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# MIX

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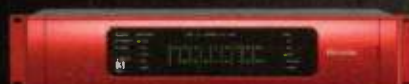
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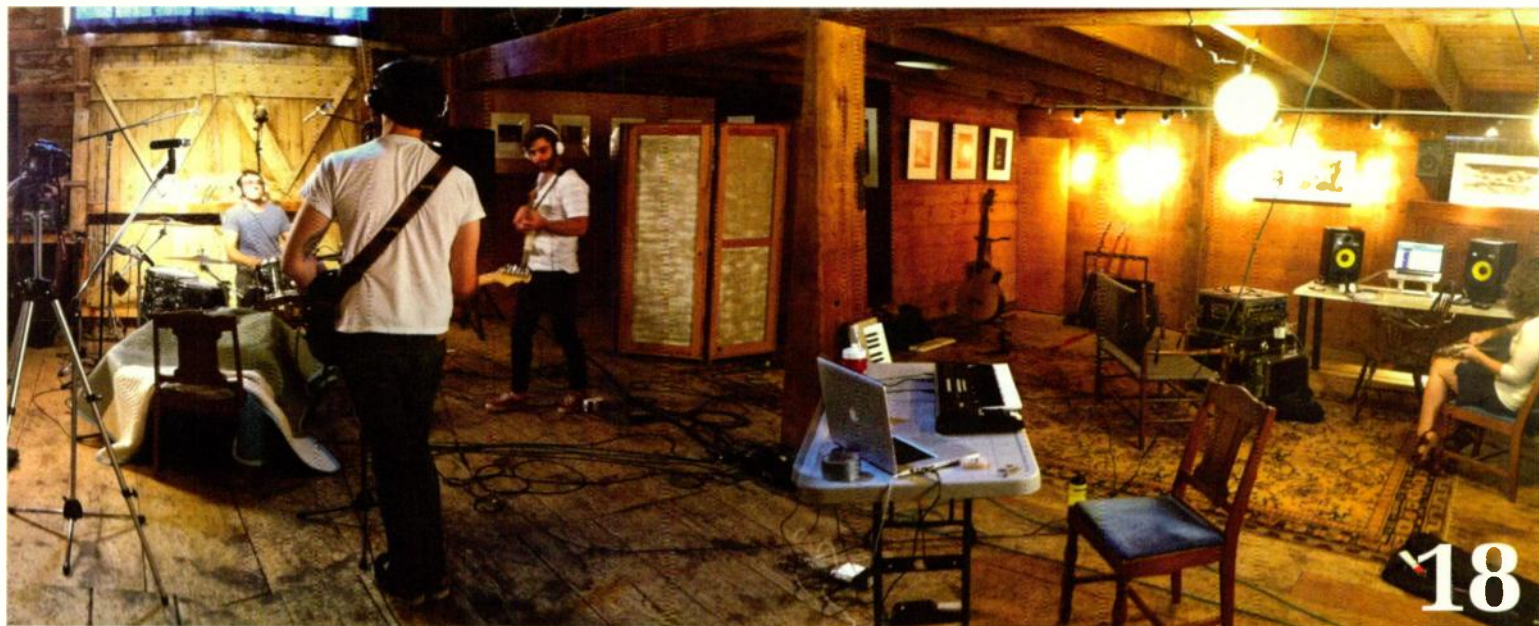
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**On the Cover:** Bruce Springsteen will  
be honored this month as The Recording  
Academy's MusiCares Person of the Year as  
part of Grammy Week. **Photo:** Steve Jennings.

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# From the Editor

## THE REGIONAL APPROACH

**A**ll politics is local." That's the actual quote, coined by former Speaker of the House Tip O'Neill. He should know. He built a base in the South, and then he took it national, with enormous influence over a long period of time. I've thought of that phrase often over the years at *Mix* because it has parallels that run deep in our industry, especially at this time of year.

AES was just a few months back, then the holidays came and went and now we're headed off to the NAMM Show in Anaheim in a week, where we will attend the TEC Awards. That will be followed a few weeks later by Grammy Week, then the Oscars, then South by Southwest, NAB, Infocomm, Summer NAMM, and we're back at AES in New York next fall. Each of them is a national show with an international presence, and yet each of them has been built up by having a strong base in local markets, with active regional participation.

Many of these organizations—the Recording Academy and AES in particular—have set up a series of regional chapters, many of them extremely active in outreach to their local recording communities, often on a monthly meeting basis. Most of the organizations also have a host of student chapters in universities and trade schools across North America. Considering that most students end up back in their hometown markets, and that the real lion's share of audio recording actually takes place outside of New York, Los Angeles and Nashville, a regional approach is a solid means by which to build a national base.

The same holds true at *Mix*. When I came onboard in 1988, *Mix* was the leading magazine in pro audio, and it got that way through printing regional directories in the back of each month's issue. May was Northeast Recording Studios, June Facility Design, September Southwest U.S. Studios, December Mastering, and so on. It was drilled into me early that while we are attracted to the major recording centers, a whole lot of audio is being recorded, broadcast and played back live in places like Indianapolis, Boston, St. Louis and Phoenix. Even Bloomington, Ind., Brattleboro, Vt., and Eugene, Ore.

That's why we have re-introduced the concept of the *Mix* Regional focus. Last month we turned our attention to Los Angeles, this month the D.C. Metro area, where, besides the regular stream of work for television and government, we found a vibrant R&B scene, with a legacy in reggae.

In upcoming months we will be taking *Mix* Regional to Austin, to the Southwest, to Atlanta and Miami and Chicago and the Northeast. If you have a recording, live sound or post-production story, send it along to [mixeditorial@nbmedia.com](mailto:mixeditorial@nbmedia.com). After all, all recording is local.

Thomas ADK

P.S. Our apologies for the absence of Classic Tracks this month. We instead asked ace writer/editor and closet musicologist Blair Jackson to pen this month's tribute to Bruce Springsteen. Read it. Page 30. It's good.

# Mix

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# Current

COMPILED BY THE MIX EDITORS

## John Sebastian to Host 28th Annual TEC Awards



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On Friday, January 25, an array of top audio producers, engineers and musical talent will take the stage at the Hilton Anaheim during the 2013 NAMM Show to recognize the achievements of their peers at the 28th Annual Technical Excellence and Creativity Awards, presented by

the TEC Foundation for Excellence in Audio.

Singer/songwriter John Sebastian, founder of The Lovin' Spoonful and a member of the Rock N' Roll Hall of Fame, will host the evening's honors as well as perform. Other guest artists scheduled to perform include David Pack (Ambrosia) and bassists Phil Chen (Jeff Beck, Rod Stewart, Ray Manzarek) and Tal Wilkenfeld (Allman Brothers Band, Mick Jagger, Chick Corea).



Once again, the zCold Chili Bone TEC Band will be led by musical director Larry Batiste, and will feature Will Kennedy on drums, Melvin Lee Davis on bass, keyboardist Randy Emata, guitarist Ross

Bolton, percussionist Luis Conte, Ron King on trumpet, Jacques Voyemant on trombone, Charles McNeal on sax, and vocalist Claytoven Richardson.

The celebration of the past year's highest achievements in sound technology and music production will feature 28 awards for audio products and projects, and will be co-produced with NAMM. "We are honored to partner with the great folks at the TEC Foundation to produce the TEC Awards at NAMM," says Joe Lamond, president and CEO of NAMM. "Since the early days of NAMM and exhibitors like the Edison Company, technology and creativity have been at the heart of the advancement of the music industry."

## Cinema Audio Society Awards

On February 16, the Cinema Audio Society will present the 49th Annual CAS Awards for Outstanding Achievement in Sound Mixing for 2012 in six categories at an awards dinner in the Crystal Ballroom of the Millennium Biltmore Hotel. Production Sound Mixer Chris Newman will receive the CAS Career Achievement Award, the association's highest honor. The CAS Filmmaker Award will be presented to director Jonathan Demme.

"I am especially delighted to be announcing, for the first time in our history, the nominees for Foley and ADR Mixing in some of our categories, as well as the nominees in our newest category: Motion Picture—Animated," says CAS President David E. Fluhr.

Nominees for the Motion Pictures—Live Action category are *The Hobbit: An Unexpected Journey*: Production Mixer Tony Johnson, CAS, Re-recording Mixer Christopher Boyes, Re-recording Mixer Michael Hedges, CAS, Re-recording Mixer Michael Semanick, CAS, and Scoring Mixer Peter Cobbin. *Les Misérables*: Production Mixer Simon Hayes, Re-recording Mixer Andy Nelson, Re-recording Mixer Mark Paterson, Scoring Mixer Jonathan Allen, and ADR Mixer Robert Edwards. *Lincoln*: Production Mixer Ronald Judkins, CAS, Re-recording Mixer Andy Nelson, Re-recording Mixer Gary Rydstrom, CAS, Scoring Mixer Shawn Murphy, ADR Mixer Bob Johanson, and Foley Mixer Frank Rinella. *Skyfall*: Production Mix-

er Stuart Wilson, Re-recording Mixer Scott Millan, CAS, Re-recording Mixer Greg P. Russell, CAS, Scoring Mixer Simon Rhodes, ADR Mixer Peter Gleaves, and Foley Mixer James Ashwill. *Zero Dark Thirty*: Production Mixer Ray Beckett, CAS, Re-recording Mixer Paul N. J. Ottosson, ADR Mixer Brian Smith, and Foley Mixer John Sanacore.

The nominees in the Television Series—One Hour category are *Boardwalk Empire*: "The Milkmaid's Lot." Production Mixer Franklin D. Stettner, CAS, and Re-recording Mixer Tom Fleischman, CAS. *Breaking Bad*: "Dead Freight." Production Mixer Darryl L. Frank, CAS, Re-recording Mixer Jeff Perkins, Re-recording Mixer Eric Justen, ADR Mixer Eric Gotthelf, and Foley Mixer Stacey Michaels. *Game of Thrones*: "Blackwater." Production Mixer Ronan Hill, CAS, Re-recording Mixer Onnalee Blank, CAS, Re-recording Mixer Mathew Waters, and Foley Mixer Brett Voss. *Homeland*: "Beirut is Back." Production Mixer Larry Long, Re-recording Mixer Nello Torri, CAS, Re-recording Mixer Alan M. Decker, CAS, ADR Mixer Paul Drenning, and Foley Mixer Shawn Kennelly. *Mad Men*: "Commissions and Fees." Production Mixer Peter Bentley, CAS, Re-recording Mixer Ken Teaney, CAS, and Re-recording Mixer Alec St. John, CAS.

A complete list of nominees is available from the CAS Website: [cinemaaudiosociety.org](http://cinemaaudiosociety.org).

## David Manley, Founder of Manley Labs and VTL, 1939-2012

David Manley, 73, founder of VTL, Manley Laboratories and the ViTAL record label, died of a heart attack on December 26, 2012, at a hospital near his home in Varrennes-Jarcy, France. Famously described in the pages of *Stereophile* by Robert Harley in a 1991 interview as expressing "his strongly held beliefs with a passion and conviction that the printed word does not adequately convey," Manley leaves behind a rich legacy that continues to grow under the leadership of, for VTL, his son Luke Manley and daughter-in-law Beatrice Lam, and for Manley Labs, his ex-wife, EveAnna Manley.



Photo courtesy of Luke Manley





## Scott Leslie Named President of Renkus-Heinz

Renkus-Heinz, a leading manufacturer of products for sound reinforcement located in Foothill Ranch, Calif., has appointed Scott Leslie (pictured) as its president. Leslie's new position will see him spearheading the company's continued expansion, working closely with company founder and Chairman Harro Heinz. Leslie comes to Renkus-Heinz from JBL Professional, where he served as Vice President of Engineering. His deep industry background includes stints at a wide range of technology leaders, including Sun Microsystems, Tektronix and Altec Lansing. Leslie is also founder of Evidant Corporation, providers of Business Intelligence for IT solutions, where he held executive level positions since 2002.

including Sun Microsystems, Tektronix and Altec Lansing. Leslie is also founder of Evidant Corporation, providers of Business Intelligence for IT solutions, where he held executive level positions since 2002.

## Oscar-Winning Sound Editor Mike Hopkins, 1959-2012

Sound Editor Mike Hopkins, who collaborated with filmmaker Peter Jackson on the *Lord of the Rings* trilogy and won Academy Awards in 2003 and 2006, died on December 30, 2012 in a rafting accident in New Zealand. He was 53 and a native New Zealander. According to reports, Hopkins, his wife, Nicci, and a third passenger encountered a flash flood on the Waiohine River on New Zealand's North Island, which caused their raft to capsize. As reported by Clive Young for *Pro Sound News*: "Carolyn Watson of the Wairarapa Police [stated], 'All three were wearing life jackets, wetsuits and helmets at the time, and it appears that Mr. Hopkins got into trouble after they were ejected from the raft in a fast-flowing eddy.' Police would like to thank all those who assisted in the recovery of Mr. Hopkins and the rescue of his companions, particularly the jet boat operator who came to our aid and, at considerable risk to himself, was able to rescue the female."

With Ethan Van der Ryn, Hopkins shared the Academy Award for Sound Editing for their work on *The Lord of the Rings: The Two Towers* (2003) and *King Kong* (2006). Hopkins' other film credits included *Kung Fu Panda* (ADR supervisor), *Transformers* (ADR supervisor, sound editor), and *Dreamgirls* (dialog editor). He was also nominated seven times for Motion Picture Sound Editor awards.

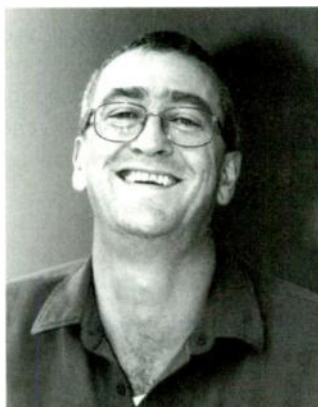


Photo: Tim Nielsen

## New Hires at Harman

In January 2013, Harman Professional (harmanpro.com) in Northridge, Calif., named Jaime Albors to the position of Senior Director of Global Sales Operations. Reporting directly to Scott Robbins, Executive VP of Worldwide Sales, Albors is tasked with oversight of all global sales office operational activities.

Marc Lee Shannon was named Senior Manager, Business Development, for its U.S. Regional Sales Office, focusing on sales efforts for AKG professional audio products and brand promotions for other Harman Professional companies. He will report directly to Mark Posgay, Senior Director, U.S. Sales.

Andy Flint was appointed Senior Manager, Portable P.A. Marketing, Loudspeaker Group. Flint will lead the development of new marketing and product strategies, and report directly to Mark Gander, head of marketing for the Loudspeaker Group and its JBL Professional brand.

Finally, Harman Signal Processing in Salt Lake City promoted Rex Reed to Director of Engineering, overseeing the BSS Audio, dbx, Lexicon and DigiTech brands. He will report directly to John Fitzgerald, Vice President and General Manager of Harman's Signal Processing and Amplifier Business Units.



Jaime Albors



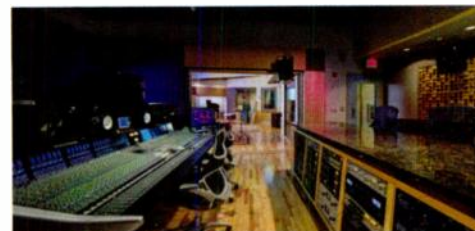
Andy Flint

## SPARS Sound Bite

### Know Your Environment

By Chris Bell

As engineers today, it is imperative to consider that the music we record can and will be played everywhere through different mediums and endless amounts of devices—from iPhone earbuds and Beats by Dre headphones to the more critical audiophile listening on B&W 802 Diamonds. Then, take it a step further and appreciate the multitude of ways your sound can get to these devices, whether it is from streaming through a subscription service on your laptop or from a 24-bit/96KHz WAV file. In the end, we might not have control of where the music we record will end up, but one thing is for sure: We are the source.



The days of listening back in your car as a final mix check are gone. It just isn't good enough anymore. We used to check the mix in the car for a couple of reasons. One, it was a controlled and familiar environment that we were used to listening in and could trust. The other reason was to put the mixes in the same environment that the consumer would be listening. Some even went as far as sending the mix down an FM transmitter to hear it over the radio.

In my career I have been fortunate to be able to work in some wonderful studios and controlled environments. In my current room at Blade Studios in Shreveport, La., we spent around \$100,000 on monitoring, literally sparing no expense. Why? Because to me, it's one of the most vital elements of recording. Our large-format monitors are the Ocean Way HR2s that were set up and tuned by Allen Sides. It's nice to be able to check the low end and know it's accurate. The mid-fields are ADAM S3X-Hs and the near-fields are the standard Yamaha NS10s. We're also sporting four ADAM S3X-Vs for surround with an ADAM Subro Mk2. I've been using ADAM monitors for a few years now and I like them because I feel like they are detailed and they translate well. It's important to have speakers that your ears know and trust. These are all placed in a Russ Berger-designed control room. I'm not saying this is the setup everyone needs to make a record, but the value of a well-tuned professional work environment cannot be underestimated these days with all the listening options available.

So the next time you're working on a mix remember that a professional studio with professional monitoring is still the place to trust for an accurate listening environment so your mix will sound great on earbuds, or in the club.

Chris Bell is a producer/engineer at Blade Studios.



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## MIXBLOGS



### TechTicker

I just back from Montreal. I had heard for years about the city, its charm, and its active and hip music scene. But I had no idea how entrenched high-end audio is in that city.

>>[blog.mixonline.com/mixblog/category/techticker](http://blog.mixonline.com/mixblog/category/techticker)



### Robair Report

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# Music



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Photo: Billy Pavone

## JIM JAMES

My Morning Jacket Frontman Explores New “Regions”

By Blair Jackson

**W**hen we last checked in with Jim James, the charismatic and visionary frontman of the eclectic rock/soul/neo-psychedelic band My Morning Jacket, they had recorded a stunning album with co-producer/engineer Tucker Martine, called *Circuital*, essentially live in the studio, which in that case was actually an echo-y church school gymnasium in the band’s hometown of Louisville. That came out May 2011 and since then they’ve

been touring almost nonstop all over the U.S., Europe, Canada, Mexico, Australia and Japan, bringing their mesmerizing, ever-changing live show to a multitude of festivals and headlining dates in large and small venues.

Somehow, in the midst of what must seem like a never-ending tour, James carved out short periods at home to complete his first full-length solo album, *Regions of Light and Sound of God*, just out on the ATO label. Call him eccentric, idiosyncratic, unique, whatever—if you’re at all

familiar with his work, you just knew he would come up with something strange, beautiful and compelling on his own outside of MMJ, and that’s precisely what he did on *Regions*.

It’s definitely not a band album: James played most of the instruments himself and it’s chock-full of loops, samples, unusually layered instruments and vocals, and many interesting sonic touches. It’s all over the place stylistically, with nods to classic late ’60s/early ’70s soul and funk, a dash of doo-wop and more dreamy





and poetic musical spaces. There are more keyboards than guitars (MMJ is quite guitar-oriented), with haunting piano on a couple of tracks, some Pink Floydian synths here, and some obviously Stevie Wonder-inspired synths there. James' characteristic deeply reverb'd lead vocals are much in evidence, and throughout there are distorted bass and drum parts that contrast effectively with cleaner lines and smooth-as-silk strings that recall predecessors such as Curtis Mayfield and Marvin Gaye.

"I consider Curtis Mayfield to be the Buddha; I look up to him so much," James says. "His music is so important to all living beings, like water or air. Marvin was a darker force than Curtis, but I consider *What's Goin' On* to be perhaps the greatest album ever made. It speaks to every vein of the human experience, musically and otherwise."

James is no newcomer to home recording. "I've been doing it since high school," he states. "I started on a boombox, then got a 4-track, then started working with my cousin John and his 8-track reel-to-reel. We recorded a few things on ADAT early on, which was just a horrible medium, and we used to mix things to DAT—God, remember DAT? Now I own a Studer A827 with Pro Tools, etc., but with a good setup and good converters, I think digital sounds great. I have a Burl B2 Bomber [A-to-D

converter] and the Apogee Symphony converters we used to mix the record."

James engineered the album himself, working "in little chunks, a week here or there, over the course of two years" in his studio, which was set up with considerable help from Tucker Martine and Louisville engineer Kevin Ratterman (who mixed the album with main mixer Rick Kwan and James at Ratterman's Funeral Home Studio). Ratterman says James' studio is "super-sweet. It's in this ranch-style home, in the front living room. It's a decent amount of space and it's got a window that looks out over a park—really nice. He's got a Trident 80B [console], ProAc [100] monitors, and a bunch of Telefunken pre's—V76s and V72s. He also has an RCA preamp, maybe from the late '50s or early '60s, they used specifically to amplify ribbon mics. Jim's in love with old RCA mics." Indeed, James notes, "I alternated between using an RCA 44, a 77 and a [Neumann] M49 for vocals." Most of the deep reverb on the vocals came from an old EMT 140 plate James adores.

"Where on *Circuitual* we were really focusing on getting the entire take—including the main vocal—live, I obviously can't do that by myself in a studio," James notes. "So *Regions* used more of a building-block kind of method. Some songs, like 'A New Life' and 'State of the Art' are full takes, and then some, like 'All Is Forgiven,' or 'Know Til Now' are comped. Most started as a vocal and rhythm bed and then stuff comes in. But most of these had all the elements in place in my mind before I started cutting them. So I'd create the beat, then maybe put on a bass or Wurliitzer, then the vocal, then add more and more 'til it was done."

As for the mix, which was done on the Funeral Home's late '70s Trident TSM, Ratterman notes, "Jim had everything super-organized. It was almost like opening up a final mix. There was lots of creative editing and there were already effects printed and EQs. He almost could have released it the way he mixed it. With our engineer ears, Rick and I sort of tailored it a bit, cleaned up a few frequency things, made it a little bigger in places. But overall it still feels kind of surreal, which is what Jim was looking for."

