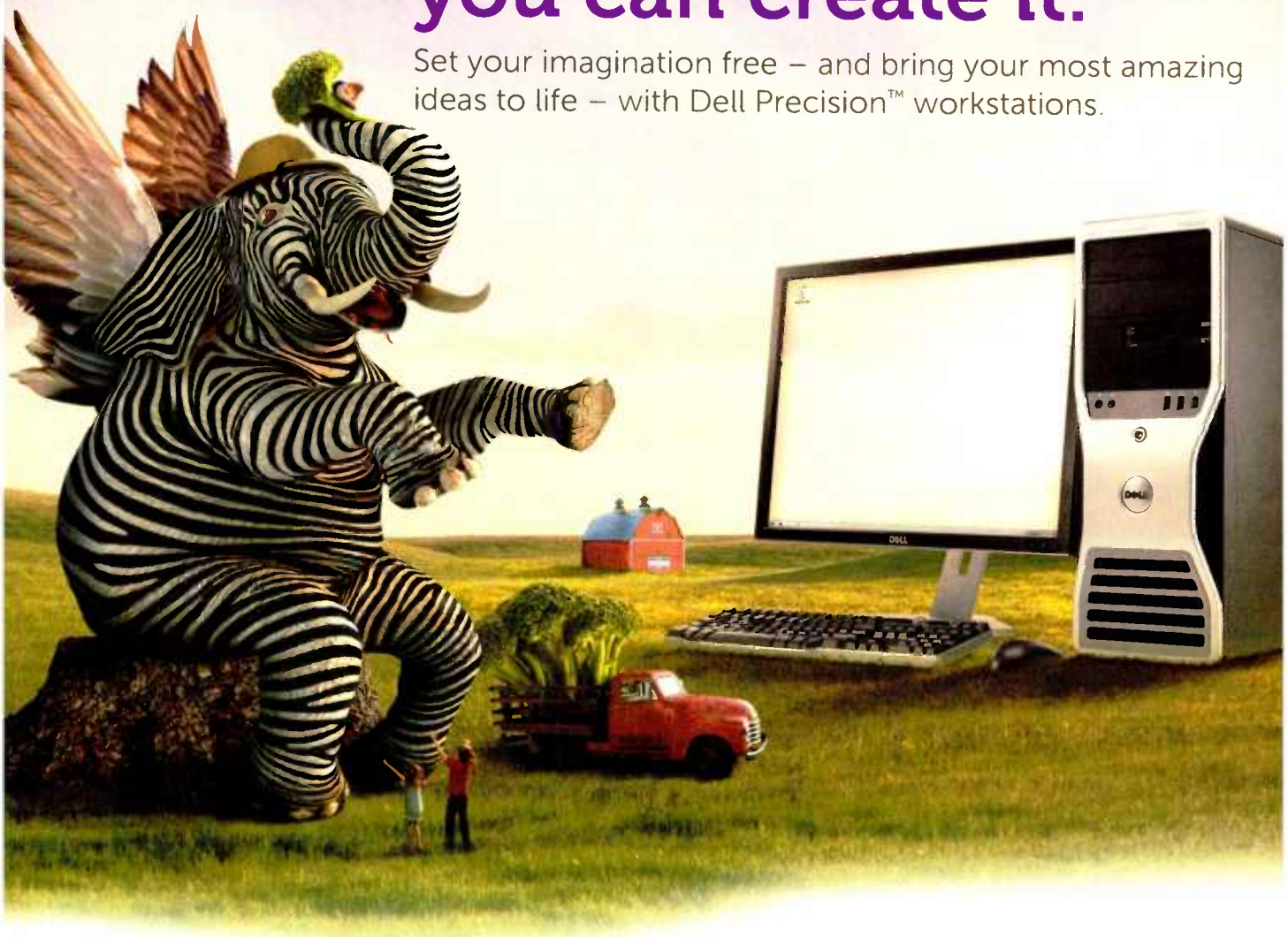

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Connections, Face to Face

I'm writing from the plane on my way to Mix Nashville, packed in with 150 people but for all practical purposes alone. It's about the only alone time I get these days. I can't receive e-mail, can't get a call, no texts on the Droid, can't flip over to HuffPo or CNN to find out what's happening in the world outside of audio. No requests for copy from the publisher, no pitches from writers, no Excel spreadsheets to keep me in line. No proofs to read, no Web story to update, no meeting on cover type. No calls from my daughters, no tickets to arrange for the concert next week, no updates on the family coming in for Thanksgiving. Just me and my book and my *New York Times* crossword puzzle. Four hours of quiet, four hours of bliss. But tomorrow, and I'll be back in my element. Organized chaos, with sponsors to greet, panels to run and 750 pre-registered attendees to get in the doors for a Monday morning downbeat. Next month it gets even more crazy, when 14,000 audio pros descend on *Mix*'s hometown of San Francisco for the AES convention. Products to see, friends I haven't run into for a year, late-night dinners with a spontaneous group of interesting folks—it's my favorite time of the audio year.

Events have faced a tough road in the down economy these past couple of years, not just in professional audio but across the entertainment industry. Are they smaller? Yes. Have they proven any less valuable? Not at all! Mix Nashville, postponed from May to September because of the middle Tennessee floods, picked up in attendance and sponsorship because, our informal surveys showed, the benefits of in-person interaction are a perfect complement to a Facebook, Twitter, Webcast-driven world. AES picked up exhibitors during the past two months and is expecting, if not record attendance, a solid turnout in San Francisco come the beginning of November.

People need the connection—the handshakes, the face-to-face, the introduction to a friend of a friend. Much of our lives these days is spent in isolation. A bass player lays down an overdub at home and sends a file across the country; a designer Skypes the client in lieu of visiting the site; a mixer finishes a hit song and has never been in the room with the producer. There is nothing wrong with remote production, and certainly great music can be made by a single person at home or by a team working in collaboration across several cities, or even continents; it's convenient, cheap and fast. But it's not for every situation. Sometimes you just need to be in the same room.

The audio industry is full of sensory people—people who love good food, good wine, good art, good sounds. They work hard and they play hard. Sometimes they work alone and turn out brilliant work. But they grew up with a crew.

So go to your local monthly AES chapter meeting, stop by the NARAS P&E event at a local studio and come by the *Mix* booth in San Francisco to say hello. My plane is about to land; by the time we start our initial descent into BNA, I'm bored. I need connection.

Mix Nashville begins and tomorrow I get to hang out with a few hundred Nashvillians. I couldn't be happier.

Tom Kenny
Editor

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By Maureen Droney

Chris Lord Alge's Mix L.A.

Does Chris Lord Alge really need an introduction at this point? From Green Day, Stone Temple Pilots, Hole, Nickelback and My Chemical Romance, to Faith Hill, Bon Jovi, Melissa Etheridge and countless more, Lord Alge has had a long run of mixing hits. He's smart, funny, outspoken and has a unique way with words. He likes to keep the energy up, and he's legendary for the speed at which he mixes. He's extremely efficient, but he's also full of heart and passion for his work. And yes, he is *very* self-confident. But the real key to Lord Alge is that he's a true believer—a front-running torch carrier for the magic of rock 'n' roll. Here are excerpts from a recent phone conversation we had on a Wednesday morning in September just before he got rolling on his day.

You've had your own studio for a while now. How's that working out?

I like it because I live close by. I commuted all those years to Hollywood, then to Burbank, and I finally had enough of driving. I have a daughter now and I wasn't getting to see her because I got home after she was in bed.

Years ago, I'd mixed a Damn Yankees album at Can Am Studios in Tarzana, so I thought I'd drive over and see if it was still there. Sure enough, I pull in and it's just like I left it, and 3.6 miles from my house! After a bit of negotiating, we got involved and spent weeks and weeks refurbishing Studio B. It was in disarray, but had the bones of a great studio. It was built by Vincent Van Haaff to mimic Studio A of A&M, and really, it is one of the last bastions of sound in the San Fernando Valley. It's been two-and-a-half years now. I got lucky; it was kind of designed for my needs. Big SSL, big control room, lots of room for my plug-ins, gear, what not. Halfway through I ended up acquiring the Studio A side also. Now we have Don Gilmore moving in there.

Oh, you have the original Can Am SSL!

Yes, a 72-input 4000 E Series. Perfect. I was on a 60 all those years, so I've actually upgraded to a bigger console. We rebuilt and recapped it. It was just unused. You know, for 10 years they'd only used two channels. So we fixed it up and brought the room back to the glory days. I call my side Mix L.A., and we keep the Can Am heritage Studio A the way it was. Now we're expanding, adding a third and fourth studio. So we're making a facility here. And I could not be happier.

You enjoyed the process.

I love the action. All those years, I kind of sat back and let other people do it because I was busy with the music. But now I prefer to do it myself because I'm in control. Obviously, the music is always Number One, but the studio thing is a lot of fun—if you have a great staff. And I have the best staff in town.

How many people work for you?

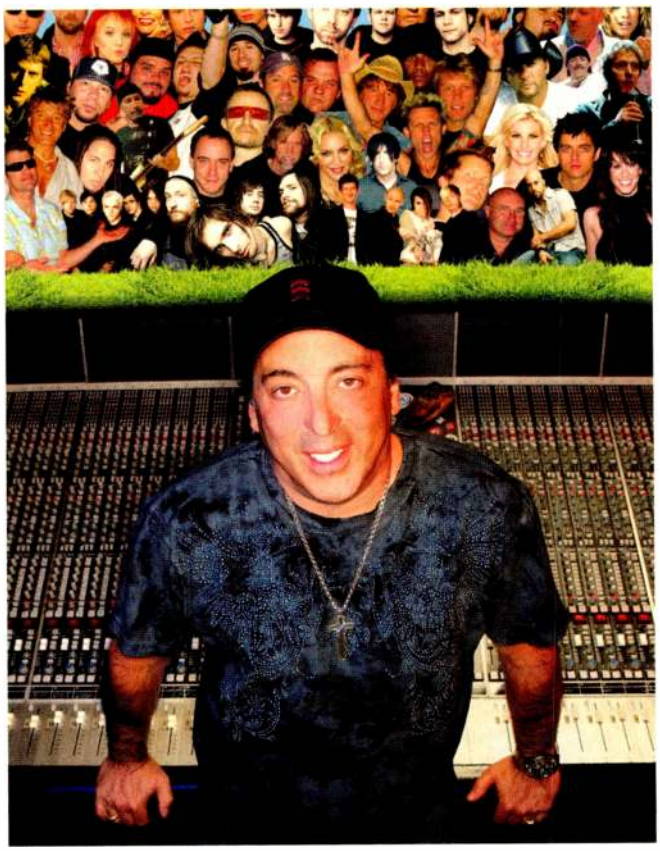
Five. I have two assistants that alternate every two weeks, and three other engineers: one that manages the place, one that does all the editing and one that's a full-time tech. Everyone kind of shares shifts. These are guys who've been tolerating me for 10 years. When I said I needed a team that works hard and has the same goals I do, they all wanted to come to the party. They actually all moved to be within like 10 minutes of the studio. Like me, they learned the commute thing is a big problem.

Do you still work "regular" hours?

We try to make it 10:30 to 6:30, or 9 to 7. That's the goal. But look, this is the music business. You just go with what works. It ebbs and flows, and many times it goes till midnight. It's all about taking care of your clients. Whatever they need, we just do it.

People are generally surprised that you still use a Sony 3348.

I cannot lie; I use a 3348. I have four of them just in case one breaks down, and I've bought every blank reel of tape on the planet that I could find so far. And the reasons get even better lately. Why this type of format never became a standard perplexes me because there is no other drop-dead storage medium that ensures that you can retrieve your song. So I stuck with the 3348 48-dig thing for several reasons. Number one: I like the way it sounds. Number two: I like driving something with a remote. I feel like I have control of the music. Number three: When I hit Play, I instantly hear music—stop, play; stop, play. Pro Tools doesn't do that. It doesn't react as quickly as I can. Sure, with DAWs you can rewind and fast-forward faster, but play, stop; play, stop; you can't do it. And the fourth and most important reason: When I put that track sheet in the box with the tape and a year-and-a-half later they need it, I've got what they need. I've



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Sgt. Lord Alge's All-Star Band: This collage represents a selection of the engineer's credits.

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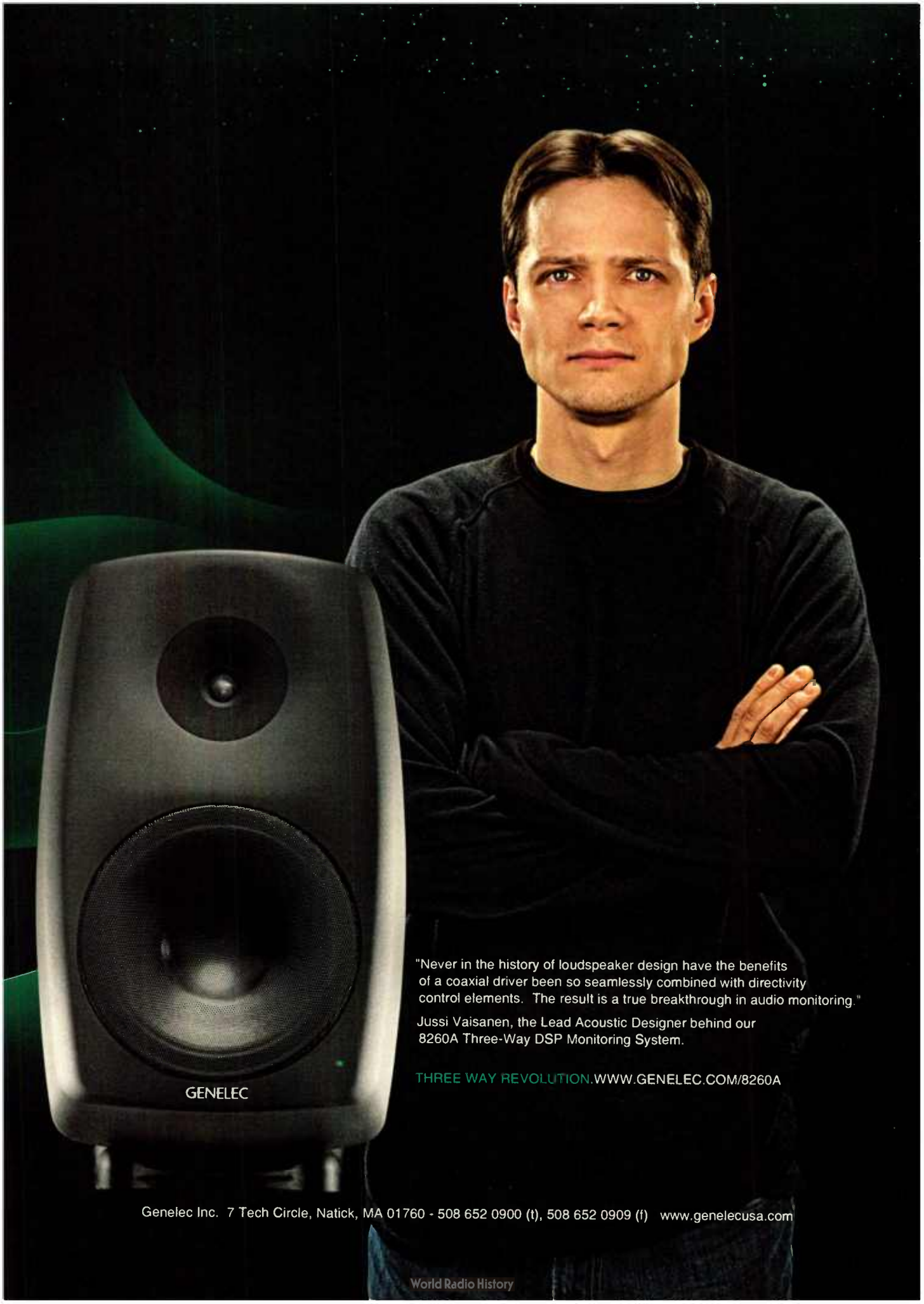

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got what's on that recording. Because one of the biggest problems today is: "Where are the files? Where did my record go? Where is that album?" With my system, I know that whatever went on that record, I have it and it didn't change. And this is becoming more and more of an issue. I get many, many calls to resurrect albums that are gone because I have these multitracks.

File management is huge. I grew up doing it; that's just how it is for me. Am I happy that they stopped making digital tape for 3348s? No. Would I be happier if they had a new machine? Yeah. But at least this way you have a final resting place for your album. I try to encourage every artist to preserve their legacy. Don't just think that the record company's going to have it in a box with a label on it and it's going to be fine. If that hard drive will not boot up, you are missing your record. Period. Don't think that you can go back in 10 years to that hard drive, that SCSI that you thought had $500,000 of your hard-earned money on it. It's over.

Mix L.A., in the former Can Am facility in Tarzana, Calif., is brimming with Lord Alge's collection of outboard gear and instruments. Lord Alge is in the process of adding a third and fourth studio.

What do you mix to lately?

We mix 2-track back to 96/24 HD through Apogees. Because our multis are all 48/24, it's all locked and clocked, and the clarity is really good. I'm happy with the way it sounds, and it's convenient for mastering. When it's appropriate to the song, we also run some half-inch, and once in a while it's the half-inch that has the magic. And I run a 7½-inch quarter-track, quarter-inch on a 30-year-old Pioneer RT-707 that I found on eBay, brand-new. The most excitement bands give me is when they see that sucker rolling and they hear that little bit of ¼-inch compression doing its thing! I'm going to bury that thing with all the reels in the ground in a time capsule. It will probably last longer than your hard drive. So we run the three: The halfie, the dig and the ¼-inch, dumped back into the Pro Tools in case they want to screw around with it.

What are your monitors?

The same Yamaha NS-10s I've had for 20 years, same subwoofer. Some big M&Ks for the wowers, and I mostly stick with the same boom box, the Sony ZSM1 I've had all these years. It's the one the bands gravitate to because it sounds kind of like computer speakers.

Do a lot of bands come to the mix?

It's 50/50 lately. I find if the band's in town and shows up when we're at the finish line, we close the deal. It helps if there are any questions. I just finished My Chemical Romance. We mixed a lot of it without them, and then they came in for a few days to do recalls, reviews and tweaks to the songs they had issues with. It's important for them to come in and see and touch and feel and know that their questions have been answered. They want to know, "Does this make it better or does it not? Does my part really help?" They want to see if their changes undo the mix or not, which is important.

What about the producers; are they there?

Many of the ones I work with live within 10 minutes of here and they like the convenience of being able to pop over. We also do a lot through iChat or e-mail or phone calls. But I like it when they come down and set up shop here. They do their business, they do vocals, and we can plow through three or four songs if we have to. Many of the producers are working with multiple bands; it's not just the one project. So they've got stuff to do. And the A&R contingency, whether they are in L.A. or New York, they are onboard, too. We have really good communication long distance because of the technology. But people like to hang out here. They like my place. We have fun. It's like real record-making.

What's your advice on creating an exciting song?

If you're going to build a house, the most important part is to make sure your foundation is strong. And don't try to do your mix at Home Depot. You want to work in a house that's finished. You can't make a mix unless it's organized. If your files are in disarray, if it's not cleaned up and ready to go, then your mix isn't going to work.

But beyond that, it's all up to your ears. It's the energy. To make something exciting you have to be excited by the song.

Your favorite piece of gear lately?

I'm not going to lie; it's the plug-ins I helped Waves build. They built in things that take me multiple fader moves to do and also eat up parts of the console. With the plugs, having these effects or compression or whatever is so convenient. When I'm building my [3348] tapes, it's kind of like a tracking date. I try to keep things as pure as possible because this is a legacy tape I'm making. But some of these tracks need a little help, so I'm doing what you'd do on a tracking date to analog where you use some compression correctly to fight signal-to-noise. I'm just trying to get gain structure out of the files and the plug-ins really help.

I'm also re-visiting old pieces of gear: an AMS DDL, an Omnipressor, an Eventide H3K, an old EMT [plate] reverb. And a great one, the Ursa [Major] Space Station—it does something nothing else does. It's got one setting, and it's, "Yeah, that's the flavor!" Maybe the coconut raspberry or the coffee ice cream that song needs.

You pretty much like everything you're doing, don't you?

Oh, yeah. We even make going out to dinner exciting—we're going to finish what we have to do and make it before the kitchen closes. Because you want drama, excitement and the thrill of the hunt. If there's no action, who cares? III

Maureen Droney is executive director of the P&E Wing of the Recording Academy.

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World Radio History

CURRENT

compiled by Sarah Benzuly

IN MEMORIAM
KEITH BARR, 1949-2010

Audio pioneer and innovator Keith Elliott Barr—perhaps best known as the founder of Alesis Electronics—was found in his home in Vancouver, Wash., on August 24, 2010, passed away due to an apparent heart attack.

Largely self-educated in electronics, Barr worked as an engineer and technician and co-founded MXR Innovations in Rochester, N.Y., in 1973 with Michael Laiacona (later founder of Whirlwind USA) and Terry Sherwood. After a dozen years of producing guitar effects and rackmount studio devices, the company ceased operations and chief designer Barr moved to California.

In 1984, he formed Alesis. In 1985, Barr developed the XT reverb and brought in his friend Russell Palmer to handle the business side and oversee sales. A year later, Alesis launched the MIDIverb, the first pro 16-bit effects processor priced at less than $1,000. Following that, Alesis teamed up with Marcus Ryle (who later founded Line 6) to produce the MMT8 hardware sequencer and the HR-16 (1987), a drum machine capable of true studio sound quality in an affordable package. During the 1987 Audio Engineering Show in New York City, Barr had dinner with the Alesis sales/marketing team, and he laid out plans to develop a pro-level studio recorder. Originally, the concept was for an analog machine, but with the availability of lower-cost DSP and converter chipsets, the idea was soon abandoned in favor of a digital approach. After a mammoth engineering project that took four years, the ADAT recorder was almost ready for prime time, even though it wasn't entirely ready.

Unveiled at the Winter NAMM show in 1991, ADAT was a compact studio tape recorder that could store eight tracks of digital audio on video tape, and could be interlocked with up to 15 other ADAT units, providing up to 128 tracks in all. ADAT delivered more than a year later, but in that time, half-inch analog 8-track sales came to a virtual standstill, and for a while every conversation in the industry seemed to be centered around this newcomer on the digital multitrack block.

By 2000, the appeal of the ADAT tape format diminished, mostly due to the rise of inexpensive disk recording systems, although the ADAT legacy lives on in the industry-standard Lightpipe digital 8-channel, fiber-optic protocol. Eventually, the huge Alesis business empire began to crumble, and in 2001, Numark owner Jack O'Donnell acquired the company and continues Alesis' mission of creating affordable production tools. Barr re-focused his energies on developing integrated circuit designs. He founded two companies: Exelys (sports technology products) and Spin Semiconductor, which creates complex ASICs (Application-Specific Integrated Circuits) for audio and music applications. Barr's design for the FV-1 ASIC put a complete digital reverb on a single chip for OEM installation into compact mixers, guitar amps, etc.

In 2006, Barr authored *ASIC Design in the Silicon Sandbox*, a book on building mixed-signal integrated circuits that was published by McGraw-Hill. He is survived by his wife and two children.

—*George Petersen*

GENE CZERWINSKI, 1927-2010

The founder of Cerwin-Vega, Eugene Czerwinski passed away on August 6, 2010.

In 1957, he created the world's first solid-state hi-fi component power amplifier, a monster capable of a then-unheard-of 125W RMS. Czerwinski always had a passion for impressive bass reproduction. In 1964, in the era when loud rock music was taking form, he designed an 18-inch woofer capable of 130 dB. A decade later, he developed the Sensurround double-18 subwoofers that produced ultra-low bass reproduction designed to simulate seismic events in movie theaters for the release of the film *Earthquake*, a technology that garnered a special Scientific and Engineering Academy Award in 1974. Czerwinski sold Cerwin-Vega to the Stanton Group in 2002.

Go to mixonline.com to read noted recording engineer/producer Drew Daniels' memories of Czerwinski.

—*George Petersen*

API Gets Patent

API's Lunchbox® has been awarded trademark status by the United States Patent and Trademark Office. Granted on July 13, 2010, the registration helps recognize API as the creator of the format, providing both product identity and protection when the Lunchbox is mentioned in print or online.

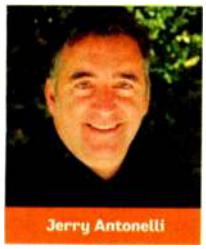
Elektra Turns 60

"Breaking from the valid and understandable anniversary traditions of the past, we decided to celebrate Elektra on the Web, the connective community of our age. [The elektra60.com site] was modeled on a world's fair, where a visitor can walk down the center promenade and take in the sights and sounds, and step into multiple pavilions for more enriching experiences."

—*Elektra founder Jac Holzman*

World Radio History

Industry News


Jerry Antonelli

Mark Ureda is VP/general manager of the **Harman** (Northridge, CA) Professional Loudspeaker Group (JBL Professional, Selenium). In other company news, **Kaushal Garg**, **Robin Ghose** and **Vibhor Khanna** fill sales team positions at the company's India site...**Crown Audio**'s (Elkhart, IN) new business developer, tour sound, is **Eric Friedlander**, and **Daniel Saenz** fills the market manager for installed sound position...Filling the newly created sales engineer, installed sound, position at **Audio-Technica** (Stow, OH) is **Mark Donovan**...**Guitar Center Professional** (Westlake Village, CA) appointed **Jerry Antonelli** as an account manager...New distribution deals: **JZ Microphones** (Latvia) names **Sascom Marketing Group** (Oakville, Ontario) to handle U.S.; **Adamson** (Toronto, Ontario) adds **ProSonic Audio-Lights Ltd.** (Cyprus) to its European roster; **Plus 3 Marketing** (St. Louis) will rep **WorxAudio Technologies** (Washington, NC) in Missouri, Kansas, Iowa, Nebraska and Southern Illinois; and **AMI Music International** (Sao Paulo) will handle **Renkus-Heinz** (Foothill Ranch, CA) in Brazil.

From left: Lenny Kaye, Bob Margouleff, Lee Foster, Tony Platt, Eddie Kramer, David Bialik, Janie Hendrix, John Storyk and Malcolm Cecil

PHOTO CHERYL FLEMING CHERPHOTOS.COM/ARCHITECTURE

ELECTRIC LADY TURNS 40

Operating nonstop in the heart of New York City's Greenwich Village for four decades, Electric Lady Recording Studios has been a remarkable landmark of the world audio scene almost since it opened on August 26, 1970. The New York Section of the Audio Engineering Society recently hosted a special event at Electric Lady, ensuring that the studio's noteworthy run would not be overlooked. For those lucky enough to be in attendance, the evening proved to be a fascinating and often emotional tribute to the studio and its founder, Jimi Hendrix.

Go to mixonline.com to read a full report.

—*David Weiss*

Studio Unknown Update

On the one-year anniversary of our column, we thought it would be fitting to give you a behind-the-scenes look at who we are, why we feel so passionate about making sure the voice of the "little guy" in the industry has the opportunity to ring out, and how we, as a "small working studio," have adopted many of the trends we've been covering for the past year.

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CLAIR BROADENS REACH

CLAIR

On August 9, 2010, Clair Global acquired New York–based Wireless First Inc. and GTO Live Inc., retaining those two companies' employees and names under the newly formed Broadcast Services division. That division will be managed by Shaun Clair and Kevin Sanford, founder of Wireless First and GTO Live. Sanford founded Wireless First in 1996 and GTO Live in 2008. Wireless First specializes in wireless mic and communications technology for TV and live event production, while GTO offers backline capabilities and services. Clients include the Tony Awards, MTV Video Music Awards, Country Music Awards and other high-profile live televised events.

TEC VOTING OPEN

The 26th Annual TEC Awards is scheduled to be held at the 2011 NAMM Show on January 14, 2011. Due to the change in scheduling, the eligibility period was extended to June 30, 2010—and now you can vote on those eligible Creative and Technical awards at tecfoundation.com.

Mix Master Directory Spotlight

This month's featured listing from the new online-only Mix Master Directory (directory.mixonline.com/mmd)

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World Radio History

The Spirit of American Gadgetry

HAND-CRAFTED IMAGINATION

The Heath "Parasol" kit airplane that started it all

Ed Heath's airplane fell apart in mid-air, killing him as it disintegrated. It was 1931, and Heath had been riding on the wings of the American industrial revolution with his line of build-your-own airplanes. His death could have been the end of our story right there, but instead it was a new beginning for American ingenuity. So what the heck does a failed prop plane from the 1930s have in common with a modern, modular analog synthesizer? In this case, they were both built from do-it-yourself kits.

PHOTO COURTESY THEPLEXUS.COM

A stack of PAiA 4700 synthesizer modules, wired up and ready to go

It was soon after the Wright Brothers first got off the ground that Edward Bayard Heath started his company, tapping into Americans' need to do their own thing. Early airplanes were expensive, but you could build your own from Heath's kit for around $500, and it was (reportedly) a pretty nice one at that! After Heath's death, the "Heathkit" company continued, becoming a successful manufacturer of more "grounded" build-it-yourself gadgets. In the 1950s, the company had great success offering oscilloscope kits for a fraction of what a prebuilt 'scope cost at the time, and with a flood of WWII surplus electronic parts on the market, Heathkit concentrated on offering budget-minded electronic kits to consumers. Each kit came with a detailed manual and color-coded parts. You did not need formal training to make a Heathkit—just a few simple tools.

Steve Jobs' First Workbench

In 1995, Steve Jobs, co-founder/CEO of Apple, described how Heathkit projects inspired him in his early years in an interview with Daniel Morrow for the Smithsonian Institute: "... It gave one an understanding of what was inside a finished product and how it worked because it would include a theory of operation, but maybe even more importantly, it gave one the sense that one could build the things that one saw around oneself in the universe. These things were not mysteries anymore. I mean, you looked at a television set, and you would think, 'I haven't built one of those but I could. There's one of those in the Heathkit catalog and I've built two other Heathkits, so I could build that.' Things became much more clear that they were the results of human creation, not these magical things that just appeared in one's environment that one had no knowledge of their interiors. It gave a tremendous level of self-confidence."

PHOTO COURTESY JIMFOREMAN.COM

High fidelity exploded in the early '60s with the onset of the stereo revolution, and the kit companies were there to fill the void in quality stereo consumer electronics. Audiophiles complained that they could not enjoy their new stereo vinyl with the large wooden console units of the era, so enthusiasts turned to kit-building to create their sometimes outrageous stereo component systems. In addition to the Heathkit company, several other kit manufacturers thrived during the '60s, including Eico, Dynaco, Fisher, HH Scott and glorious McIntosh. Similar to Heathkit, Eico was a company that used surplus WWII electronic components in its kits.

But then, as transistors replaced tubes, Japanese companies crushed the American companies in the consumer electronics market. They could build them faster, cheaper and better. It was no longer economical to do it yourself. In fact, in many cases it cost more to make a radio from a kit than it cost to buy a Japanese-made model off the shelf. So in the '70s, the kit-building focus shifted to the new frontier: analog synthesizers.

The Eico kit open-reel recorder responsible for my own career direction. Also on the shelf: Eico oscilloscope, Dynakit ST-70, PAiA vocoder and various bits and robots all made from kits.

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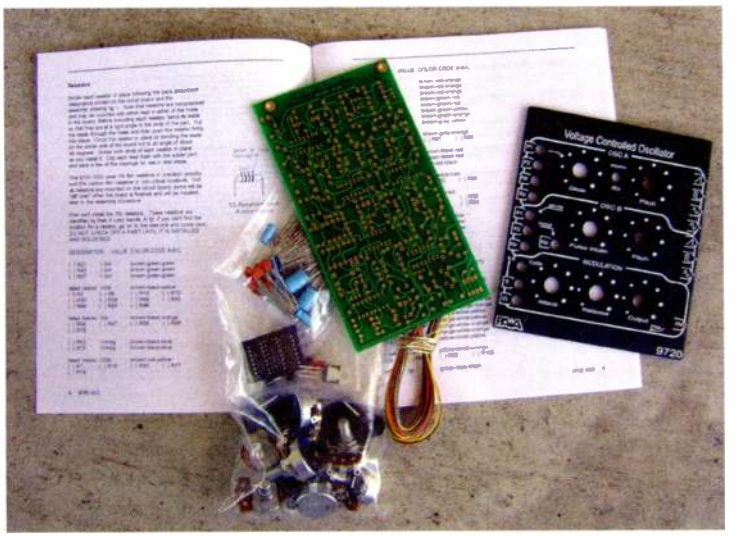

PHOTO COURTESY PAIA.COM

Here's what a simple PAiA VCO kit includes. Not that big a deal, huh?

Today's New Kit-Masters

On the forefront of the synthesizer revolution was John Simonton of PAiA Corporation, whose company still offers several kits for the musician and engineer, including the 9700s analog synth module and the Fatman. If you love analog synths, you'll want to get a stack of these fun and useful devices for gritty low-end tone and audio processing through their envelope filters. PAiA also offers new build-your-own spring reverbs, flangers, vocoders, guitar effects and even stereo mics. The PAiA users group in the '70s also started *Polyphony* magazine, which eventually became *Electronic Musician*, a sister publication to *Mix* since 1985.

I have to give a great deal of credit to the kit-makers for my own career direction. My father built an Eico open-reel tape deck from a kit in the early '60s, and when I was 4 years old, he sat me in front of it with a microphone. He monitored the recording off of the playback head, creating an amazing delay sound, which I remember to this day. I sat there for hours babbling into that microphone, listening to my voice echoing. It changed me. That old Eico tape machine is the reason I am engineering today.

Our minds can be inspired by the act of putting together a simple electronic kit. It's an American tradition: Sweating over a workbench in a garage, then daring to take that plane for a ride. Or at the very least, the electronic kit helps us to understand how things work, which then inspires us to ask the question: "How can I build it better?" III

Sylvia Massy is the unconventional producer and engineer of artists including Tool, System of a Down, Johnny Cash, Red Hot Chili Peppers, Tom Petty and Prince. She is a member of the NARAS P&E Wing Steering Committee and Advisory Boards, and is a resident producer at RadioStar Studios in Weed, Calif.

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Avid's Pro Tools 8.1 now supports the HD Omni interface (pictured).

DAWS FOR PRO AUDIO APPLICATIONS

NEW PLAYERS, NEW VERSIONS, NEW FEATURES

By George Petersen

From functional freeware to high-end apps, the current crop of DAW software represents an exceedingly wide range of offerings for the PC or Mac user. And it's a rare user who can get by working on only a single title, so sometimes a second or third DAW program—reflecting different specialties—is a must. With continual updates to existing programs and new players entering the market, we looked into what's new in the world of software-based DAWs, with late-breaking, pre-AES show news that savvy producers need to know.

Ableton

Now at Version 8.1.5, Ableton (ableton.com) Live combines a nonlinear flow with powerful real-time editing and flexible performance features. New functions and improvements in Live 8 include a new Groove Engine, revamped warping, live looping, new effects, real-time crossfades in the Arrangement view, an expanded groove library (with vintage Akai MPC and E-mu SP-1200 beats), the ability to extract grooves from audio or MIDI files, and real-time groove quantization. In addition to an updated Beats Warp mode and new Complex Warp mode, users can now slice audio files to MIDI tracks based on transients, and a Looper offers classic sound-on-sound looping without the limitations of a hardware device. Other tweaks include new effects (vocoder, multiband dynamics, overdrive, limiter and frequency shifter) and workflow enhancements.

Ableton Live 8 offers a new Groove Engine and an expanded groove library.

Adobe

The upcoming version of Adobe (adobe.com) Audition is a cross-platform app supporting either PC or Mac platforms. Designed specifically to take advantage of Apple's Intel-based Macs, Adobe Audition for Mac is a ground-up development effort (not a simple porting from the PC version) that will feature familiar tools for stereo or multitrack mixing/editing/recording and advanced audio restoration capabilities. New features in Adobe Audition for Mac include powerful audio editing and multitrack mixing views; advanced noise-reduction capability; Native 5.1 surround support; multichannel effects; other new effects; high-performance multithreaded processing; and flexible, parallel workflows optimized for fast-paced audio post-production. Release is scheduled for late this year. Adobe plans to allow users of Audition 1.5, 2 and 3 to upgrade to the cross-platform version of Audition regardless of OS.

Apple

A year ago, Apple (apple.com) began shipping its updated Logic Studio bundle for the Macintosh, combining its Logic Pro DAW/MIDI platform with the MainStage live performance app; Soundtrack 2 audio post software; 80 studio effects plug-ins; 40 virtual studio instruments; the Studio Sound Library (18,000 loops, 5,000 SFX); and production utilities including WaveBurner CD mastering; Compressor surround encoding; and more than 200 new features, which include Amp Designer and Pedalboard guitar-sound modeling, Flex Time timing/tempo manipulation, Drum Replacer and Quick Swipe Comping vocal/solo track compositing. Aside from the extras, Logic Pro V. 9.1 offers a 64-bit mode, where application memory is not limited, so any RAM amount not needed by the OS is available for use by Logic Pro or the included plug-ins. Therefore, users can run far more instances of memory-intensive plug-ins such as sample-based software instruments.

Avid

There's been a lot of activity in the Avid (avid.com) camp lately. Just out, Pro Tools HD V. 8.1 is a free update for Pro Tools HD 8 users for Mac OS X 6.2 (or higher), Win XP and (unofficially) Windows 7. Note: Pro Tools LE and M-Powered remain at V. 8.0.4. Pro Tools HD 8.1 adds a few minor I/O and session setup tweaks, and support for the new HEAT (Harmonically Enhanced Al-

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Cakewalk SONAR 8.5 Producer

gorithm Technology) software add-on. Developed with Crane Song's Dave Hill, HEAT adds color and analog warmth to a mix. But the hyperjump here is 8.1's support of Avid's HD Series interfaces—HD I/O, HD Omni and HD MADI. *[Note: For more on Avid's new line of HD interfaces, turn to our AES preview on page 26.]*

BIAS

Currently at V. 6.2, BIAS (bias-inc.com) Peak Pro offers advanced playlist editing and mastering for Macs (PPC or Intel based) running OS 10.4 or higher with a Classical Editing mode for creating seamless, customizable crossfades. Also featured is ultra-fast RAM-based editing, volume envelope control over entire regions (including fades and crossfades), improved high-resolution metering, advanced PQ sheet/text export with metadata support, modeling of popular dithering algorithms and a redesigned user interface. Also standard: a suite of production effects and 32 VST effects (delay, limiter, vocoder, de-ess, tone generator and more) from Maxim Digital Audio. The $499 street price also includes the Peak Pro Production Pack, with BIAS Reveal LE audio analysis tools, SoundSoap LE audio cleaning utility and more.

Cakewalk

Announced a year ago, Cakewalk's (cakewalk.com) flagship SONAR 8.5 Producer software keeps expanding. Beyond the recording, composing, editing, mixing and mastering functionality with 64-bit audio capability, this PC-based application for Windows XP, Vista (32/64-bit) and Windows 7 (32/64-bit) offers multistage effect plug-ins and Integrated Arpeggiator for triggering arpeggiations on MIDI or instrument tracks with in-depth control over all arpeggiator parameters, and Session Drummer 3 for fast creation of virtual instrument drum tracks. Also included are stellar-sounding kits and patterns from top sound designers and drummers. The new V. 8.5.3 adds enhanced AudioSnap 2 audio timing/tempo manipulation, with improved rendering, new resolution settings (to set tempo changes on every beat, measure or clip) and an Auto-Stretch mode. Snap settings can now be used to snap both audio and MIDI events to audio transients in selected tracks.

Cockos

Now four years old and at V. 3.672, Cockos' (reaper.fm) Reaper is a low-cost, full-featured DAW program for PCs (Windows 2000/XP/Vista/7), Macs (OS 10.4 or higher) or Linux/WINE systems. Main tweaks in Reaper V. 3 include enhanced MIDI and automation functions, but Reaper maintains a strong fan base, especially with its low pricing ($150 for commercial users; $40 for non-commercial users), solid 24-bit/up to 192kHz performance, clean GUI and large collection of included 64-bit audio ReaPlugs, ranging from EQs and compressors to synths and delay/reverb ambience processors.

EnergyXT Software

EnergyXT (energy-xt.com) is cross-platform (PC/Mac/Unix) full-featured DAW that offers audio/MIDI recording/editing/mixing, virtual synths and effects, yet is small enough to reside on a USB thumb drive for true portability between CPUs. New in EnergyXT 2.5.3 are the ability to send and share music files online using SoundCloud, improved render/bounce for remixing and loop creation, and the addition of a playlist function for onstage playback use. Full VST support is also standard. Pricing via direct download is $75.

Fairlight

Designed for film, video, music production and post-production, Fairlight's (fairlightau.com) EVO is an integrated hardware/software package offering recording, editing, mixing and video functions with seamless workflows for SD and HD file formats. EVO combines Fairlight's Crystal Core Processing, the SX range of I/O options and Xynergi self-labeling key technology, with an emphasis on providing quick access to mixing tools and 36-bit floating-point audio throughout the signal path. Rotary encoders and touchscreens deliver in-line controls with detailed, full-color displays for every fader. System pricing starts at $68,000.

Harrison

Harrison's Mixbus (harrisonconsoles.com) integrates a modeled analog console—based on the company's 32 Series and MR Series console designs—into a full-featured DAW. Now at version 1.3, Mixbus operates on the Macintosh (PPC or Intel) platform running OS X 10.4.11 or higher and supports AU plug-ins (with onboard plug-in delay compensation) and any Core Audio interface. The software focuses on the mix console, which offers EQ, filters, dynamics, and bus summing on every track along with analog tape saturation modeling for a vintage sound. Retail is an affordable $79.

Image Line Software

Image Line's (flstudio.com) new FL Studio Signature Bundle ($279, direct download) combines the FL Studio Producer Edition software with a plug-in suite containing Sytrus, DirectWave Full Sampler, Soundfont player, VideoPlayer, the Maximus maximizer and the Hardcore Guitar effects, in addition to 40-plus other effects such as maximization, dynamics, delay, distortion, EQ (graphic and parametric), filtering, phasing, flanging, chorus, vocoding and reverb. This Windows-based bundle offers all of the sequencing and audio recording/editing/mixing capabilities of FL Studio Producer 9, along with AudioTracks, Full Mixer, ASIO recording and WAV editor. It also supports plug-in instrument standards including VSTi (½), DXi (½), Buzz and ReWire.

LMMS (Linux Multimedia Studio)

LMMS is a cross-platform (Linux and Windows) free/donation-ware DAW program that's available for download at lmms.sourceforge.net. The new V. 0.4.8 officially supports modern Windows

Cockos Reaper V. 3 features enhanced MIDI and automation.

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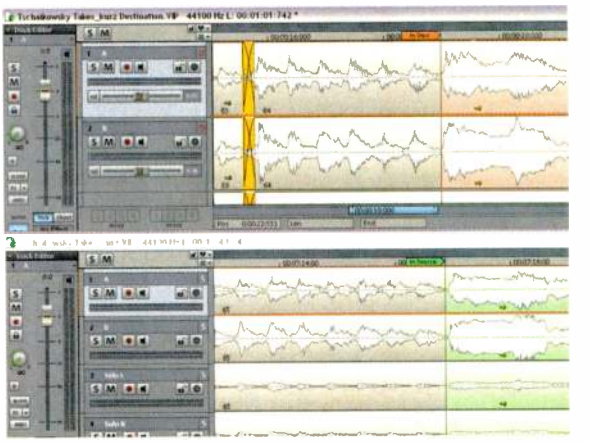
64-bit CPUs with improved floating-point math. In addition to audio sample/MIDI sequencing/editing within an updated GUI, LMMS provides a mixer with 64 FX, a selection of instrument and effects plug-ins, and track-based automation.



Projects in Magix Sequoia 11 can be mixed in surround formats.

Mackie

With a GUI designed for fast production, Mackie's (mackie.com) Tracktion 3 supports Mac OS 10.4.8 or higher and Windows XP on the PC side, and is offered in three bundles—Basic, Project and Ultimate—depending on which plug-ins or virtual instruments are included. Speaking of bundles, Tracktion 3 is also included with Mackie's new Onyx Blackjack (2x2 USB) and Blackbird (16x16 FireWire) recording interfaces. The software supports up to 24-bit/192kHz recording (full 192 kHz with Mackie's Onyx 1200F and Onyx 400F interfaces), with 64-bit math mixing for improved headroom and reduced distortion in the summing bus. On the third-party side, Mackie has released drivers that allow its Onyx-i FireWire consoles to provide front-end support and interfacing for Pro Tools M-Powered-8 software. The Onyx-i mixers are also bundled with Tracktion 3.

Magix

Samplitude 11 Pro from Magix (magix.net) offers up to 999 tracks with a maximum of 256 simultaneous inputs. In a single project, a maximum of up to 64 submix and 64 aux buses may be added simultaneously. Recent additions for this PC-based program include the Vandal SE guitar/bass amp modeling, the essentialFX (dynamics, modulation and other commonly used sound-processing functions), new drums, Revolta 2 "analog" processing, Harmony Agent, Elastic Audio and full Windows 7 support.

The company's Sequoia 11 takes the power of Samplitude 11 Pro to the next step, adding advanced functionality such as DDP support for no-compromise CD master transfers, crossfade editing, and a four-point editing feature that combines the source/destination aspects of both linear and nonlinear editing styles. One strength of Sequoia is its proficiency in the area of broadcasting, integration and multitrack editing, and projects can be mixed in surround formats with up to 12 channels.

MOTU

MOTU (motu.com) has been shipping its Digital Performer 7.2 for several months, and it adds some slick tricks to the rock-solid DP7 Macintosh platform. Most noticeable are the customizable UI themes, which change the look of Digital Performer with a single click to load presets such as Carbon Fiber, Zen, Plasma and Producer (among others); users can also tweak settings to create their own variations. Perhaps more practical is MOTU's release of Digital Performer Control, a free app that allows Digital Performer 7.2 users to control Digital Performer functions, name tracks, enter data, etc., over a WiFi network using their iPad, iPhone or third-generation iPod Touch. The app supports both portrait (perfect for auto-location duties) and landscape modes (great for mixing and using both hands to move faders). All communication between the Digital Performer project and DP Control app updates instantaneously between the two displays. It's a free download from the Apple App store.

MU Tools

MU.LAB 3 from MU Tools (mutools.com) is a software DAW for Mac OS 10.4 or higher and for Windows (NT/2K/XP/Vista/7) designed with a simplified GUI that's intended to not overwhelm the user with a complex feature set. This audio/MIDI system offers full-on recording/editing/routing with integrated high-qual-

MOTU Digital Performer Control

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NEW 15th Anniversary BLACK U5

Fifteen years ago, in 1995, Avalon Design (CA) introduced the worlds most powerful Instrument Preamplifier and Tone shaping DI Box. The U5 has gone on to become the first choice for Studio Recording and Live Sound Professionals in all markets worldwide.

Now in its fifteenth year of continuous production, Avalon is proud to release the NEW "BLACK U5".

We hope you enjoy our Anniversary BLACK U5 and thank you for making our U5 "the music industry's true DI work horse"!

U5
INSTRUMENT DI-PREAMP

- This new U5 is in fact exactly the same as our standard natural aluminum finished model, with the exception of the blue LED's
- Same Pure Class A, all discrete, high headroom, preamp with gain
- Same passive TONE control shaping networks
- Same Avalon sound, controlled extended bass performance, low noise and perfect midrange balance

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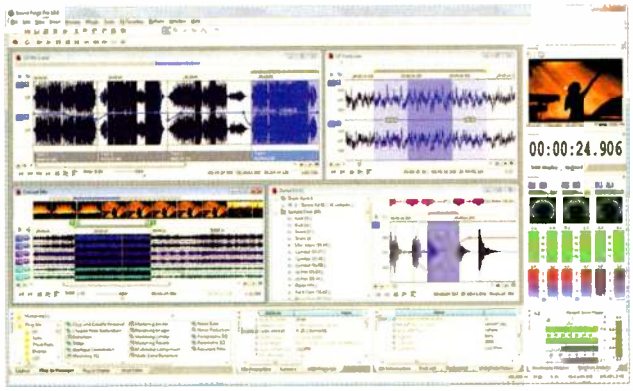
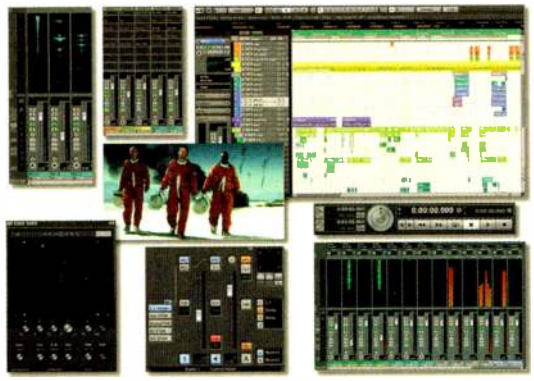


Sony Creative Software Sound Forge Pro 10 (PC-only)



Steinberg Nuendo 5 is geared toward high-end music/post apps.

ity synths, samplers and effects, with VST effects and instrument plug-in support. The program is compact enough to reside on a USB stick, and is offered in three versions—MU.LAB 3 Free, MU.LAB 3 XT ($32) and MU.LAB UL ($96)—each having a progressively expanded feature set, with the UL version offering 32x32 I/O channel support.