Jim James: "I wanted the record to sound like it was the past of the future. Like you were living in the year 4030, but hearing a record that was made in 3970, if that makes sense." ■

## THE SLIDE BROTHERS SECULAR "SACRED STEEL"

**P**rodigiously talented steel guitar wizard Robert Randolph never strays too far from his roots. Though for more than a decade he's been a jam band circuit and rock festival favorite, playing his stirring blend of rock, blues and R&B styles, a part of him is still the eager young player who grew up in the "sacred steel" Gospel music tradition that originated in House of God churches beginning in the 1930s.

Now, along with John McDermott, Randolph has co-produced (and plays on) a terrific album

showcasing four of the best sacred steel guitarists on a fine collection of both secular and spiritual tunes: *Robert Randolph Presents the Slide Brothers* (Concord Records).

Two of them are real bothers—Chuck and Darick Campbell—and Calvin Cooke and Aubrey Ghent are part of the lap and pedal steel brotherhood. The diverse repertoire includes songs popularized by the Allman Brothers, Elmore James, Fatboy Slim and George Harrison, among others.

The legendary Eddie Kramer was the principal engineer, cutting live basic tracks mostly at MSR Studios in NYC, doing some overdubs at 16 Ton and House of Blues Nashville, and mixing it on the Steve Firlotte (of Inward Connections)-modified API at LAFX Studio in North Hollywood.

Typically, two of the four slide players were on each song, and Kramer placed their small amps "in a large vocal booth [at MSR] with a screen between them, and I put a [Shure] 57 and a Royer [ribbon mic] up close on both, and a couple of [Neumann] 67s back a bit. Those all went through a pair of 1176s [compressor/limiters] and the mic pre's in the Neve board. When you hear them play, each has a distinct character and sound and voice. We were always trying to capture that live spirit."

—Blair Jackson



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Listen to  
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## CAMPER VAN BEETHOVEN'S LA COSTA PERDIDA

Myles Boisen ([mylesboisen.com](http://mylesboisen.com)) didn't know he was recording some of the final tracks for Camper Van Beethoven's latest album, *La Costa Perdida*, when the band visited his studio, Guerrilla Recording, in 2011. The band had written a handful of new songs—many with a laid-back, Nor-Cal feel—and intended to demo them, to get a feel for what the final recordings might sound like. Their drummer, Chris Pedersen, lives in Australia, so the other musicians—frontman David Lowery, guitarist Greg Lisher, multi-strings player Jonathan Segel and bassist Victor Krummenacher—asked Michael Urbano just to help figure out drum parts.

"The [songs] weren't finished. Michael hadn't heard any of it," Lowery says. "And later, we went for the 'real' tracking sessions at Sharkbite Studios ([sharkbitestudios.com](http://sharkbitestudios.com)), but we went back and listened and realized we'd caught all these really superb, nutty drum performances with Myles."

Boisen, whose studio is also equipped with a Tascam MS16 1-inch machine and a Soundcraft Spirit board, recorded to Pro Tools. "I knew



there were going to be a lot of takes involved," he says. "I kept everything very isolated. There's a live drum room, where I had the drums and Victor. David was in his own room, and the guitars were in the lounge. This way, anything could be taken out and redone. When they left, they all took away copies of the Pro Tools sessions."

The group kept basics of three songs from Guerrilla, six from Sharkbite, and one has parts from both studios. Additional parts, including all vocals, were recorded by bandmembers in their personal studios. Segel notes he made great use of Universal Audio's UAD plug-ins: "I have been happy with the Neve 1073 and 88RS Channel Strip," he says. "It's funny to go back to these things that we used as hardware all those years ago. These, and many of the EQs in this collection can be pretty extreme, and that's exactly what I want. The Pultec Pro EQ is another that emulates exactly its hardware counterpart, and can be more subtle than the Neves."

## JASON MARSALIS VIBES QUARTET

In a World of Mallets



This elegant jazz ensemble record from vibes and percussion player/producer Jason Marsalis was tracked in The Music Shed in New Orleans ([musicshed.net](http://musicshed.net)). The engineer, Ben Lorio, met Marsalis when they worked together on production of an Ellis Marsalis Christmas compilation. "Toward the end of that, he told me about this solo record, and I said I'd love to work on it." Six months later, Marsalis returned with his band, and they did all the basic tracking in one day.

"They'd been playing concerts. I think they had a gig the night before, so they had the songs down," Lorio says. They played each song a few times, and then Marsalis spent another day cutting additional percussion parts. During band tracking, Lorio kept the instruments mainly isolated; piano and vibes were gobo'd off but together in the main tracking room.

"On vibraphones, I had a spaced pair of U 87s over the bars and a pair of Microtech Gefell M930s as well. In that vibe and piano room, I also had two ribbons as room mics." The vibes mics went to Neve 33119 mic pre's and then into Pro Tools. For added ambience, Lorio also miked up the studio's echo chamber with a pair of Coles ribbons.

"The drum room and main room have doors to the echo chamber. I kept both of those open to make it sound more like everyone is in the same room—a little bit of leakage to get a room sound."

## NATALY DAWN

How I Knew Her

Nataly Dawn's partner/bandmate/producer Jack Conte explains what makes Dawn's solo album *How I Knew Her* different from their work as Pomplamoose: "On a Pomplamoose record, Nataly and I sit together with bass and piano and work together on songs. In this case, she wrote songs by herself. This is a personal record about her and her family. Also, the mood is different with Pomplamoose; it's a release where we can have fun and be crazy and weird, whereas this was a very meaningful, personal thing for Nataly."

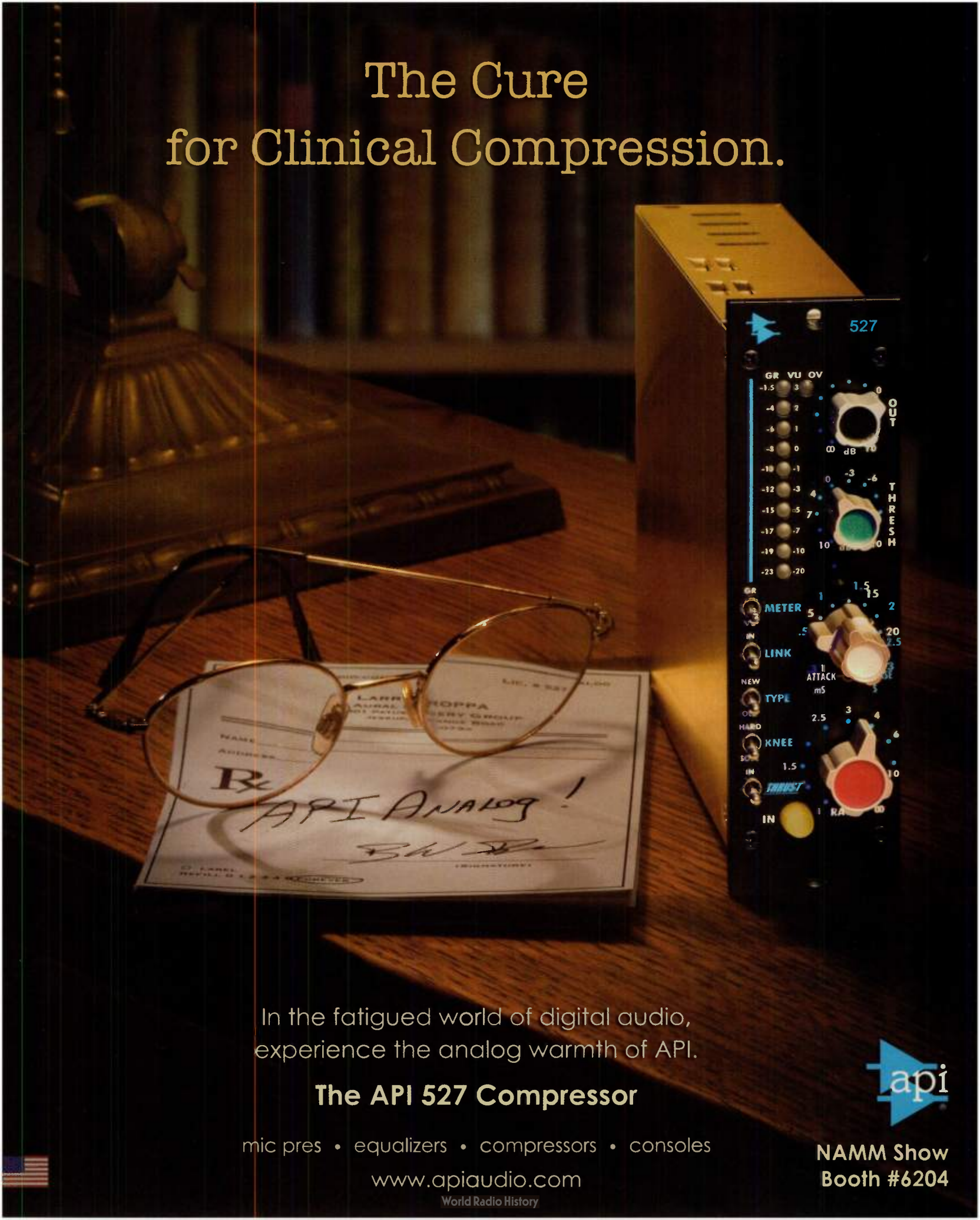
Dawn's songs are beautifully realized with layers of percussion, guitars, strings, keyboards. Basic tracks were recorded to tape by Oz Fritz in Prairie Sun's ([prairiesun.com](http://prairiesun.com)) "Waits Room," a former storage room so named because Tom Waits preferred it to the facility's impressive official studios. Overdubs, including lots of percussion, some strings and keys, and almost all of Dawn's vocals, were tracked by Conte in his personal studio, and musician/engineer Mike Mogis mixed the album.

"Her vocal mic was a Neumann TLM 103 straight into a Digi 003 with no pre, but Mike made it feel like a part of the record," Conte says. "He also used this great reverb unit, a Quantec Yardstick, which doesn't sound like reverb; it sounds like room. It gives you a space to put your instruments in without giving you a long, hissy tail at the end of everything. Part of the room sound on the record comes from the Waits Room, but a lot of it is that reverb."





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# SWEAR & SHAKE AT MAPLE RIDGE

By David Weiss



**W**hen it comes to music, half the trick is simply finding something that's genuine. For New York producer/engineer Ben Goldstein (BenGoldsteinMusic.com), that elusive discovery occurred on his first sighting of the Brooklyn band Swear & Shake (swearandshake.com).

"I really loved what they brought to their live show," Goldstein recalls. "I saw real musicianship and a true sense of fun between them and the audience. Immediately after that concert, I knew I wanted to work with them."

He soon got a call from the band. It turns out Goldstein and Swear & Shake vocalist/guitarist Adam McHeffey had both attended SUNY-Purchase. The band headed upstate to Cambridge, N.Y., to a property called Maple Ridge. It was the first step in what would be an unusual hybrid of on-location and studio recording, leading to what would become one of 2012's most ear-catching indie records.

Owned by a devoted fan of the band and overall patron of the arts, a 132-year-old barn at Maple Ridge was a natural headquarters for the creation of Swear & Shake's new album, which would eventually also be called *Maple Ridge*. "Between this barn, and my love for mobile recording, the pieces came together," says Goldstein, whose credits also include Louis Weeks' *Long Gone* EP, the outdoor performance series *The Leaf Sessions*, and Patt Eagan's forthcoming record, *Interstate Lines*. "The barn at Maple Ridge was a massive, aged space that sounds really beautiful and different. It was a very conducive environment to making music and being uninhibited."

In these utopian surroundings, Goldstein went to work connecting his mobile setup. A relatively compact rig that emphasizes simplicity and streamlined operation, it consists of an API 3124 4-channel mic/line preamp and a PreSonus DigiMax 8-channel preamp, feeding a 4-input Digi 002 for a total of 16 channels. A 4-channel headphone amp and Dynaudio BM5A monitors enable audio out from the MacBook Pro running Pro Tools 9.

Next, Goldstein set the band up in a circle on the barn's ground floor, allowing McHeffey, drummer Tom Elefante, vocalist/guitarist Kari Spieler

and bassist Shaun Savage to stay in mutual visual contact as they recorded. "I really love to capture a live sound—I don't mean sonically, but in terms of performance," Goldstein emphasizes. "We spent a lot of time getting set up the first day, so we wouldn't have to think about it the next three or four days. The acoustic guitars were recorded with a Radial DI, and the bass was plugged directly into the API 3124. Meanwhile, the electric guitar amplifiers were miked downstairs, completely isolated from the barn space."

To capture the drums, Goldstein eschewed tom mics while positioning a Shure SM57 on the snare, a Sennheiser MD 421 18 inches away from the resonant kick drum head, plus a more unorthodox Shure SM7 on that drum's beater side. "I was taught not to do that, but it really works for me," Goldstein says, who is a professional drummer himself. "When I hear the bass drum at a gig, I'm experiencing it from the beater side—it's a big part of what I'm used to hearing." Finally, drum overheads came courtesy of two modded MK-012s.

Goldstein depended on a single Shure KSM27 for the vast majority of the all-important room-miking duties in the barn, which consisted of two stories measuring 2,800 square feet per floor. "From an engineering standpoint, I like to let the playing do the work, and not my miking," Goldstein notes. "With that one Shure KSM27 alone you can do so much, depending on how you're compressing it and using it in the mix. The instruments really resonated so beautifully, and sung in that space—and of course I had a lot of fun squashing them in the mix!"

After several days at Maple Ridge, Swear & Shake came away with drum, bass, guitar tracks and a smattering of overdubs. As Goldstein expected, however, final vocals, additional guitars, horns, percussion and additional overdubs would need to be achieved in the controlled conditions of Brooklyn apartments, a Baltimore basement studio and even the band's touring van.

"Going to the barn, the plan was just to capture the live energy of the four of them together," he explains, "then bring it back home and build. By the end of the album, we had brought on about 10 other musicians. I also like to incorporate 'nonmusical' and environmental sounds in the recordings and arrangements. The goal was to get the album to give me the same feeling of excitement that I felt at their live shows."

With his love of field recording, Goldstein was happy to hit the NYC streets with a Roland field recorder and his stereo pair of Oktavas. The result of those efforts are clearly heard in the song "The Light," where the sounds of footsteps inside the NY Public Library, a bocce ball game in Bryant Park, and a street vendor introduce the music with an airy city sound. Additional nonmusical sounds that Goldstein recorded for the record include a frying egg, a clothes dryer door, and a percussion setup comprising a dust pan, a Café Bustelo can and a baking pan.

As Goldstein observes, deftly merging ambience with music—as happens throughout the 10 tracks of *Maple Ridge*—has little to do with fader magic and everything to do with what happens on the front end. "A lot of the melding happens in the tracking," he says. "Both in appropriate miking and in performances that equal the energy and attitude of the material that's already there. Once you match all of that, mixing it all together is not difficult."



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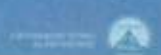
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# DREW ZINGG'S DEBUT ALBUM PROJECT

Producer/Engineer George Walker Petit Spotlights Guitarist

By Matt Gallagher



George Walker Petit at the Neve 8038 console in Oliver Leiber's studio

**G**uitarist Drew Zingg's self-titled debut solo album ([dzdap.com](http://dzdap.com)) is a revelation, and it was carefully designed to be one. It features the teamwork of Zingg with an elite rhythm section: Vinnie Colaiuta (drums), Will Lee (bass) and George Whitty (keyboards/arrangements). Together, and with guest vocalists and horn players, they blend seamlessly as a band to create 12 soulful and smoking tracks that span jazz, rock, funk, blues, pop and more.

For 30 years, Zingg has been known mainly within the circles of his notable employers (and dedicated fans who have seen him perform live), contributing to the music of artists such as Steely Dan, Michael McDonald, Boz Scaggs, Marcus Miller, Rickie Lee Jones, David Sanborn, Gladys Knight, Alana Davis, and Patti Austen.

Four years ago, Zingg had a conversation with a friend he'd known since their days at Vassar College in Poughkeepsie, N.Y., in the late 1970s, producer/engineer/composer George Walker Petit. "I said, 'You're one of the better guitar players I've ever heard. Why don't you make a record?'" Petit recalls. "He said, 'I wouldn't know how to do that.' I said, 'I would, because I've either engineered or produced 100 records at this point.' I was really motivated. I basically started this as a bit of a payback to Drew because he was such an influence on my music, and I figured he was one of these hitherto unknown, deserving artists who is a genius at what he does, and not enough people know about it." To raise the needed funding, Petit first turned to mutual friends from Vassar. "Everyone signed on, from within a 5-minute conversation. So I formed an LLC, and we called ourselves the Infrangible Syndicate. We started fundraising all over the country."

Zingg chose the musicians he wanted to record with, and Petit took on the roles of producer and engineer. Petit found a studio in Los Angeles via another friend from Vassar, producer/engineer Oliver Leiber (son of Jerry

Leiber of Leiber & Stoller), who owns a private home studio, The Doguehouse. Petit booked four days at Leiber's studio for tracking, assisted by Marc DeSisto and Mauricio Gargel. "We wanted pristine sounds, but we wanted it to sound natural," Petit says. "The intention was to make the album sound like a bunch of friends in a great studio naturally playing together."

"The entire thing was recorded in Pro Tools through [Leiber's] Neve 8038 desk, or some API preamps," Petit says. "The Doguehouse has one live room and two large iso booths. Vinnie's drums [in the live room] were miked with Neumann, AKG, and Royer mics. I wanted a really acoustic drum sound—something that would breathe—so I also miked the room with a Neumann SM 2 [stereo mic]. I had two sets of overheads on the drums: a pair of Neumann K 84s, and I had a pair of beyer 160 ribbon mics. Depending on the song I would use this pair or that pair, or a combination of those. Will Lee's Sadowsky bass went through an Ampeg SVT tube direct box. Will was also in the room performing with Drew and Vinnie, but of course he was going direct, so there were no issues there.

"I would say 90 percent of Drew's tracks are played on his Gibson ES 335 through a JS Technologies Suhr Badger 18 amp. He played a couple of rhythm tracks on a Fender Stratocaster, and a couple on a Gretsch Hollowbody. Drew was in [the live room] but his amplifiers were in one of the iso booths, and we used Little Labs units to create that daisy-chain between Drew's guitar pedalboard and signal into the amp room, where the amp was miked. The amp was close-miked with, depending on the tune, either a Shure SM57 with a Royer 121, and then a pair of Neumann large-diaphragm condensers. I think we used a U 67 and a U 87 for miking the room. The larger of the two iso booths looks on through glass into the live room. We put George Whitty into that station with his Hammond [B2 organ] and his other three keyboards. "

Following tracking sessions at The Doguehouse, Petit and Zingg visited Different Fur in San Francisco to spend 11 days with assistant engineer Nick Pope overdubbing and experimenting with various song parts. A trumpet overdub took place in New York City at Downtown Studio. The final overdubbing session took place at Hyde Street Studios in San Francisco.

Petit took all the sessions on a hard drive to his mix room in New York City, Petit Jazz. Notably, Petit mixed the entire album in the box, primarily using his Universal Audio UAD Powered Plug-Ins and an SSL Nucleus controller. He strongly favors analog character and strove for the most transparent and natural-sounding mixes. "Part of my intention was to make sure that you couldn't hear what I was doing," Petit says. "I didn't want to hear a big delay, I didn't want to hear incredible amounts of compression [or] reverb. That said, I used multiple instances of plug-ins on each of these tunes! But I wanted them to be used in a subtle way. Absolutely not one piece of processing was used other than in the box. And I'm staying in the box—I'm sorry. I'm happy about the way this record sounds. People are freaking out about the sound of the record."



# Live



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*Robert Earl Keen (pictured at right) sits in with the Preservation Hall Jazz Band at The Chapel*

## GOING TO THE CHAPEL

New Club Runs Smoothly With Networked System By Barbara Schultz

**A** new venue needs to offer something special to carve out a space in San Francisco's crowded club scene. The Chapel should have no problem. This newcomer to the city's Mission District is outstanding on every level: leadership, support staff, atmosphere, music, refreshments, sound.

Owned by restaurateur/real estate developer Jack Knowles, The Chapel is built in what was originally a mortuary that dates to 1914. The former chapel is now a uniquely beautiful performance space, while the rest of the building is divided into upstairs lounge and offices, full bar and, coming in the spring, a full-service res-

taurant and outdoor cafe featuring Knowles' acclaimed cuisine.

The audio side of the ambitious build-out was handled by Delicate Productions ([delicate.com](http://delicate.com)), headed up by George Edwards and, initially, by project manager Coty Shipe.

"I got a call last summer from George saying they had this project in the works," says Jon Graves of QSC Audio. "There were a couple of line arrays on his radar, but I think he felt our total-solution approach would not only sound great, but also make the installation run smoother. I went up, took a bunch of photos, talked to George and Coty, and got together a proposal with the help of QSC's Application En-

gineering Team. After more conversations, we made some tweaks to the design, but of course everyone wanted to hear it first."

In mid-September, Graves shipped the proposed rig for the main venue to San Francisco and came along to supervise a demo. "We pushed all the carpenters out of the way and ground-stacked the rig—the final rig would be flown, but we ground-stacked it—and George brought in a band that did a five-song demo to see how everyone felt about it."

On-site for the demo were Knowles, Edwards and Shipe, and Lee Brenkman, the head of audio for Slim's Presents, which runs two popular San Francisco venues. Brenkman was brought in as





Photo: Ken Friedman

*Head of audio for Slim's Presents, Lee Brenkman, has consulted on sound for The Chapel since March 2012. "The extra effort made by the crew from Delicate, and especially Jon [Graves'] assistance in setting up and tuning the system made for one of the better new-install situations I've experienced," Brenkman says.*

an audio consultant to help choose the system and oversee ongoing audio operations. A few days later, Graves got the news that QSC's proposal had been accepted, but the club had to be show-ready in just a couple of weeks.

"It was an extremely tight timeline," says Nick Fletcher, who took over project management for Shipe as the installation began. "It became kind of a rolling install that was somewhat unconventional. They wanted to open so early that we supplemented with rental gear, and as parts came in, we gave the owners what they'd purchased. Getting it done combined concert production with more conventional installation."