PreSonus

Version 1.5 of PreSonus' (presonus.com) Studio One Pro DAW software is a major upgrade that includes video playback support from any QuickTime video with sync for composing to picture; the ability to draw automation waveforms; the ability to change tempos within an event; a built-in SoundCloud client that allows users to upload audio files directly to the Web; a new MIDI file player in the browser; and more. The Native Effects plug-in offerings are enhanced, now with 27 64-bit plug-ins, including dynamics processors, modulation effects, amp simulators and reverbs. Studio One Pro also supports VST 2.4, VST 3 and AU plug-ins, as well as ReWire technology. At press time, PreSonus announced V. 1.5.2, which is mostly a maintenance update but adds Mackie HUI support.

RML Labs

Offered in three versions—Full, Lite and Basic—and handling 72/36/24 mono or stereo playback tracks, RML Labs' (sawstudio.com) Software Audio Workshop (SAWStudio) has been a popular choice for PC users since 1993. One interesting aspect of SAW is a close relationship that founder/developer Robert Lentini maintains with users, often adding updates or minor tweaks on a continual basis, based on specific user suggestions. Currently, SAWStudio is at V. 4.9 and some recent updates include the addition of Studio Reverb V. 2, Studio Frequency Analyzer V. 1.9 and Studio Levelizer V. 3.6, three of the program's many included plug-ins.

SADiE

Now owned by Prism Sound, SADiE (sadie.com) 6 software is slated to ship this month, and it can

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run as a software-only version with any I/O, such as Prism Sound's Orpheus, a PC's built-in soundcard or the low-latency SADiE Series 5 hardware solutions. In addition to new technical features, the slick new interface offers an astounding array of viewing options that include complex, shaded-color choices, making this new release easy on the eyes. Rather than a one-DAW-fits-all approach, SADiE 6 is offered in several configurations tailored for specific audio applications, including radio production, video post, mastering or studio recording.

Sonic Studio

Now at V. 1.3.5, soundBlade from Sonic Studio (sonicstudio.com) handles mastering, restoration, recording and mixing chores with eight channels at up to 192 kHz (or 16 channels with the multichannel option). Features of this Mac application include Source-to-Destination editing, real-time multimode editing/gain adjust and fade setting, and real-time AU and VST DSP hosting. It includes Sonic EQ LE, DDP file delivery, background sample rate conversion, TPDF redithering, and iZotope's SRC and MBIT+ redithering. Options include the Series 300 FireWire hardware interfaces, NoNOISE II restoration suite, renovator spectral restoration and more.

Sony Creative Software

From its roots as a looping/music creation program, Acid Pro 7 from Sony Creative Software (sonycreativesoftware.com) has developed into a full-on DAW and audio/MIDI recording, editing and sequencing environment. New MIDI features include MIDI track envelopes and key frames, a drum-grid editing mode, MIDI filtering and processing, and MIDI file export. It also now includes more than 20 DirectX audio effects, VSTi soft synth support and Zplane's élastique audio time-stretching and pitch-shifting. Supported platforms include Windows 7, Vista and XP.

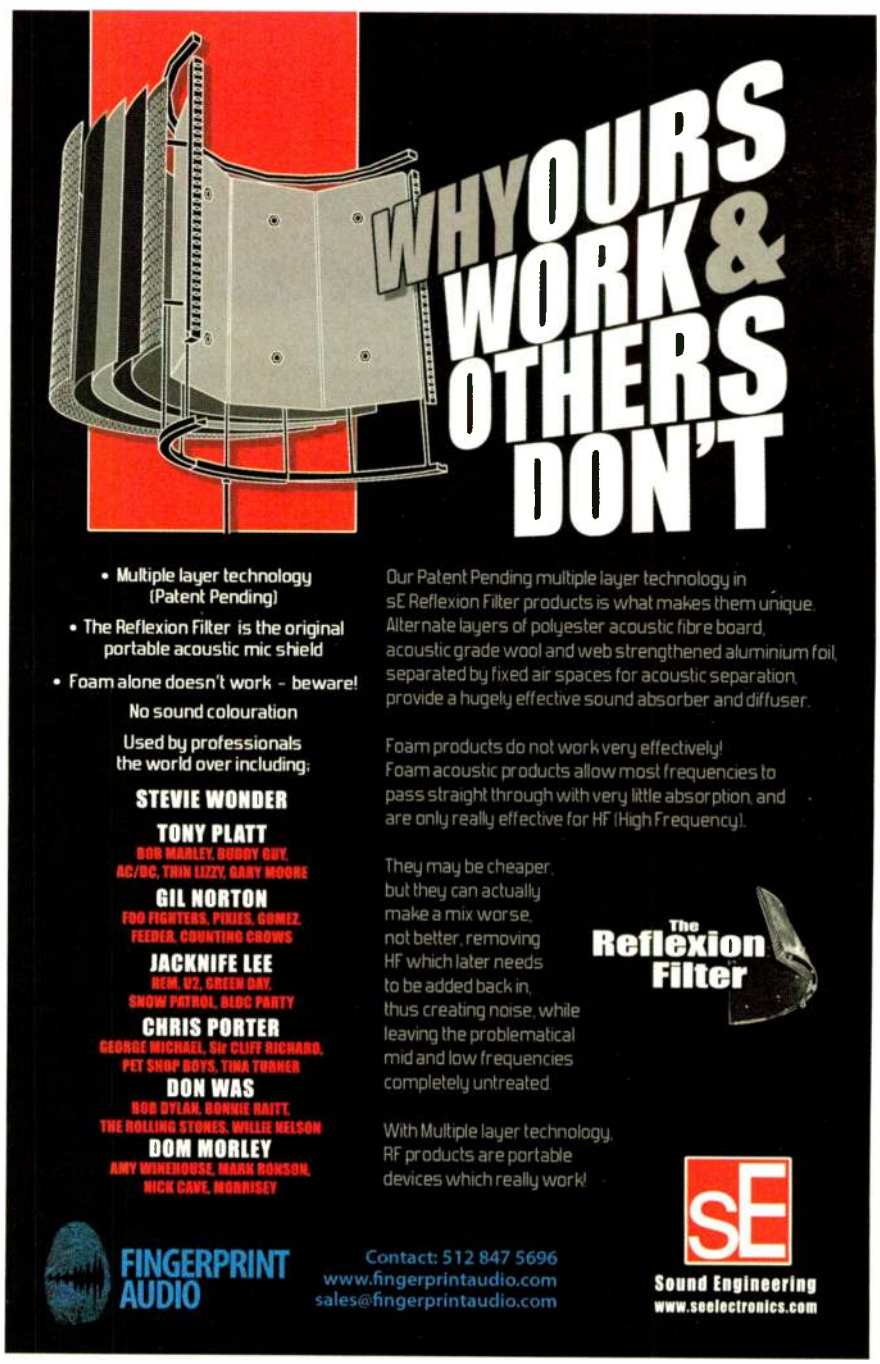
Intended specifically for audio editing and mastering duties on the PC platform, Sound Forge Pro 10 is an all-in-one production suite for audio recording/mastering, sound design, audio restoration and Red Book CD creation. It offers 24/32-bit 192kHz resolution with multiple video AVI, WMV, and MPEG-1 and MPEG-2 format support, along with an included plug-in for exporting 5.1 Dolby Digital AAC-3 surround files. Also new are 64-bit SRC sample-rate conversion and MBIT+ bit-depth dithering from iZotope.

Steinberg

Now at V. 5.5.1 and supporting Macintosh OS 10.5 and higher and Windows 7/Vista/XP, Steinberg's (steinberg.net) Cubase offers new tools among its 56 included plug-ins and eight virtual instruments, such as Groove Agent ONE, Loop Mash, VariAudio and Pitch Correct for working with beats and vocals, as well as REVerence, the first VST3 convolution reverb. Also standard are unlimited audio/instrument/MIDI tracks, stereo and 5.1 mixing, Audio Warp time stretching/pitch shifting and Apogee UV22 HR dithering.

Designed for high-end music and post-production applications, Nuendo 5 employs new ADR tools and an advanced QuickTime-based, Native video playback engine; automated batch file export; Nuendo Surround Panner V. 5; smooth scrubbing; a reworked, networkable mediaBay; and network collaboration for multiseat projects via LAN or WAN. Nuendo 5 also reads CMX 3600 EDL lists provided by the video editor, as well as exported and imported CSV-formatted spotting and ADR lists. Also new is the extended Monitoring Matrix, which lets users listen to individual stems, groups, input or output buses with a single click on the Source button. Nuendo 5 is now shipping and is cross-platform for Windows and Mac OS. ■

George Petersen is the executive editor of Mix.



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AES 2010 PRODUCT PREVIEW

10 NEW PRODUCTS THAT WILL BOW AT AES SAN FRANCISCO

By the Mix Staff

The Audio Engineering Society returns to San Francisco next month, from November 4 to 7. 2010, for its annual U.S. convention, and it's looking to be a great show, with hundreds of manufacturers showing the latest in new toys for audio professionals. With that in mind, here's a preview of some of the new products that will be on display. For more info about the show, visit www.aes.org, and if you get a chance, stop by the *Mix* booth (#1037) during AES and say hello. See you there!

MORE PRO TOOLS, SMALLER PACKAGES

AVID HD SERIES INTERFACES

The new HD Series interfaces—HD I/O, HD Omni and HD MADI—from Avid (avid.com) pack more functionality into smaller spaces. Avid HD I/O brings high-quality audio record/playback in three two-rackspace configurations: 8x8x8 analog/digital ($3,995), 16x16 analog ($4,995) and 16x16 digital ($2,495) versions. The $4,995 HD MADI opens workflows and speeds production for broadcast, live sound and post pros with its ability to connect Pro Tools HD systems to MADI infrastructures, without the need for a format converter. The 4-in/8-out HD Omni ($2,995) features two world-class mic preamps, headphone outs, a full-featured surround monitor section and a 14x26 channel mixer that functions even when the computer is off. AES booth #1018 and Room 110.

VERSATILE TUBE MIC

CHAMELEON LABS TS-1 MKII

Chameleon Labs (chameleonlabs.com) offers the TS-1 MKII small-diaphragm tube microphone, which features a U.S.-made, mil-spec 5840 NOS pentode that is said to offer sparkle and warmth without the overly bright sonic qualities of other pencil condensers. Features include an outboard power supply with a control that lets users adjust the tube's heater voltage for a variety of tonal variations, and a mic body with interchangeable cardioid and omni capsules. Retail is $559, including mic, capsules, power supply, shock-mount, cables, windscreen and carry case. Options include a switchable cardioid/omni large-diaphragm capsule ($249), a $49 adapter for mounting AKG CK capsules to the TS-1 body, and a $65 small-diaphragm hypercardioid capsule. AES booth #605.

REACHING THE SUMMIT

SOFTUBE TLA-100A PLUG-IN

Swedish-based software developer Softube (softube.se) is in the final stage of developing a plug-in version of Summit Audio's popular TLA-100A tube limiting amplifier (pricing TBA). Scheduled for launch at AES, the software painstakingly models the warmth and compression nuances of the two-rackspace device, and maintains the unit's simple two-knob interface, making it easy to achieve the right amount of limiting quickly. It will be available on the VST/AU/RTAS/TDM platforms (Mac and Windows) and for VENUE, and is scheduled for release in December. AES booth #812.

RIBBON DONE RIGHT

ROYER LABS R-101

Royer Labs' (royerlabs.com) R-101 ($895 MSRP) features a 2.5-micron, 99.9-percent-pure aluminum ribbon motor that is based on the company's R-121 model, but in a 1.5-inch diameter cylindrical body with no protruding pole pieces. The ribbon transducer's flux-frame and rare Earth Neodymium magnets create a powerful magnetic field that increases sensitivity while reducing stray magnetic radiation. Its offset-ribbon design positions the ribbon element toward the front of the microphone body, allowing for higher SPL handling on the front (logo) side of the microphone and the option of a brighter response when recording lower SPL sound sources on the microphone's back side. This approach also results in the R-101's ability to withstand high SPL sources (135dB @ 30 Hz). Shock-mount and carry case are included. AES booth #613.

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M SERIES

A R T
APPLIED RESEARCH AND TECHNOLOGY

It All Starts Here

Every recording starts at the microphone. Every engineer knows that tone lives or dies at the source.

The M-Series from Applied Research & Technology (ART) defines the next generation of high performance microphones for studio or stage. Premium capsules, upgraded electronics, discrete low-noise circuit design and sonically transparent windscreens guarantee unmatched performance when recording critical tracks in the studio. Solid heavy duty body design and rugged shockmounts* ensure unmatched long-term reliability for broadcast or remote recording applications where most studio microphones would fear to venture.

Designed to complement ART's world class line of studio preamps and processors, M-Series microphones are expertly engineered by Applied Research & Technology to deliver the quality and performance professional studios would expect, at a price any home or project studio will embrace.

**M-One package includes heavy-duty hard tail standmount*

M ONE
Large Diaphragm Cardioid Side Address Condenser

M TWO
Large Diaphragm Cardioid Side Address Condenser w/ Two Position Pad & Roll Off

M THREE
Large Diaphragm Multi-Pattern Side Address Condenser w/ Two Position Pad & Roll Off

M FOUR
Multi-pattern Tube Condenser Microphone

M FIVE
High Performance Ribbon Microphone

www.artproaudio.com

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NEXT-GEN 500 SERIES MODULE RACK
PURPLE AUDIO SWEET 10

For AES, Purple Audio (purpleaudio.com) has announced shipping for the next generation of its Sweet 10 rack housing, with 10 slots for API 500 Series–compatible signal processing modules. Priced at $800, the new Sweet 10 employs a cool-running, low-noise switching power supply that operates at 150 kHz—well out of the audio range—and with auto-sensing to any voltage worldwide, it's ideal for the traveling or touring engineer. The new unit also improves on the original with four I/O connections per channel for more versatility. A new option is Purple Audio's Moiyn ($725), an all-discrete 8x2 mixer module/summing amp in a single-slot format. AES booth #514.

HANDHELD POWERHOUSE
SENNHEISER SKM 5200-II WIRELESS

Sennheiser (sennheiserusa.com) announces the next generation of its top-of-the-line wireless handheld transmitter, the SKM 5200-II. The new unit extends its switching bandwidth nearly five times the performance of the original, from 36 MHz up to 184 MHz. Other features include adjustable sensitivity (40 to 0 dB in 1dB steps) and a 3-position low-frequency filter, while selectable output power (10mW or 50mW) and a new Low Intermodulation mode provides a minimum of seven hours operating time. It's available in black, nickel and steel blue, and can be fitted with a wide range of premium capsules, including Sennheiser's MD 5235, and Neumann's KK104 and KK105. Available frequency ranges include 470 to 638 MHz and 614 to 697.9 MHz. AES booth #920.

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NEW LOOK, NEW SOUND
PMC AML2 STUDIO MONITORS

The latest near-field Advanced Transmission Line monitor from PMC (pmc-speakers.com), the AML2 powered studio monitors ($10,499 pair) supersede the AML1 model with many internal improvements, such as an upgraded power supply and an enhanced cabinet structure. The AML2 combines a flat-piston, 6.5-inch carbon-fiber/Nomex™ honeycomb woofer capable of extreme 33mm excursion with a 1.5-inch soft-dome tweeter on an acoustic lens, routed through all-discrete 24dB/octave crossovers to Bryston-designed Class-A/B (100W/80W) analog amps. Each 15.75x7.9x12.5-inch (HxWxD) unit weighs 35 pounds; a matching subwoofer for 2.1/5.1/7.1 arrays is optional. AES booth #1307.

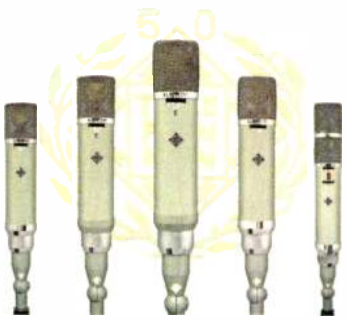
MADE FOR TRACKING SESSIONS
MANLEY MICMAID

Scheduled to ship by the time of the AES show, the MicMAID ($TBA) from Manley Labs (manleylabs.com) lets users easily audition and select between four microphones and four microphone preamplifiers, with instant level-matched switching between various combinations. Other features include recall settings for gain, mic and preamp combinations; selectable phantom-power generation; front panel DI input (with variable phase and ground lift); and sealed, gold-contact relays for silent, lossless switching between sources. AES booth #602.

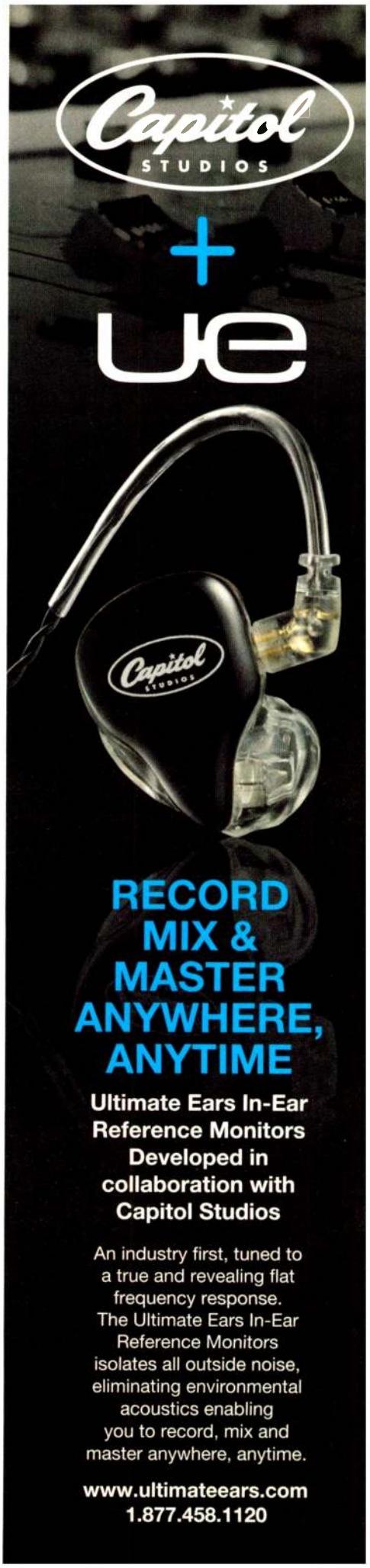
LOW-NOISE STUDIO CONDENSER
MICROTECH GEFELL M1030

The M1030 ($1,942) studio condenser mic from Microtech Gefell (microtechgefell.de) features a cardioid pattern and a smooth frequency response with a slight presence boost in the 8 to 14k Hz range. Under the grille, the large-diameter capsule feeds an electronic impedance converter based on a newly designed solid-state circuit topology. This transformerless design reduces the noise floor to a low 7 dBA while raising the maximum output capacity, resulting in a 135dB dynamic range. The mic ships with a wooden case and swivel stand mount. An elastic suspension is optional. AES booth #641.

THEY SAY IT'S YOUR BIRTHDAY
TELEFUNKEN ELEKTROAKUSTIK ANNIVERSARY MIC REISSUES



Telefunken Elektroakustik (t-funk.com) celebrates the 50th anniversary of the ELA M 250/251, 250E/251E and 270 mics with commemorative mic reissues in leather-bound, anniversary logo flight cases. The ELA M 250 is the two-pattern (cardioid/omni) version of the three-pattern ELA M 251 (cardioid/omni/figure-8). The stereo ELA M 270 has all three pickup patterns on the top and bottom capsules, and only two original units were produced; Telefunken Elektroakustik purchased an original to use as a benchmark for the re-creations. Each model features a dual-backplate CK-12 capsule hand-built from parts that are constructed from the original AKG blueprints. The amplifier in the ELA M 250E/251E/270 Series has a GE 6072 tube and Haufe T14/1 transformer. All ship with vintage-style power supplies, 10-meter Gotham Audio cables, leather-bound flight cases, wooden boxes, spare 6072/ECC81 tube (for 250E/251E and 270 models only) and five-year warranties. AES booth #525. III



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Raymond Kent of Westlake Reed Leskosky served as A/V systems designer and technology project manager for new studios at Cuyahoga Community College Center for Creative Arts in Cleveland, Ohio. Architectural/acoustical design was by the Walters-Storyk Design Group.

SYSTEMS DESIGNERS AT WORK

WHOLE-STUDIO SOLUTIONS FROM A SINGLE SOURCE

By Blair Jackson

With technology changing by the minute and becoming ever more complex in some ways (but simpler in others), it's getting harder even for seasoned audio pros to keep up with dizzying shifts and trends. Owner/operators may wonder: How do I integrate new gear into my old workflow—or should I try? What new equipment or way of working will increase my efficiency but not present too drastic a learning curve? Do I have to throw out all my analog boxes and switch to plug-ins? How can I get the most bang-for-my-buck outfitting this cool room off of my garage?

There are a few ways to answer those and other questions. Hundreds of clicks around the Internet on manufacturers' Websites and in audio chat groups could shed some light. Perusing magazines like this one could point you in some positive directions. Or you could try the route that an increasing number of overworked and/or befuddled folks have tried: enlist the services of professional systems designers. Thousands have worked hand-in-hand with these largely unsung experts in gear selection, integration and work solutions to find the most comfortable and economical path through the new technology minefield. We recently checked in with reps from four successful firms in the system design world to learn more about what makes them tick and the range of services they offer.

Pro Audio Design

Playing in bands, working in studios and bartending. That's how Dave Malekpour sums up his life in the Boston area before he got involved in the world of professional audio in the mid-'80s, first as part of a local studio design, installation and maintenance concern, then as head of his own company: Anything Audio, founded in 1989, which morphed into the now-giant Pro Audio Design (proaudiodesign.com) in 1993.

"The first person I hired was a tech, so it was me and him, and my concept was sales and service combined—try to connect things in a holistic way," he says. "I've had this system design approach from the beginning.

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SONY

A Perfect 10

Perfection is elusive. But when achieved, things come together perfectly. What's true in life is also true in audio production software. Introducing Sound Forge™ Pro 10 software, the 10th version of the legendary audio editing and mastering application. This one scores a perfect 10.

Long the professional standard for analyzing, recording, editing, producing, converting and resampling audio, Sound Forge Pro 10 makes a great thing even better with these new features: event-based editing, integrated disc-at-once CD burning, élastique Pro timestrech and pitch shift plug-in, plus the Mastering Effects Bundle 2 powered by iZotope™—valued at over $200, and more.

Sound Forge Pro 10 delivers the ultimate all-in-one production suite for professional audio recording and mastering, sound design, audio restoration, and Red Book CD creation. Power. Stability. Reliability.

This one's perfect.

Visit your favorite retailer or www.sonycreativesoftware.com/perfect for special, limited-time offers on new Sound Forge Pro 10.

NEW

Sound Forge Pro 10

Professional Digital Audio Production Suite

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What does this connect to? How are you using it? What does it need to talk to? How does it all go together? My vision was to do everything because I saw a lot of gaps where people weren't really thinking through the whole process. I saw people come over from the music store, having spent a hundred grand on equipment, and ask, 'How much does a patchbay cost?' 'Okay, it'll be like twenty grand.' 'Uh, I don't have twenty grand. I thought it was going to be a grand to buy all the cables and patchbay.' So we focused not just on the system design, but also on value engineering—helping customers to figure out the best way to spend their money on the end result, and working with them through the whole process. Our job is to help people with their vision and translate that into something that can be built or accomplished."

From the beginning, Pro Audio Design catered to a broad spectrum of clients. Malekpour notes, "We were an ADAT and Tascam service center at the same time we were refurbishing SSL and Neve consoles and equipping high-end studios." He notes that in 1999, his company sold 49 refurbished SSLs, around 30 Neves, 12 Euphonix "and a bunch of APIs. I had nine service techs doing console work. In 2009, it was probably a dozen SSLs. Obviously, the market has changed, with more people working in the box instead of on big consoles. We still have four full-time service techs, but they're doing a broader range of things. They're doing more repair work, more installation work. We've broadened out into some commercial installations, like churches, helping out theaters and nightclubs."