Completion dates were fixed because the venue had already booked several shows in association with the Hardly Strictly Bluegrass festival. Preservation Hall Jazz Band were slated to play over several nights with guest stars Justin Townes Earle, Steve Earle and Alison Moorer, Robert Earl Keen, and Elvis Costello, who played two charity shows on the second night of HSB.

## more online



See more photos of The Chapel and additional audio specs. [mixonline.com/February.2013](http://mixonline.com/February.2013)

"It was, 'Yes, and by the way, we have Elvis Costello coming in. Try to get this done for us,'" Graves says with a laugh. They got it done.

The system in the performance space includes an Avid SC48 board, a mic package comprising mainly Shure and Sennheiser models, and QSC's rig: 18 WL3082 boxes in WideLine-8 arrays, six GP212 subs, two PL340 and seven PL380 2-channel amps, and SC28 and Rave 522ua processors. Stage monitors include seven CSM 12s and one CSM 15, all powered by PL325 and PL380 amps. Audio in the main room, and in all other

zones—also equipped by QSC—is controlled by Q-Sys.

"The entire system is networked so that any zone can select from multiple audio sources, as well as a balanced, aligned live feed from the venue. This is done via 3-inch touch panels located in each zone," Graves explains.

"The install involved acoustical changes, as well," Fletcher says. "The building touches the one next door, so we had to build up the wall between with extra sheet rock and tweak the system to avoid transmissive sound from the P.A. The WideLine-8 arrays are steerable, which was really key. We tweaked the steering and made some EQ changes, and now the neighbors are satisfied."

Before the opening week, Knowles added another key staff member: After five years as assistant general manager at the Troubadour (L.A.), Angele Dayer became The Chapel's manager and publicist. She says she's happy about her move north and the opportunity to work in such a unique venue.

"I've been blown away by pretty much every act that has come into the room so far," she says. "We had a show recently with Lavender Diamond, who's very good, and John C. Reilly and Tom Brosseau were added at the last minute. I didn't know what to expect, but I was so impressed—they played beautiful duets with guitars and harmonies. This is no flavor of the week sort of thing. It's all music that's really substantial and has integrity, which goes along with the integrity of the room."

# GRAVEYARD: SWEDEN ROCKS

**F**ollowing the success of their Number 23 album *Lights Out*, Swedish metal band Graveyard is bringing its act to the U.S., playing clubs across the country with their front-of-house mixer of two-plus years, John Rönnekle.



Photo: Anders Bergstedt

Rönnekle took time out from their European dates (19 shows in six countries to close out 2012) to talk about the U.S. plans: "Right now I'm traveling with only mics and a delay effect," he says. "On drums we have mounted a Shure Beta 52 on a Kelly Shu mount [bass drum microphone shock-mount], and one Beta 91 in foam inside the bass drum. For snare, a SM57 on top and a SM81 for snare bottom; the SM81 tolerates a high sound level without distorting and doesn't sound so 'new' and crispy in the higher frequencies. I keep the snare bottom mic loud in the mix to amplify small drum rolls and ghost strokes. The rest of the drums are basic: Sennheiser e604s for toms and SM81s for overheads and hi-hat."

Vocals are captured through a Beta 58. On guitars, Rönnekle has a Sennheiser MD421 but he's considering adding another mic with a different character that he can blend in. "For bass I use a Radial DI box and an ADK A51 on the cabinet. In the mix I use the low end from the DI signal and the high end from the mic," he says.

Rönnekle says his main focus is to keep the mix clean and simple: "Guitar solos and vocals tend to be louder in the live mix than on record. Especially in the States, people are really fond of solos of all kinds! On ballads I try to make things a little more ambient than the rest of the songs: more effects on the vocals and some extra reverb on some guitar parts. The band are really dynamic, and my job is mainly to make everything sound natural."

—Barbara Schultz



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## FIXIT FRONT-OF-HOUSE ENGINEER HORACE WARD

Horace Ward (Lady Gaga, Prince, Destiny's Child, Beyoncé, Mary J. Blige, Dru Hill, Sean "Puffy" Combs, Wyclef Jean, Usher) says he often mixes on an Avid VENUE Profile digital console and uses a Dangerous Music 2-Bus analog summing unit to impart analog characteristics to the sound. He mixes stems from the console (stereo drums, mono bass, stereo instruments such as guitar and keyboards, stereo backing vocals, lead vocals) to the 16 analog inputs of the Dangerous 2-Bus and then takes the analog output of the 2-Bus into the P.A. feed. "I do a lot of hip-hop with a lot of low-end and grit, a lot of dynamics," Ward says. "I need the depth that I get with the 2-Bus so that I can place everything in the mix. When the mix is just coming from a digital console it's loud and flat-sounding. With the 2-Bus I can get the vocal to the front for the audience to hear without being so loud. If you push too many tracks through the 48k digital console, it doesn't sound that good. The feel is different with analog and digital summing output. With keyboards, for instance, when you put reverb on them, now they 'wrap around' the audience; it's like 3-D, even coming from behind you. With a typical live digital console, you lose the 'spread' in the sound."

## FIREHOUSE PRODUCTIONS AT 12-12-12 BENEFIT



Firehouse Productions (firehouseproductions.com) of Red Hook, N.Y., was the sound reinforcement contractor for 12-12-12: The Concert for Sandy Relief, held at Madison Square Garden on December 12, 2012, to benefit the Robin Hood Relief Fund. The concert featured many of the biggest stars in the music industry, including Sir Paul McCartney, Eric Clapton, Bruce Springsteen & the E Street Band, Roger Waters, Bon Jovi, Billy Joel, Alicia Keys, Kanye West, The Rolling Stones and many others.

To fill the 18,000-seat Garden, Firehouse deployed a large JBL VTX Series rig, including two main left and right P.A. columns of 18 V25 full-size line array elements, complemented by two outfill arrays of 12 V25s, with four VerTec VT4886 subcompact line arrays serving as under-hangs. Eighteen S28 and four G28 dual 18-inch cardioid arrayable subwoofers were ground-stacked to complete the VTX installation. All the speakers were driven by Crown IT12000HD power amplifiers with system control provided by JBL HiQnet Performance Manager software.

"It's not every day we get to do the sound reinforcement for a concert that's broadcast around the world to more than a billion people," says Mark Dittmar, Lead Design and Integration Engineer of Firehouse Productions. "12-12-12 was one of the most challenging projects we've ever done. Funny enough, the P.A. turned out to be one of the simplest aspects. Using all JBL line arrays all around the Garden made a huge difference in getting the sound to be consistent throughout the arena, and consistently excellent."

"The low end from the VTX V25 main arrays is significantly increased, to the point where we're not flying subs with the system," Dittmar continues. "We stacked the S28 and G28 subs on the ground to give the system additional low-frequency impact but we did not need to fly subs as part of the main array columns as we have in the past. The JBL HiQnet Performance Manager software makes setting up and controlling the system a lot easier and more accurate. In fact, the 12-12-12 show was only the second time we had ever used Performance Manager. I'm happy to say it worked perfectly for us."

## JUANES: LOUD AND UNPLUGGED



From left: Monitor Engineer Anselmo Rota, Systems Engineer Jonathan Daly, FOH Engineer Jose Amable Frometa

Colombian singer-songwriter Juanes, nominated for five 2012 Latin Grammy Awards, embarked on the Loud and Unplugged Tour during 2012 with dates across the U.S. and Europe. The 13-piece band comprised Juanes on guitar and vocals, with two additional guitarists, bass, keyboards, two vocalists, drums, two percussionists, and a 3-piece horn section. 3G Productions, based in Las Vegas, handled the audio production for the completed tour and will head back out for U.S. dates in the spring of 2013. The band's audio kit comprised a DiGiCo SD10 (with Waves SoundGrid bundle) and an SDRack via Optocore at FOH with engineer Jose Amable Frometa, with an additional SD10 and SDRack at monitors operated by Anselmo Rota and systems engineer Jonathan Daly. FOH encompassed 68 inputs including FX returns, plus iPod, opening act mixer, and L/R. Four AES outputs from the console fed a Lake processor. "The only outboard gear we're carrying is a Summit DCL200 compressor inserted in the main L/R output group," says Frometa. Racks and stacks were local.



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~ Pro Audio Review

RADIAL WORKHORSE

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~ Resolution

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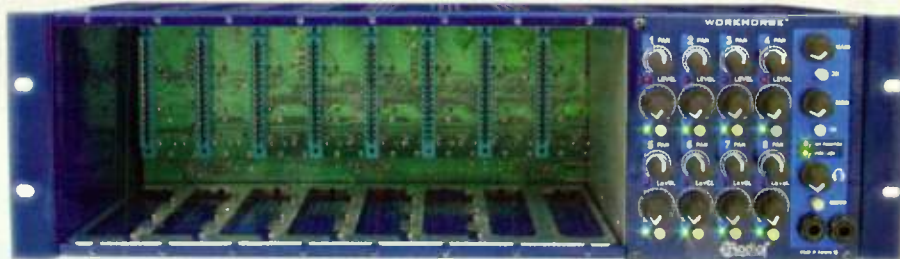
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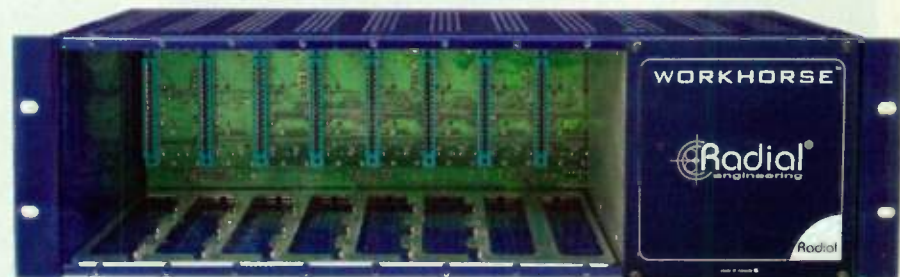
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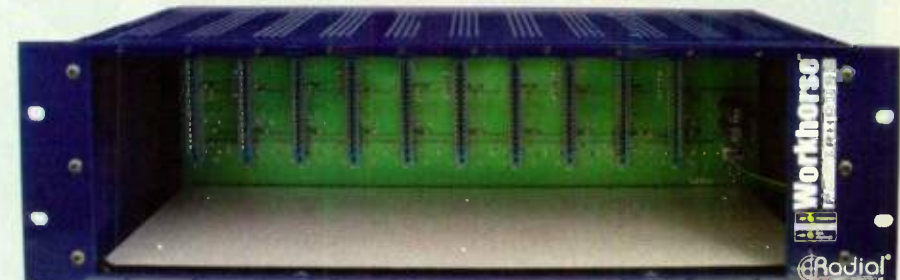
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## NICK WATERHOUSE: STAGE AND STUDIO



From left: Pianist Tim Hill, background vocalists Erin Harris and Brit Manor, and Nick Waterhouse.



At Bimbo's 365, Nick Waterhouse played his 2007 Gibson Custom shop '63 Block Inlay 335, rewired by Dave Neely of Hollywood, Calif., with vintage wiring harness from RS Guitarworks and Throak low-wind Humbucker pickups.



"The Gibson SG I play onstage was my first 'real guitar,'" says Nick Waterhouse, he of the Golden Age sound and sensibility. "My dad picked it out and my parents gave it to me as an adolescent. I didn't play it much through the years, as I bought a Rickenbacker 330 after my first summer job, thinking the SG was too much of a modern rock, heavy metal cliché, but a few years ago I started thinking of it not only as something personally significant, but also an oddball like myself. So I sort of took the wood and had it rebuilt electronically and hardware-wise—Kluson Waffleback tuners, bone nut, old-style smaller wire frets, fabric covered wire and paper in oil caps, a staple pickup from Seymour Duncan's custom shop; it sort of turned into a black beauty '55 Les Paul in the guts, but with a vintage Humbucker on the bridge. I cut most of the record with it. It just feels like 'my guitar.'"

Waterhouse recorded his album, *Times All Gone*, at Mike McHugh's Distillery in Costa Mesa, Calif. *Mix* caught Waterhouse and his band—Jack Payne (bass), Jeff Luger (drums), Kyle Stephens (keyboard), Tim Hill (piano), Jon Lammers (baritone sax), George Schafer (tenor sax), Erin Harris and Brit Manor (backing vocals) at a packed house on New Year's Eve at the famed Bimbo's 365 nightclub in San Francisco.

"The board at the Distillery is a 16-channel Flickinger console, which has been famously linked to Muscle Shoals," Waterhouse says. "[The studio] has a very large hexagon-shaped live room. The entirety of the record was tracked in this room, almost entirely live. Drums, bass, organ, piano, guitar, saxes and female vocals were all recorded at the same time on every tune.

"To me, it was very much the directness of the technique versus trying to replicate a 'period' sound," he continues. "I was simply trying to make a record that sounded good to my ears, and Michael [McHugh] really helped prop me up when I wasn't getting what I wanted. He would recommend microphones, such as RCA, Electro-Voice and Sony, but he urged me to use my ears.

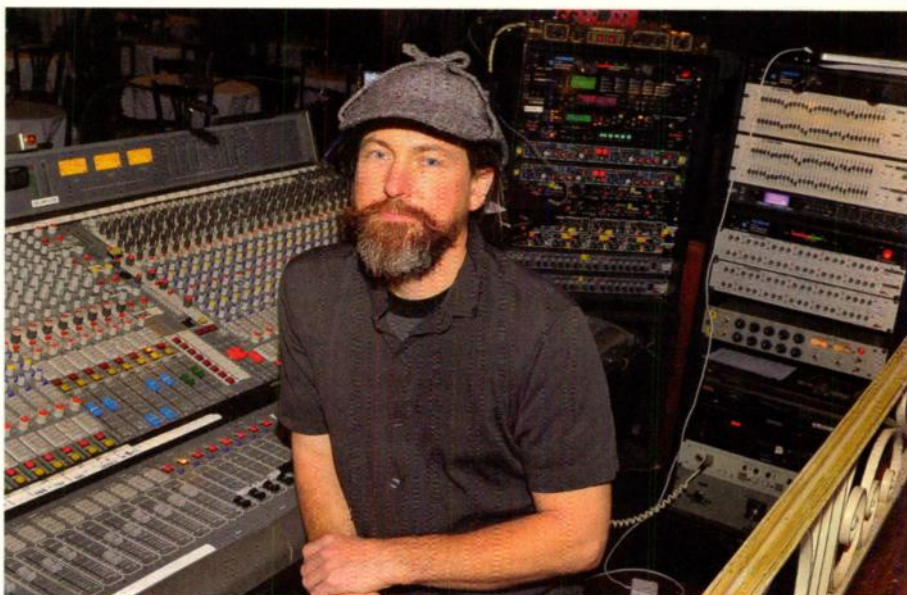
"I recorded a lot of the album using a 1965 Magnatone M-10 amp, but that does not travel well and is rather quiet. I also used an Ampeg Reverberocket from '63 that I had acquired halfway through the record. On the road I use a Silverface Fender Twin amp—pretty universal and I know what I'm getting out of it."



Front-of-house engineer **Chris Preston**, a Santa Cruz native and partner in Live Oak Audio, was behind the console for Waterhouse's New Year's Eve show. The two had met when Preston was mixing Black Mountain and The Allah-Las in Los Angeles at the 2012 FYF Fest.

"At Bimbo's, I used a Midas XL200 console—awesome boards, give me one everyday!" Preston exclaims. "They have a great selection of processing tools at FOH there at Bimbo's, but still, the only unit I used was their Yamaha SPX 2000 for reverb and my (DeltaLab) Effectron for delay. I used two channels of dbx 166 to crush the vocals for some double-bused grit without overdriving the preamp. Mixing Nick and the band it's pretty much a case of 'good input equals good output.' Everybody in the band knows their part and how to play it. They make my job easier.

"Nick's vocal mic, the Ampex 3001 from 1966 [opposite page], was an eBay score last year that has proved its worth a hundredfold. It was new, never used, in the original box and actually smells like 1966. This mic works perfectly for Nick's style; plus, it comes from about the right time period as the overall sound should feel. If I can find a few more I'd use them on the girls as well. Unfortunately, the only other 3001 I know about is part of the collection at MoMA in New York."

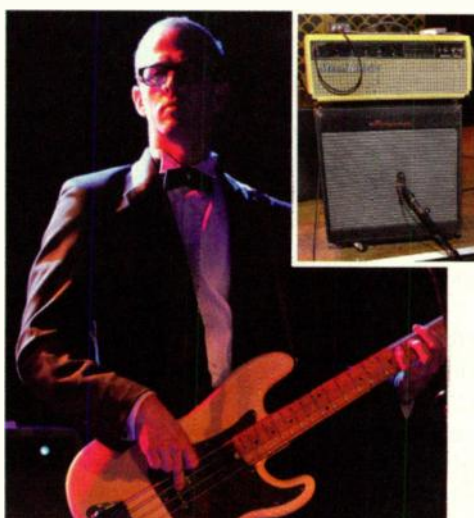


Bimbo's monitor engineer **John Anaya** is mixing on an analog Soundcraft MH3 console. "There were no effects requested, so I'm utilizing some of our rack gear, the TC Electronic EQ station—smart and easy EQ on every send to the stage. We also have external compressors and gates and Lexicon effects for stage mixes. The stage wedges for the show were Radian MicroWedge. I used nine mixes to the stage for this act. We also have a Meyer powered sub for the low end of our drum mix.

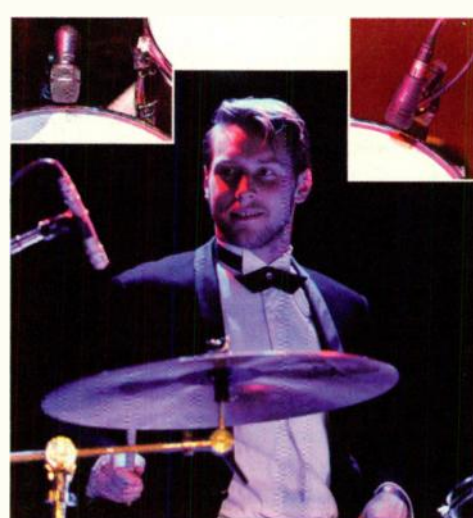
"As for microphones, Chris [Preston] brought a vintage Ampex 3001 for Nick's vocal," Anaya continues. "Pretty standard fare otherwise. Specials were M88 on tenor sax and a 421 on baritone, 421 on bass cab with a Countryman DI; it was one of the cleanest and better-sounding bass rigs I have seen at Bimbos in some time—Mesa head and Ampeg small cab. For the drums we had EV 868 on kick, Beta 56 on snare, 57s, 604s and a pair of Shure small-diaphragm condensers, KSM 137s. For Nick's Silverface [Fender Twin] amp [pictured opposite] we had 57s, and for the background vocalists we had 58s."



GEORGE SCHAFER & JON LAMMERS



JACK PAYNE



JEFF LUGER



# GRAMMY Week for Producers/Engineers

**W**hen Neil Portnow steps to the Grammy stage on Sunday, Feb. 10, as president/CEO of The Recording Academy and welcomes the audience to “music’s biggest night,” prime time scheduling forces him to neglect the back story: It’s really Music’s Biggest Week. Starting Wednesday night with a P&E Wing party at The Village, on through the Sunday night broadcast, there are nonstop events in and around Los Angeles for musicians and engineers.

It’s quite a week, all reaching a peak on Sunday afternoon with the Pre-Tel, followed by the Main Event.

The Pre-Telecast is where the awards action is for the pro audio industry, where you will see Bob Ludwig graciously and humbly accept an award, or Leslie Ann Jones, or Al Schmitt, or Danger Mouse, Brendan O’Brien or David Foster. It’s more of a grass-roots show with a fun energy, and it moves fast. There are stellar performances and a great house band led by Larry Batiste. It starts at 4:30 Eastern time, and you can stream it live at [grammy.com](http://grammy.com).

In the meantime, here are some news and notes for Grammy Week 2013, with the producer/engineer in mind.

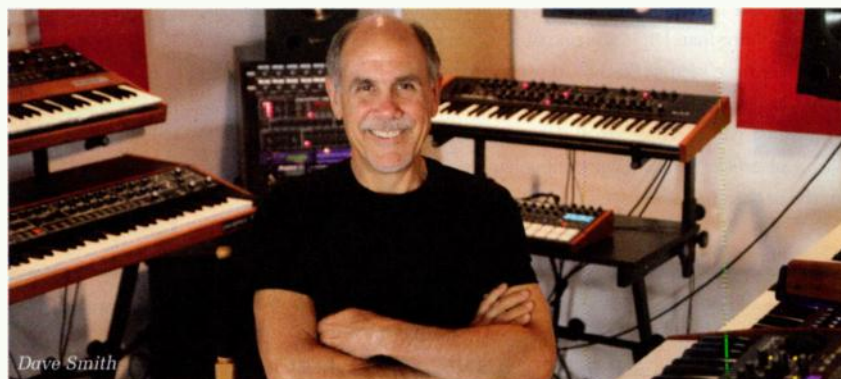
## Technical Grammy for MIDI, Royer Labs

As part of the Recording Academy’s Special Merit Awards, this year’s Technical Grammy Award recipients include Roland founder Ikutaro Kakehashi and Dave Smith for their contributions to the development of MIDI technology, and Royer Labs for their developments in ribbon technologies.

At the 1983 NAMM Show, Ikutaro Kakehashi, founder of Roland Corporation, and Dave Smith, president of Sequential Circuits, unveiled MIDI, a standard that motivated the cooperation of an entire industry and helped move music technology into a new era. Nearly unprecedented collaboration between competing manufacturers who connected their electronic keyboards and enabled them to “talk” to one another.

“It’s already been 30 years since the debut of MIDI protocol in 1983, but it seems to me that those years have passed so quickly,” said Mr. Kakehashi. “Electronic musical instruments have become very popular all over the world through this time, and it is my great pleasure that MIDI played a significant role in their prevalence.”

Royer Labs, meanwhile, is being honored because the company “single-handedly brought ribbon microphones into mainstream recording,” according to the announcement from the Recording Academy. “Royer designed a radically different line of ribbon microphones—small, lightweight, durable, and achieving incredible sound—which were revolutionary and moved the art of recording forward. Royer’s innovations continue to win the praise of artists, producers and engineers today.”