Pro Audio Design still does a lot of high-end studio work—sometimes with the Walters-Storyk Design Group—that involves new or restored consoles, but Malekpour notes, "I don't have a particular agenda. I mean, I personally love consoles—I won't lie—but I also sell control surfaces. We just did an all-control surface project with some good front-end gear and some plug-ins. I try to look at, 'What are you trying to do?' I don't really care what the brand is. To me, if we do our job right, you're going to be happy with the system and you're going to get good results, and we're going to have those customers for a long time to come."

The company has weathered the down economy surprisingly well—in part because they've developed such a diverse client base, but also, frankly, because "we've done a lot more liquidations, helping businesses change their positions—and not necessarily just going out of business," says Malekpour. "When the Hit Factory closed, they contracted us to liquidate the facility, and we also sold the consoles from Allaire [in upstate New York], which was just about my favorite studio ever. But we've also done work for some big television companies where they want to get rid of older technology so they can put in something new, and we'll help them on both ends of that. We sold Quad Studios in New York to the current owners and helped them in repositioning. We do asset appraisals, too."

PAD was the system designer for engineer/producer Yaron Fuchs' personal studio.

This self-proclaimed gear-head has always been more than just a salesman or company executive. He built and equipped his own personal studio—"I'm as proud of my patchbay as anything," he says with a chuckle—and recently co-produced, engineered and played lead guitar on the just-released self-titled debut album by Jackson Wetherbee.

WE ENJOY THIS ONGOING CONVERSATION WITH OUR CUSTOMERS. WE HELP THEM REFINE THEIR CRAFT.

—RICK PLUSHNER

Tekserve Pro

With more than 200 employees and an enormous flagship store on 23rd Street in Manhattan, Tekserve (tekserve.com/pro-audiovideo) prides itself on servicing the Macintosh community, according to co-owner Matthew Cohen, but also strives to live up to it's down-home slogan, "The Old Reliable Mac Shop." Started in 1987 by Dick Demenus and David Lerner as a Macintosh service center, Tekserve started branching out into other areas, including pro audio, when Smart Machines CEO Cohen merged his company with theirs in 2000, bringing in his extensive experience and expertise to form the entity known as Tekserve Professional.

"In 2002, when Tekserve Professional promoted Chris Payne to head up our pro audio practice, we really took off as a force in professional audio," Cohen says. "The [audio and video] manufacturers were going to market with very sophisticated solutions and they were not always well represented, so when they found a group of people who could represent their products really well, they gravitated to us and we increasingly became a resource. We took them into environments where they weren't being considered, including the major broadcast networks, cable channels and various higher-end studios looking for points of integration between their existing technology and cutting-edge digital systems.

"What's interesting now in integration is the systems are becoming much more sophisticated," Cohen continues. "You're not just talking about an audio workstation and a mixing console. You're often talking about a collaborative workflow and a collaborative storage platform that will allow you to share resources and assets.

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BOB ROCK

Musician, engineer and producer for such legends as Metallica, Mötley Crüe, David Lee Roth, Bon Jovi, Michael Bublé, Bush, The Cult, American Bang, The Offspring, and 311.

Music Hall of Fame inductee and Juno Award winner.

Inspiring and recording rock's greatest performances – for over 3 decades.

STERLING.

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See our Bob Rock interview at
YouTube.com/SterlingMicrophones
or visit sterlingaudio.net

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You're talking about an asset layer that really organizes and forces the users to make the content meaningful over time so you can manage it over time. Workflow enhancement has really become something that everyone's after these days, and it involves a lot of complex issues."

Tekserve Pro has worked with a wide range of clients through the years, including the above-mentioned networks, radio giant XM, the Chicago White Sox (for whom they've done a multifaceted IT video application), Jazz at Lincoln Center Studios, and other top Manhattan post houses: Sonic Union, C5, Sync Sound, Postworks and many others. Tekserve was also saluted by the Grammys for a special system it designed for that show's telecast, which allows for a smoother transition between acts by capturing and tweaking automations during rehearsals.

Dave Malekpour of Professional Audio Design

Raymond Kent, director of WRL's Innovative Technology Design Group

"To stay on the cutting edge," Cohen suggests, "you have to know what can be done and where the integration points are and what's valuable to the application. We're very good at walking into a situation and listening and trying to understand what their circumstance is, and from that make good suggestions. In every area of our business, I've always felt that our responsibility is to make sure they understand what their choices are, what the ramifications are and how to make good decisions for themselves. Instead of going in and trying to sell somebody—'I'm gonna make this perfect, I'm gonna do this, I'm gonna do that'—I want them to come to the realization, 'This is what I need. This is what I want to do. This is why I want to do it.' We're in it together, and I think that's much more powerful than just selling somebody a solution."

Cohen says that having both a pro wing dedicated to solutions and a thriving consumer-oriented enterprise stocked with thousands of products works out to be a strong symbiosis: "It's the only way we're be able to do it. It's a pyramid you could tumble on any side and each aspect benefits the other. The business we're in is of relationships with manufacturers and serious customers."

GC Pro

If you've been to any kind of audio show in the past 25 years, chances are you've met Rick Plushner. He was national sales manager for Sony's Digital Audio division in the early '80s; then general manager for Neve's West Coast branch; followed by VP of sales for Euphonix and president of SSL's North American operation. It was while he was at SSL that Plushner teamed up with Guitar Center's then-new GC Pro division to introduce some new pieces of outboard gear, plus the SSL AWS 900 Series console. That then led to Plushner going over to GC Pro (gcpro.com) full-time—he's now director of the company.

Asked how it feels not to be working for a single manufacturer for the first time in decades, Plushner laughs and says, "In a word, it has been liberating, and it's part of the reason I chose to go this route five years ago. What I recognized was that so many of the products that were being designed are very plug-and-play-oriented. Certainly, Digidesign [now Avid] was one of the manufacturers that rode that—designing a very sophisticated product that's to some degree plug-and-play. And I recognized that distribution and sales were changing, and that's why I thought to help develop a channel like GC Pro, where we can represent a wide range of manufacturers—SSL's AWS 900, Neve Genesys, Avid/Digi with their wide range of products. But they actually all require a lot of expertise, too. As we all know, you don't just plug in a computer and expect it to work. You have to load the right software programming and integrate the systems properly with other pieces, so there's still a great deal of expertise involved. The good news is the two weeks of commissioning a studio is down to a few days."

Though he has helped guide GC Pro to the point where they now have 35 offices (compared to 214 Guitar Center retail outlets) and some 70 employees, he credits Guitar Center CEO Marty Albertson with having the vision to "want to seed and develop a division that would be the outside sales division of the company—non-retail business-to-business. The idea was to reach out to recording studios, post-production houses, houses of worship, live sound venues; go out into the communities and call on these customers directly and respond to bid specifications and provide services beyond what a retail organization would do."

Was there any hurdle in convincing pro-level people that usually more consumer-oriented GC was a viable route to take? "Yes, because in the early days, some of the manufacturers of very specialized, high-end boutique products didn't really view Guitar Center as the type of company that could or would represent their products. So it was really a matter of contacting those manufacturers, and explaining, 'No, no, no—this is how we're doing it. We're different. We're a boutique-style operation, with highly trained sales engineers nationwide able to represent your products properly. We offer on-site demos, equipment loans, and truly focus on properly presenting highly specialized products.' Slowly but surely they came on board and every one of them has had a great experience." GC Pro sells many products the regular retail chain does not, and, of course, also has a trained staff of system design experts and gear integrators.

GC Pro has enjoyed substantial year-on-year growth since Plushner arrived, and he notes, "We're continually evolving as a company and our customers evolve with us. A client will come back six months, a year or two years later, and say, 'I'm really ready for that console we talked about.' 'Great! Are you considering upgrading your studio monitors and effects processing?' We enjoy having this ongoing conversation with our customers. We help them refine their craft—and I do believe that audio is a craft."

Westlake Reed Leskosky

Westlake Reed Leskosky (aka, WRL; wrldesign.com) might not be the first name that comes to mind when you think of audio/video systems design, but the fact is, the 106-year-old company, founded by the son of President James Garfield,

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is one of the most respected and successful architecture and design firms in the country, responsible for literally hundreds of projects, from restorations of historic theaters to ground-up performing arts centers, schools, medical facilities, museums, government offices, corporate environments; you name it. "The only thing we don't have in-house is landscape architecture and civil engineering," says Raymond Kent (CTS, LEED AP BD+C, EAVA, ECA), director of WRL's Innovative Technology Design Group. "But we have mechanical, electrical, plumbing, structural engineering in-house, architecture and interiors, as well as my group." Headquartered in Cleveland, WRL has satellite operations in Phoenix, Washington, D.C., New York City and L.A., and does work all over.

Kent's background was mostly in live theater: He was technical director of the famed Laguna Playhouse, and also an award-winning set and lighting designer at other venues around the country. He's written books on automated lighting systems and theater technology, and taught at various colleges. His Innovative Technology Design Group specializes in "audio/visual, theatrical consulting, acoustics, IT, lighting design, building automation systems and show control, and specialized interiors," Kent explains.

Unlike some systems design groups, WRL does not have a retail gear operation: "As consultants and not dealers, we try to be as non-biased [about equipment] as possible. Education about current technology is critical to our work, so I'm there at InfoComm and other shows, and I'm always willing to listen to a manufacturer and demo their product and get feedback from people who currently use it. Because of the volume of projects we do, it's critical for us to get information in a timely manner, and the manufacturers know that about us. It's important to us to get the right products for every project. I don't want you to call me back to repair the equipment I recommended. I want you to call me back because you've got another theater that you want to do or you're going to recommend me to another theater because your system works so well.

"Dealing with technology becomes a greater challenge when you've got a historic renovation," Kent continues. "You look for existing pathways: Where you used to have these massive microphone jack fields, you now can do digital distribution over a single twisted pair so you're pulling one cable. A good example is the new Aviom wall box [Wall Frame 6], which we worked on with Aviom based on a project we worked on. We met with Aviom, showed them what we were doing in the performing arts, and now I have a box I can load up with either mic level or line-level I/O, and I literally take an RJ45 connector, plug it into the box and off I go. I don't have a guy sitting there soldering connectors."

Jobs vary in complexity from converting a 1920s 1,200-seat movie palace into a 500-seat legitimate theater with a thrust stage, to setting up a recording studio, video editing suites and an all-digital cinema at Oberlin College, to digitally interconnecting all the arts buildings in Cleveland's impressive Playhouse Square complex.

Part of WRL's operating philosophy, too, is to employ as much green technology as possible. "There are different areas related to everything from design concept through implementation," Kent says. "How do you reduce the amount of infrastructure—conduit and cable, even man-hours on a job site—so you can reduce the overall carbon footprint of a building? What happens to the gear that you take out of a facility? Can it be recycled in a responsible way or repurposed? How do you incorporate more energy-efficient technology? We've been working with the Department of Energy on an energy star–rating system for professional A/V equipment. So we're always looking for opportunities to design things in a more sustainable way." III

Blair Jackson is the senior editor of Mix.

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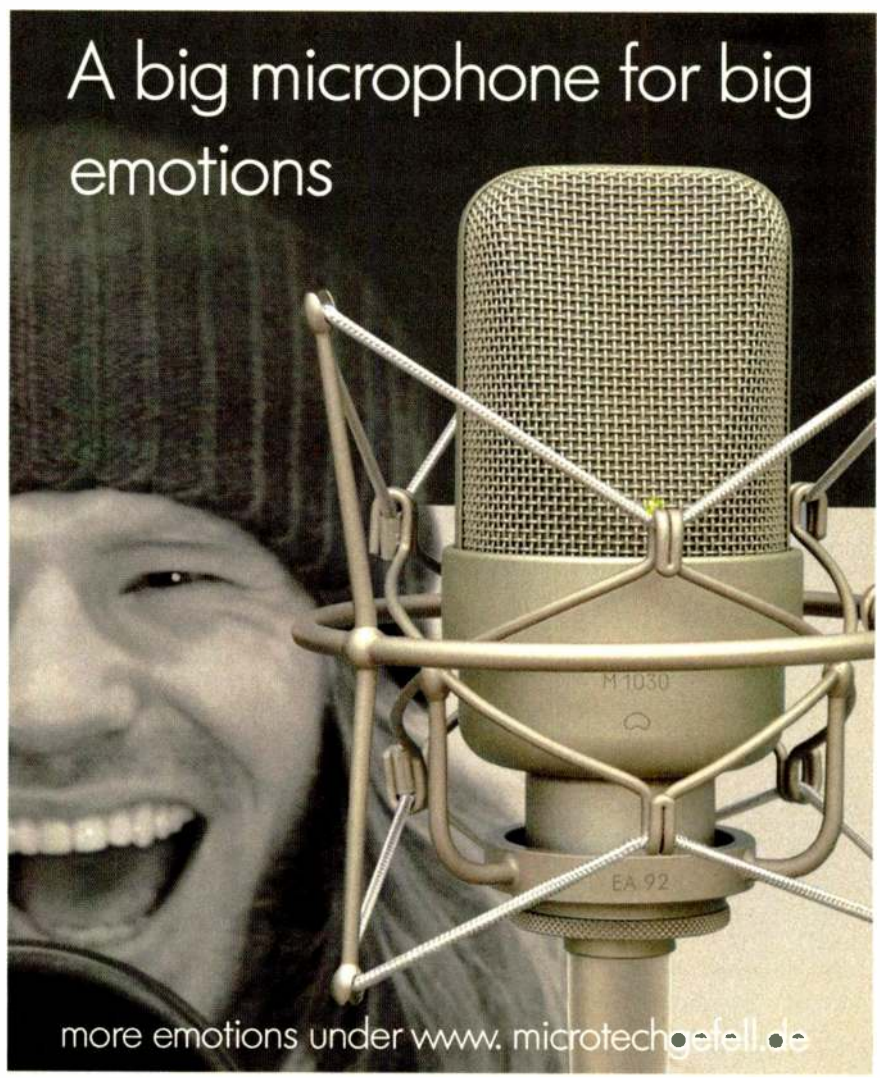

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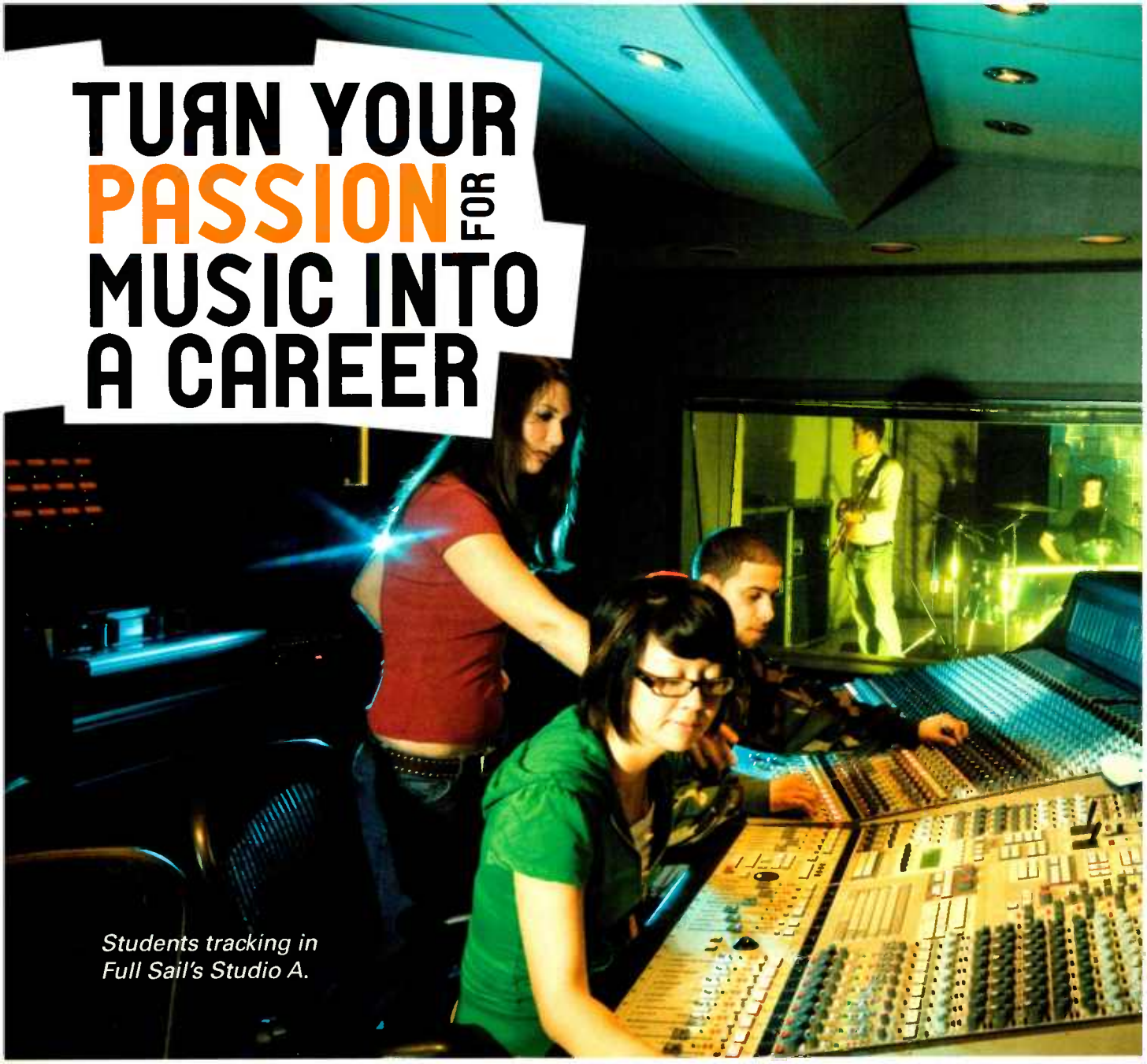

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PHOTO: JAMES MINCHIN

By Blair Jackson

Michael Franti and Spearhead

BRINGING 'SUNSHINE' TO DARK TIMES

Offhand, Michael Franti and Spearhead would not seem to be likely candidates to land songs in the Top 20 and become a popular headliner. After all, the tall, biracial, dreadlocked, tattooed, perennially barefoot Franti has been dancing (literally) around the periphery of what we might call "popular" music since the mid-'80s. He's produced an impressively eclectic body of work that fuses hip-hop, funk, folk, reggae, ska, rock, soul and other styles, and he's never shied away from the strong political convictions and social consciousness that drives much of his work. With pointed lyrics addressing the death penalty, police brutality, poverty, AIDS, corrupt government and other hot-button issues, Franti could easily have been dismissed as merely an activist firebrand by now—were it not for the fact that he also writes beautiful love songs, radiates optimism and goodwill onstage and off, and has come up with some of the catchiest tunes you'll hear on the radio. As this article is being written in late August, the irresistible title track of Franti and Spearhead's new album, *The Sound of Sunshine* (released September 21), is the Number One song on Triple-A radio and seems likely to follow last year's smash hit, "Say Hey (I Love You)" onto the pop singles chart.

The Top 20 success of "Say Hey" caught everyone, including Franti, by surprise. "It was a year after the record had been released," he says over lunch in San Francisco (where he lives). "'Say Hey' had already had its run at Triple-A radio and gone away, but then some Top 40 stations started playing it the next summer—one in Salt Lake, another in Green Bay, one in Florida. Then the focus groups got a hold of it and liked it, so all these other stations picked it up. Next thing you know, it's everywhere and it's

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a hit. It was wild!

"The week it went crazy, my appendix ruptured and I went into the hospital," he continues. "I almost died. But I said to the doctor, 'You better help me survive this because I want to hear my song on the radio!'" Franti survived, of course, and got his wish when he heard 'Say Hey' on the radio in the car the day he was released from the hospital. The song became inescapable; a summer later it still is—it's appeared in a film, a videogame and now it's the soundtrack for a ubiquitous Corona Light (beer) commercial.

Franti says that his brush with mortality informed the songwriting for *The Sound of Sunshine*, which is easily his most buoyant and affirmative disc to date. "I know there are a lot of people hurting out there right now," he says, "and if our music can bring them some peace and some sunshine..." He lets out a little self-conscious laugh, as if he doesn't want to sound like he's just promoting the album. The songs are still dotted with socially aware sentiments, and in his offstage life, Franti is as involved with good deeds as ever, such as his annual free Power to the Peaceful festival in San Francisco, which challenges the thousands who attend to better the world and their communities, and his involvement with Sole4Souls, who distribute free footwear to the needy around the world. But he is conscious not to sound heavy-handed or didactic, and these days he wants people to sing along and shake their bones, as well as think.

Through the years, Franti has recorded in many different studios, some in his native Northern California, but also in Philadelphia (early work with hitmaker Joe "The Butcher" Nicolo at Studio 4) and Jamaica; the excellent 2008 *All Rebel Rockers* album, which contained "Say Hey," was mostly cut at Anchor Studios in Jamaica with reggae legends Sly and Robbie co-producing. One song from Anchor featuring Jamaican musicians appears on *The Sound of Sunshine*: the bouncy dancehall number "Shake It," featuring Lady Saw. But the rest of the album—a wonderful blend of breezy and anthemic rockers, heartfelt ballads and Caribbean-influenced numbers—has a more unusual provenance. It was largely recorded in backstage dressing rooms and hotel rooms during Spearhead's 2010 winter and spring tour supporting John Mayer in basketball and hockey arenas, and in Franti's small bedroom at home in San Francisco. (A couple of tunes were begun in his remote villa/yoga retreat in Bali, too.)

"We'd play a lot of the new songs every night and then we had a Pro Tools rig and a laptop that we would take into the dressing room, and we would attempt to record the songs based on how we saw people respond to them—are they dancing, are they singing along, are they responding at the right points in the music? So Jay [Bowman, co-songwriter, guitarist in the band, engineer] and I would set up and re-record them—speed 'em up, slow 'em down." Adds Bowman, "literally within moments of performing them because the tempos were fresh in our minds. It was a great field test."

PHOTO BEN RENSCHEN

Michael Franti (seated) working on material for *The Sound of Sunshine* with musician/engineer Jay Bowman in the Hotel Arts in Calgary, Alberta, Canada.

"Jay and I and our bass player, Carl Young—'the godfather'—write most of the songs," Franti says. "So usually what will happen is it might start with a little guitar riff or a chord progression or a hook. I always try to come up with the hook of the song first. I've written songs where you write the whole song and there's nothing to sing along to, you're struggling to find that hook. So it's more productive to write the sing-along part first. Then we'll put up a little beat on the drum machine and make a basic demo."

Bowman notes, "We do have a studio here in San Francisco—the Sugar Shack—but it's more like the Storage Shack these days," he says with a laugh. "We got tired of being in dark rooms, so with laptop technology you can pretty much be anywhere. It was all over once we started using the laptop. We started working in Michael's room on the laptop, and I thought, 'We have an HD rig sitting over at the Shack—let's bring it over here and set it up in the bedroom. We can do it all in here, even mixes.' So we've done a lot there and we also took it out on the road with us."

Bowman first encountered Franti at Hyde Street Studios (San Francisco) in 2003 when Franti was recording his album *Everyone Deserves Music*. During the sessions for that record, Bowman was asked to come help out at the Sugar Shack on a version of "Bomb the World" that was being produced by Sly and Robbie, and he and Franti forged a friendship that later blossomed into a creative partnership. Bowman co-wrote nine of the 11 songs on *Sound of Sunshine* with Franti, and bassist Carl Young also contributed to the writing of four. The personnel in Spearhead has changed some over time, but is solid now with the previously mentioned three, plus guitarist Dave Shul, drummer Manas Itene and keyboardist Raleigh Neal. That said, not all the players appear on every track of the CD; sometimes Franti will play bass or drums, and Young or Bowman keyboards. Sultry singer Jolene Rust is also on the album and tours with the band.

Franti, too, knows a fair amount about recording, having been involved in the production of his music since his pre-Spearhead days in Bay Area groups The Beatnigs and the Disposable Heroes of Hiphoprisy, and usually owning some home studio equipment, from 4-tracks in the early days to ADATs to Pro Tools later on. "Learning about recording was trial by fire for me," he says. "I bought all the gear; I bought a little mixing desk, I bought samplers, I bought mics, keyboards, set up the space and then it was like, 'How do I turn it on?'" he says with a laugh. Needless to say, he

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doesn't have that problem anymore, and he credits working closely with Sly and Robbie as having taught him much about sonics and production.