## Party of the Week: Village and P&E Wing

With all due respect to Clive Davis, the best party of Grammy Week takes place on the Wednesday before the show at the Village in West Hollywood. There, Jeff Greenberg and his team host the Recording Academy's Producer's and Engineer's Wing in their annual tribute to our side of the industry. On February 6, the P&E Wing is celebrating "An Evening of Jazz" and honoring 27-time Grammy winner Quincy Jones and 18-time winner Al Schmitt.

Now in its sixth year, the annual celebration has also served to raise awareness of issues that the Recording Academy is fighting for, often in Congress, sometimes in the public mind. This year, the message is Quality Sound.

"The tireless efforts of the P&E Wing continue to raise awareness of the ever-evolving climate of sound quality and the increasing interest in the preservation and integrity of recorded music," said Neil Portnow, President/CEO of The Recording Academy. "This year, it is with great honor that we pay tribute to two industry pioneers who also continue to raise awareness in the field of recording and who have set precedents of excellence within the music community. The contributions of both Quincy Jones and Al Schmitt are innumerable, as are their incomparable bodies of work, and we look forward to an unforgettable evening with these two icons."

It's the toughest ticket in town, and it kicks off Grammy Week. But The Village and the P&E Wing sure do know how to throw a party.



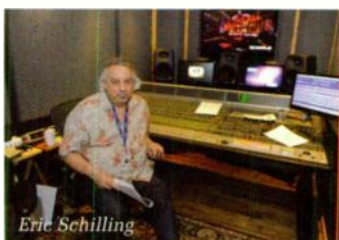
From last year's party, L-R: Producer Jimmy Jam; President/CEO of The Recording Academy, Neil Portnow; honoree Jimmy Iovine; and Producers & Engineers Wing Senior Executive Director Maureen Droney.

Photo courtesy of The Recording Academy/WireImage.com/Michael Kovac.

## If You Are Watching at Home, Then You Are Hearing...



John Harris



Eric Schilling



Tom Holmes

A 5.1 broadcast mix by Tom Holmes out of the Denali truck, seated at a Calrec console, and a music mix by the tag team of John Harris and Eric Schilling out of two mirror-image trucks from Music Mix Mobile, featuring Avid D-Control consoles, Pro Tools HD and Genelec 5.1 monitoring.

During three days of rehearsals leading up to the show, Schilling and Harris alternate mixes for each artist as they run through the show. After an artist leaves the stage, a producer or sometimes the artist themselves, will come out to the other truck, and the mixer will walk the 10 feet to the other vehicle and call up the tracks via a networked MAD1 connection. They fine-tune the mix while the other engineer takes the main seat. Back and forth it goes. During showtime, only the main truck is live,

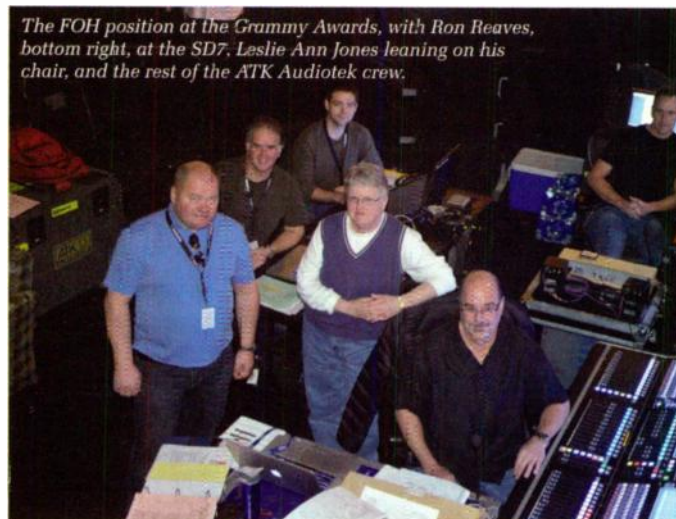
and it feeds a 5.1 mix to Holmes in the Denali truck, where it is sent off surround-only to CBS in New York

Broadcast Audio Supervisors representing the Recording Academy are Phil Ramone and Hank Neuberger.

## If You Are Watching at Staples Center, Then You Are Hearing...

A house music mix by 15-year Grammy veteran Ron Reaves, about to start his second year mixing music on a DiGiCo SD7 system, with Mikael Stewart on his left at a DiGiCo SD10 handling the production and insert audio. Two 56 I/O MAD1 stage boxes allow for up to 488 total channels at 48k (there were plans to explore 96k for this year) across a fiber-based Opticore system; all I/O can be shared console to console—the two monitor positions (both SD 10 consoles), FOH and announce positions. The house P.A. has been JBL for years, and last year they used a Vertec line array system with Powersoft amps.

ATK Audiotek again will be handling the system rental and installation, headed by Fletch. Representing the Recording Academy as Live Sound Supervisor is producer/engineer Leslie Ann Jones.



The FOH position at the Grammy Awards, with Ron Reaves, bottom right, at the SD7, Leslie Ann Jones leaning on his chair, and the rest of the ATK Audiotek crew.



# Bruce's Night

## SPRINGSTEEN HONORED AS MUSICARES PERSON OF THE YEAR

By Blair Jackson

**How does he do it?** Night after night, year after year, for four decades now? At his commercial peak in the 1980s, Bruce Springsteen & the E Street Band would typically play for close to three hours a night, with two 90-minute sets divided by an intermission. But today, with Bruce at age 63, there is no rest for the weary—i.e., us fans. Now it's three solid hours or more, as the eight-piece E Street Band and nine additional musicians and singers (including Jake Clemons, the talented sax-playing nephew of the late great Big Man, Clarence Clemons) tear through a mind-boggling collection of old and new Springsteen classics, rarities and uplifting cover tunes with an intensity that borders on the maniacal, yet is so, so satisfying.

No wonder the band's current *Wrecking Ball* tour was the second highest-grossing run of 2012. Springsteen always delivers; to paraphrase one of his songs, he "proves it all night for our love."

With all due respect to James Brown, Bruce has been the Hardest Working Man in Show Business since he and the E Street Band exploded into the national consciousness in the summer and fall of 1975, following the release of *Born to Run*. In the years since that epic album—surely one of the greatest of the rock era—Springsteen has traveled down many different musical roads, while always remaining unmistakably himself. Even though this champion of the working class now lives in the "Mansion on the Hill" he once sang about, thematically he has rarely strayed far from his humble New Jersey roots.

His songs are filled with underdogs and the downtrodden, hard-working folks struggling to find a little light and life in an often-cruel world. There's disappointment, desperation and resignation running through some tunes, but that is balanced by the hope, faith and determination that rings out from so many others. A few are just great party anthems. We've met unforgettable characters in his colorfully evocative story-songs, and also been privileged to dig into his psyche through his more confessional numbers. We relate to both of those strands of his writing—as well as his simpler song portraits, clear and uncomplicated as a Walker Evans photo—because they are all delivered with unbridled sincerity and soulful conviction.

If Springsteen had never played another note after his monumental *Born in the USA* tour in the mid-'80s, his legacy as one of the greatest rock artists of all time would have been secure. Few, if any, of his contemporaries can match the 11-year period that produced *The Wild, The Innocent & the E Street Shuffle*; *Born to Run*; *Darkness on the Edge of Town*; *The River*; *Nebraska* and *Born in the USA*, for breadth, passion and insight.

But it's a handful of dissimilar albums he's made since the mega-Bruce period that show the true depth of his artistry. Coming after the at times bombastic *Born in the USA*, the more introspective *Tunnel of Love* felt like an unusual turn at the time, but it has weathered well. The dark and powerful 1995 album *The Ghost of Tom Joad* (and the accompanying solo tour) was a striking minimalist reflection of the hard times afflicting many in that decade. *The Rising*, released the year after the 9/11 tragedy, beautifully captured some of the zeitgeist of that horrific event

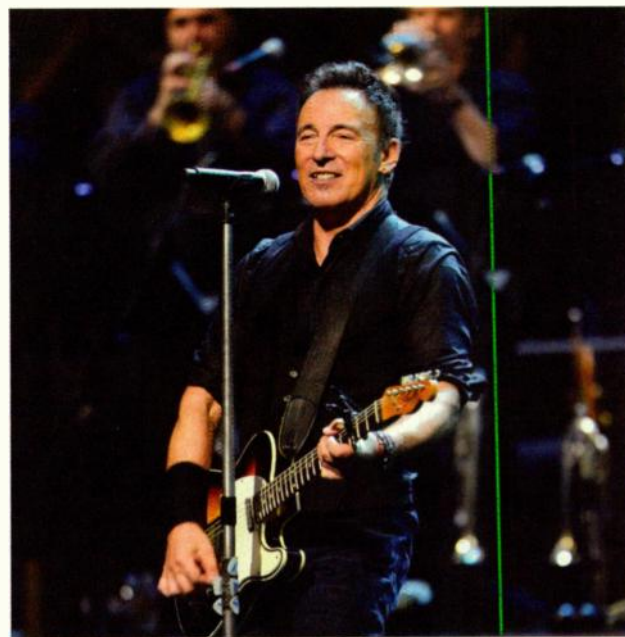


Photo: Steve Jennings

and its aftermath, with deeply moving songs that tapped into our confusion, anger and deep sense of loss, while offering an uplifting message about the power of love and remembrance to heal even the deepest wounds. Then there was *We Shall Overcome: The Seeger Sessions* (2006), a raucous and joyful album of mostly traditional folk and spiritual songs performed by a big, loose band; a welcome relief. Some of that spirit (and approach) spilled over to last year's brilliant *Wrecking Ball*, which is replete with melodies inspired by traditional Irish music, this time in the service of songs about the impact of the nation's current economic woes on regular folks. Bruce has a unique way of making bad times seem better; just sing along and you'll feel good!

On February 8, two days before the 55th Grammy Awards telecast, MusiCares—a philanthropic arm of the Recording Academy dedicated to helping musicians in need—is hosting an invitation-only gala event at the Los Angeles Convention Center to honor Bruce Springsteen as its Person of the Year, recognizing both his greatness as an artist and his many years of giving back to the community. Bruce doesn't just do high-profile benefits for good causes (though he has certainly done many, from No Nukes to Amnesty International to 9/11 and superstorm Sandy relief). For much of his career he has regularly donated proceeds from his concerts to food banks, homeless shelters and other nonprofits in the cities in which he performs. As NARAS President/CEO Neil Portnow stated, Bruce is "a national treasure and an exemplary humanitarian." Woody Guthrie would be proud. Pete Seeger no doubt is proud.

Among those performing to fete Springsteen that night are Jackson Browne, Neil Young, Alabama Shakes, Emmylou Harris, Elton John, Jim James, Mumford & Sons, Patti Smith, Mavis Staples, John Legend, Sting, Eddie Vedder, Tim McGraw and others. Sounds like a tribute fit for The Boss. He deserves it.



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# COMMUNITY OUTREACH

## ARTISTS ENGAGE FANS THROUGH REMIX COLLABORATIONS

BY MARKKUS ROVITO

The notion of musicians collaborating with their audience was once unthinkable. Later it became a cute gimmick on its way to becoming a sound idea that made real business sense. What happened? Some of the same technological advancements that “destroyed” the music business brought the artist and audience closer together.

Perhaps it's just wishful thinking, but it seems as if the tide of enforcement culture in the music industry may be slowly turning. Headlines of RIAA suits against pre-teens no longer dominate the music news, and the hero of the mash-up movement, Girl Talk, runs free in the streets, unsued for his innumerable sampling transgressions. Perhaps the industry's long arm of the law is just getting old and flabby, or perhaps the powers that be are finally reading the writing on the wall. Whether it be cassette mix tapes, sampling, file sharing or bootleg remixes, passionate music fans simply want to use advanced technology to better access, create and manipulate the music they love. And no amount of lawsuits can stuff popular technology back into Pandora's box.

So it may not be coincidence that as the music industry's wrath against music fans fades out, the popularity and acceptance of artist/audience collaboration continues to grow. While such collaboration can come in many forms, the contest—songwriting contest, album artwork contest, remixing/mixing contest—dominates the landscape. Sprouting from the popularity of talent competition TV shows and the phenomenon

known as crowdsourcing (wherein one taps into the vast throngs of the Internet-connected to find the best person for a particular task), remixing contests in particular have become the de facto method of artist/audience collaboration.

First embraced by the electronic music field where copious remixes are standard, remix contests started to pick up steam when household names such as Peter Gabriel and David Byrne held remix contests for some of their early '80s hits in 2006. At that time, such contests still had the feel of a gimmick, a way to drum up interest for under-the-radar album reissues or to hype up new music gear or software from the MI companies that would sponsor the contests.

However, some appeal to the remix contest would prove that it was not a fad. A Website listing currently active remix competitions shows well over 100 running on any given day, including everyone from obscure European electro artists all the way up to heavy hitters such as Snow Patrol and indie-blog-darlings-turned-major-label-stars Passion Pit.

There's seemingly unending interest from would-be remixers, who have less expensive and more powerful production tools at their fingertips with every passing year. Artists see it as a way to connect with existing fans and to reach new fans, possibly even discovering future collaborators in the process. Even labels and music distributors get something out of the contests; oftentimes the winner or winners will have their remixes sold on specialty releases. Coming back full circle to the aspiring producers, they can now use remix competitions not only as a way to increase their skills and have fun, but also to possibly gain recognition as a legit artist in their own right. As long as the labels and other rights holders can get past the idea that once the stems of the original song are out there, there's no realistic way of keeping them from being used illegally, everyone in the equation wins.

*Continued on p. 34*



## CASE STUDY #1

### THE NEW GIRL: CHRISTINA AGUILERA



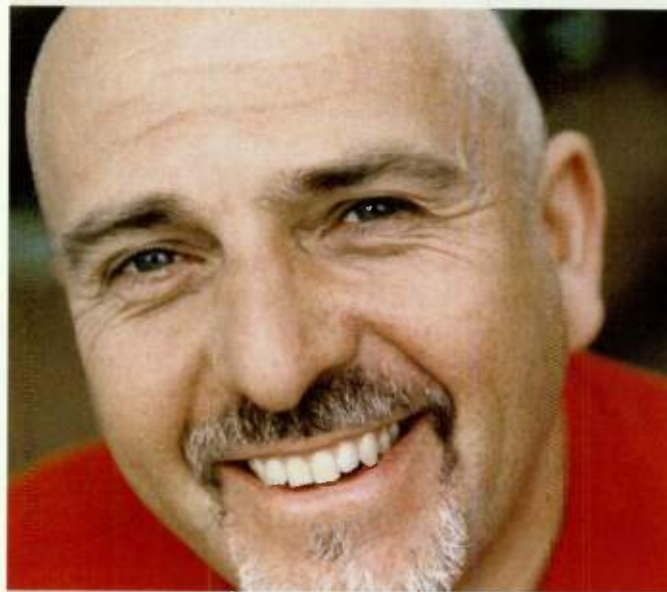
Obviously, she's new only to the remix competition scene; Aguilera's debut album alone eclipsed 17 million in sales back in 1999. But for her latest album, *Lotus*, Aguilera joined the growing ranks of high-profile superstars open to the idea of remix crowdsourcing by coinciding the November 13, 2012 release of *Lotus* with an Indaba Music remix contest worth a tasty \$5,000 to the winner, who would also receive some iZotope software and exposure for the remix on Aguilera's Websites.

The star power of Aguilera drummed up serious interest from the Indaba community. With nearly 1,500 remixes submitted, the representatives of RCA Records charged with judging the contest had their ears full of the rearranged strains of Aguilera's single "Your Body." Unlike some contests where a popular vote from the community determines the ultimate winner, the top three vote-getters in this contest had to settle for a signed copy of *Lotus*, some software and bragging rights.

One may think that with five grand at stake, that kind of scratch may have contributed to the popularity of the contest. However, at Indaba, modern name recognition and relevancy seem to count for more than the value of the booty. That's why a recent Linkin Park contest also drew more than 1,400 entries with a \$1,000 grand prize, while Barry Manilow (\$6,250) and Bootsy Collins (\$4,000) contest only garnered hundreds and several dozen entries, respectively.

## CASE STUDY #2

### THE O.G.: PETER GABRIEL'S REAL WORLD RECORDS



Peter Gabriel launched Real World Records with the WOMAD organization way back in 1989 to open up his state-of-the-art recording facilities to diverse musical acts from outside of industrialized Europe and North America. The label was also an early adopter of audience collaboration, launching a remix contest for Gabriel's "Shock the Monkey" in 2006. While Gabriel also worked with Indaba for a "Games Without Frontiers" remix contest in 2010, Real World now handles its regular remix contests through the socially oriented platform SoundCloud.

By integrating with SoundCloud's ubiquitous streaming audio technology, Real World can package everything it needs for the contests—an audio player for the original song, a download button for acquiring the stems, and an upload button for submitting a finished remix to SoundCloud through DropBox—into a single module that can be embedded into any Website (like a YouTube video).

These contests tend to offer much less valuable prize packages to the winners than you see in more high-profile cases, but SoundCloud's technology seemingly makes them easier to implement, and also opens them up to SoundCloud's enormous registered user base, which the company reported reached more than 15 million users in May 2012. Those users are just as likely to be ardent music fans as they are to be musicians, producers or remixers, and they can enjoy the full power of SoundCloud's socially driven music discovery with a free membership.



### REMIXES RISING

Some credit for the uptick in artist/audience collaboration has to go to Indaba Music. The company formed in 2007 as a social and interactive community for musicians, producers, engineers and remixers geared toward online collaboration, and has since offered its members (both free and paid) access to an online DAW and samples for creating music. But songwriting, mixing and remixing contests have been a big part of Indaba's value to its user base since the beginning, and the company can claim responsibility for many of the biggest musical acts' remix contests over the last few years, on the way to growing to 750,000 members. Just a sampling of Indaba's recent contests include Yo-Yo Ma, Metric, T-Pain, Snoop Dogg, Papa Roach and many others. A recent competition offered remix stems for all 10 songs off the latest Bon Iver album, and winners were released on a Bon Iver remix album on Spotify.

Mantis Evar, executive vice president of Indaba Music, co-founded the company along with Matthew Siegel, and has personally witnessed the industry's change of heart toward artist/audience collaboration. "During the very early stages of Indaba Music it was somewhat tricky getting the artists and labels to offer up their stems, as these—next to the final mixdowns—were their most valuable assets," Evar says. "Once we ran a few successful campaigns, those initially reluctant soon realized they now had a new and trusted way to monetize these assets. Where at first we had to be persuasive in getting artists involved, today we have a consistent flow of major artists seeking to work with our community."

Although Evar didn't answer our direct question as to whether artists working with Indaba Music are compensated directly from Indaba's membership dues revenue, he thinks they see clear value in running mixing, production and remixing contests. "Finding new music creators to rework music has shown to be a unique way of not only getting fans involved but also gaining a whole new audience from those sets of remixes. Some of our campaigns earn up to 70 million impressions."

The old adage was "everyone's a critic." In today's technological society, it could be that "everyone's an artist." Another way to look at remix contests aside from benefitting the original artist is that they help develop the next generation of artists. The true value of crowdsourcing is a meritocracy where the best rise to the top and are then rewarded. Evar cited some of the rewards that Indaba members have won: worldwide album releases, royalty shares and even performing onstage with their musical heroes. "Imagine," he says, "coming home from school and spending your spare time on a remix to find yourself just a few weeks later on Entertainment Tonight discussing your Usher remix with Usher himself!"

### THE BUSINESS OF SHARING

Beatport, the Number One online seller of DJ-friendly electronic music, has tried different methods of monetizing remix stems. In the past, Beatport would charge a fee to download the stems for a remix contest. While there was some success in that, it would never fail to garner some hate from people whose ire was raised by being asked to pay to enter a contest. This year, Beatport launched Beatport Play, its

## CASE STUDY #3

# THE ENTREPRENEUR: ILL.GATES



A longtime music producer, live performer and DJ, ill.Gates has been steadily growing his fan base for years with his music, tireless work ethic, and his willingness to bend, break, and even create the rules of the music business. He frequently gives away singles, remixes or even entire albums to those who join his email list. Then if you're enticed onto the ill.Gates Website, you have the option to purchase the music in high-quality MP3 or lossless formats in different bundled packages. At times, the deluxe bundles have been known to include the stems for some or all of the songs on the release.

Besides including remix stems as a value add-on to his deluxe album packages, ill.Gates has also branched out by putting a price on his vast music-production knowledge. An Ableton-sponsored expert of the Live software, ill.Gates sells various popular Ableton Live templates designed for efficiency and creativity when DJing or producing music. He even has a subscription-based streaming video site in development for his popular four-hour music production workshop called The ill.Methodology. While he may not yet have the name recognition of his Grammy-nominated contemporaries like Calvin Harris, Deadmau5 or Skrillex, ill.Gates has written a chapter or two in the book of making it as a talented artist.



 **indabamusic**

**beatport**

 **NATIVE INSTRUMENTS**

area dedicated to remix contests, where there are usually several competitions running from big names in dance music like A-Trak, Boys Noize, Lindstrom or Freq Nasty. With the advent of Beatport Play, instead of charging for the stems, the stems are free, and the winner of the contest always gets the remix released for sale; Beatport ostensibly can make its money back through selling that track.

 **TRAKTOR REMIX SET**



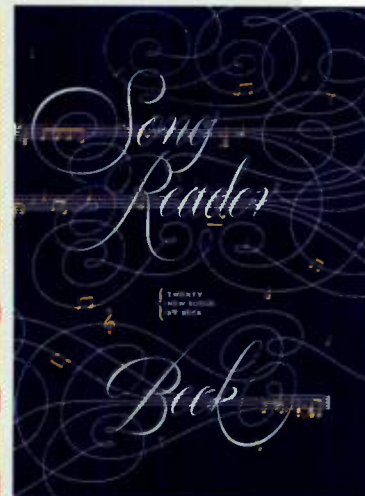
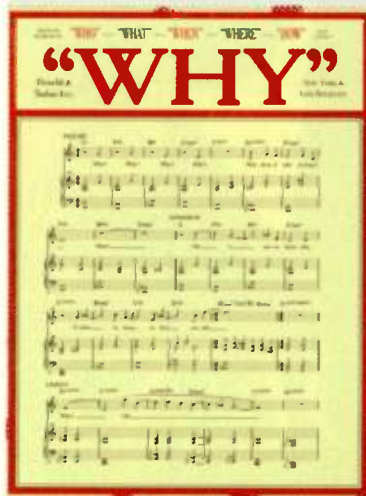
Down another avenue, Beatport has teamed up with Native Instruments to sell Traktor Remix Sets. These are collections of loops and sounds from an original artist's track that a DJ or remixer can use in the latest version of NI Traktor software to rearrange and mix the track however they see fit. While it's not direct artist/audience col-

laboration, this is an interesting new way for producers to monetize pieces of their music, and for the end user to enjoy them without entering a contest.