Anyway you look at it, though, the recording methodology for *The Sound of Sunshine* was quite unorthodox. Nearly all the album was recorded using just two mics—a Neumann U87 and a Shure SM57—usually one at a time, including on drums. "Most of the drums were done in the dressing room or a hotel room, depending on how lenient they might be—'Okay, Minas, let's get this one really quick!'" Bowman says with a laugh. "We'd set up with one mic and we'd listen back, and say, 'Oh, the hi-hat is too loud,' so we'd turn the drum set a little to the other side or put the mic on the other side. 'Oh, we're not getting enough reverb. Okay, let's open the bathroom door.' 'We're not hearing the kick drum enough; move the mic closer.' Sometimes the best sound came from having the mic off to the side. Then, if we needed a little more of something, we added other parts when it was convenient." Thus, most of the drum parts were constructed after the fact from multiple tracks within Pro Tools. "Also, once it was in the box, we could send a little reverb to an aux and that gets us a stereo field," Bowman adds.

"Once we went with this mobile route," he continues, "we figured the one way we were going to win is to have a great, solid signal path. So we had the two mics and the laptop and then, to get a more traditional sound, I got us an API 512 [mic pre] and coupled it up with a Purple Audio MC77 [1176-style limiter], and that was our whole signal chain."

"Everything was constantly evolving," Franti adds. "We did dozens of different versions of songs, and finding the right groove and the right tempo often took hours and hours of experimentation. I'm a person who, at a certain point, will just say, 'Throw it away; let's start over!' And then I'll lean over to Jay: 'Did you save that?'" he says with a laugh. Franti records his vocals throughout the process, often working alone. "I'll have the laptop and a mic, and I'll sing until I get it right. It might be the first take, it might be the 30th take." He and Bowman never comp vocals per se, but Franti might do an occasional punch-in.

All along, too, "I'm always asking people for their opinions," Franti says. "Sometimes they'll say, 'You know what, I liked the version before this one,' or, 'Maybe that last guitar part is a little bit too much,' or, 'The other one had a better beat to it but I can hear the words better on this one.' We sometimes even have listening parties on our bus—invite fans onto the bus and crank some tunes up. See what they like; see when people stop dancing." III

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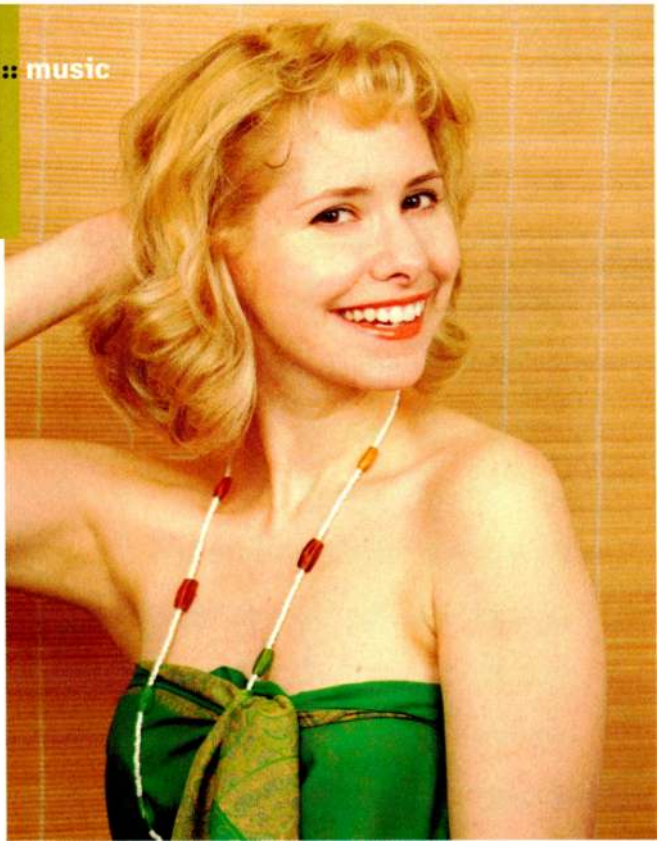

Nellie McKay

NO PLACE LIKE 'HOME SWEET MOBILE HOME'

By Barbara Schultz

"Where do songs come from?" Nellie McKay asks in our interview about her latest release, *Home Sweet Mobile Home*. Her question may be directed inward in part, but it's not rhetorical. After making five albums—four composed of original material and one collection of Doris Day covers, *Normal as Blueberry Pie*—this sweet-voiced, quirky, gentle artist is still somewhat mystified by her own process.

It's difficult, as well, for anyone to generalize about the process of making the 13 tracks on *Mobile Home*. Approximately three months of recording took McKay and co-producer Robin Pappas to half-a-dozen recording studios in five different cities, while 22 musicians (in addition to multi-instrumentalist McKay) contributed. The album also isn't what you would call "genre-specific"; McKay's songs have pop vocals, Caribbean rhythms, old-time ukulele, piano and voice. However, if we take a cue from McKay's songs and focus on what can seem to be random, smaller elements, a sense of the album as a whole emerges.

For example, when we asked McKay who of the many engineers on this release could offer a good deal of information about the recording, she suggested Kent Heckman of Red Rock Recording in Saylorsburg, Pa. Heckman, it turns out, tracked rhythm parts and horns for three songs on this album, but he knows McKay well: "When Nellie was in high school, she lived around here and she took music lessons from [jazz musicians] Phil Woods and Dave Liebman, and they've recorded here for years.

"Nellie writes all her own charts," Heckman continues. "I believe we used a click track, and the horn players might have asked a few questions about phrasing—this note short or this note long type of thing—but I don't think she cut a reference vocal with them. She did play some piano."

Heckman tracked bass, drums and horns simultaneously, with the three-piece horn section in the main room and other musicians in satellite iso booths. He used a Neumann U67 on sax, and Royer R-121s on trombone and trumpet; all of the horns went through a D.W. Fearn mic pre into Pro Tools, which was the one common factor among almost all of the sessions that became part of the album.

Another engineer McKay mentioned was Ichiho Nishiki, who recorded most of the vocals and numerous instrument overdubs in Lofish Studios (New York City). "Nellie is constantly a very creative person," Nishiki says. "She constantly has new ideas, so during vocals, she might say, 'Okay, we probably need a piano for this,' so we move to the piano. Or, 'Maybe drums here,' and she will keep moving. One time we made a trashy-sounding drum kit using a pipe chair and a bottle of water. One time she played cello. Then she would come back to the lead vocals. And her vocals are usually just one take, maybe two takes. She's so good—a beautiful voice and a different character for each different song."

Nishiki says McKay chose Lofish "because it's so comfortable. We tried a couple of mics [on her voice]. I thought a U67 microphone would be good, so we rented that and used the studio's Universal Audio LA-610 MkII, LA-2A and LA-610 mic pre's. She likes singing with a chair, so we put a chair in the middle of the room—just simple."

Tracking was also done at Jack Ruby Studio in Ocho Rios, Jamaica ("The tropical essence is all over the music," McKay says.), Winslow Court in L.A. ("It has the most incredible room sound; it's an unknown gem.") and in Sear Sound Studios in New York City not long after the passing of Walter Sear, whom McKay remembers fondly.

She says she also particularly enjoyed recording in Camden Chamberlain's Kite Fishing Studios, though at press time, this owner-operated facility wasn't included in the album notes. "I found this studio when I was going through with Aimee Mann on a Christmas tour," McKay recalls. "It's scary going to a studio you don't know. It's a bit like finding a back-alley abortionist. You don't know who's behind that door. But we recorded almost the entire track of 'Please' there, with just me laying on instruments, and that was an incredibly positive experience—just me and an engineer."

Home Sweet Mobile Home was mixed in Pro Tools on both coasts—by MP Kuo at Lofish, and Tony Maserati at RNC Productions and the Boom Boom Room (both in North Hollywood).

Kuo says her mixing philosophy is always to "listen first a couple of times as an audience would listen, get to know the song and think

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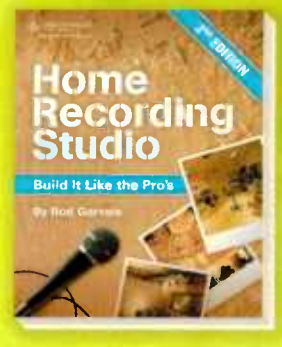

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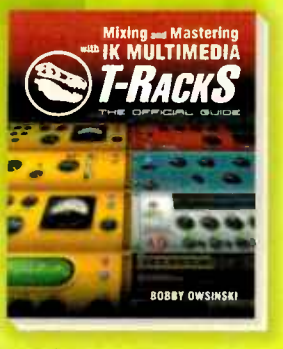

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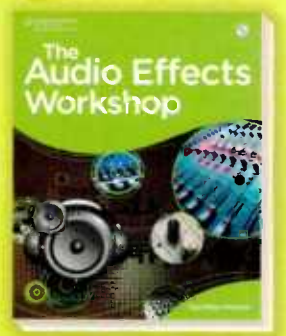

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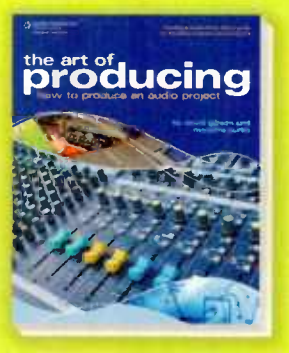

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about how I would enjoy the song. A song might sound like it should be very intimate, or it might need a lot of layers if it's more surreal-sounding. What I love about mixing with Nellie is she's so talented and there's so many things going on that are so intricate; every time you listen, there will be something surprising that you didn't hear the first time."

"There's a delicacy that's needed in the approach to working on this," Maserati observes, "because that's in Nellie's personality and the way she makes music and arranges music. She feels it out, and she needs to be into it. There's no formula. There's no roadmap. Well, there is a roadmap, but it's handwritten.

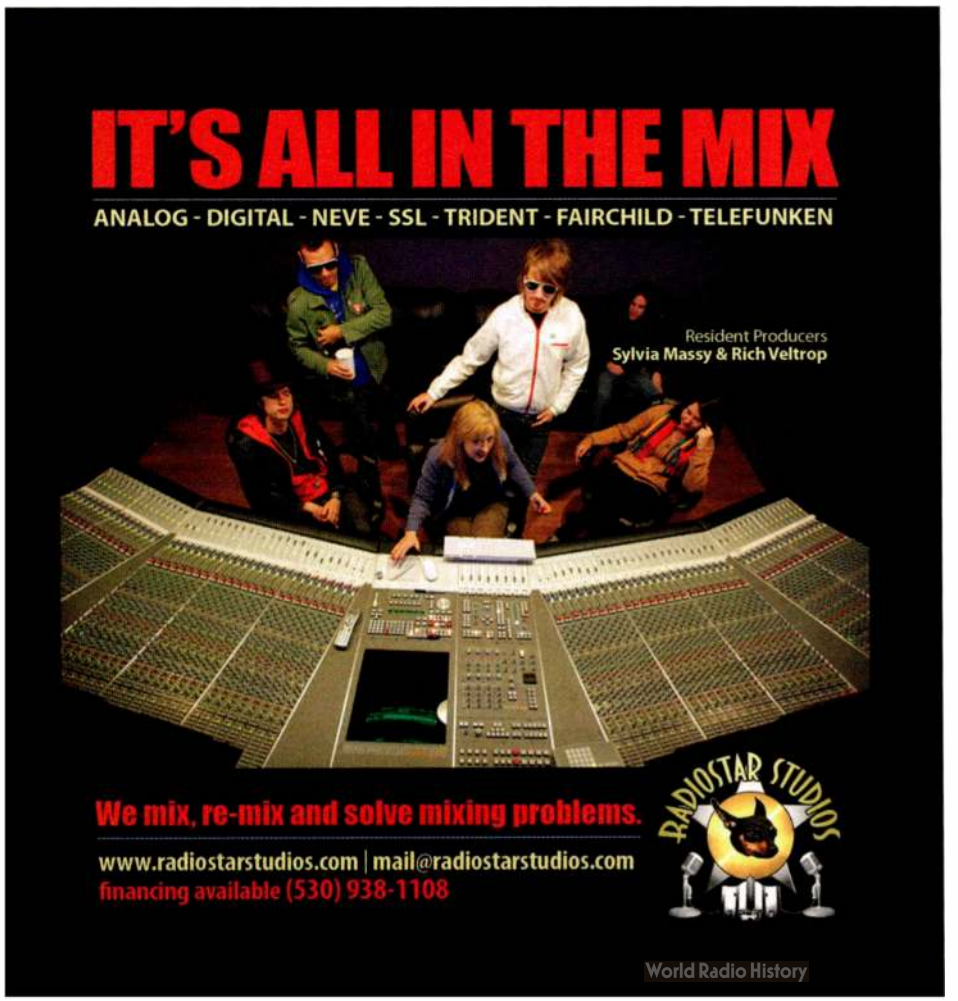
"[For] many vocalists, if you can get one thing out of them that sounds like it's got character, that's a lot," Maserati continues. "But Nellie is able to change character for a different perspective on a lyric, which is quite wonderful and is the mark of a great artist."

Maserati and Kuo both augmented Pro Tools with racks of outboard gear. In Maserati's case, he used the equipment that came with him when he moved from upstate New York to the L.A. area earlier this year: Neve EQ, an SSL X-Logic rack, Chandler Zener, GML parametric EQ, Universal Audio 1176, various plug-ins, etc. "I have the best of both worlds," Maserati says. "I have plenty of analog outboard gear that I've had for 20-plus years, and I have all the plug-ins and digital gear I need, as well."

On McKay's vocals, Maserati used a light hand: "Primarily, the things I had to use were compression, EQ and combinations of those. I've got a Thermionic Culture Vulture box, which I used to sort of thicken or enrich the harmonic quality of her vocal or a particular instrument. She wasn't the kind of person who was looking for a maximized vocal way up in the mix with the perfect amount of delay and reverb on it."

"I try to get her voice very nice, pure, light and airy," Kuo says. "We have a lot of vocal tracks on some songs, so I'm trying to build the instruments around her that might not be in her vocal frequency to support, to make a fuller mix."

"Tony described this album, when we were first approaching it, as a 'sonic landscape,'" McKay says. "He said, 'You know, whatever you decide to do, whoever you decide to work with, it's all part of the sonic landscape,' and I love that." III



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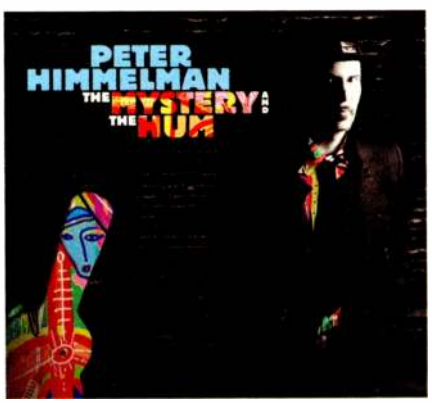
World Radio History

Peter Himmelman—Creating 'The Mystery and the Hum'

Musician, songwriter, TV/film composer and Webcast producer Peter Himmelman (peterhimmelman.com) readily admits that he thrives under pressure. For his latest solo release, *The Mystery and The Hum* (Himmasongs), he dared himself to write a body of entirely new songs within 20 days and to record them outside of the familiar environs of his project studio in Santa Monica, Calif. In the process, he created a highly inspired work of soulful rock and blues.

"I had been doing music for a television show called *Bones*," Himmelman recalls. "When the [Writers Guild of America] strike hit [in November 2007], there was an indeterminate amount of time off, and I thought, 'Well, I'm going to use that time.'"

Himmelman contacted producer/engineer Rob Genadek, a longtime friend, and scheduled a three-day lockout at Genadek's The Brewhouse Recording Studio (Minneapolis). For these sessions, Genadek booked bassist Jim Anton and drummer Billy Thommes (both veterans of guitarist Jonny Lang's band), whom Himmelman had never met. Genadek encouraged Himmelman to create spare, loosely arranged demos of each song for Anton and Thommes "so there were no preconceived notions" about the music, Genadek says.



Genadek says his approach to production is to "get it right with the microphone and the mic pre, and that influences everything else down the chain. I'm trying to go through a session without anybody noticing what I'm doing, and if I'm doing that, I'm probably serving the music in the best way possible. Each song gets its own treatment. Predominantly, the stuff was recorded live. The studio has a main room and two isolation booths. The drums were in the main room with the bass going direct [to] a Line 6 POD. Pete was set up in the bigger isolation booth that has a Yamaha grand piano, and he played electric guitar in there, as well, with the amp in the other isolation booth. All his stuff was right there, and he had good sightlines."

Genadek tracked the drums directly into Pro Tools through Aphex 107 tube preamps that he had modified; he used Neve preamps on electric guitars and occasionally called on the "colorful" mic pre's in his 1979 Neotek Series III console. For acoustic guitar, Genadek says, "I took an Audio-Technica lavalier and fashioned a little mount between the 12th fret and the sound hole [using] board tape and coffee stir-sticks. We needed to have that relationship [between the guitar and vocal mics] be very consistent so we wouldn't get too much phasing." Himmelman tracked his vocals with a Blue Blueberry mic.

"In three days we probably recorded 18 tunes," Himmelman says. "I felt 12 or 13 of them were good, and I brought them home to my studio to do some fixes and overdubs. Nothing was overanalyzed. It was very collaborative. The difference between recording and making a record is that inexplicable magic sum."

Himmelman dedicated *The Mystery and The Hum* to the late Don Smith, who mixed this album before passing away in early 2010. "He probably mixed it all in a week," Himmelman recalls. "He ran everything back to tape and put it through the board and warmed it up. Right after Don finished mixing the record, he got sick—he had liver disease—and then he died. After his memorial service, I said, 'I've got to put out this record.' He had given me so much inspiration and validation over the years."

—Matt Gallagher

Project

Ray LaMontagne's Great Room Recordings

When singer/songwriter Ray LaMontagne decided to self-produce an album at home, he asked around, looking for an experienced engineer with enough equipment to capture his five-piece band live in the great room of his house in rural Massachusetts—this was not a job for a DAW and a few mics. LaMontagne's drummer, Jay Bellerose, and another friend, Elvis Costello, agreed that LaMontagne should give Ryan Freeland a call.

Freeland, who won a Grammy for Best Traditional Blues Album for engineering Ramblin' Jack Elliott's *A Stranger Here*, operates his own studio, Stampede Origin (ryanfreeland.com), in West L.A., and he has designed his rig to be portable; he is producer Joe Henry's go-to engineer and often hauls his gear over to Henry's Garfield House studio to record.

Rock-It Cargo brought Freeland's gear, and all of the band instruments and amps, from Southern California to the East Coast. "Then we set up in the great room," Freeland says. "There was electricity, but not much else. I brought my racks, mic stands, cabling, speakers, headphones—basically my entire studio. I have 24 of everything—24 channels of mic pre's, 24 compressors and 24 Apogee inputs. We recorded to Pro Tools HD 88.2kHz, 24-bit."

LaMontagne wanted to sing in the middle of

PHOTO: RYAN FREELAND

Ray LaMontagne (right) in session at home with drummer Jay Bellerose and bass player Jennifer Condos

World Radio History

Perfect Sound Opens In Hollywood Hills

Producer/engineer Norm Kerner teamed up with producer/multi-instrumentalist Jake Rodenhouse to convert a 4-bedroom, 3-bathroom house on a secluded estate in the Hollywood Hills into a full-service music production facility, Perfect Sound (www.perfectsoundstudios.com). Kerner reports that since opening in December 2009, Perfect Sound has hosted sessions for Band of Horses, Sum 41, Murder Dolls, Rob Zombie, Ryan Adams and Tenacious D.

Perfect Sound's control room houses an SSL AWS 900+ SE console and (pictured at right) a Neve 8014 console.

PHOTO: KELLY MCMASTERS

The studio property includes 180-degree views to the Pacific Ocean, a pool and decks. "We are offering artists this type of retreat literally three minutes from the action in Hollywood, and we have made sure that from equipment to staff to maintenance, we can stand up to the best studios out there," says Kerner, who in the 1990s owned and operated Brilliant Studios in San Francisco while working with alternative rock artists such as Spain, American Music Club, Sky Cries Mary and Imperial Teen. "This is my third major studio and [Rodenhouse's] second, so we had lots of ideas and seemed to agree on just about everything."

Perfect Sound's control room features a 24-channel SSL AWS 900+ SE console alongside an early '70s analog Neve 8014 console; Barefoot MM27 Micro Mains, ADAM Audio Sub12s and Yamaha NS10Ms for monitoring; a Pro Tools HD3 system with Apogee conversion; and Pro Tools and Logic Studio software. "We fully embrace both present and past technologies in the pursuit of recording new, important music and having it sound as full and powerful as it can," Kerner says. "That's always the mission, isn't it?"

—Matt Gallagher

Taking Back Sunday In the Studio

PHOTO: PAUL WITSER

Taking Back Sunday with assistant engineer Chris Rahm (in Fl@bush T-shirt)

The fifth album by tuneful rockers Taking Back Sunday is a work in progress. In June, the bandmembers were in Robert Lang Studios (Seattle), writing and arranging new songs with producer/engineer Eric Valentine, who was also with them for *Louder Now* (2006).

"This new music is going to feel more like their early stuff," Valentine says. "They've gone back to an earlier version of the band. The guitar player and bass player, John [Nolan] and Shaun [Cooper], who were in the band for their first record, are back."

Valentine will do all of the engineering and production on the finished songs, but he left the technical decisions on pre-production to Robert Lang staff engineer Nathan Yaccino. "The goal was to provide the band with a relaxed, creative environment rather than setting up awesome sounds," Yaccino says. "Initially, the five of them set up in the round in our main live room. This didn't last very long due to drum bleed in the vocal microphones. We ended up putting [vocalists] Adam [Lazzara] and John between two separate airlock doors off to the sides of our live room. We have plenty of iso booths, but this was more to keep the band close to each other for communication purposes. Everything was tracked straight to Pro Tools through our 192 and Apogee Rosetta 800 converters."

"I was focusing on songs and arrangements, and we had a very capable engineer," Valentine says. At press time, Lazzara, Nolan and guitarist Ed Reyes were in Valentine's studio, putting the finishing touches on the arrangements.

—Barbara Schultz

by Barbara Schultz

Drums were set up at one end of the room, with some low baffling, and Freeland was at the other end. The two guitarists, Eric Heywood and Greg Leisz, set up on either side of LaMontagne, and their amps were placed under a stairway in the back of the space. Bassist Jennifer Condos sat on the floor next to the drums. "Everybody still used headphones," Freeland says, "so they're hearing what the mics are picking up and they can play to the room. On the title track, for example, Jay is doing really powerful drum hits and you hear them exploding beautifully into the vocal mic; I think that was because he could hear the bleed when he was doing it."

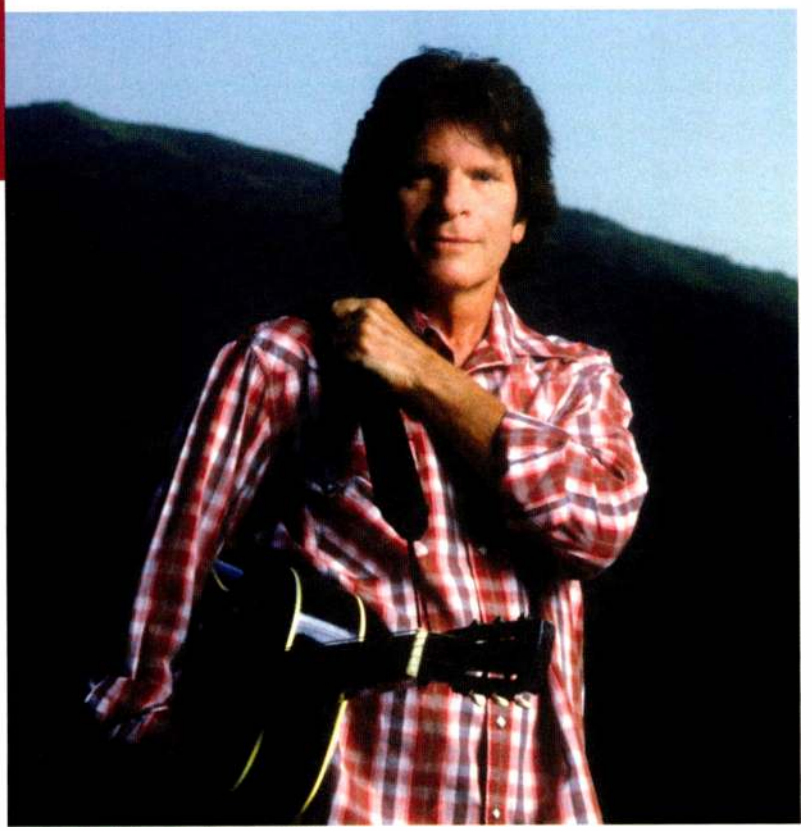
Guitar sounds also benefited from the setup: "I put two mics on each of the guitar cabinets," Freeland says, "a [Shure] SM57 and a Fathead ribbon. Then I ran them through this old Ampex MX10 tube mic pre that adds its own natural tube compression. On a couple of songs, Eric and Greg crank the amps really loud so you hear all of that bleed spilling out into the room and creating this welling guitar vibe."