It seems the future of the music industry is always a day away. More than a decade after Napster, we still have major labels and filthy rich superstars. Technology has affected music distribution and creation, meaning we have fewer music stores and much, much more mediocre-to-terrible music to suss through. But things have always been changing, and will continue to change. Will artist/audience collaboration create a concentric vortex of everybody remixing everybody else's stuff like some kind of aural M.C. Escher drawing? Or maybe this trend will help usher in a golden age of collaboration where artist and fan find that in helping each other, they help themselves. Hey, maybe we're already there and we just don't know it yet! Time will tell, but for once, there may be something good coming from the music industry besides the music.

## CASE STUDY #4

### UN-ONE-UPPABLE: BECK'S SONG READER

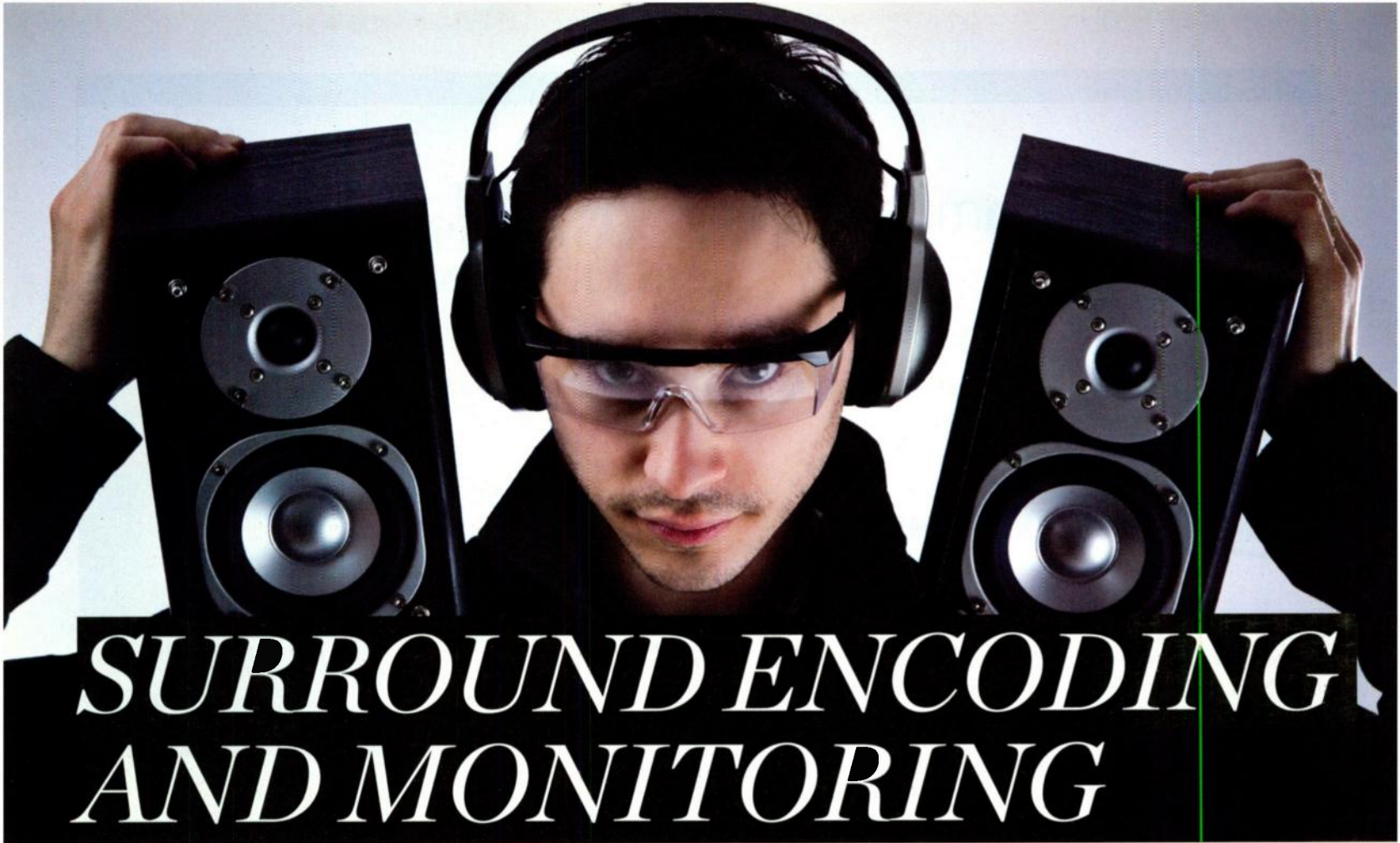


While new technological frameworks have aided the growth of artist/audience collaboration, it's Beck's latest project that simultaneously takes low-tech music publishing and audience interaction to the extreme. His compositions in *Song Reader*, a visually sumptuous book of sheet music published by San Francisco's McSweeney's, will exist in recorded form only as the versions submitted by the public.

In his preface to *Song Reader* published by The New Yorker, Beck traced the mental seeds for *Song Reader* all the way back to mid-'90s. A company had just published a sheet music version of one of his albums that was decidedly not sheet-music friendly. In an interview with McSweeney's, Beck said, "Seeing those songs reduced down to piano parts made me feel like they'd become abstractions. I mentioned...that it might be better to write a group of songs specifically for a songbook, rather than trying to force the songs from my record into written arrangements."

It wasn't until 2004 that Beck had a chance to talk to Dave Eggers, best-selling author and founder of McSweeney's, about the idea that was finally published as *Song Reader* in December 2012. The \$34 book oozes with vintage-style illustrations that complement the 20 songs and dozens of musical "fragments" that Beck himself will not record. You can hear interpretations of the songs at SongReader.net, where at the time of this writing, there were 65 versions posted just days after the book's release. Beck encourages musicians to stray from the "starting-off points" of the piano and guitar chord arrangements in the book. "I think some of the best covers will reimagine the chord structure, take liberties with the melodies, the phrasing, even the lyrics themselves," he said. "There are no rules in interpretation."





## THE WIDE-RANGING OPTIONS OF MULTICHANNEL PLAYBACK

BY KEVIN BECKA

**I**f there were one phrase that best describes the state of surround audio production today, it would be “ever-changing.” Surround is still trying to find itself across film, television, gaming, audio-only and, ultimately, the portable delivery systems. It seems that on the high-end, in event spaces such as theaters, the channel count will only go up, while in the home and on mobile sets, the move is toward refinement of the surround experience and re-creation of the immersive field out of headworn sets.

Last year, Dolby, the worldwide leader in surround encoding across nearly all platforms, debuted a revolutionary technology called Dolby Atmos, an object-based system that can accommodate up to 62.2 channels for theater playback through a proprietary decoder. Dolby also works continuously with companies like Intel and Nokia, on the chip level, to make surround easily portable. DTS, meanwhile, Dolby's chief rival on the high end, created some buzz at CES a few weeks ago with DTS Headphone:X, which delivers 11.1 for headworn playback. GenAudio's AstoundSound is

finding traction in the encode for 2-channel headphone and speaker listeners. And there are a couple of heavy hitters in the headworn device market that have created some impressive products that provide a believable playback experience, even when the listener is moving.

For the companies that make physical surround playback products and develop algorithms, a major hurdle has been to provide broad distribution of quality playback. This is especially daunting with the consumer's love affair for portable devices. For engineers, the frustration has always been how to get all listeners to have the same or similar experiences when playing back their mixes, no matter the format. The past few years have revealed a separation between technology developments for the big theater experience and on your phone while you ride public transit. Yet both areas have to be addressed in delivery. They have to also be addressed on the front end.

### DOLBY ATMOS

The release of Dolby Atmos has been followed by early adoption on the high end, with Skywalker Sound, Todd-AO and Warner Bros., among others, installing systems. While you can get up to a 62.2-channel mix, that isn't entirely accurate. Those are the limits of the “physical channels.” The system throws out the concept of channels in favor of a hybrid approach to mixing that directs sound as dynamic objects (or sound elements) that envelop the listener, in combination with channels for playback. The flexibility of object-based mixing provides total control over placement and movement of individual sounds or “objects” anywhere within a theater environment.

The rooms used to create the content are equipped with a render mas-



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## DTS HEADPHONE:X

Fresh out of CES 2013 in Las Vegas, DTS Headphone:X (dts.com, \$TBA) is capable of recreating the surround sound experience using a pair of headphones. The system is scalable from stereo up to 11.1 and works on any headphones, within reason: DTS is in the process of certifying earbuds and headphones from a range of manufacturers to assure a similar consumer experience.

The 11.1 room model starts with a standard ITU 7.1 setup then adds four "high" speakers that can be arrayed in pairs or as discrete channels. DTS uses a proprietary room capture system and is in the process of creating user tools so content creators can model their own spaces.

## SONY MDRDS6500 DIGITAL SURROUND HEADPHONES

Designed and priced for the home user (store.sony.com/MDRDS6500 \$299), the Sony MDR-DS6500 wireless headphone system is compatible with a variety of audio formats including Dolby Digital, Dolby Digital Surround EX, DTS, DTS-ES Matrix, and DTS-ES. The transmitter is designed to work with several Sony surround receivers, including the ES 7.2-channel Wi-Fi A/V Receiver, ES 7.2-channel 4K A/V Receiver and ES 9.2-channel 4K A/V Receiver. The circumaural headphones consist of a 40mm driver offering an effective wireless range of 300 feet with a 20-hour battery life. Other features include auto-tuning and a rotary volume control, both on the headphones.



tering unit (RMU), a box the engineer uses to develop and play back the Dolby Atmos mix. While speakers are elements used to get the audio out (5.1 or 7.1, for instance), with Dolby Atmos, sound objects can be placed anywhere in the soundfield, even overhead.

It all starts with a bed mix of 5.1 or 7.1. On top of that bed mix is a hybrid solution that marries in objects that can be placed anywhere within the speaker configuration. At any one time, the objects can be placed in the field be-

tween or directly coming from the speakers, simulating up to 64 discrete speaker feeds. All this data is stored within the master mix, which then is rendered real time at the venue to match speaker placement, size or geometry of the space. This allows for an accurate rendition of the mixer's intent to be carried through to the venue, no matter the gear they have. As long as they have the Dolby Atmos decoder, it's all done via the math. Right now, Dolby is using the same RMU in the mix studio and commer-

cial theaters as they wait for the availability of Dolby Atmos Cinema Processor (CP850), which should be available Spring 2013.

## DTS GOES CONSUMER

While a mixer may have a good shot at upholding integrity with basic stereo mixes playing back over quality speakers or headworn devices, surround content complicates the matter. With all the different surround encoders and decoders, plus a rash of software and hardware "helper" de-

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## BEYERDYNAMIC HEADZONE PRO XT

The beyerdynamic Headzone PRO XT ([beyerdynamic.com](http://beyerdynamic.com), \$3,437 w/out headphones) is designed to take a 5.1 mix and reproduce the experience on headphones. The system consists of the single-rackspace, fanless base unit, headtracker receiver rail (HR 2), HC 1 Headtracker clip plus FireWire and power cables, and software CD. The DT 770 PRO HT headphones (closed), and DT 880 PRO HT headphones (semi-open) must be ordered separately. Inputs to the base unit include 5.1 audio inputs on a balanced, 25-pin D-Sub, Digital 5.1 (FireWire) and AES/EBU (XLR), plus an additional communication input with volume control for talkback on a balanced XLR. There are three banks for individual setups that are accessed through programmable front panel buttons. The headtracker can be manually deactivated by a front panel button or is deactivated automatically when a second set of headphones is plugged in. More in-depth control is provided by a software control panel that is compatible with Windows 2000, XP, Vista, 7 (32- and 64-bit) and Mac OS X.



phones (semi-open) must be ordered separately. Inputs to the base unit include 5.1 audio inputs on a balanced, 25-pin D-Sub, Digital 5.1 (FireWire) and AES/EBU (XLR), plus an additional communication input with volume control for talkback on a balanced XLR. There are three banks for individual setups that are accessed through programmable front panel buttons. The headtracker can be manually deactivated by a front panel button or is deactivated automatically when a second set of headphones is plugged in. More in-depth control is provided by a software control panel that is compatible with Windows 2000, XP, Vista, 7 (32- and 64-bit) and Mac OS X.

## SMYTH RESEARCH REALISER A8

The Realiser A8 system ([smyth-research.com](http://smyth-research.com), \$3,760 w/headphones) is designed to model a room over headphones, giving the user the ability to hear a 2-channel mix as it would sound in a particular space with speakers. The A8 comprises a desktop processor/controller, RC-1 remote control, and HTM-1 miniature mic for in-ear measurements. Other accessories include the TU-1 wireless rechargeable head tracker for attachment to any headphones, TR-1 head-tracking reference for placement in front of the listener and Stax SR-202 headphones. The A8 is truly a custom experience because the system is set up specifically for each user, and a profile is stored in the system and can be reproduced over any headphones. Users can model and store different rooms for specific listeners. The TU-1 and TR-1 follow the listener's head movement and adjust the audio so that the listener's experience is similar to moving his/her head in the room.



vices and upmixers meant to enhance the quality of a listener's experience, there's no telling how your mix will sound when it gets to the end of the line. It took years to achieve normalcy in television. Today there's no guarantee that a Verizon phone will act the same as an AT&T phone.

This is where DTS thinks it has the answer

with its new Headphone:X system fresh out of CES 2013. Headphone:X takes advantage of the advanced properties of the DTS-HD audio codec, which is said to precisely simulate the experience of being in any movie theater or the movie's mixing stage, and fine tuning that experience to an exact seat location within the room.

DTS went to great pains at CES to demo their system, collaborating with Focal to create a unique 11.1 speaker playback system as a reference, then quickly A/B them with Headphone:X. Michael Farino from DTS explains: "The system is not a matrixed upmix but a re-creation of the discrete playback in a particular space." So for content creators,



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## PIONEER SE-DIR800CII DOLBY DIGITAL SURROUND HEADPHONES



Promising a three-dimensional surround sound experience, The Pioneer SE-DIR800CII (pioneerelectronics.com, \$399) supports Dolby, Dolby Pro-Logic II, Dolby Digital EX, and DTS

and DTS-ES formats. The battery-powered wireless units come with a base station that accepts both digital (Toslink) and analog inputs (RCA). The SE-DIR800CII has three Dolby Headphone settings including: DH1 (simulates a small room); DH2 (simulates an average-size room); and DH3 (re-creates the acoustics of a small movie theater).

nothing changes. Farino continued: "An engineer would mix the music/film as they would in any space, then the mixes can be played back from the perspective of the sampled environment."

The ability to make all this happen is within the Headphone:X metadata, which is captured using a proprietary system. Right now DTS can only produce this room capture data but is working on simple user tools so creators can sample

their own spaces. For DTS and surround playback, this is a groundbreaking product that if it delivers as promised, can provide high-quality surround playback and assure broad distribution with little affect on the engineer. Plus it's scalable from stereo to 11.1, meaning existing mixes from stereo on up can be played back in the modeled environments.

### OTHER PERSPECTIVES

For Genaudio's AstoundSound encoding process, Greg Morgenstein, Genaudio's senior mix engineer, wants

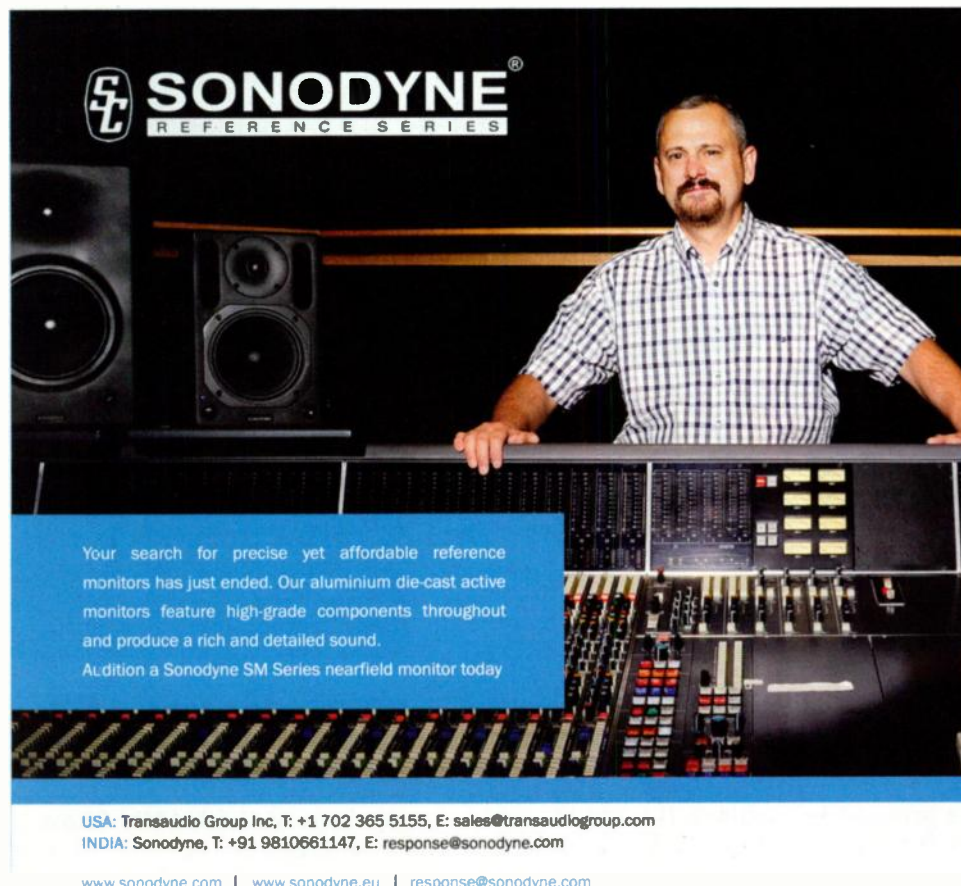
the pure surround mix as a source for his encode. Genaudio AstoundSound is a 4D sound localization cue technology intended for professional and consumer software and hardware product integration. Morgenstein's "playground" is Astound Studios (astoundstudios.net), a 5.1 studio built specifically for AstoundSound.


When Morgenstein creates the Astound-Sound encode, he would rather have the full

surround mix, or start one from scratch, as his intention is to accurately re-create the original surround listening experience over two speakers and headphones. To check the finished product, the 5.1 original and a fold-down created with a Waves plug-in is checked against the Astound encode, which is created by running parts of the original mix through plug-ins. The center will go through a single plug-in, and the front and rear stereo pairs will each have their own plug-ins. This gives Morgenstein the ability to customize the encode for each application—it's not a one-size-fits-all encode.

### WHAT IT MEANS

So in answer to the opening questions, engineers can pretty much carry on with business as usual, unless of course you find yourself on the Skywalker Sound stage and get to mix a jet-by with a new ceiling speaker. But all mix engineers would be wise to brush up on the wide range of options out there in surround delivery and develop techniques to make sure the integrity of their mixes follow through to the AMC Theater or the iPhone on the train. ■





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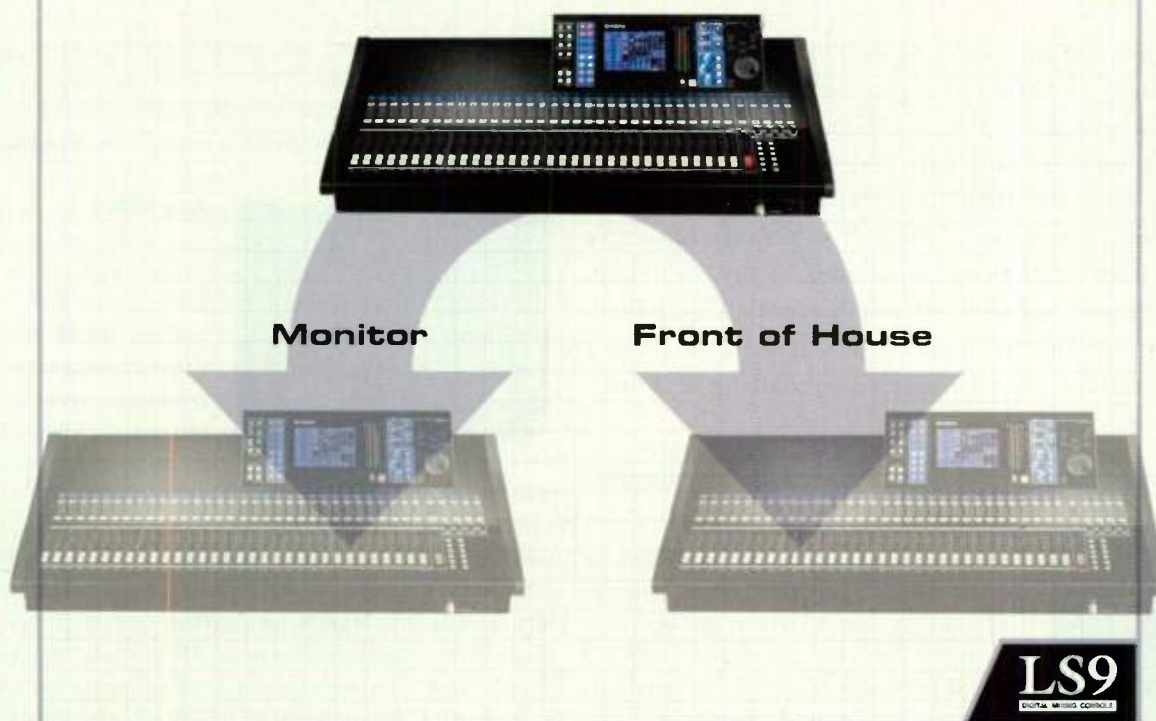
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# MONITORS FOR SURROUND

## Speakers to Build Your Multichannel Setup

By the *Mix* Editors

Years ago, when the first wave of excitement for 5.1 music projects hit its peak, *Mix* ran a product roundup on “surround speaker systems.” We established criteria, such as they had to have their own sub, and we thought we were being cutting-edge. But then a number of users and manufacturers called in and said, “Huh? If somebody buys five speakers and a sub, it’s a surround system.” They were right.

This time around, we selected monitor models from leading manufacturers that we figured would work well for a near-field, surround sound experience, starting at 6-inch woofers and up.



### Acoustic Energy Pro AE22 Active

Designed to be used on a mixing desk at ear level, the AE22 Active monitor incorporates high-quality class A-B power amplifiers totaling 160 watts for each speaker, with EQ presets to provide adjustment of tonal balance and low-frequency bandwidth. The AE22 is a low-distortion, closed-box speaker with an exceptional time domain performance (better than 40dB down within 5

ms) and good horizontal off-axis consistency. It doesn’t have the flattest anechoic amplitude response you’ll ever see, nor the widest bandwidth, but from 60Hz to 25kHz it is about as musically accurate as moving-coil driver technology can achieve at the price. There is also an AE22 Passive option. (acoustic-energy.co.uk)



### ADAM F7

The A7X in the AX series is ADAM Audio’s most popular model, and with the F7, the company presents a brand new speaker with the same dimensions and a similar sound quality, but at a lower price point. The F7, too, features ADAM Audio’s proprietary X-ART tweeter, the most famous of all ADAM inventions, assuring utmost

clarity of the high frequencies. The 7-inch glass fiber/paper-midwoofer comes with a 37mm voice coil. It has been designed to perfectly comple-

ment the ART tweeter, starring in both the deep registers and the musically crucial midrange. The F7 shares the same controls one finds in the F5: a volume knob ( $-\infty$  to +6dB) and two room EQs for both the high (>5kHz) and the low (<300Hz) frequencies. (adam-audio.com)



### Akai RPM8

The RPM8 reference production studio monitors are specifically designed for use with MPC workstations/controllers. RPM8 studio monitors are two-way, active, speakers made with producers, recording engineers, remix artists, DJs and other musicians in mind. Each monitor features an

8-inch woven-kevlar low-frequency driver with 80W RMS of continuous amplification for robust, full bass all the way down to 39 Hz. The monitors’ high-frequency system consists of a 1-inch silk-dome tweeter with 40W RMS of continuous amplification, mounted on a custom, functionally optimized waveguide for excellent control of directivity and reduction of unwanted early reflections. RPM8 studio monitors contain active, fourth-order crossovers for outstanding separation and optimal power management, delivering up to 113 dB SPL and with accurate frequency response from 39 Hz to 20 kHz. (akaipro.com)



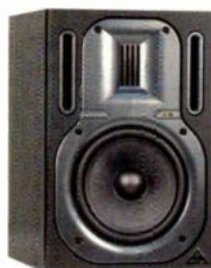
### Alesis M1

The M1 Active 620 is the third generation of the acclaimed Alesis M1 Active Series. With a bold new look, redesigned driver, bass density control and EQ, this affordable, high-precision active reference monitor delivers superb sonic clarity. Specs include a 6.5-inch woofer, magnetically-shielded, with ultra-stiff polypropylene cone with rubber surround and high power handling voice coil (65 watts), 1-inch silk-dome tweeter (30 watts). Frequency response is stated at 49 Hz to 20 kHz; crossover frequency is at 2.8 kHz. The speakers include high, mid and low frequency EQ switches to accommodate user preference and subwoofers. (alesis.com)

### ATC SCM16a

The compact SCM16a active loudspeaker is a robust monitor designed for the accurate reproduction of stereo and multi-channel audio in small- to





medium-sized studios or in remote locations. Incorporating technology called Constrained Layer Damping, the SCM16a features two lightweight driver cones that sandwich a constrained damping layer, said to be more efficient than conventional damping because of the way it shears when the cone flexes. In addition to the CLD-designed 150mm mid/bass driver, the SCM16A features a neodymium 25mm soft-dome tweeter. The upgraded onboard amplifier pack provides 200 watts to the mid/bass driver and 50 watts to HF; the ultralow-distortion design is capable of continuous sound pressure levels greater than 108 dB. Controls include bass level EQ and high-frequency attenuation. ([atcloudspeakers.co.uk](http://atcloudspeakers.co.uk))

#### ATD2 FAR Active

The FAR Active monitor systems in the AV Series include high-quality analog amplification and powerful DSP and CPU, offering easy, convenient and central control of setup via dedicated PC software and remote control. The two-way AV monitors feature a front-ported bass reflex that allows flush mounting and easy placement in the room. ([atd2.com](http://atd2.com))

#### Behringer B3030A Reference Monitor

The B3030A incorporates an ultra-high-resolution, 2-inch velocity-ribbon transducer and a long-throw, 6.75-inch Kevlar-coned woofer (built-in 140-watt biamped) in a die-cast aluminum chassis and an active crossover network with 4th order Linkwitz-Riley filters. There are separately controlled limiters for low and high-frequency overload protection, and servo-balanced inputs with XLR and 1/4-inch TRS connectors. ([behringer.com](http://behringer.com))

#### Blue Sky SAT 6.5 MK II

Blue Sky entered the monitor market with an emphasis on surround systems, and the SAT 6.5 MK II is a reliable, high-performance THX pm3-approved active monitor speaker with a 6.5-inch hemispherical woofer and a 1-inch dual-concentric diaphragm tweeter that has a built-in waveguide for excellent off-axis response. The speaker delivers clear, accurate sound with a low noise floor and an adjustable gain range. A pair of custom-designed 100W amplifiers with optimized electronic crossover power the speaker. The rear panel offers a gain control, 12dB input attenuator, and 80Hz highpass filter for acoustic adjustments, while audio input is via a balanced XLR connector. ([abluesky.com](http://abluesky.com))

#### Dynaudio DBM50

This two-way active near-field monitor includes a 7.5-inch extended-excursion woofer, 1-inch high-resolution soft-dome tweeter, powered by a 2-channel 50-watt amp (crossover frequency at 1500 Hz, with 6dB slope), all in a housing that incorporates a front baffle tilt for desktop placement and a smooth HF waveguide securing optimal near field sweet-spot. Frequency response is stated as 46 Hz to 21 kHz ( $\pm 3$ dB), with max SPL of 117 dB at 1 meter. ([dynaudioprofessional.com](http://dynaudioprofessional.com))

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### Emotiva airmotiv 6

All airmotiv monitors are fully bi-amplified, with a separate amp for the woofer and high-frequency transducer, each offering 210 watts per channel of power—audiophile-grade, with toroid transformer, large electrolytic power capacitors, and stacked metalized film capacitors used throughout. Mixers can use either balanced or unbalanced inputs, tweak the response to fit a studio or room with active crossover controls, and have the convenience of 115V/230V user-switchable AC power, with full override protection. The high-frequency gain, low-frequency gain, and overall gain of each unit are calibrated to within 1.0 dB of reference standard, which allows every pair to deliver stunning imaging and pinpoint placement of instruments in the sound stage. (emotivapro.com)



### Equator Q12

Featuring a coaxial design, the Equator Audio Q12 studio monitor offers an SPL of 114 dB before distortion powered by 500 W to the woofer and 200 W to the horn. The drivers include a 12-inch woofer and a 1.3-inch titanium dome rear firing compression driver. The magnetically shielded cabinet features a 1-inch

HDF baffle and 3/4-inch 13 layer Baltic Birch. (equatoraudio.com)



### Event Electronics Opal EX8

The two-way Opal EX8 features a 1-inch metal-dome tweeter mounted in a unique elliptical waveguide and an 8-inch woofer. The Opal's EX8 mid-low driver is a technical innovation. As a raw speaker it provides a frequency response of 30Hz -10kHz and power handling up to a staggering 1000 watts. The EX8 is capable of reproducing midrange frequencies with the clarity and speed of dedicated midrange drivers. At the same time it can deliver defined and accurate frequencies down to the Opal cutoff of 35 Hz, without resorting to rear-porting and manipulation of the listening space. Two proprietary Event technologies allow for this performance from a single driver: X-Coil and XBL. (eventelectronics.com)

### Focal SM9

One of the many innovations within the SM9 are the two independent monitoring systems housed within the same speaker cabinet: a 3-way monitor equipped with a 1-inch pure Beryllium inverted dome tweeter, a 6.5-inch midrange driver, 8-inch bass driver and an 11-inch passive radiator; and the same cabinet includes a two-way monitor utilizing the same inverted dome tweeter and a 6.5-inch midbass driver. By engaging the Focus mode switch on the side panel of each speaker, the three-way system becomes a two-way monitor with different crossover electronics. The all-an-



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alog amplifiers developed specifically for the SM9: 600 watts of class-AB amplification drives the SM9 on three separate channels, respectively 400 W (woofer), 100 W (midrange) and 100 W (tweeter). Independent left and right speakers are offered at a suggested retail price of \$3995 each. (focalprofessional.com)

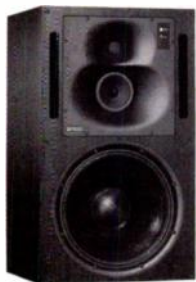
#### **Fostex PM641**

The PM641 is a three-way monitor from Fostex featuring a 6.5-inch woofer, 4-inch midrange and a ¾-inch tweeter driven by a 50W, 18W and 18W independent amplifier. A built-in channel divider provides ideally overlapped frequency cross-overs for smoothest connections between the drivers. The midrange and tweeter are positioned symmetrically on the Left and Right to minimize the physical height of the enclosure boxes as well as to minimize the effect of diffraction. (fostexinternational.com)



#### **Genelec 1038B**

The Genelec 1038B is a three-way active monitoring system including loudspeaker drivers, speaker enclosure, multiple power amplifiers and active, low signal level crossovers. The 1038B is designed to perform well both as a free-standing monitor and flush mounted into the control room wall. The unique Directivity Control Waveguide Technology provides excellent stereo imaging and frequency balance even in difficult acoustic environments. Versatile crossover controls allow for precise matching of the speaker system to different acoustic conditions. The system can be used both in vertical and horizontal orientation by simply rotating the DCW unit. (genelecusa.com)



#### **Guzauski-Swist GS-3a**

From the ears of engineer/designers Mick Guzauski and Larry Swist to yours, this three-way active system features a 2-cubic-foot sealed enclosure housing a 12-inch woofer, 3-inch ATC dome midrange and 1-inch dome tweeter. Frequency response is stated at 28 Hz-18 kHz, ±2dB. The free standing, two-rack-space amplifier takes both analog and digital (AES) inputs and swallows a beefy 12 amps. (guzauski-swist.com)



#### **iKey Audio M-606v2**

The M-606v2 from iKey features a 6.5-inch woven glass aramid composite woofer and a 1-inch neodymium driver on its soft-dome tweeter driven by 65 watts and 25 watts of peak power, respectively. The magnetically shielded cabinet offers front-firing ports plus XLR, TRS and RCA connectors on the rear, as well as Volume and High Frequency controls. (ikey-audio.com)



#### **JBL LSR4326P**

This two-way system from JBL features a 6.25-inch woofer and a 1-inch tweeter powered by 150-watt and 70-watt amplifiers. The 4326P features Room Mode Correction, JBL's exclusive technology that automatically analyzes and corrects the response of each speaker in the room for absolute accu-



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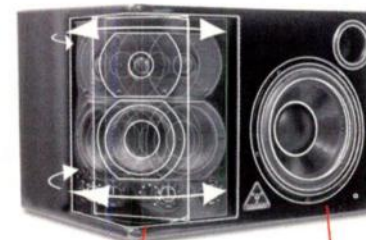
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racy at the mix position. The magnetically shielded transducers minimize interference when used in close proximity to video monitors, and the reinforced enclosure and convenient mounting points make for easy installation. (jblpro.com)



#### **Klipsch RG-61 II**

These compact, passive monitors from Klipsch (15.4 inches H x 8.5 W x 12.25 D) come in black ash or cherry wood-grain vinyl and feature a 1-inch titanium horn-loaded tweeter, 6.5-inch high-output woofer. The RB-61 II features Klipsch's proprietary Tractrix Horn technology promising precision and clarity. The dual binding posts

allow for the bi-wiring or bi-amping of the speakers. (klipsch.com)



#### **KK Labs DS-8**

The KK Labs DS-8 is a powered monitor that includes DSP/Ethernet control with either analog or 24-bit/48kHz AES/EBU digital audio input connections; audio connections are via XLR. The two-way design features an 8-inch woofer and a 1-inch inverted-dome titanium tweeter powered by intergral 350W

and 200W amplifiers. (kkaudiolabs.com)



#### **KRK Rokit Powered 10-3**

The Rokit Powered 10-3 monitor is a state-of-the-art three-way design enclosed in a compact form factor, with tweeter and midrange in a unique rotatable housing; whether they are vertical, placed on their side or wall mounted, the proper orientation of the acoustic axis can be maintained. The radically curved front surfaces mini-

mizes diffraction and provide a wider, more natural-sounding sweet spot from the front-firing slotted ports. The tweeter design of dome and waveguide geometry coupled to the curved front baffle are optimized for on- and off-axis linearity, and the Rokit Powered 10-3 has both Low and High Frequency level controls. (krksys.com)



#### **Mackie MR8mk2**

The MR8mk2 from Mackie incorporates an ultralow-distortion 8-inch voice coil driver with hyperbolic curved cone profile to reduce severe cone resonances and a high-output 1-inch soft-dome tweeter with neodymium magnet to minimize distortion and handle fast transients. Each monitor

includes 150 watts from precision Class A/B amplification with active protection circuits (100 W for LF, 50W for HF), while an optimally sized custom waveguide provides seamless transition of HF and LF. Adjustable HF and LF acoustic controls offer sonic tailoring to your mixing space, and flexible inputs include XLR, TRS and RCA connections. (mackie.com)



#### **M-Audio BX8 D2**

The BX8 D2 from M-Audio updates the BX Series design inside and out. Featuring 8-inch LF drivers with Kevlar cones and a 1.25-inch silk-dome tweeter with integrated waveguide (70W LF; 60W HF Class A/B amplification). Response is 38 Hz to 22 kHz,

crossover at 2.2 kHz. Input sensitivity is 90 dBA at 1 meter. The 12-inch x 10-inch x 15-inch monitor weighs 26.4 pounds. (m-audio.com)



#### **Neumann KH310A**

The KH 310 three-way active monitor features a Mathematically Modeled Dispersion Waveguide with wide horizontal and narrow vertical dispersion, said to provide smoother off-axis

response. The 8.25-inch woofer, 3-inch midrange and 1-inch tweeter are powered by Class AB amplification (continuous, 150W, 70W and 70W), with crossover frequencies at 650 Hz and 2 kHz (24dB/octave slope). Frequency response is measured at 34 Hz to 21 kHz,  $\pm 3$  dB, with max SPL of 114 dB averaged. (neumannusa.com)



#### **PMC twotwo•6**

The twotwo•6 from PMC features a 6.5-inch driver that incorporates the company's ATL bass loading technology and a 1-inch soft-dome tweeter with Class D amplification and a crossover at 1.8

kHz. Frequency response is measured at 40 Hz to 25 kHz, with a max SPL of 113 dB. A powerful DSP engine controls driver response, crossover and EQ, and they were designed to be positioned either horizontally or vertically without compromising imaging. (pmc-speakers.com)



#### **Quested V2108**

The V2108 reference monitoring system from Quested Limited is intended for near-field applications. It applies an 8-inch woofer and 1-inch dome tweeter to designer Roger Quested's well-known driver layout, along with the company's new current-driven, floating drive stage Class-A/B amplification with two channels of 200W to

each of the drivers. The compact cabinet delivers LF response down to 40 Hz. (quested.com)



#### **RCF Mytho 6, Mytho 8**

New from RCF USA are the Mytho 6 and Mytho 8 active two-way, near-field reference monitors. These combine an aluminium/magnesium alloy (with high-excursion soft-polymer surround) dome tweeter and either a 6- or 8-inch neodymium woofer in a front-ported, all-aluminum enclosure. Power is via 200- and 100W Class-A/B bi-amplification to the LF and HF drivers with onboard DSP crossover and equalization. (rcf.it)



#### **Samson Resolv A6**

The two-way, active Resolv A6 with round-edged, ported tuned enclosure includes a 6.5-inch woven carbon fiber woofer and 1.25-inch silk-dome tweeter with neodymium magnets, heat-sink and ferro-fluid cooling, along with integrated low-diffraction waveguide. Power is 75 watts and 25 watts; an ac-



tive crossover utilizes a multi-pole design for linear response from bottom to top. Frequency response is 40 Hz-30 kHz, and there is a four-position high-frequency lift control. XLR and 1/4-inch balanced inputs, unbalanced RCA inputs. (samson-tech.com)

#### **Sonodyne SM100ak**

This two-way active nearfield monitor, designed to appeal to musician/engineers, includes a 6.5-inch Kevlar cone woofer in a diecast chassis and a 1.25-inch silk-dome tweeter with integral waveguide firing through a twin, vented port. Frequency response of 60 Hz to 22 kHz,  $\pm 2$  dB, with max SPL of 108 dB. Amplification is 80 watts to LF, 40 watts to HF, with 4th-order Linkwitz-Riley crossover at 1.8k. Front controls include power switch and volume; rear controls include Gain and four DIP switches for bass/ treble tilts and bass roll-off, with balanced XLR and TRS inputs. (sonodyne.com)



#### **Tannoy Reveal 601P**

The low-distortion 6.5-inch LF/MF driver and 1-inch soft-dome wide-bandwidth tweeter (coupled to an elliptical waveguide) of the Tannoy Reveal 601P extends the amplitude response from 63 Hz to 30 kHz; the passive two-way design recommends 50W to 100W RMS. The sculpted and rigid front baffle design is said to minimize diffraction, and response has been optimized for quarter-space near-field operation, such as on a meter bridge or on a desktop. A front firing reflex bass port negate boundary-coupling. Balanced XLR and unbalanced jack connectors. (tannoy.com)



#### **Trident Audio HG3**

The unique cabinet configuration of the HG3 was designed to solve problems: cabinet resonance, phase distortion, inter-modulation distortion, edge diffraction...but it's the rotating 6-inch-diameter cylinder housing the midrange and tweeter that catches one's eye and provides ultimate listening flexibility. Dual-voicecoil longthrow subs extend smooth response down to below 35 Hz, while the midrange and tweeter, with separate 60W amp, take response to 19.5 kHz. Crossovers, critical in a separate sub enclosure, are set at 320 Hz and 3.5k. The amplification section houses three high-power MOS modules; THD is at .05 percent, with noise level typically below -104 dB. (tridentaudiodevelopments.com)



#### **Yamaha HS80M**

This two-way bass-reflex, bi-amplified near-field studio monitor was designed with flat, accurate response in mind, much in the tradition of the venerable NS-10. Featuring an 8-inch cone woofer and 1-inch soft-dome tweeter (120 watts total power), frequency response is stated at 42 Hz to 20 kHz. XLR and TRS inputs accept balanced or unbalanced power, and the rear includes Mid EQ, Room Control and High Trim switches, along with a Low Cut switch. (usa.yamaha.com)



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# MIX REGIONAL: D.C. METRO

## OMEGA RECORDING STUDIOS

Omega Recording Studios has long been highly regarded by major artists as the place to record while in the Washington, D.C. area, and over the years has hosted such talent as Def Leppard, Michael Bolton and Mya. Omega's Studio A, which comfortably records live groups of up to 70 musicians, has made it the go-to studio for international music publishers. For over 30 years publishers such as De-Haske (Netherlands), Rundel Music (Germany) and Warner Bros. Publications and the CL Barnhouse Company have traveled to Omega annually to record music for symphony orchestra, concert band and jazz big band. In this time of tight budgets, Omega has become the low-cost alternative to some of the traditional music centers. It recently recorded the symphony orchestra and big band tracks for a New York Voices album engineered by Elliot Scheiner, who commented, "I was truly impressed with everything. The staff was incredible."



Other recent orchestra sessions include the scoring for the NBC television special *Their Finest Hour*, narrated by Tom Brokaw, composed by John Keltonic and engineered by engineer Jim Curtis. Other recent Omega projects include shows for Disney and Norwegian cruise lines, and brass band albums for the Salvation Army.



Grace Potter and the Nocturnals at 9:30 Club

## 9:30 Club: Best in U.S.

Steel Pulse made its U.S. debut at 9:30 Club on the night of Bob Marley's funeral, and it was broadcast worldwide. Dylan played there two nights in 1997 as he was receiving his Kennedy Center Honor. The Beastie Boys, after a five-year hiatus, returned to the stage at 9:30. Cyndi Lauper, the Fleshtones, Red Hot Chili Peppers, the Smashing Pumpkins, Jimmy Eat World, Fugazi, Adele...they all have put on memorable performances at 9:30. From 2007-2011 it was voted Top Club at the Billboard Touring Awards; it has been awarded Nightclub of the Year honors four times by Pollstar, the concert industry trade journal. For most of that time, it has also been Pollstar's top ticket-selling club. And it has a killer sound system for its 1,200-capacity space.

The room itself has treatments and has undergone gradual improvements over the years, with baffles hung from the ceiling and balcony-level walls that are perforated with absorptive material behind them. In 2008, Eighth Day Sound contracted for a major update to the sound system, installing a d&b audiotechnik J Series array with eight tops per side over three B2s per side in cardioid pattern. All of the amps are d&b D12 except the sidefills and downfill, which are powered by D6s. d&b E12 outfills are added for when the stage is forward at lightly attended shows. "It's a little bit of overkill for a 1,200-cap room," says senior audio engineer Shawn "Gus" Vitale, "but I never want it to breathe hard." An Avid Venue Profile (mix rack) was moved into FOH in 2008 because most visiting engineers have some experience on the platform.