On LaMontagne's vocal, Freeland fed his Neumann M49 into an Avedis MA5 mic pre and a Retro 176 for compression: "Not much, just kind of light," he says. "Especially with the bleed, I couldn't hit the compressors too hard because the room would get sucked into every single mic.

"Ray's record represents that great time that we all spent together in Massachusetts," Freeland concludes. "I love that about recording: You take a sonic snapshot, and every time I hear it I think of that time with my friends." III

World Radio History

CLASSIC TRACKS



John Fogerty

"CENTERFIELD"

By Blair Jackson

It's October, and that means playoff baseball and the World Series, so what better "Classic Track" to talk about this month than John Fogerty's "Centerfield"? Not only does 2010 mark the song's 25th anniversary, it also earned the supreme honor this past summer of being formally "inducted" into the Baseball Hall of Fame in Cooperstown, N.Y.—it plays there 'round the clock.

With its references to Willie Mays, Ty Cobb, Joe DiMaggio and the Mighty Casey, "Centerfield" is the rare rock tune that is explicitly about sports. More unusual is that it became a hit: Aside from being the title track of a Number One album in 1985, the song made the Billboard Top 50 as a single. But even more remarkable has been its staying power in the culture as both a staple of Classic Rock radio ever since its release, and its use on countless baseball telecasts, documentaries, you name it—hence its place in the Hall of Fame. After "Take Me Out to the Ballgame" (originally recorded in mono in 1908!), "Centerfield" is the most popular song ever written about our National Pastime.

"It was clear to me that songs about sports and rock 'n' roll really do not co-exist very well," Fogerty told the Associated Press earlier this summer, "but I did it anyway. I just thought, 'You know, I'm going to risk looking lame.'

"As a little boy I loved baseball. I dreamed of being a major-league player. Of course it didn't work out that way. But to be associated at all, in any way [with the Hall of Fame] is a wonderful honor."

Most people know Fogerty primarily as the singer/songwriter/guitarist for the San Francisco Bay Area–based group Creedence Clearwater Revival, who churned out hit after hit in the late '60s and early '70s, including such tunes as "Proud Mary," "Green River," "Bad Moon Rising," "Down on the Corner," "Fortunate Son" (see "Classic Tracks" March 2009, available at mixonline.com) and others. After Creedence's messy break-up in 1972, Fogerty went solo—*truly* solo—playing all the instruments on an album of country and gospel cover tunes under the name the Blue Ridge Rangers. (In fact, on the original pressing, Fogerty's name didn't even appear on the jacket.) An eponymous album on Asylum in 1975—also a totally solo affair—was only a moderate success, and then in 1976 he shelved an album both he and the label deemed unworthy of release, initiating a decade-long absence from the public eye while he dealt with various legal issues surrounding his Creedence legacy.

So Fogerty didn't really have a current career when in the fall of 1984 he called The Plant Studios in Sausalito, Calif.—across San Francisco Bay from his home in the East Bay town of Albany (he grew up in nearby El Cerrito)—and said he wanted to come in and make an album. Once again, Fogerty chose to play all the instruments and handle the vocals himself. Jeffrey Norman, who had been a staff engineer at The Plant before splitting off recently as an independent, was recommended for the project by Plant general manager Jim Gaines. "I was in the right place at the right time," says Norman, who these days runs Mockingbird Mastering in Petaluma (Sonoma County, Calif.). "Most major artists came with their own engineer and entourage; he didn't. It was just John."

Because the project was not going to require a giant live room for a band, Norman, Fogerty and assistant Mark Slagle were assigned the smallest room in the complex, Studio C, variously known as The Pit and the Sly Stone Room (for the records he made there in the early '70s). The 420-square-foot room—with two iso booths and a 140-square-foot control room—was mostly considered a demo and overdub studio, but Fogerty was delighted, as he told *Mix* writer Elizabeth Rollins in early 1985: "The fact that it was just my size was kind of cool because there's just one of me... and I would set up the equipment as if each guy was there." Studio C was equipped with Trident 80B console, Studer A-80 VU MKIV 24-track (running Ampex 456 tape) and Sierra Westlake Hidley monitors (as well as the then-ubiquitous Yamaha NS-10s).

"I had never met John," Norman says, "but he turned out to be a very nice guy—very pleasant—and also very confident, but in a good way. He knew *exactly* what he was doing. He came in with his guitars and some

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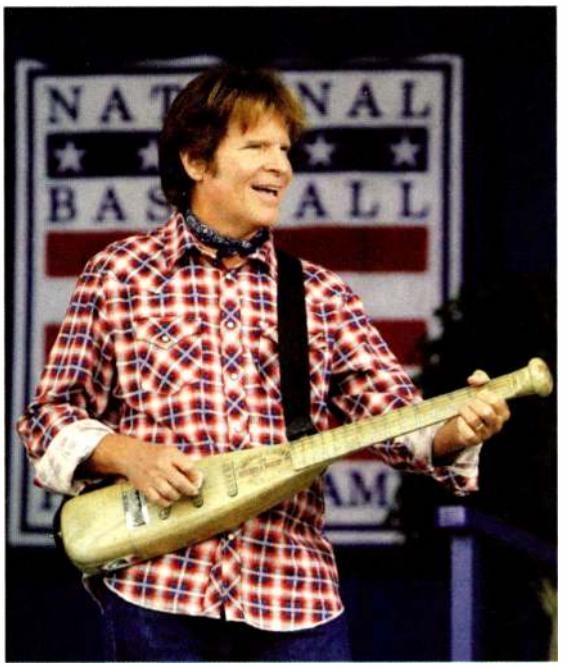

Fogerty played a specially made "bat guitar" at the Baseball Hall of Fame when his song, "Centerfield"—from the album of the same name—was inducted.

> The crack of the bat is a sound that John brought in. He had it on a synth as a sample, and I believe he got it from the movie *Damn Yankees*, which is cool.
>
> — *Jeffrey Norman*

amps and keyboards and drums, and he had this little notebook with every song delineated—all of the parts, all of the exact amp settings: Guitar number one is going to do *this* rhythm part, using *this* amp at *these* settings. He'd say, 'Okay, I have three guitar parts on this song, I have a sax on this,' and so on. Each song started with a rhythm guitar and a click track and sometimes a scratch vocal, and that would be the basic track. Once that was done, he would then play the drums to that track and build it from there." In that era, Fogerty had his own 8-track studio at home and he had clearly done plenty of preproduction on his own, though Norman says he never heard any demos. For his part, Norman was mostly happy to defer to Fogerty's ideas and inclinations.

In that March '85 *Mix* article, Fogerty recalled of Norman, "He was only a mild knob twiddler. We laughed about that. That's a Pete Townshend expression. I would say, 'Wait a minute, wait a minute. I've been working on this a long time.' I would have him repeat to me what he was doing. This was the first day, which we ended up having to do over. Most of what he was doing was fine. I just didn't want him to get carried away because most engineers, just because it's there, say, 'Well, I'm supposed to do something, I'll try this.'"

Fogerty did rely on Norman for mic choices and outboard settings, "but any time I wanted to use EQ on a specific drum, he al-

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ways wanted to know exactly what I was doing," Norman says. The engineer mainly used the Trident console's onboard EQs, "though I didn't need that very much. There was no EQ on any of his guitars. He had it dialed." Guitar amps were miked with Neumann 87s and Shure 57s. He also used 87s for drum overheads. Other drum mics included a 57 on the snare ("maybe in combination with another mic," Norman offers), a Neumann KM84 on the hi-hat and Sennheiser 421s on the toms. Bass was direct. Because of the negligible acoustic properties of Studio C, everything was close-miked with no room mics used. Instead, Norman used EMT 140 reverbs, as well as one of the new kids on the block in that era: the AMS digital reverb, a box Fogerty liked so much he bought one for himself after the sessions.

As for Fogerty's vocals, "Although he did some scratch vocals along the way," Norman notes, "I remember the first time we did a lead vocal, it was like, 'Oh, my God, that's John Fogerty!' He was really getting to that voice!" [Laughs.] The singer would usually do just two or three takes of each vocal. "There was a little comping, but not a lot," Norman adds.

In the case of the song "Centerfield," there were a few sonic touches that give it a distinctive sound. "My main contribution was the gated [AMS] reverb on the synth 'claps,'" Norman says. "It made it kind of unique—you hear that and you know what song it is instantly. The crack of the bat is a sound that John brought in. He had it on a synth as a sample, and I believe he got it from the movie *Damn Yankees*, which is cool. It sounds a little fake, I guess, but it's perfect for that song. He also did some changing of parts on that song. Like the organ part he added, which is great because it sounds like a stadium organ—I believe that was not in his little book originally."

The *Centerfield* album was recorded and mixed over a period of about six weeks at the end of 1984, with Norman working steadily five days a week. It was mixed in The Plant's Studio A on a Trident TSM 80 console equipped with Melquist automation. "We would talk about reverbs and I would get some blends and get things to what I thought was close, and then John would modify it if he wanted," Norman says.

At the time, Fogerty told Rollins in *Mix* that after he and Norman had mixed about half the album, "I went back home and put on a Creedence record, and said, 'Yeah, new stuff matches, sounds fine.' Then I put on a contemporary record, and said, 'Whoa!' The contemporary record just jumped right out at me and the Creedence just sort of laid there. So I went back to the drawing board. I had to work with the correct balances between higher and lower registers. Nowadays, you can print a lot more on a record. It used to take me about an hour-and-a-half per tune. Now we averaged 10 to 12 hours."

Whatever sonic legerdemain Fogerty and Norman employed on the *Centerfield* album, it seems to have worked. It was an out-of-the-box smash that brought Fogerty the solo success that had been so elusive since his Creedence days. It started with the Number One rock single, "The Old Man Down the Road"—a song so Creedence-like that Saul Zaentz, boss of Fantasy Records, CCR's former label, actually sued Fogerty for *self*-plagiarism: a dumb, frivolous suit if there ever was one. Then different radio formats began to add various other songs to their playlists, including "Centerfield," the Sun Records–influenced "Big Train (From Memphis)" and "Rock and Roll Girls"—all modern classics. The album remains Fogerty's biggest seller.

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PHOTOS: STEVE JENNINGS

The Goo Goo Dolls performing one of their classic hits

By Sarah Benzuly

Goo Goo Dolls

LONGTIME MEMBERS MAKE TRIUMPHANT RETURN TO THE STAGE

The Goo Goo Dolls may have stayed quiet for the past few years—four years passed between *Let Love In* (2006) and this year's *Something for the Rest of Us*—yet they were anything but when the foursome hit the stage in late August at the Sleep Train Pavilion (Concord, Calif.). Touring in support of their *Something for the Rest of Us*, the Goos (lead vocalist/guitarist Johnny Rzeznik, bassist Robby Takac and drummer Mike Malinin, as well as touring/recording member keys/guitarist Korel Tunador and guitarist Brad Fernquist) also played liberally from their previous albums (including songs from self-titled debut in 1987). From hit single "Slide," "Dizzy" (from *Dizzy Up the Girl*, 1998) and "Iris" to the radio-friendly "Home," the Goos offered something for everyone to sing along to.

The album's distinctive rock leanings with a dash of pop translated easily to the stage, thanks in part to the fact that Fernquist was involved in the recording sessions. "We pretty much walked in [the studio] with the band we play with and made a record, which I think is going to show during the live performance," Takac told *Billboard* before the album's release. Also adding to the easy switch from studio to stage sound is front-of-house engineer Paul David Hager, who had mixed the new record and has been part of the Goos' road crew for the past five years.

Hager is mixing on an Avid Profile console with two FOH engines, with

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Pictured, clockwise from above left: Johnny Rzeznik; FOH engineer Paul David Hager (left), FOH systems engineer/crew chief Michael Conner (center) and FOH A2 Tim Shaner; and Robby Takac

one running in tandem as a backup, which he's "never needed yet," Hager says. "I have about 60 channels from the stage; the openers [Green River Ordinance and Switchfoot] use the rest up to [a total of] 96." Hager employs some on-board effects—including Waves Mercury Live plugs, Eventide Anthology 2, Chandler TG comp and a "must-have" Crane Song Phoenix—but ups the ante with a wealth of outboard gear. Select items from that rack include five Distressors for vocals and snare, two Fatso Jrs. on guitars, a 4-channel SPL Transient Designer,

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Monitor engineer Larry "Filet" Mignogna (left) and monitor system tech Justin Hoffman

two Bricasti reverbs and two Eventide H3000s. "I also have two Crane Song HEDD units on my outputs to the sound system," Hager adds. "I have a mix of old- and new-school going on—the same as I do in the studio."

The Clair Global–provided sound system comprises 16 i3 line arrays a side, 10 BT218 subs a side and six i-DL side hangs a side, as well as six i3s for front-fills across the stage. All speakers are powered by Lab.Gruppen PLM20000 with Lake control. "I tune by using pink noise to get the zones all in tune and timed, and then I walk around with a few prerecorded songs to tighten up by ear," Hager explains. "Then I take about 15 minutes running a virtual soundcheck to get all my console channels tweaked to the room. Then we line check and the band comes in and plays a couple of songs." A very tight ship, indeed.

Also steering the sound is monitor engineer Larry "Filet" Mignogna, who previously took over monitor duties for Bob Windel on The Eagles' tour; Windel was previously on this tour before Mignogna stepped in. Mignogna is also working on a Profile console, using about 50 inputs from the stage. Unlike Hager, Mignogna's gear is compact, relying on all onboard plugs (D-Verb for vocals, Smack! comps) with nary an outboard piece to be seen.

The entire band is on in-ears using a full Sennheiser wireless package. "The stage is dead-quiet except for drums," explains Mignogna. "All guitar amps are offstage. During the show, most of my attention is on John. He has more of an FOH-style mix, along with numerous specific cues in each song. The rest of the band is pretty dialed in. I didn't have to do much for them. When I came in to take over from Bob, they were already dialed in and very seldom asked for anything. Also, Robby, Mike and Korel all have PQs on their mixes that their techs take control of. But they rarely have to touch them."

Malinin's drum kit is miked with AKG D12, Shure SM91 and a NS-10 speaker wired for kick; Telefunken M80 (top) and AKG 414 (bottom) on snare; hat and ride take Neumann KM 184s; and toms and overheads see Neumann TLM 103s. "I also have Pintech triggers on the toms to open gates in the console," adds Hager.

Electric guitars take Heil Sound PR-30s and Audio-Technica AT4050s, while acoustics see Chandler TG Channel preamps. Bass is an Ampeg tube DI and a Tech 21 SansAmp RBI. Rzeznik sings through a Sennheiser 5200 Series wireless. "We go between a Neumann KK 104 head (in larger venues) and a 5235 head (for smaller venues) due to the rejection," Hager explains.

Other personnel on the tour include systems techs Mike Conner and Justin Hoffman, and Tim Shaner (FOH A2, has been with the tour for four years)—all with Clair Global. III

Sarah Benzuly is Mix's managing editor.

World Radio History

SOUNDCHECK

PHOTOS: STEVE JENNINGS

McLachlan sings through a Neumann KMS150; all other vocals take AKG 535s. Other mics onstage include models from Heil, Earthworks, Audix and Electro-Voice.

Lilith Fair

Female singer/songwriter touring festival Lilith Fair stopped by the Shoreline Amphitheater (Mountain View, Calif.) in early July, where fans were treated to sets by Sarah McLachlan (founder of the festival), Heart, Miranda Lambert, The Bangles, Colbie Caillat and much more on three stages. Solotech (Montreal) provided all of the gear.

Working out at FOH is Gary Stokes, who is mixing on an Avid Profile, sending 60 channels to the house and a few more to monitors. "However, I have patched my output buses digitally through plug-ins back to extra channel inputs on my bottom layer," Stokes says. "This gives me effectively 24 more customizable virtual control groups on the input faders. I spend pretty much the whole show on this bank and have almost eliminated the dreaded input bank switching. This setup does hog the console DSP resources, and I quickly ran myself out of DSP and input channels to make this happen."

Outboard gear includes a dedicated vocal chain (Crane Song Trakker compressor and Empirical Labs Lil Freq EQ on an analog insert), XTA D2 and Sidd (digital insert), TC System 6000 (reverb, chorus and delay on McLachlan's voice; patched on AES to the desk) and EQ Station, True P8 8-channel mic pre for some audience and test mics, and a Grace headphone amp.

The L-Acoustics V-DOSC rig is supplemented by ARCs for outfill and dV-DOSC for downfill. The two smaller stages use dV-DOSC and Meyer Sound CQs. Solotech system tech Marc Germain tunes the rig on a Meyer Sound SIM system. His control system comprises a custom BSS SoundWeb system for console switching and input matrix management; a Meyer Galileo for primary system EQ and drive; and a remote control of some XTA pieces onstage performing x-over/delay functions for sub-systems.

Over at monitor world, engineer David Pallett is mixing on a Yamaha PM1D; Solotech has provided two Avid monitor boards for those artists who are not carrying their own gear and opt to use one of Solotech's techs to mix monitors. The only outboard pieces of gear Pallett is using are Avalon 767 tube preamps on McLachlan's main and piano vocals and a Lexicon PCM70 reverb also on vocals. "I make liberal use of the onboard effects and processing on the PM1D," Pallett says. "I use individual reverbs for all the other musicians, as well as gates and compressors on various channels."

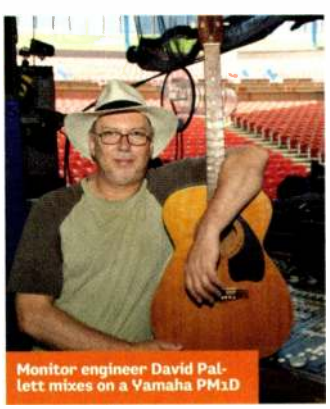
McLachlan's studio engineer, Chris Potter, is also on tour, mixing on an Avid Profile and recording to Pro Tools. "I supply stereo mixes for the cameras archiving the show, as well as reference mixes for the artist and management," he says. "My main position is to capture the show in multitrack form for later use." Outboard gear at Potter's side includes two Yamaha REV500 reverbs and D5000 delays, and Alan Smart C2 comps across the stereo bus.

While much press has been given to the number of shows cancelled on this tour, both Stokes and Pallett remain upbeat.

"It has certainly been a topic of conversation but no one is moping around," Pallett says. "Having worked with Sarah for close to 20 years, I can honestly say that our morale starts at the top. When you see Sarah smiling and happy to be out here doing what she loves and putting on a great show, you can't help but be infected with the same attitude. After seeing that Live Nation has cancelled hundreds of shows, you quickly realize that this is just a sign of the times and not a reflection on the great talent we are supporting on this tour."

"In 25 years," adds Stokes, "I have almost never been on a tour that has not cancelled or changed dates at the last minute. This is part of 'business as usual' for most touring pros. Although I can see tickets are down in some markets, this hardly seems unique to the concert business, and our performers have put on such great and diverse sets that I feel the fans are getting more than their money's worth. It doesn't hurt that Sarah is having a great time onstage every night and that is some good energy everyone can't help but feed off, from patrons to ushers to audio technicians—myself included."

Front-of-house engineer Gary Stokes at the Avid Profile



Monitor engineer David Pallett mixes on a Yamaha PM1D

Sarah McLachlan's studio engineer Chris Potter also mixes on an Avid Profile.

World Radio History

Paisley Tour's "Other" Concert Stage

Fans traversing the parking lot on their way to the Brad Paisley H20 tour were treated to a two-hour pre-show concert at the "Water World Plaza Stage" outside the main venue on a portable stage setup, where up-and-coming artists Steel Magnolia, Easton Corbin and Josh Thompson performed. Audio provider Sound Image selected two Allen & Heath iLive-T 112 digital consoles for FOH and monitor duties. "With three bands and five-minute changeovers in between, there's a lot of action," says monitor engineer Scott Ferguson. "But Bill [Chase, FOH] and I both have our scenes set for the next band long before the stage is reset." Ferguson is running stereo in-ears for all the bands, with an added sub wedge for the drummer.

Nashville-based Sound Image engineers Bill Chase (left) and Scott Ferguson

According to Chase, "The order of the bands changes every day, so we have scenes for each console that only bring up the inputs we need. We keep the entire backline onstage for the full show, and all three bands share a drum kit, bass rig and mic package." His output configuration includes stereo mains, a pair of front-fill outputs deployed via the console's matrix and a dedicated subwoofer pair. "I really like the console's dedicated sub preset because it's differentiated from a regular aux send, and it's always on the surface. Very cool design."

After helping set up Paisley's main P.A. in the morning, the two engineers move to the Water World Stage in the afternoon. Ferguson handles the mic placements, with Chase doing final tweaks before moving to FOH. "There's no time for sound checks, so we use the same presets every day," Ferguson says. "We might have to do a little tweaking, maybe due to traffic noise, or if we have to set up near a brick wall, but the EQ and effects on this desk make that pretty easy."

The post-show procedure is equally streamlined. "We're expected to get out by 8, including P.A., lights and stage," Ferguson says. "The first thing I do is save my scenes. If I made any changes, I make a new scene. Then I go to my show file and archive the show. I do that for every show, save it to the console and then again to a memory stick. After that, it's the physical tear-down."

load in

Longtime Faithless FOH engineer Mark Kennedy is manning one of two Midas PRO6s (supplied by Brittania Row) while the other travels to the next venue with the rest of the system.

Milwaukee's 11-stage/11-day **Summerfest** saw **Martin Audio** LE700 monitors supplied by **Clearwing Productions** (Milwaukee)...UK rental company **Adlib Audio** is the latest member of **L-Acoustics'** K1/KUDO Pilot Program... FOH engineer **Ken "Pooch" Van Druten** is using **Waves** Multirack and SoundGrid—forgoing a console package—on **Slash**'s Asian and Australian tours...Engineer **Nathan Lane** once again took FOH controls for the recently wrapped up **Idols Live!** tour, where he took out a **Yamaha** PM5D-EX digital console system: a Yamaha PM5D with DSP5D Expander clocked by an **Apogee** Big Ben word clock...FOH engineer **Brad Mulligan** set up the new **InnovaSon** Eclipse digital console at this year's **Toronto Jazz Festival**. The board's M.A.R.S. integrated multitrack recording system was put in place so that each performer's engineer could record portions of the soundcheck and then tweak their mixes offline on headphones.

road-worthy gear

Blue en•CORE 300 Vocal Mic

Now shipping is Blue Microphones' en•CORE 300, its flagship live vocal mic. The unique open architecture design of this studio-grade condenser maximizes air volume in the capsule chamber for consistent cardioid polar response, regardless of how the mic is gripped, and reduces in-chamber resonances for a more natural sound. The Blue logo glows to indicate the presence of phantom power. Retail is $199.

www.bluemic.com

DAS Aero 8A Compact Line Array

The DAS Aero 8A ultracompact (9.6x20.7x14-inch) line array features a neodymium 8-inch woofer and 2-inch-voicecoil HF compression driver mounted on a new waveguide horn assembly and driven by Class-D bi-amplification (250 + 100 watts) and onboard DSP. The 8A can be used solo; with the optional LX-212A 2x12 powered sub; or in multiple unit arrays. Rigging on the trapezoidal birch-ply enclosure can create splay angles from 0 to 10 degrees for creating various column curvatures.

www.dasaudio.com

Audix CabGrabber-XL

Audix unveils an extended version of its CabGrabber , a clip-on mic mount for guitar/bass amps and cabinets. Designed for both straight-front and slanted speakers from 14 to 20 inches deep, CabGrabber-XL is made of durable aluminum tubing and accepts any standard mic clip, securely holding mics weighing up to 16 ounces. The unit rotates 180 degrees and locks into position, so engineers can place a mic exactly where they desire. Retail is $89.

www.audixusa.com

World Radio History

ALL ACCESS

Photos and text by Steve Jennings

Toby Keith

Keith plays an electric Gibson ES 335 and Takamine Jumbo body for acoustics. He sings through a Shure UR4D wireless system with KSM9 capsules for himself and the backup vocalist. There are also a few wired KSM9s for other singers.

Country superstar Toby Keith is out on tour to support his latest album, *American Ride* (much of which was written on the road last year; will there be a new album resulting from this jaunt?). *Mix* caught up with the Sound Image–supported tour in early August at the Shoreline Amphitheater (Mountain View, Calif.).

Front-of-house engineer Dirk Durrham (left) is manning a Midas XL-4 console with 48 mono inputs and 12 stereo ins/12 stereo outs. In his outboard rack are Drawmer gates, ADL and dbx comps, and a TC Electronic 6000 and Lexicon 960L for effects.

According to system tech/crew chief Ted Bible (right), the summer dates (amphitheaters and festivals) include 54 JBL VerTec 4889s and VerTec 4880s (above, left). "We hang 15 in the main column and 12 in an aux column," Bible says. There is also a hang of 10 subs in between the main and aux. "We also stack 10 more subs in the pit per side. There are eight proprietary frontfills made by Sound Image placed across the front of the stage in pairs." The system is powered with Crown HD12000 amps and driven by five dbx 4800s, where they do all x-over and EQ processing.

"For tuning the P.A. system," Durrham adds, "we use Smaart and a Klark Teknik DN6000. We've got a great crew this year; most are new to the tour, such as Ted Bible. Our camp has wanted Ted for a while now, but he's always been out with the big rock tours like Def Leppard and Lenny Kravitz. He bought property in the Nashville area, and I stole him away and things have been great. As far as Toby, well he's from Oklahoma—that should say enough. But seriously, he is a man's man and a true standup guy."

World Radio History

According to drum tech Lance Stoner (right), Dave McAfee's kit is miked with KSM 27s for toms, KSM 32s on overheads, Beta 56As on ride and bongos, KSM 137s on hi-hat and bottom snare, Beta 98 on cross stick, and Beta 91 and 52A on kick. "And the good-old 57 for top snare," Stoner says. "He does use a seat Thumper bridged to 2 ohms."

Chuck Golf, bassist/band leader

Rex Mauney's keyboard chain includes a Yamaha S80, Motif Rack, Muse Receptor and a 1957 Hammond B3.

From left: monitor engineer Russell Fischer, monitor tech Stephen Wharton and band monitor engineer Bill Collyer

Monitor engineer Russell Fischer is also mixing on a Midas board—a Heritage 3000—while band monitor engineer Bill Collyer works on an Avid D-Show. "This is because Toby prefers the sound of analog consoles over digital," Fischer explains. "The band has grown accustomed to the snapshot capabilities of digital. It is easier for two of us to be in two places at once.

"All plug-ins used are internal to the console," Collyer continues. "Some sweetening on the bass DI, EQ and comp/limiters for the outputs and the FX—nothing too fancy." Rack gear on Keith comprises Summit TLA 100, eight channels of Drawmer DS 201 and 12 channels of Brooke Siren DPR 404.

Keith's in-ear monitors are Shure PSM 900 Series and some PSM 700s (below). "I have eight wireless ear mixes for the band," Fischer adds. "I have three hardwired ear mixes. In addition to the 11 mixes onstage, I have a guest pack and a few backup units for spares. For the ear mixes, I am using a Professional Wireless HA-8089 helical coil antenna."

"Hidden under the stage set faced upstage, guitarist Rich Eckhart [top] uses Krank and 112 iso box, guitarist Rich Eckhardt use a Kustom amp with Roland, TC Electronic and Dunlop effects and a 4x12 stereo cab with all Shure wireless," says guitar/keyboard tech Ripp Mayes (above).

Josh Bertrand plays a Fesden steel guitar; amps are Mesa Boogie studio and preamps are Peavey 112s.

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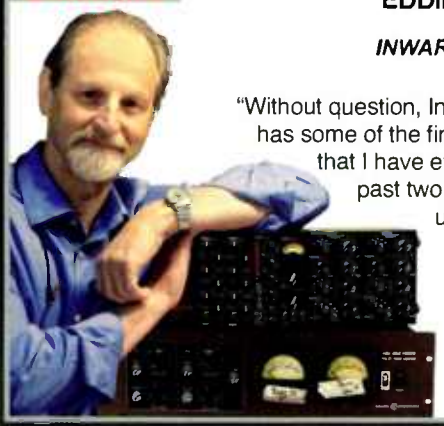

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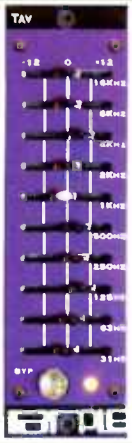

PURPLE AUDIO TAV 10 BAND INDUCTOR EQ

The Purple Audio TAV is a new take on the console graphic, with ten easy to use bands. Each band uses a high quality inductor and carefully selected caps to set the center frequency. Designed to work in standard 500 Series frames.

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WUNDER CM7 FET

The U47 FET is legendary for obtaining larger-than-life kick and bass tracks as well as thick and full vocals. For the first time, Wunder has re-issued this classic design to compliment their CM7 and CM7 GT series.

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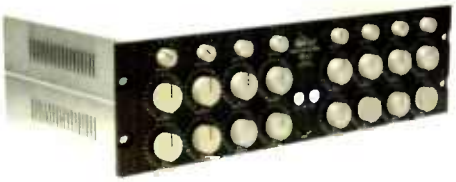

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World Radio History

Analoguetube AT-101 Stereo Limiter

Reincarnated, Improved Analog Vintage Warmer

The Fairchild 670 (and mono 660 version) were originally designed by Russian émigré Rein Narma for Les Paul in the 1950s for limiting audio program going to disc-cutting amplifiers. It's considered by many to be the ultimate in audio limiters. This "holy grail" is found again and revised in Analoguetube's AT-101 stereo limiter, a superaccurate re-creation that incorporates advances in component quality and carefully designed modern additions, yet retains the true essence and sound of the original Fairchild 670 limiter.

The AT-101 vastly improves upon the Fairchild 670's inconsistent and unreliable operation.

Big and Beautiful

The rackmount AT-101 is nearly eight spaces tall, with 20 tubes, four transformers per audio channel, five more transformers, and chokes in the power supply and control sections; it weighs 65 pounds. It is handmade with wiring turrets and point-to-point connections using silver-stranded wire to mil-spec construction (circa 1950), ceramic tube sockets, handmade high-voltage silver-mica condensers, Hovland Musicap polypropylene film capacitors and custom-made Sowter transformers.

To solve the Fairchild's "Achilles' heel," Analoguetube commissioned JJ Electronics to remanufacture the long-out-of-production GE Five Star 6386 tubes—four matched sets are required per channel. The 6386 is a remote cut-off, twin-triode with exponential—as opposed to linear—transfer characteristics. These tubes ($120 each)—along with the transformers, power supply design and the high-voltage sidechain control signal—are the core reasons the Fairchild and now the AT-101 sound as they do and are free of ugly limiter/compressor artifacts, no matter how much compression is used.

Other modern remedies include a more efficient power supply that ramps up the filament voltage upon power-up for longer tube life; a regulated high-voltage B+ source; an additional regulated linear power supply for the 6386 tubes; an over-temperature monitoring system—the unit dissipates more than 300 watts in heat; and a stereo-link switch replacing the 670's Lateral/Vertical M/S processing mode.

PRODUCT SUMMARY

COMPANY: Analoguetube Ltd
WEB: analoguetube.com
PRODUCT: AT-101 Stereo Limiter
PRICE: $19,000

PROS: Tonally smooth and rich. No expense spared.
CONS: Cost.

In the Studio

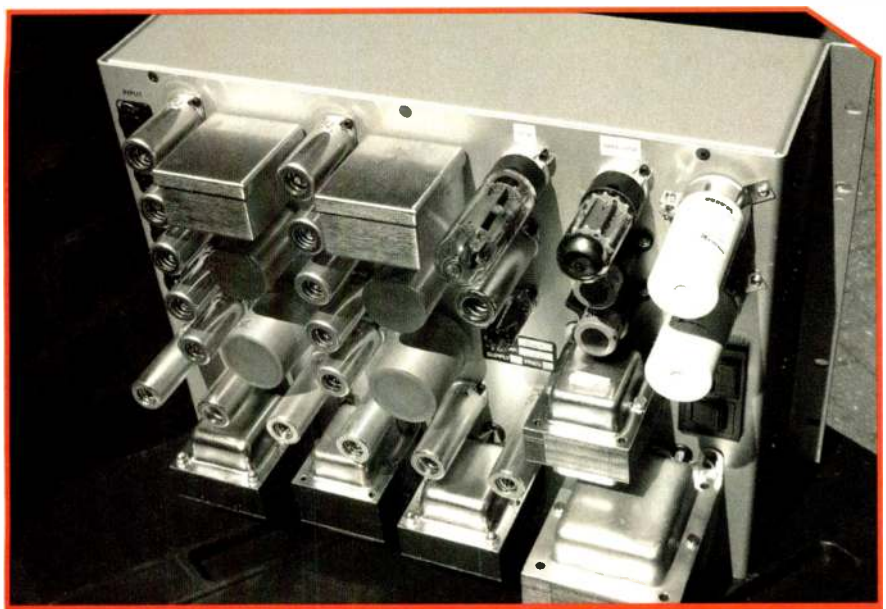
I've been using the AT-101 on every possible source, including across the stereo bus. The Fairchild 670 was the first limiter I ever used, and over the years I've experienced its inconsistent and unreliable operation, sonic differences between the channels, and the day-by-day changes in compression and distortion. By comparison, the AT-101 is smoother and more liquid sounding; warmer and richer without being boomy; and "shiny" sounding without treble hype.

After finding unity gain on the AT-101, I sent my Pro Tools mix out to the unit and returned its output back into my Benchmark Media ADC1 A/D converter for recording back into the DAW. My first mix was a country rock song. All of the typical complaints from the "in-the-box" mix naysayers vanished, as the overall mix instantly gelled with a rich and super-warm sheen. However, my first settings were too heavy-handed. After repeated listens, I began to miss the give and take of the track's internal dynamics. After backing the threshold control down, I ended up with about 2dB maximum gain reduction on peaks as indicated on the unit's two big VU meters. The mix was still smooth but not as clamped-sounding.

On a smooth jazz song mix, I used the Time Constant (TC) set to 2 with its 0.2 ms attack and 0.8-second release times. I got about 3dB max gain reduction with the threshold at 3. Threshold settings follow level input. If you turn up the level input, the output level goes up

World Radio History

By Barry Rudolph



The back panel of the AT-101 also sees a moden twist on the original 670.

predicated on the threshold knob's setting. At fully CCW (off), the AT-101 will make about 18 dB of super-warm gain.

I tried all six time-constant settings, and found positions 1 or 2 good for up-tempo songs, and positions 4 or 5, with their automatic program-dependent release times, better when you're looking more to warm up the sound than to control it.

As I rarely place loud "meter-moving" mix elements hard-left and -right, I've never been a big fan of stereo linking. It works fine on the AT-101, but I didn't use it for any of these tests.

I also didn't use linking to record my 80-year-old Schiller baby grand piano. I used two Mojave 101 FET condenser mics (with -15dB pads) placed over the hammers. I used my RTZ 9762 mic preamp (a mil-spec version of the Neve 1272 circuit) plugged directly into the AT-101 followed by my ADC-1.

I used TC position 3 this time, and no matter how much you like to squash when recording, the sound was always smooth, bright (I used no EQ) and full. Winding up the input level control or just driving more level from the mic pre and/or increasing the threshold control gets you needle-pinning gain reduction—around 15 dB—that sounds fantastic.

The piano's soundboard and resonance, string harmonics, and even my piano's squeaky sostenuto pedal are all well heard, yet the attack of the hammers is somewhat rounded off—in spite of where I placed the mics. It's easy to get all those cool piano sounds you know from The Beatles, Rolling Stones and Pink Floyd.

The longer release times of TC positions 5 and 6 will act as a kind of release time Hold button where gain reduction is "frozen" over short time periods of no sound. When sound resumes, the AT-101's output level will be more or less the same as before. This is important when the user is relying on a compressor/limiter for a certain level of consistency when recording musical phrases separated by time gaps.

Recording and processing vocals in a mix are a lot of fun. There is no obsessing over exact record or mix levels when your singer gets (unexpectedly) louder or softer—the AT-101 makes it all good. I used TC position 3 or 4 and limited as much as the producer and I wanted. With my quiet preamp, we found no additional noise with the AT-101, making it possible to hear all the grit, grain and subtleties of our singer's voice, the mic and the surrounding recording space.

Fairchild Reincarnated

The AT-101 is truly the ultimate limiter for any source and, as a mix bus limiter, it's a dream come true. It's the realization of the epitome of Narma's original concept and design, and if there was ever an addictive piece of outboard gear, I have found it. III

Barry Rudolph is an L.A.-based engineer. Visit him at www.barryrudolph.com.

World Radio History

By Barry Rudolph

Solid State Logic X-Patch

I/O Management System Controllable Via Computer, iPhone

A single X-Patch can handle 16x16 line-level I/Os at +4 dB or -10 dBv.

X-Patch is an analog line-level signal-routing matrix that uses SSL's SuperAnalogue™ technology and a JFET switching array borrowed from the company's Matrix console. SSL's Logictivity™ X-Patch Remote Studio Browser, an included Java-based application, communicates to X-Patch over Ethernet for setup, configuration and preset selection.

Up to 128 pesets can be programmed and retained in the unit after power off and without X-Patch Remote running. Setups can be backed up and stored as .xml files, and X-Patch Remote will control up to six X-Patches in parallel. A free iPhone app allows preset selection over WiFi.

This single-rackspace unit has 16 inputs and 16 outputs on four rear panel, 25-pin D-Sub connectors and an external power supply. There is also an RJ-45 jack; MIDI jacks are available if you'd like to use MIDI to change presets. The front panel has an on/off switch and a pair of convenient XLR combo jacks wired in parallel across the channel 1 and 2 input/outputs of the DB-25.

X-Patch routes up to 16 outputs from your DAW, console, multitrack and outboard gear to 16 inputs that return to input I/Os and gear inputs. Remote Channels, Network and MIDI sub pages are provided to configure the unit. From the Channels page, you can label channel outputs (Sources) and inputs (Destinations), define channels types, and set +4dB/-10dBv levels for each I/O. With both balanced and unbalanced lines usable, this facilitates the integration of guitars, other musical instruments, guitar pedals or hi-fi gear into your recordings and mixes.

The Network sub page determines whether X-Patch uses DHCP (Dynamic Host Configuration Protocol) or static IP addressing. The MIDI page selects which channel receives Program Change messages, with program numbers equal to X-Patch Preset numbers. It's all simple.

In addition to controlling a basic 16x16 matrix, X-Patch Remote allows up to 128 oft-used processing chains to be "pre-made"—stored and then easily dropped into signal paths. Up to six analog processors can be organized into X-Patch Chains.

In the Studio

X-Patch's incredible usefulness was apparent once I connected my small collection of outboard and my HD192 to X-Patch's DB-25 connectors. They all became new "plug-ins" in my Pro Tools HD3 Accel rig.

The X-Patch software is intelligent enough not to require the engineer's mindset of connecting outputs to inputs; that happens automatically without the possibility of duplication—i.e., connecting the same processor twice or two outputs to the same input.

Changing patch setups and building chains was easy and fast. You must configure Chains first and then Presets, and before you change a route in a Preset or alter a Chain, you must first null the existing choice by selecting None.

I named, configured and connected all eight I/Os of the HD192, my RTZ Professional Audio 9762 mic preamp outputs (X-Patch is not for mic lines), Benchmark Media ADC1 A/D converter/clock, an 1176LN, AM-864 compressor, Creative Audio Labs' MW1, an Aphex 230 Voice Channel, a pair of JBL/UREI 7110 limiters and my stereo Korg 1-bit MR-2000S recorder.

I set up paths for connecting the outputs to the ADC1's inputs and/or sending outputs and returning inputs to and from Pro Tools. I used Pro Tools' analog I/O 3 and 4 for sending to the Korg MR-2000S during mixing, but during tracking, 3 and 4 became a parallel processor path for the Aphex 230 and the MW1 while 5 and 6 were used for the 1176LN and AM-864.

I found no sonic difference using X-Patch over XLR patch cables; in fact, switching between presets while audio is present produces no pops, clicks or even gaps when switching between similar presets—assuming there is unity gain and no DC offset. This makes changing presets on-the-fly possible when, for example, I would "reuse" the AM-864 already on the lead vocal track for processing a guitar solo. As soon as the vocal stopped, I automated this preset change using MIDI and then changed back when the solo was over.

The front panel XLRs are great for connecting itinerant gear under review, but I wish there was a way to break those analog connections (via the software) from being paralleled to X-Patch's DB-25s.

X-cellent

X-Patch is a great patching solution for any studio. A single X-Patch will increase the capabilities of all your outboard and offer instant system reconfiguration that is useful for changing in-the-box mixes to stem outputs and for song-to-song effect changes for front-of-house and theatrical sound mixing. Doing all this from my iPhone is fun, too. III

PRODUCT SUMMARY

COMPANY: Solid State Logic
WEB: solid-state-logic.com
PRODUCT: X-Patch
PRICE: $1,199

PROS: 16x16 patchbay controlled by computer and iPhone.

CONS: Front panel XLRs are not on/off-switchable.

World Radio History

Michael Brauer photo by Juan Patiño

"Rather than simply use samples to replace drums, I prefer to supplement and enhance drum performances. With that, I've had a hard time finding a program that allows an easy way to audition and manipulate samples that play back locked and in phase. I'm not looking anymore... Trigger is amazing."

Justin Niebank (Carrie Underwood, Taylor Swift, Rob Thomas, Bon Jovi)

"Trigger is a huge leap forward in drum triggering and drum supplementation. The phase accuracy is astounding. The ability to blend samples and reduce false triggers internally is very clever and powerful. I love to live by my motto, whatever works, and I must say, trigger really works!"

Ross Hogarth (Hoax Productions, The Doobie Brothers, Motley Crue, Roger Waters, Melissa Etheridge, Jonas Brothers, Miley Cyrus)

"The NRG Recording Studio A room has been one of the most popular drum rooms in the industry. It's great to hear the sound captured in the Steven Slate sample library, and even better to use it with phase accuracy in Slate's TRIGGER plugin, which is now my go-to drum replacer."

Jay Baumgardner Founder of NRG Studios (Papa Roach, Hoobastank, Evanescence)

"I consider Trigger the state of the art for drum replacement, it's exactly what I've been patiently waiting for to come around. Slate has an excellent sample library and some really great presets to start with. It's the best and most versatile program I've ever used."

Michael Brauer
(Coldplay, The Fray, John Mayer)

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World Radio History

By Brandon Hickey

Neural UpMix by DTS

Stereo Becomes 5.1/7.1 With This Easy-to-Use Software

Neural UpMix by DTS is a software version of Neural's intelligent upmixing hardware processor. It can be used as a real-time plug-in with surround-ready software like Pro Tools HD, Pro Tools LE with Avid's Complete Production Toolkit or Nuendo, but it can also function as an Audio Suite plug-in in Pro Tools. Rather than serve as a matrix decoder—which would extract surround information from 2-channel program information specifically designed to be decoded—the goal of this tool is to take any 2-channel audio and create a truly enveloping surround sound version. In recognition of the growing community of 7.1 listeners wanting to enjoy the maximum benefits of the Blu-ray format, the plug-in will upmix 2.0 material to 5.1 or 7.1, or even 5.1 to 7.1.

Neural UpMix by DTS allows you to create real-sounding surround environments via a simple GUI.

Easy to Get Around

The GUI is attractive and self-explanatory, and its Width and Depth controls execute the bulk of decision-making. The Depth control determines the front-to-back weight of the audio that is output, while the Width control dictates how much center-weighted signal will feed the actual center channel, vs. the left- and right-front speakers or phantom center. A graphic depiction of the playback environment helps illustrate which of two 7.1 upmix variations is selected. One setting adds the sixth and seventh channels, each 90 degrees off-center, in accordance with recommendations from the 7.1 home theater specs from ITU and THX. The other adds the additional channels to the rear of the playback position, just outside the traditional surrounds. Large peak/VU input meters—and dedicated peak/VU meters for the outputs created by the processor—simplify signal management. Each output has a post-process trim control, and there's a master output control with an optional limiter.

PRODUCT SUMMARY

COMPANY: DTS
PRODUCT: Neural UpMix by DTS
WEBSITE: dts.com
PRICE: $449

PROS: Converts stereo files to 5.1 or 7.1 with impressive sound quality.

CONS: No support for upmixing mono or rotating surround image.

Upping the Mix

My first use of the software was to attempt a 5.1 upmix of symphonic music that had been recorded with a Decca Tree and subsequently mixed to 2-channel stereo. I adjusted the Depth control with an emphasis on maintaining the sense that the orchestra was in the front of the listening position and the sound was interacting with the concert hall's acoustics. The results did not necessarily align with those expectations. Contrary to what I had envisioned, the process did not extract exclusively ambience and draw it into the rears; instead, the entire sound of the orchestra now enveloped the listening position. Though not my original intention, the sound was striking. The sonic experience produced here quite apparently differed from the simple end result of adjusting a front-to-rear panning control or a divergence panning control included in a DAW (using Pro Tools HD as my reference). Looking to prove—in a scientific way—that truly unique information was being generated for the surrounds, I summed the left-front channel with the left-surround channel, flipping the left-front out of polarity relative to the rear channel. Complete cancellation did not take place, thus proving that unique, yet still perfectly complementary information was being generated.

My curiosity led to further testing. Soloing each of the individual playback channels revealed rich-sounding audio. Each channel exhibited a full broadband frequency response without audio artifacts. When moving my head around the soundfield with all channels playing back, there were no washy, phased sounds. Next, I wanted to see how this sound would hold up to matrixing and downmixing. I tried processing upmixed signals from DTS Neural Surround UpMix with the classic Dolby SEU4 and decoding with the SDU4. I then tried a more modern Neyrinck ProLogic II encoder, decoding with a Denon Professional receiver. In each case, the surround image maintained integrity, with the ProLogic II mix sounding very close to the original. The encoded Lt/Rt through two speakers also sounded very clean, again with no distracting phase discrepancies. When doing a

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true stereo downmix, using the onboard facilities of a Martinsound MultiMAX, I dropped the center 3 dB before splitting it off to the left and right, and also attenuated each surround channel by 3 dB before combining them with their respective channels. The end result was also remarkably clean.

Virtually Real

After these tests, I returned to creating a virtual concert hall around the 2-channel classical piece. At this point, I thought a reverb processor might do the trick, so I used the Waves Renaissance reverb on a Large Hall–type setting. I ran the 100-percent wet reverb track through Neural UpMix and adjusted the depth to place the weight of the generated ambience slanted toward the rears, which resulted in a very convincing virtual sonic environment. Normally I would rely on a TC Electronic System 6000 generic reverb to perform this kind of process, for lack of any kind of alternative with acceptable sound quality. Having said that, I would not turn my nose up to Neural UpMix as a very acceptable alternative for creating simple virtual environments. Given the reasonable price of Neural UpMix relative to the System 6000, this could be a great way for smaller studios to unlock surround potential from their collection of stereo plug-ins.