In summer 2011, Vitale upgraded the monitor rig to seven d&b M2s and eight M4s, all powered by the D12. "As at FOH, not too much EQ is needed to make these wedges scream and sound awesome," Vitale explains. "These are mostly run in biamp mode, unless we have an extraordinary mix count to satisfy." Monitors have a laptop with d&b R1 for monitoring and control. The monitor desk is the Yamaha PM5D RH workhorse, which they've had for almost 10 years with few problems.

"Most days the visiting engineers come in, load their show, tune for 10 minutes max and away we go," Vitale says. "We also have a Dolby Lake processor in front of the d&b amps for additional EQ and delay. The auto sensing on the digital inputs makes it almost seamless when we have visiting desks. We take a neutral, hands-off approach as house engineers. We are here to help if you want or need it, but never meddlesome."





PopMark Media Team: L to R: Jaime Horigan (Studio Manager), Stephen Joseph Antonelli (Co-Founder/Music Production Director), Bill Wienecke (Assistant Engineer), Lisa Horan (Owner/Co-Founder/Creative Director), Shaun Loughran (Marketing/New Media Associate), Kevin Hill (Co-Founder/Audio Post Director), Matt Davies (Sound Designer/Engineer)

## POPMARK MEDIA

A little bit of music, some heavy moves in post, scriptwriting, marketing, social media, corporate advertising, cable TV...Popmark Media has in two short years established an audio footprint in a wide range of markets. A few specific accomplishments:

Lisa Horan and Stephen Joseph Antonelli received top honors in the Great American Song Contest for their song, "Spin This World the Other Way," which they were hired to write for an anti-bullying organization called Rock the Rage. Kevin Hill, working out of Studio Unknown (inside PopMark), a Dolby Tuned and Print Master-approved dubbing stage, did the full sound package, edit to mix, for *Lovely Molly*, *Red Robin* and the feature-length documentary *Soldiers of Paint*. And the music production division (All About the Song), led by Antonelli, was contracted to write and produce custom music for such entities as The Discovery Channel, Syfy Channel, National Geographic and the World Bank, among others, as well as develop the score for a local university's theme song.

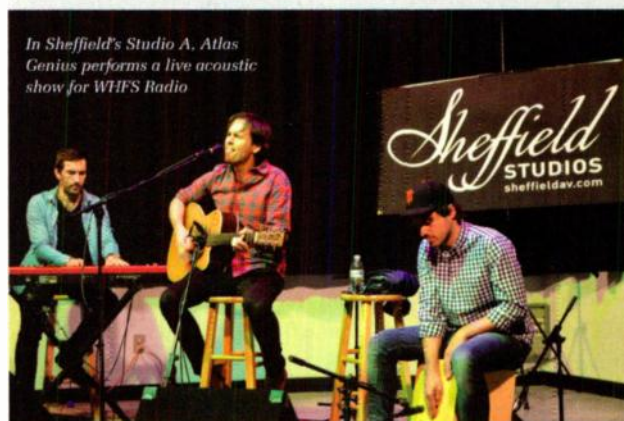
## Bias Studios Maintains 40-Year Tradition



Mike Mars of Motley Crue in Studio A, where he was adding overdubs to a Frank van der Horst project, engineered by Dawson

For more than 40 years, Bias Studios, Springfield, Va., has been serving the D.C. area with its primarily API (Gold Seal in Studio A, 3288 in Studio B) and vintage-equipped, Tom Hidley-designed three-studio complex. Owned by local legend and two-time Grammy-winner Bob Dawson, the facility continues to host both established and up-and-coming artists. Staff producer/engineer Jim Robeson, who has been at Bias since 1980 and won two Grammys for projects with Cathy Fink and Marcy Marxer, adds arranging, songwriting, production and engineering to the facility's services.

## Sheffield Does It All



Sheffield Recordings is entering its 45th year of operation, and the company shows no signs of slowing down: High-end studio recording out of an SSL Duality Studio A or Yamaha DM2000 Studio B; remote recording out of the Sheffield AV truck; HD Video production and editing suites; new media creation and delivery; and since 1995, an intensive education program called the Sheffield Institute.

Recently, Sheffield established a partnership with local alt-rock station WHFS for a "live in studio" program called Just Passin' Thru. The station lines up an artist on their way through town to do a live acoustic show at Sheffield's SSL Duality-equipped Studio A, where it is simultaneously recorded and broadcast. The shows typically include a few acoustic versions of the artists' best-known songs and a Q&A for a small audience made up of contest winners. In the closing months of 2012, Studio A hosted EVE 6, Dirty Heads, Silverversun Pickups, Switchfoot and Atlas Genius.



# JAMES MCKINNEY

**J**ames McKinney is a happy man with an infectious smile and a passion for all aspects of music production. He is a true multi-hyphenate, working as songwriter, arranger, producer, performer, label owner and industry advocate through his position as Trustee of the local chapter of the Recording Academy and co-chair of the P&E Wing. He has performed for three U.S. presidents and played onstage with Stevie Wonder, Kenny Burrell and many others. But he is most proud of his current production work with indie artists such as Wayna and Kokayi (2009 Grammy Nomination for Best Urban Alternative Performance), and Carolyn Malachi (2011 Grammy Nomination for Best Urban Alternative Performance), for which he co-wrote, played on and produced. New releases coming out this year include Carolyn Malachi, Chuck Brown and Wale, to name a few.

***So I understand you were working with Chuck Brown when he passed, and now you are working with him posthumously.***

Yes, I was really blessed to work with Chuck on his last recording, and this whole posthumous album I am now doing is a great honor for me and hopefully a treasure for his home city, Washington, D.C. We had a really good chemistry in the studio—happy, having fun and grooving! He sounded great on the Sony C800G, getting all of the depth and growl in his 76-year-old voice. I actually ran his Strat straight from his wah-wah pedal into the new SSL AWS 924 and got a perfect recording in one take. I am so impressed with Chuck and all of the wisdom in his musicality coming from his 76 years of life and performing. This is an important record for me being a 20-year transplant to D.C. from Florida. You can't come from D.C. and not be influenced by Chuck Brown and Go Go Music!

***You are a writer, player, arranger, producer, engineer—sometimes all at once. How does any one skill set influence the others?***

I think they all complement each other well, although the technical perfectionist side of engineering can sometimes get in the way of creative flow. It all really comes down to the music and the feeling.

I love the process of having a song concept and banging it out with the artist in the studio. I am playing keyboards while programming a beat, singing with the artist and tracking a scratch vocal simultaneously! Sixteen bars of a groove in Logic Pro in 10 to 15 minutes, "That sounds nice! Let me set up the mic," then it is the CharterOak SA538 from the Focusrite Red 8 or the silky Manley Reference Cardioid straight into the Apogee Ensemble (due for an upgrade to the Symphony I/O), no compression, because I'm crazy like that and like a good signal with some headroom. I took George Massenburg literally when he said, "Engineers have become lazy; move the fader when recording!"

***The musician and the engineer. Do your left brain and right brain always work together? Or do you find time for each?***

I think I am mostly right brain/right brain, again about the feeling and vibe, but I try to set up a clean chain in advance for everything so the creativity can



just flow. If it needs to be dirty, I can do that later in the process. The music is the most important thing, and in my process, I want the mix engineer to understand music and to mix musically. One of the best mixing engineers I ever worked with was Scotty Beats, who passed away in 2006. He was the only mixer I knew who would close his eyes to find the Q and frequency when EQ-ing a track or moving a fader, and the results were always so exact, but also so musical! It is all about the music.

***You work at home in preproduction, and in studios all over town. What is your production process, and who do you work with?***

Again, I am so blessed! I work at studios all across the country. Locally, I do most of my work at Night Flight Studios with Kevin Jackson Jr. as an engineer, and Kevin Jackson Sr. as my mix engineer. I also frequent Blue House Studios with engineer/owner Jeff Gruber, and I am one of the lucky few who gets to work in the elusive Yoko K.'s private studio with her. I have also done some great recordings recently at Omega Studios, Bias Studios, XM/Sirius Radio Studios and even at the Art Institute of Washington with engineering students there.

Nationally, I work a lot in New York at Eusonia Studios with my business partner Scott Jacoby. In L.A., I frequent producer DJ Khalil's personal studio as well as producer Salaam Remi's personal studio.

***You are also very active on the P&E Wing with advocacy and leadership. Where is our recording industry right now, and what do you see changing over the next five years?***

Greater awareness and availability of high-quality audio for digital consumption and awareness for consumers; more availability of credits for producers and other music creators in digital delivery such as with iTunes sales and Amazon music sales; and a continued support on issues like The Performance Rights Bill on Capitol Hill. I am so proud to be part of the Grammys, an organization that advocates for music-makers' rights, and the P&E Wing, which drives those efforts and continues to raise the bar for the standards of the recording arts as well as listening standards for the consumer.



# "THE DRUMMER'S SECRET WEAPON!"



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World Radio History



# SMITHSONIAN FOLKWAYS

## *Respect for Tradition*

by Barbara Schultz

No trip to D.C. is complete without visiting the Smithsonian. From Washington's uniform to Dorothy's Ruby Slippers to Pollack's paintings, essential artifacts of our national culture have been curated there since 1846. So as part of our "visit" to the D.C. audio community, we called on Pete Reiniger, chief engineer at Smithsonian Folkways, the nonprofit record label of the National Museum.

Smithsonian Folkways is "young" compared to the Institution as a whole. It was created after the acquisition of Moses Asch's Folkways label in 1987. (Folkways was started by Asch in '48.) Today, Smithsonian Folkways holds the catalogs of several labels, amounting to more than 3,500 titles.

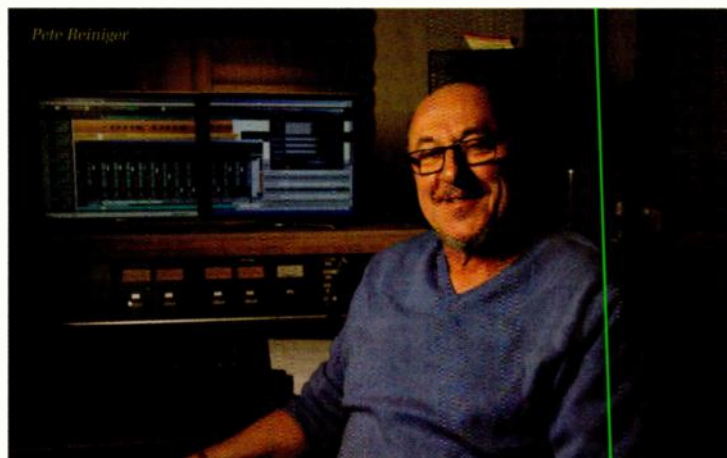
Reiniger works on the majority of new releases that carry the Smithsonian Folkways imprint—sometimes recording and/or mixing, sometimes mastering only. "If I track and mix a project, I'll bring it to another studio to be mastered because it's best to have another pair of ears," he says.

Four Smithsonian Folkways projects are nominated for Grammys this year: new albums by singer/songwriter Elizabeth Mitchell and Latin folk/rock band Quetzal, a banjo-centric album by Stephen Wade, and *Woody at 100*, a three-disc collection celebrating the centennial of Woody Guthrie's birth.

Reiniger flew to L.A. to track Quetzal's *Imaginaries* (nominated for Best Latin Rock, Urban or Alternative Album) in Joel Soyffer's Coney Island Studios ([coneyislandstudios.com](http://coneyislandstudios.com)). Led by singer/multi-instrumentalist/composer Quetzal Flores and his wife, musician/composer/singer Martha Gonzalez, Quetzal combines traditional Latin instruments with rock music and Gonzalez's jazz-leaning vocals.

"Two engineers working at the studio, Alberto Lopez and Camilo Moreno, helped on those sessions," Reiniger recalls. "Camilo is also all over that album as a percussionist."

"We recorded to Pro Tools, but with everything passing through the electronics of a 24-track analog tape machine. That enhances the sound in an analog fashion. The Massenburg mic pre's were a big plus. Everything was tracked separately, with many instruments done individually as overdubs, particularly the percussion. We started Martha's vocals in an isolation booth, but I could hear the room tone, so we moved her out into the big room."



Reiniger has developed a philosophy about miking unfamiliar instruments, like some of the folk pieces he encounters: "Never mike an instrument you haven't first listened to acoustically. After that, it's just physics as to microphone selection and placement."

Reiniger brought the Pro Tools files back to D.C., where he works on a PC-based Cube-Tec AudioCube system fitted with Nuendo and Wavelab. "I've used Nuendo for years and prefer mixing in it," he says. "But on the title track, we briefly exported the intro into Pro Tools because Quetzal wanted an old radio-type sound that he knew we could create with a plug-in in Pro Tools, then brought it back into Nuendo."

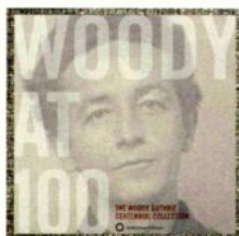
Reiniger sends his mixes to Airshow ([airshowmastering.com](http://airshowmastering.com)). "They do a great job. I've been working with David Glasser and Charlie Pilzer for years," he says.

For in-house mastering projects like *Woody at 100*, Reiniger says, "The rig is the same, but I use Wavelab for editing. All the restoration plug-ins are from AudioCube."

Reiniger appreciates AudioCube's Spectrapolator, which allows him to select and remove anomalies at specific frequencies. Restoration tools also include a Declicker, a Dehisser, a Debuzzer to take out AC hum, and a Repair Filter, among others. "Brickwall EQ is another mastering and restoration tool, but I use it sometimes in mixing, too, because if you have a lot of extremely low frequency and you want to get rid of everything below 30 Hz, say, you can get rid of it by selecting a highpass filter."

Many of the tracks on *Woody at 100* were previously remastered for Smithsonian Folkways' releases and simply had to be sequenced and balanced. Some were cleaned up a bit more. About a third, however, were previously unreleased songs that had to be transferred, restored and mastered.

"Our philosophy on remastering and restoration goes back to reissuing the *Anthology of American Folk Music*, which we did in 1997," Reiniger says. "There were people who wanted us to get rid of all the noise, but our attitude is, if it starts digging into the music, we will stop. If that leaves a little hiss, you live with the hiss. Sometimes we'll find what we call a 'once around,' a swishing sound that you get from discs; that's almost impossible to get rid of because it's not a steady-state frequency. That would have to remain. I'm trying to make historical recordings more listenable to a contemporary ear—for people who may not even remember LPs let alone 78 rpm transcription discs. But I always approach with caution, because we don't want to do any restoration work that will compromise the musical content."





# se·lec·tion [ sə'lekSHən ]

noun

1. the action or fact of carefully choosing someone or something as being the best or most suitable
2. a number of carefully chosen things
3. an extensive variety of tones for a sound engineer's sonic palette



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# AskEddie

By Eddie Ciletti

## POWER SERGE

Three-and-a-Half Geeks Revisit a Classic Synth



**A** Serge Modular Synth has been in my shop this fall for a little TLC. It's filled with late '70s-era 4000 Series C-MOS ICs, so it's technically straightforward. But it's such a unique piece of gear, the kind of technology that begins to ask its own questions. In this case, the questions start with its user interface, which is unlike the more familiar Mini Moog and ARP 2600-style "touring" synths that the world is more familiar with. I've invited a few of my friends to share some insights after a brief introduction based on a conversation with Logan Erickson.

### FOUNDATION

The typical (analog) synthesizer convention consists of four primary building blocks: a Voltage Controlled Oscillator (VCO), Filter (VCF), Amplifier (VCA) and Envelope Generator (EG). You can think of it as a four-wheeled vehicle that is relatively linear and easy to drive. The Serge panel system has the four basic wheels (VCO, VCF, VCA and EG), but it's what you don't see that makes it more like assembling a continuous track system for a tank, with the ultimate benefit of having control over every element within that system.

In addition to using a conventional VCO, there's a "hidden option" to roll your own oscillator by patching together multiple non-oscillator modules—envelope generators, for example. This approach requires, and ultimately teaches, a deeper understanding of synthesis. Also, the typical sequencer has an internal clock source, while the Serge uses a module called the Dual Slope Generator for its timing. When mastered, the Serge Modular Synth provides much wider—and *wilder*—control of *everything*, like being able to choose the size, shape and placement of each tank "wheel" to expand the possibilities of how the tank can move. I think of this as "event-based synthesis."

Serge systems are typically described in terms of 7x17-inch "panels" that could be customized with an assortment of module options. The 1970s panel systems are known as "paper faced" due to the thin white piece of printed paper with geometric shapes labeling each function of the module. Later the Paper Faced System was replaced with a more rugged aluminum panel with silkscreen-style labeling of each function.

More recently, Serge Panels have morphed into fixed-module arrangements. While this makes manufacturing easier and more cost-effective, the set group of modules per panel may or may not fit all customer preferences. That said, the current build quality is audiophile/military-grade.

### ABOUT THIS SERGE...

Frank L. Eaton, the original owner, provides his synthetic right of passage:

"During my junior year at Oberlin College (1977-78), I bought a six-panel Serge Modular Synthesizer in kit form. At that time, Serge was the competitor and economic alternative to the Buchla. My classmates Marc Canter (founder of Macromedia and social media agitator) and Bob Ostertag (avant garde composer) also bought their Serge modulators at about the same time.

"The kit consisted of assembled circuit boards, pots, wires, graphics and metal boxes, together with instructions. I recall the assembly time being about 40 hours and that the process severely tested my soldering skills! Serge Tcherepnin, the eponymous founder, was very patient in fielding questions from his small workshop in California and appreciated the three Oberlin kids putting his product to use.

"The instrument is an amazing piece of technology that inspired hundreds of hours of experimentation, from live improvisation to heavy studio use. I used it actively until I sold my recording studio, Noise New York, in the late '80s. Since then, I would take it out on rare occasions until about a year ago, when I contacted Eddie to do a major overhaul. Future plans are to integrate the Serge into a home digital studio."

### WEST COAST CULTURE

Thanasi Frentzos (gonzosynthesis.com), a mod and repair guy in Minneapolis with a penchant for analog synths and drum machines, says:

"Over the last couple of months I've stumbled upon some surprising insights, either while researching the Serge Modular Synth or by way of various books that I just happened to have been reading at the same time.

"In *The Serge Modular Creature: An Unauthorized User's Manual*, Ken Tkacs describes Moog-style 'East Coast' synths as effecting sound at the molecular level, while the 'West Coast' synths by Buchla and Serge allowed sonic manipulation at a more 'atomic' level. In doing so, I feel the West Coast synths expanded the consciousness of sound. Wendy Carlos describes Bob Moog on her site as 'a creative engineer who spoke music: I was a musician who spoke science.'

"Don Buchla and his contemporary, Dr. Robert A. Moog, both released their first products in the '60s. Buchla completed his first in 1963; Moog demonstrated his contribution at the 1964 AES. Moog was trying to create something that could replicate orchestral and band sounds, using a conventional keyboard. Buchla wanted to bring unique and completely original sounds to electronic music. Outside of synth circles, Moog's name is perhaps better known, but Buchla managed to make



his mark in the history books both in music and counterculture.

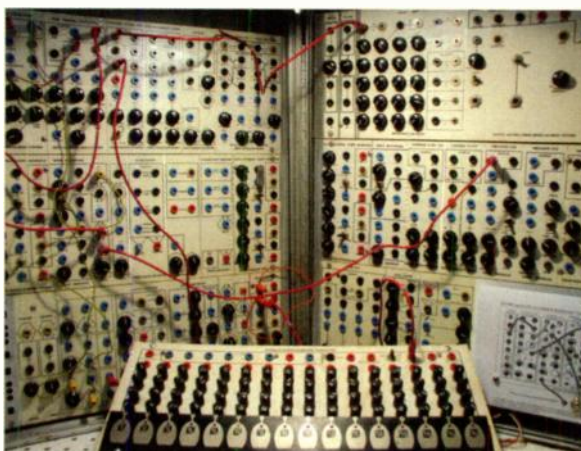
"Buchla is mentioned in Tom Wolfe's *Electric Kool-Aid Acid Test*, a book that documents the West Coast hippie culture of the 1960s through the eyes of Ken Kesey and the Merry Pranksters. It was a time of pushing boundaries of the mind as well as of light and sound, inadvertently laying the groundwork for our current concept of multimedia concerts. Buchla continued developing new ways to dig deeper down the rabbit hole, expanding the technology as well as the sonic possibilities. Then Serge came along in the 1970s and kept on digging.

"While late to the party, I'm very glad to finally have a chance to explore such a wonderfully crafted shovel, as both an electronic musician and a tech."

### SYNTHS IN HIS BLOOD

Logan Erickson is the owner of Low-Gain Electronics, a small Euro-rack-format modular synthesizer manufacturer and custom audio electronics designer ([low-gain.com](http://low-gain.com)). An electronic musician and DIY synth enthusiast by night, he is the production manager at Great River Electronics by day. A 100-percent synth geek and proud of it! He says:

"When it comes to pop culture, electronic dance music has be-



come the new norm, and synth geeks are finally getting their well-deserved 15 minutes of being 'cool.' While always popular within the DIY community, a renewed interest in synthesis has inspired a new wave of analog (and digital) modular synthesizer manufacturing!

"After finally getting to see a vintage paper-faced Serge Modular System, I immediately started snapping pictures and posting them online. Quite a few people shared their stories, and a bit of history unfolded before my eyes. It was great to see

how the old systems were made, and it might surprise many that the Serge Modular has been in continuous production since the 1970s. (Serge is now STS—Sound Transform Systems—no Website, but you can call 262-367-3030.—Ed.)

"I wasn't always so impressed. I often wondered, 'What is so great about Serge that justifies the huge price tag?' Then a friend forced me to sit down and patch up his six-panel system, and this one humbling experience flipped my opinion 180 degrees!"

For more info about Serge Modular, visit [serge-fans.com](http://serge-fans.com).

Mix Contributing Editor Eddie Ciletti can be reached at [eddie@tangible-technology.com](mailto:eddie@tangible-technology.com). Send him your Serge story!