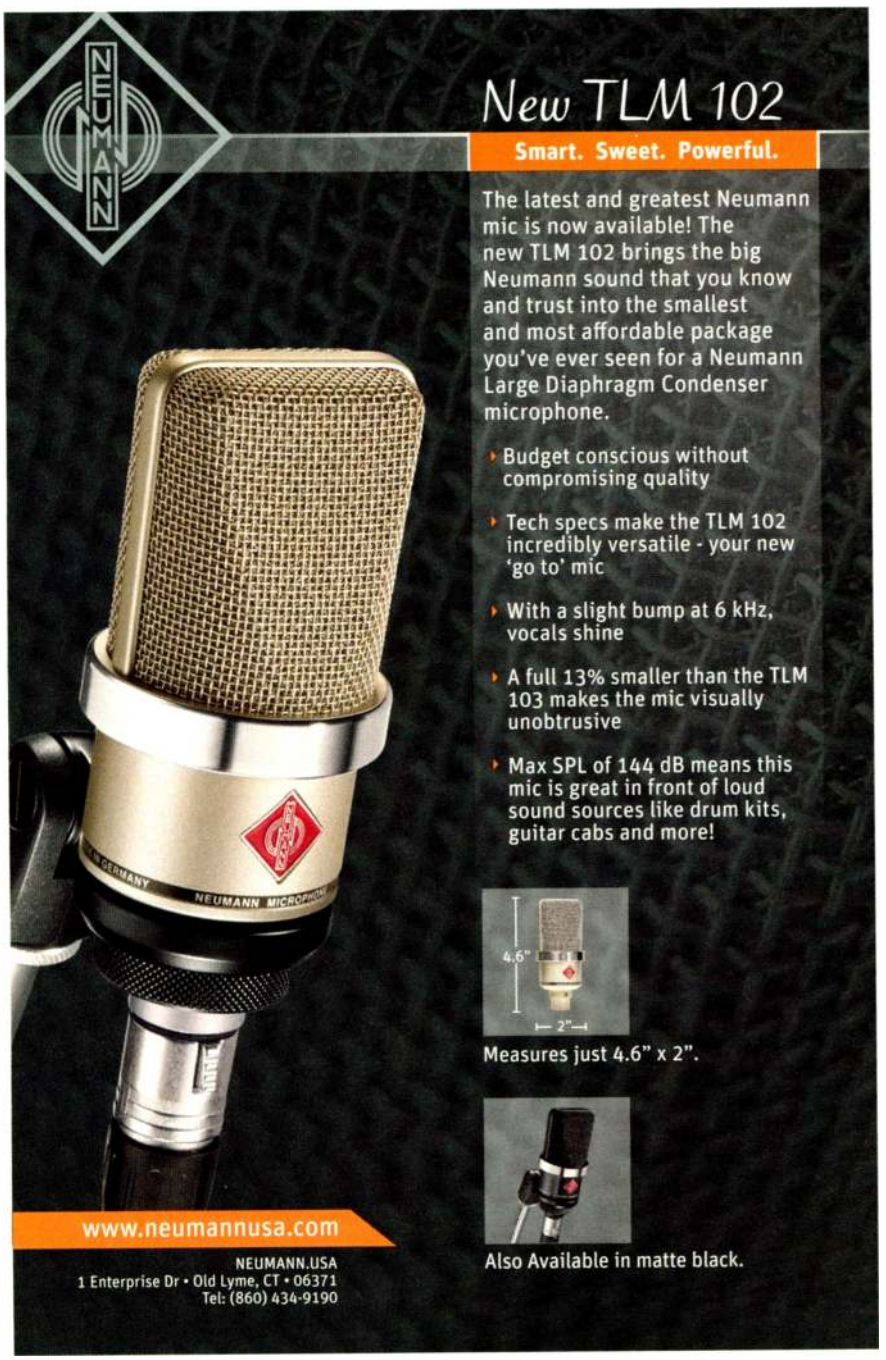
This plug-in particularly shined when dealing with ambient sound effects for film. I processed a variety of source material, including stereo recordings of rain, ocean sounds, birds and other noises that create the environment in which a scene is supposed to play out. In each of these cases, I again experienced rich, full-frequency sound that was free of noticeable artifacts or phase issues. Downmixing, folding down and matrix decoding all worked with no undesirable effects. I imagine this application was one of the plug-in's primary intents, and it works exactly as it is supposed to.

Can I Live Without It?

As far as sound quality goes, I'd give this plug-in a perfect score. It does what it aims to do and without sonic tradeoffs. The GUI is well thought out and easy to use: Simply insert the plug-in on a stereo track, and it automatically turns into a surround track. When it comes to features, there aren't many bells and whistles. Mono audio cannot be upmixed to stereo, nor to surround.

Also, some competing products offer a rotation control, which lets you rotate sound relative to the mix position, allowing a change in the distribution of energy. Neural UpMix shifts the balance from front to rear, but the image is always balanced across the center axis of the room. What if the sound is meant to radiate from the left-surround and grow to wrap around the listening position? Being able to rotate the entire surround image would be useful in this case. DTS explains that the lack of ability to rotate the surround image was a deliberate decision to prevent phase issues when audio is downmixed in a consumer environment. This wish aside, if you are adding stereo material into a 5.1 or 7.1 mix, or trying to upmix M&E's for surround use, this plug-in is indispensable.

Brandon Hickey records and mixes audio for independent films and teaches audio post.



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Dave Bottrill
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Frank Filipetti
James Taylor, Foreigner, Korn, George Michael

Elliot Scheiner
The Eagles, Steely Dan, Sting, Fleetwood Mac

World Radio History

By Michael Cooper

VocalBooth Gold, Platinum and Diamond Series

Portable Rooms for Music Production, Broadcast and Rehearsal

Not everyone can afford to build a studio from the ground up, and retrofitting an existing space to achieve isolation and flattering acoustics can be prohibitively time-consuming and disruptive. To address these issues, VocalBooth™ provides modular isolation booths for recording, mixing, broadcast and rehearsal. Two of the company's lines—the Gold and Platinum Series—sport a rectangular footprint and parallel, opposing walls. You can also order a booth with a square footprint, but these reinforce standing waves. Platinum Series booths feature a "floating" floor and walls—essentially a room within a room—and purportedly offer greater isolation from the outside world as compared to the nonfloating Gold Series booths. (See Fig. 1.) Both types have roughly 90 percent of the inside surface area of their wall panels, ceiling and door treated with absorbent acoustic products: pressed polyester panels or 2-inch, open-cell, soy-based Auralex foam.

The Diamond Series is essentially a Gold or Platinum booth modified to have five splayed (non-parallel) walls. (See Fig. 2.) Splayed walls greatly reduce the strength of standing waves and flutter echoes that skew frequency and phase response. I recently visited VocalBooth's factory, with SPL meter in hand, to test a couple of their "Platinum Diamond" (five-wall Platinum) and Gold Series booths.

Made to Order

VocalBooth will build booths in any dimensions. (Wall lengths must be specified in 1-foot increments.) Available wall lengths range from four feet (a booth for one person) to 18 feet—large enough to accommodate a four- or five-piece band or a mixing console and outboard gear. You can put the door and one or more windows on any wall. Ceilings are typically 82 inches high on the inside of the booth, but a higher ceiling can be ordered.

Floors are multilayered for increased isolation, and are typically finished with a wood-and-carpet base on the booth's interior. You could order a booth with a hardwood interior floor that will provide a more live sound. Although a large Platinum booth with a hardwood floor can weigh around a ton, the weight per square foot is only 28 to 31 pounds—less than that of the existing building you'll probably put the booth in. On the other hand, a 4x4-foot Gold Series booth weighs only about 875 pounds fully assembled. Doors are solid-core. The door seals create a bead of air between the door and jamb (or, in the case of the door sweep, the threshold) when the door closes, improving isolation.

VocalBooths come standard with electronic-ballast fluorescent lighting, which doesn't induce noise into electronic circuits unless a mic is placed unreasonably close to the bulbs. All booths include a passive-active ventilation system. The fan-driven active component sucks warm air out of the booth while cooler air from outside the booth is drawn inside through a vent that reduces air speed and resonances. The ventilation channels have multiple bends along their traverse, attenuating both external and ventilation-induced noise. Cable-passage ports are also included.

Assembling a Platinum booth (and all but the smallest Gold Series booths, whether Diamond configuration or rectangular) requires two people. The booths are designed for quick multiple assembly/breakdown. Using only a screw gun with a Phillips head bit, two people can purportedly assemble a Gold booth in about 45 minutes. An optional caster wheelbase can be ordered for booths up to 10x10 feet in size.

Figure 1: VocalBooth Gold Series rooms are typically treated acoustically with soy-based Auralex foam inside.

Going Gold or Platinum

Platinum Series booths float their floors and walls by sandwiching 2-inch-thick, hypoallergenic, pressed-polyester batting between two layers of construction. All wall and ceiling seams, including in corners, have thin strips of mass-loaded vinyl to prevent sound leakage. The inside seams between wall panels are also covered with thin acoustic panels.

The custom Platinum Series booth I tested had walls that were additionally dressed on the inside with 2-inch-thick acoustic panels. These are made from spun and pressed polyester, which ages better than open-cell acoustic foam. Alternatively, your Platinum booth can be ordered with 2-inch soy-based Auralex foam.

Platinum Series booths are designed to prevent low frequencies entering from the outside world, and Gold Series booths are intended to keep high and mid frequencies from exiting the enclosure. Gold booth floors and walls are generally not floated. However, a "sub-floor" upgrade is available.

Gold Series walls are constructed of four different layers and are typically finished on the inside with Auralex foam. The 100-percent soy-based foam ensures no toxic out-gassing; it's of-

PRODUCT SUMMARY

COMPANY: VocalBooth
PRODUCT: Diamond, Platinum and Gold Series booths
WEBSITE: vocalbooth.com
BASE PRICING (INCLUDING FREIGHT): Gold, $4,295; Platinum, $5,995; Gold Diamond, $4,995; Platinum Diamond, $6,795

PROS: Excellent isolation in midrange and high-frequency bands. Modular. Customizable. Includes ventilation and lighting systems, and cable-passage ports.

CONS: Significantly decreased isolation at bass frequencies (as is to be expected).

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fered in one of 10 different colors and sports either a pyramid or rounded-tip profile. You can optionally replace the blown foam with pressed-polyester panels.

The two-pane windows for Gold Series booths have one fewer layer than the three-pane Platinum Series. The window assemblies for both series have a clear, thin vinyl laminate on the outermost window pane. A vacuum between window panes creates an inert environment that prevents condensation from forming.

An Open and Shut Case

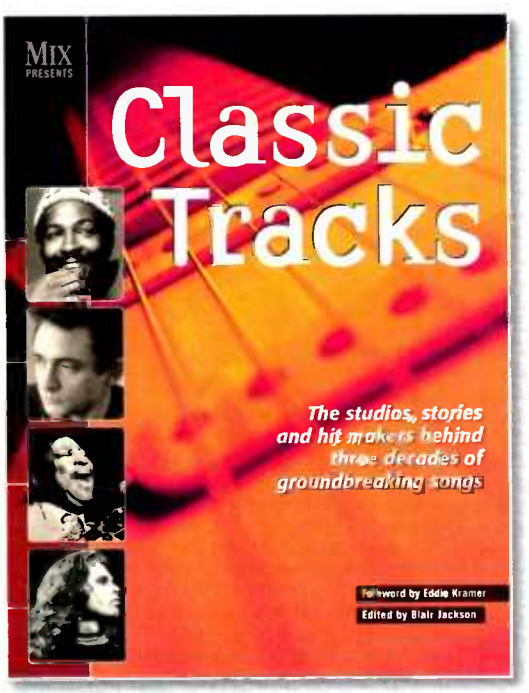
I tested a large Platinum Diamond Special (custom-configured) booth with five splayed walls, each measuring between five and 10 feet in length. I also tested a standard 4x4-foot Gold Series booth. With a drummer and electric guitarist blasting away a few yards outside each booth, the highest SPL measurement was roughly 103 dB (C-weighted) just outside the door of each booth. Inside either booth, with its door firmly shut, the sound transmission loss (STL) was between roughly 19 and 20 dB. Subjectively, the music sounded only a tenth as loud inside the booth as compared to being just outside the door, with high and midrange frequencies being the most dramatically attenuated.

Bass frequencies were also attenuated quite impressively but were still very audible from inside either booth. Quite frankly, you'd probably have to accept much greater expense and fixed construction for better performance than a modular booth can provide at low frequencies. It takes tremendous mass to eliminate the transmission of bass frequencies through physical structures, which is why state-of-the-art recording studios with floating construction can easily cost six figures to build. Most people can (and do) get professional work done with far less isolation.

If your main goal is keeping bidirectional sound leakage between your studio and the outside world to a bare minimum, a VocalBooth room inside your building should provide outstanding isolation. VocalBooth's rooms offer cost-effective, quick, comfortable and visually attractive acoustical solutions that don't force irreversible construction on your existing home, studio or office space. Best of all, you can take the booth with you. III

Figure 2: VocalBooth Diamond Series rooms feature five splayed walls with optional floating floor and walls.

Mix contributing editor Michael Cooper (www.myspace.com/michaelcooperrecording) appears in a speaking role in an upcoming movie, The Wait, *which stars Jena Malone and Luke Grimes.*



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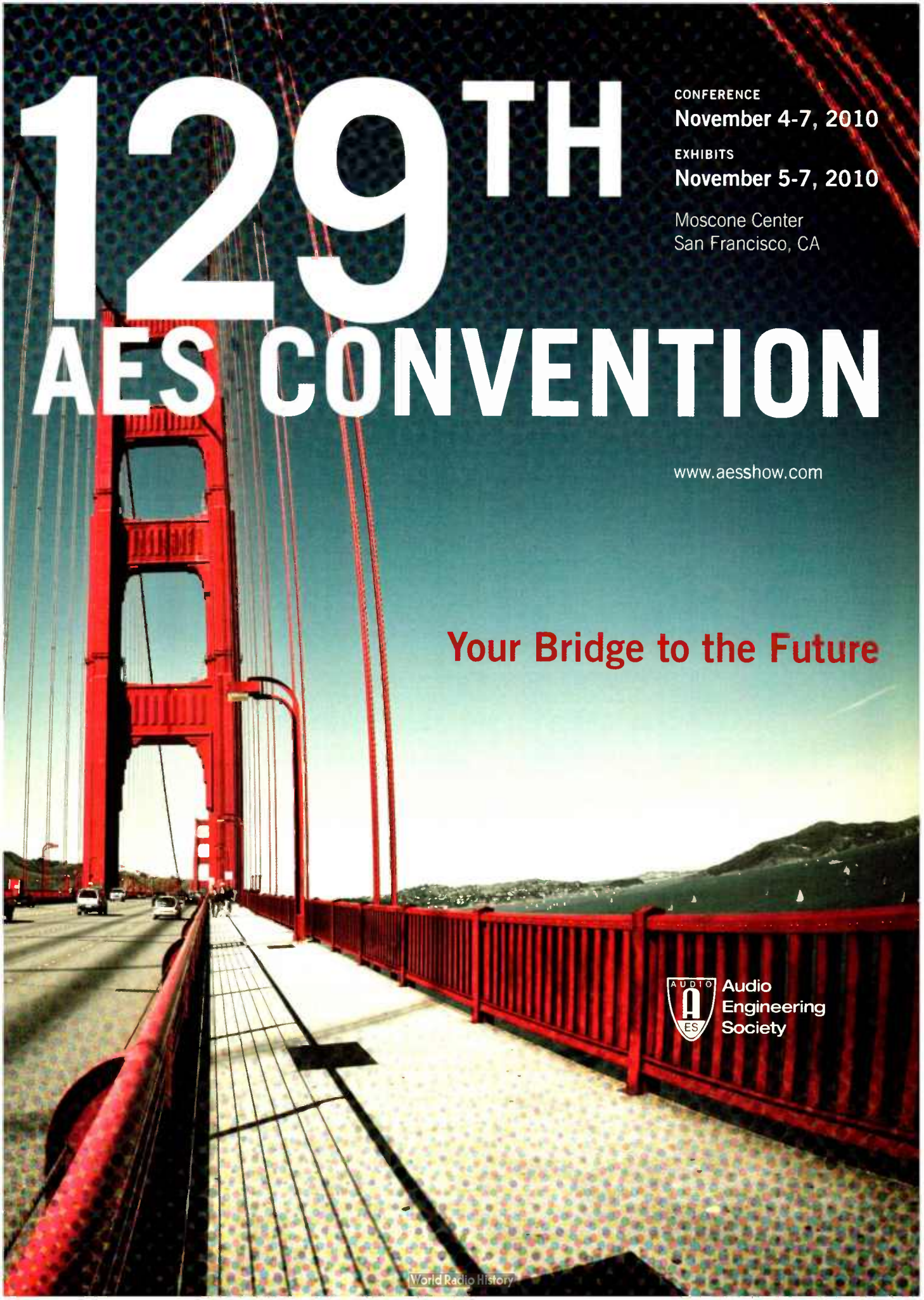

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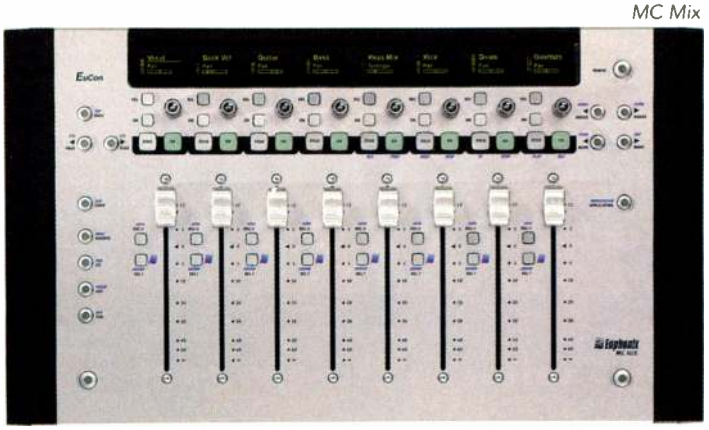
Welcome to studio-grade personal recording that fits in your pocket. Plug in your Mac Pro, mic, guitar, keyboard, speakers, and iPod, and enjoy pristine audio performance.

MC Mix



Avid Artist Series
High-end console technology

Together, **MC Transport**, **MC Mix**, and the new **MC Control v2** give you access to almost every facet of your Digital Performer 7 project for an unprecedented "hands-on" editing and mixing experience. The Artist Series brings Avid's high-end console technology to your MOTU desktop studio in a compact design that fits perfectly in front of your Mac Pro system.

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World Radio History

McDSP Classic Pack
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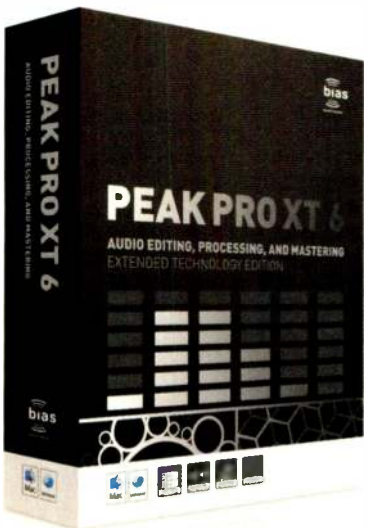
McDSP processing is now AU and Digital Performer compatible! The Classic Pack plug-in bundle delivers world-renowned emulations of vintage equalizers, compressors, tape machines, and channel amplifiers, including Analog Channel, CompressorBank, FilterBank, and the MC2000 multi-band compressor. From analog tape machine emulation to classic or customized EQ filter design, Classic Pack gives you must-have workhorse processors from McDSP for your MOTU studio.

Muse Research RECEPTOR 2 Pro Max
Rackmount Hardware VST Plug-in Player

RECEPTOR 2 Pro Max is the fastest, most powerful RECEPTOR model yet, and it's the perfect addition to your MOTU studio because you can run your favorite virtual instruments and effects with maximum performance and minimum latency. Plus, if you need to go mobile, you can rack it up and take it with you for easy, on-the-go virtual instruments and effects processing.



BIAS Peak Pro XT 6
Mastering, restoration, and delivery for DP7

Whether you're a musician, a sound designer, an audio editor, a multimedia producer, or a mastering engineer, Peak Pro XT 6 offers more creative potential than ever before. Used side-by-side or launched directly from within DP7, Peak Pro XT 6 offers comprehensive restoration, mastering, and delivery tools to streamline your workflow with industry-renowned sonic quality and precision. Peak LE and Peak Pro are also available – call your Sweetwater agent today!

Shure KSM44A
Large-diaphragm, multi-pattern condenser mic

The flagship of the KSM line — and the new must-have mic for any MOTU studio. The KSM44A is a go-to mic you can count on for great results in just about any DP project, with extended frequency response specially tailored for critical studio vocal tracking. The dual-diaphragm design lets you select among cardioid, omnidirectional, or figure-8 pickup patterns.

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World Radio History

Q&A

By Barbara Schultz

Stephen Hart

Veteran mixer/San Francisco Recording Academy trustee joins legendary Bay Area studio, The Site.

PHOTO STEVE JENNINGS

When we last spoke, you had just opened for business inside Bay Area Sound Studios (San Rafael, Calif.), but you've moved since then. Could you catch us up on what changed at BASS and what you're doing now?

I moved out of BASS in July 2010 after a two-and-a-half-year stint. The new owners, TRI, are undergoing an ambitious expansion into HD video Internet broadcast and a 7.1 control room. Our parting was all very friendly, and I'm sure I'll be back there to mix at some point. I had three-month notice and began the search for a new location. I had several discussions with facilities, but the most intriguing offers came from Studio Trilogy in S.F., a beautifully built multiroom facility—SSL K Series, API and ICON—and Mark Keller's Loudville in Sausalito, a progressive hybrid recording/ HD video production house with robotic cameras, stage lighting and a D-Command set up in one big soundstage—amazing for live music broadcast and recording in general. I'm sure to be continuing collaborations with both facilities in the future.

How did you end up at The Site?

Richard Mithun, owner of The Site, called, and said, "Before you go get married to somebody else, why don't you come up here and let's talk." I hadn't really considered The Site; it seemed kind of untouchable. However, I've made two albums there, have been a friend of RJ's for 30 years and the space is inspirational, and the pool outside my control room back door didn't hurt, either. It was an offer I couldn't say no to.

For 25 years, The Site was run on its exclusivity factor. Everyone recorded here—Limp Bizkit, Neil Young, Bonnie Raitt, Metallica, Ronstadt, Pearl Jam, Sinatra, Keith Richards—but you had to know the telephone number. It wasn't listed. Now, we're reshaping the business model and moving the facility into a new era, continuing with the type of clients the studio traditionally served but with a new presence and accessibility to the local music community.

I heard you built a new control room there.

The studio as a whole is quite large, and it had three iso booths. One of them was in excess of 500 square feet, and that's the one we converted. It is a tunable room with many acoustic options available. I believe George Massenburg mixed a Grammy-winning [Linda] Ronstadt album in that space, so it has a built-in legacy.

Did you bring in your Pro Tools rig and everything else from BASS?

I brought in an entire studio's worth of equipment, though I've reshaped it a little. I fell in love with Focal speakers, twin subs; added a Lexicon 480L and some additional mic pre's, Aphex remote and GML; and upgraded the C24's monitor path to Benchmark DAC1 converters. I have my own wiring and my own headphone system feeding into the live room. I'm in an all-digital world, but don't think for one moment I'm ignoring one of the world's greatest Neves [a 72-input 8078], which is in the main control room. It's the best of both worlds: a fully loaded [in-the-box] Pro Tools system, and in the room next door is the Neve, a mic collection that few can compete with, loads of GML equipment, and both control rooms are wired to the massive live room with 30-foot ceilings.

This sharing of existing spaces combines old and new studio business models. You're an owner/operator, but you're putting in with an established business.

Yes. It's important to keep in mind that the key to the gypsy studio-owner life that I've evolved into is to find spaces that are already built out or semi-built out. To lease a warehouse, or house and build out as an individual is cost-prohibitive, but so many people have built out spaces that are sitting dormant now.

I'm hoping a trend is beginning toward people getting out of their home studio microworlds. I don't know if it's a tangible trend yet, but I would predict that recording production work will head back to a more collaborative environment, and that goes hand-in-hand with people realizing they need good-sounding rooms. Everything can't be done in your bedroom or your closet, and more than that, who wants to endlessly work alone with no feedback? But the economic reality to this is that people can't afford those spaces alone, so partnerships like mine are becoming more common.

As a Recording Academy trustee, what are you focusing on locally and nationally?

In San Francisco, one of the primary goals is advocating for our local music scene. We need to stand up for our music venues that have been taking a beating in the press and through overzealous regulation. We're hosting a San Francisco Supervisor Candidates Forum this month to inform our elected officials that this region is the fourth biggest music market in the country and something we should build upon proactively.

As a national effort, we're active in advocating the Performance Rights Act. Our Chapter is particularly vocal in that. Professional development is important to our membership and we continue to expand in that area. We've launched a cool new Website, grammy365.com, which offers members-only access to some of the country's most prolific producers, engineers, artists et cetera—whoever is a member. Overall, [it offers] increased content and networking. It's a good direction.

Find out more about Stephen Hart and The Site at hartmixer.com or thesiterecording.com.

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