**"SIMPLY AWESOME."**

"Lectrosonics gear is built like a Mac truck. We travel the world and in all the time we've been using this gear, I've never, ever had any issues. Lectrosonics' durability is, in my opinion, unsurpassed." - Lorenzo Banda, Monitor Engineer, Foreigner

Pictured: Kelly Hansen, Foreigner lead vocalist with the HH transmitter.

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# Tech // new products



## WAVES REDD CONSOLE PLUG-INS

### Abbey Road in Your DAW

The REDD console plug-ins from Waves ([waves.com](http://waves.com)) model the custom-designed consoles built by and named after Abbey Road Studios' in-house Record Engineering Development Department. Waves meticulously re-created the unique color, character and tonal complexity of the original desks: the REDD.17 still belonging to Abbey Road Studios, and the REDD.37 console now owned by Lenny Kravitz. Controls include amp selectors, bass lift, classic and pop EQ types, high and low tone controls, stereo spread, drive and more. Both REDD.17 and REDD.37-51 are Native- and SoundGrid-compatible and are available at an MSRP of \$349.

## EIOSIS AIREQ

### New Parametric Spin

Software designer Fabrice Gabriel has released the AirEQ (\$TBA) by EIOSIS ([eiosis.com](http://eiosis.com)). Features include Character Control, allowing transparent, tight boosts and cuts in the digital domain, with three curve shapes, including Water for transparent, open and natural EQ; Fire for precise and focused boosts and cuts while maintaining a tight phase-response; and Neutral for more standard analog equalization curves. Other bands include Air for an easy one-knob HF boost, and Earth, bringing deep and solid sub frequencies.



## NEUMANN KH 310 A MONITORS

### 3-Way, Near-Field Studio Speakers

The new KH 310 A monitor from Neumann ([neumannusa.com](http://neumannusa.com); \$TBA) features newly developed drivers including an 8-inch woofer, 3-inch soft-dome midrange; and an alloy-fabric dome 1-inch tweeter. Three Class-A/B amplifiers (150W, 70W, 70W) provide power. Other features include acoustic controls for bass, low-midrange and high frequencies, system status indicators integrated into the backlit Neumann logo, and an extensive range of accessories offering diverse mounting options.



## ARGOSY SPIRE SPEAKER STANDS

### A Stable Solution

Argosy Console ([argosyconsole.com](http://argosyconsole.com)) has released the IsoAcoustic-enhanced Spire Speaker Stands, which provide an attractive and stable solution for studio monitor isolation. Two models are offered in the line: the Spire 420i (\$399), with a height of 42 inches, and the Spire 360i (\$379) measuring 36 inches. Features include 5x 4-inch powder-coated substrate for stability and resilience, die-cut side panels, and beveled edges. Argosy's new stands feature integrated IsoAcoustics-patented technology, designed to keep all movement on-axis to move in the direction of the speaker cones' travel, while resisting movement in other directions. The result is tightening of the low end as well as improved stereo imaging.





## CAD AUDIO SESSIONS MH510 HEADPHONES

### Hot Look, Quality Cans

The MH510 headphones from CAD Audio ([caduudio.com](http://caduudio.com); \$159) promise superior sonic performance, ample volume and exceptional isolation. Each unit comes with two cables (coiled and straight) and two sets of ear pads, and can be bought in four colors including black, white/red, black/chrome and black/orange.

## BETTERMAKER EQ 232P

### Hardware Meets DAW Control

TransAudio Group ([transaudiogroup.com](http://transaudiogroup.com)) is shipping the Bettermaker EQ 232P ([bettermaker.eu](http://bettermaker.eu)), a flexible 2-channel analog equalizer that updates a classic design and adds the digital accuracy, repeatability and consistency of a plug-in. The unit can be bought with full controls (\$4,950) or with a blank front panel for exclusive DAW control (\$4,250.) The EQ 232P offers a 12dB/octave highpass filter covering the range 18 to 200 Hz, two active parametric filters from 45 to 1k Hz and 650 to 15k Hz, plus a PEQ section featuring high- and low-frequency shelving passive filters, each with separate boost and cut. Settings may be saved in up to 399 presets in the unit's internal memory, and may additionally be fully automated, and all settings saved with the DAW project using the supplied software plug-in.



## MAGMA PE3R 3-SLOT PCI CHASSIS

### New Life for Old Cards

The latest expander from Magma ([magma.com](http://magma.com)) goes old school, allowing legacy PCI cards (Pro Tools|HD, UAD-1, TC Powercore, Lynx Studio, MOTU, RME, Apogee, etc.) to be used in a tower or laptop (\$1,499). The chassis attaches to a PCI or PCIe slot (a host card is included), and requires no software for installation. Laptop users can also take advantage of the PE3R's capabilities by using it with a PCMCIA or ExpressCard connection. All cards installed in expansion chassis are transparently available to the host system and operate at 64-bit PCI speed.

## SOUNDTOYS RADIATOR

### Altec Hardware Mimic

SoundToys' ([soundtoys.com](http://soundtoys.com)) Radiator software plug-in (\$129) models the Altec 1567A tube mixer from the 1960s. Features include bass and treble tone controls, a mix control for easy parallel processing, and the saturation and harmonic effects of the original hardware's input and output amplifiers. Radiator also includes Little Radiator, a simpler single-stage tube preamp model based on the Altec 1566A hardware, the little brother of the Altec 1567A.





# New Sound Reinforcement Products



## SKB SENNHEISER CASE

### Protection for Your Wireless

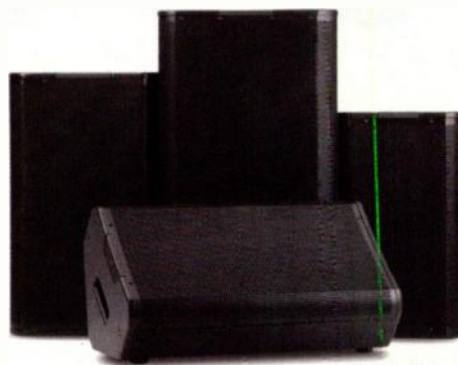
The SKB 3i-1711-SEW case ([skbcases.com/music](http://skbcases.com/music); \$129) provides sturdy housing for the entire Sennheiser EW Wireless Microphone package, including the receiver, antennas, handheld mic transmitter, bodypack transmitter, lavalier microphone, mic clip, power supply, a spare set of AA batteries and additional accessories. The case is molded from ultra-high-strength polypropylene copolymer resin, featuring a gasketed, water and dustproof, submersible design (MIL-C-41501) that is resistant to corrosion and impact damage. Other features include stainless steel molded-in hinges, patented "trigger release" latch system, comfortable, snap-down rubber over-molded cushion grip handles, and automatic ambient pressure equalization valve.

## QSC ACOUSTIC PERFORMANCE LOUDSPEAKERS

### Great Sound, Good Looker

Ideal for a variety of installed sound reinforcement applications that require high SPL and a stylish enclosure, the QSC AcousticPerformance Loudspeakers ([qscaudio.com](http://qscaudio.com); prices start at \$1,449) feature a 3-inch voice-coil, high-power-capacity compression driver combined with high-output woofers. AcousticPerformance models may be used in passive (full-range) mode to minimize amplifier channel count, or bi-amp mode for greater control and performance. To further enhance performance, bi-amp and full-range tunings

using QSC Intrinsic Correction techniques are available for Q-Sys and future QSC products. AP-5102/5122/5152 models are available in black and white finishes. AP-5122m is available in black only.



## DPA D:FACTO II VOCAL MICROPHONE

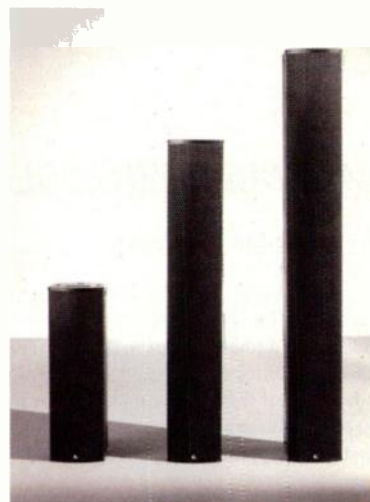
### Versatile Live Performer

Not only does the new d:facto II vocal microphone promise superior DPA sonic performance, it also offers singers and engineers a versatile adapter system featuring seamless integration with many professional wireless systems. Equally at home in sound reinforcement and recording applications, the d:facto II features extreme SPL up to 160 dB, superior gain before feedback, and a robust three-stage pop protection grid built into the microphone. The cabled version of the d:facto II, as well as the adapters for Shure, Sony, Lectrosonics and Wisyscom, will be available this month with adapters from Sennheiser systems coming later.

## FOHNN FOCUS MODULAR SERIES

### Active Line Array System

German loudspeaker manufacturer Fohhn Audio ([fohhn.com](http://fohhn.com)) has released the first of its new Focus Modular electronically steerable, active line array systems (\$TBA). The series comprises three active systems: the FM/FM1-100 high-frequency module containing 8x1-inch compression drivers with Fohhn HF Waveguide and horn; the FM/FM1-110 high-frequency module containing 16x1-inch compression drivers with HF Waveguide and horn; and the FM/FM1-400, a low-midrange module equipped with 32x4-inch long-excursion speakers. The systems are powered by multichannel Class-D amplifiers and a specially developed multichannel DSP processor for beam steering capability. A second DSP provides access to a range of audio tools including parametric 10-band EQ, compressor/limiter/noise gate, delay, x-over, status and temperature monitoring and tone generator (sweep tone and pink noise).





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# Tech // reviews

## RADIAL GOLD DIGGER AND CHERRY PICKER

Desktop Microphone and Preamp Switchers



**R**adial Engineering is known for releasing a steady stream of handy products that provide simple solutions to common problems. One of the best things about Radial gear is that every one of the company's reasonably priced boxes feels sturdy and well built, using high-quality, clean-sounding components. The latest pair of units in the fleet are the Gold Digger microphone selector and the Cherry Picker mic pre-amp selector. Both are small, portable units that offer a streamlined feature set, keeping the operation mindlessly intuitive.

### GOLD DIGGER

The purpose of the Gold Digger is to allow an engineer to audition up to four mics with ease. When working in a room with a large-format console, it is easy enough to connect different mics to different I/O strips, bus them to a common path, and mute or solo between them. In today's DAW-centric world, however, more engineers are investing in one golden vocal chain and using that with a variety of mics. Switching mics can then mean re-patching or re-cabling, and by the time everything is un-muted and level-matched, it can be difficult to remember exactly what the last combination sounded like. The Gold Digger fixes all of this.

The Gold Digger is housed in a thick steel enclosure with four female XLR connectors and one male XLR bolted firmly to the back panel. The AC adaptor attaches snugly to an input on the back panel. The front panel provides buttons for switching between each of the four mics, as well as recessed rubber trim knobs for each input and a recessed phantom-power button per channel. A green LED below each selector button indicates which mic is live, and a red LED indicates that phantom power

has been engaged. The overall weight is substantial, but a soft foam-rubber pad covers the bottom of the unit, alleviating concerns about scratching whatever surface it sits upon.

Because it's heavy, you may think that this box is full of transformers that will color the signals passing through. That's not the case. The circuit path in and out of the unit is completely passive and devoid of all circuitry. Aside from wire, the only thing in the path is the trim control, which is a variable resistor, not an active amplifier. The power supply is only for phantom power and the active, relay-based switching circuitry. That switching uses toggle switches, so you never have to turn one mic off to turn the next one on.

I used the Gold Digger for vocal, ADR and guitar tracking. The ability to provide phantom power from the unit itself is a huge bonus. For one, when switching between a U 87 and a Shure SM7 on vocals, the idea that phantom power can already be applied to the U 87 on standby, and ready to go when that mic is tapped, is pretty convenient. Switching mics with phantom power active on the preamp would mean audible power arcs with every switch. The Gold Digger's onboard phantom power overcame that nicely. The trim controls were equally handy. Naturally, a passive ribbon mic has a lower output than a condenser, so your brain's louder-is-better mechanism can easily cloud decision-making. The trim control eliminates this and kept

### TRY THIS

When recording dialog replacement for a film, the goal is to match the tonality of the original production sound recorded on set. This way, it will be easier to blend production sound that is kept with the new ADR vocals to complete the scene. For this reason, it is helpful to set up a close shotgun mic and a distant shotgun mic on the ADR stage and pick which mic to record based on the nature of the shot. The Gold Digger is a great way to switch back and forth between these two mics and speed an ADR session along.



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# Tech // reviews

## SIMAUDIO LTD. MOON 3500 MP PREAMP

Two Channels of Great-Sounding, Pristine Power



**I**n making a microphone preamp, there are two basic approaches: Personality boxes with transformers, tubes or other color enhancers; or clean, quiet and hands-off. The Moon 3500 MP is the latter, coming from an audiophile company that has been making high-end gear for more than 30 years. Simaudio is a Montreal-based, hi-fi audio manufacturer that has stepped into the pro arena with the release of this 2-channel, super-clean preamp that benefits from the designs of the company's other, and often more expensive, gear.

### CLEAN DESIGN

The front panel of the 3500 MP is simply laid out with a detented gain knob that provides up to 66 dB of power in 2.5dB increments, and a smaller, variable, unity gain and lower trim pot that knocks down the output up to 3.5 dB. Other switches include Mute, Phase and Phantom power for each channel, and a front panel power switch that works in tandem after the main power rocker on the rear of the unit. Ins and outs are on balanced XLRs and the power supply is a slickly designed unit inside the box.

Popping the lid reveals twin circuit boards for the two channels and a secondary power section to the right that is floated from the main chassis and is separately isolated. The power section uses two, ultra-low-noise toroidal transformers: one for the audio sig-

nal circuits and another for 48-volt phantom and control circuitry. Crosstalk between channels revealed by our Audio Precision APx525 test and measurement unit is extremely low at -116.381 dB (channel 1) and -113.667 dB (channel 2; download the rest of the bench test at [www.mixonline.com](http://www.mixonline.com)). All the other details are as you'd expect: There are no electrolytic capacitors in the signal path (non-phantom mode), the potentiometers are Swiss-made with gold-plated contacts, the output stage supplies high current and is capable of driving 600-ohm loads, and the circuit board is made with pure copper tracings and gold plating that yields low-impedance characteristics.

### TRULY REVEALING

I first used the Moon on different drum tracking sessions, mostly on overheads and kick and snare. I first powered a pair of DPA 2011 microphones suspended over a drum kit and loved the results. The combination offered clean, clear transients of the overall kit and a beautiful rendering of the cymbals and hi-hat. After a few sessions, I kept returning to the use of the 3500 MP on kick

### TRY THIS

If you have a clean preamp or two in your collection and you're torn as to where to use it on a larger session, opt for the most-transient instruments.

In my tests with the Moon 3500 MP, this philosophy gave me the best results overall, with punchy, in-your-face transients that supported the rest of the tracks, even when the other mics and preamps weren't my favorites.



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me from having to make dramatic changes to my signal chain's compressor after each mic selection.

My only dig on the build would be that the toggle buttons have a little wiggle to them. Given that they never actually "click in," but instead just depress, it's relatively easy to slide off the button with your finger before a mic selection is made. There was also a noticeable popping sound when switching mics. It wasn't nearly as loud as a phantom-power spike, but it was a little jarring at first. This was present whether using dynamic mics or condensers, so I'd assume the relays were the culprit. Aside from that, though, the Gold Digger worked great. [Editor's Note: Radial Engineering states that the problem is not in the relays but an inherent problem when interfacing various pieces of gear together. Rather than adding any form of buffers or filters as preventative solutions, Radial feels this is a small tradeoff.] When I compared recordings with or without the unit in the circuit path, I heard no noticeable noise or coloration imparted into the audio by the Gold Digger. The transient response did not seem to be affected in any way, nor was any signal subject to any greater likelihood of distortion.

If you have a studio or setup that focuses primarily on mono vocal tracking, this is a buy that will greatly improve your workflow. Similarly, if you like to have everything set up for large sessions before the artist arrives, but want to present options for your vocal mic, this is your box. The ability to quickly switch between mics, the cleanliness of the circuit and Radial's dedication to preserving the integrity of the input signal make this a great choice for any studio.

#### CHERRY PICKER

The Cherry Picker is kind of the opposite of the Gold Digger, in that it allows an engineer to connect one microphone to a selection of four preamplifiers and compare their sounds. The Cherry Picker is built into the same type of enclosure as the Gold Digger, with thick steel walls and a generous weight supported by foam-rubber pads at the bottom. Again, XLRs are bolted firmly to the

back, but this time it's four male and one female. The front panel also echoes the Gold Digger with slightly wiggly selector switches, each accompanied by a selection-indicator LED. Each input features a lift button to eliminate ground loops. On the Cherry Picker, one recessed phantom-power button engages 48-volt phantom power to the mic before its signal is fed to any of the preamps. An input mute button is provided, which can be handy for avoiding noise and pops when engaging phantom power or moving mics around.

The Cherry Picker is also designed with the same type of colorless, noise-free circuitry as the Gold Digger. "Military grade" active relays are employed for switching between signal paths; selecting one mic pre overrides another with toggling selection buttons. Naturally, there aren't gain controls for each channel path as seen on the Gold Digger, because the signal will be fed to a gain control directly, so with this unit, audio literally encounters straight wire between the input and output.

At times, using the Cherry Picker was an eye-opening experience. There were certain subtle details unique to different familiar mic pre's that I had never really noticed until quickly A/B'ing them using this unit. Little noise issues or over-enunciation of particular frequencies were revealed with much more prevalence than I had noticed before. After use, I've never felt more confident that I had the right pre for the job when hitting Record. The only thing that could make this work more smoothly would be if they could

fix the small popping sound during switching—much slighter than the Gold Digger's, but it was still quite audible. If there were an auto-mute during switching, that would be preferable. Instead I found myself manually engaging the on-board Mute button before each switch.

Monitoring and comparing the pre's required using four inputs to the DAW interface. If you're working with an interface that has limited I/O, eating up four of them for one mic signal could quickly become a problem. If you're accustomed to using a high-end, 2-channel A/D converter like a Benchmark ADC1 USB, then the Cherry Picker will not even be able to stand on its own. Some sort of mixer to combine the outputs of the different pre's together to one input will be necessary. If Radial combined the Cherry Picker, the Gold Digger and a mixer like its WM8 into one box, it could still price out for significantly less than the cost of the Manley MicMaid, and offer a nearly identical feature set as that unit.

While the original intent of these tools was to choose between different preamps and microphones, I found this unit to be really helpful in a variety of other ways. Given the passive nature of the signal paths and the absence of amplifiers in the circuit, these units were also able to switch between line-level equipment without any problem. I started playing around with different possibilities like comparison-testing different compressors limiting a single mic pre's signal on the way to Pro Tools, or testing different equalizers in the same vocal chain. Chaining the Gold Digger and The Cherry Picker together didn't seem to add any noise, so I could imagine buying a few of these units, building an active relay-switched patching system where a great variety of signal chains could be auditioned before committing and recording.

#### HERE TO STAY?

If you have a studio that primarily focuses on vocals or voice-over work, then it is likely that you have already envisioned the Gold Digger and wished that you had one. For those who have been in that position, I can say that it works just like you would hope. As far as the Cherry Picker, if you have the DAW inputs to support it, it too does just what it is supposed to do. Neither unit is overwhelmingly feature-packed, but every essential feature is provided. The end result is a pair of well-designed, well-executed, purpose-driven tools at a reasonable cost. ■

Brandon T. Hickey is a freelance engineer and audio educator.

#### PRODUCT SUMMARY

**COMPANY:** Radial Engineering  
**PRODUCT:** MS4 Gold Digger/  
 PS4 Cherry Picker  
**WEBSITE:** radialeng.com  
**PRICE:** \$349 street  
**PROS:** Clean circuits, quality builds  
**CONS:** Subtle noise during switching



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## MOTU DIGITAL PERFORMER 8

Major Upgrade Takes Prominent DAW into the Future



Figure 1: The wood grain clad Deluxe theme is one of 14 new design styles users can recall in DP8's preferences

**W**ith the release of Version 8, Digital Performer adds Windows 7 compatibility and a lot of great new features for both Mac and PC platforms (the company says DP8 will soon ship with both Windows and Mac OS X versions at no extra cost), but the most consequential is 64-bit memory addressing. You need a 64-bit DAW such as DP8 in order to gain access to more than 4 GB of RAM; you'll find that important if you work at all with modern sample libraries.

DP8 also affords 32-bit operation to accommodate the many third-party plug-ins that are not yet compatible with 64-bit addressing. The new version adds support for VST plug-ins (including virtual instruments) on both Mac and PC. Seventeen new proprietary plug-ins are included with DP8, including two guitar-amp sims; modeled bass cabinet, guitar pedals, spring reverb and analog delay; a de-esser and multiband dynamic equalizer; the Subkick kick-drum enhancer; and the Spatial Maximizer mid-side mastering plug-in. DP8's new plug-in chooser organizes your plug-ins in numerous helpful ways.

Also bowing in DP8 is Punch Guard confidence recording,

which automatically captures one to several seconds of audio—determined by your settings in DP's Audio Options preferences—before you punch in and after you punch out (whether manually or using auto-punch). DP8's new video engine allows you to view full-screen HD video (720 or 1080 pixels, interlaced or progressive) on your primary or secondary monitor. Fourteen new themes, which change the look of the user interface, will tickle your visual cortex (see Fig. 1).

I reviewed Digital Performer Version 8.01 on an 8-core Mac Pro loaded with 6 GB of RAM and running OS X 10.8.2. (The Windows version was not available at press time but will ship for free to registered DP8 buyers once it's ready.)

### OPENING PLUG-INS AND RECORDING

Clicking on the right side of an empty mixer insert slot (or con-

### TRY THIS

Instantiate Precision Delay on the right channel of a dual-mono acoustic guitar track (ideally recorded with a spaced pair of mics). Bus the left channel into Precision Delay's sidechain. Hard-pan the two channels opposite one another. Initiate playback and repeatedly mouse-click the plug-in's Align button until bass frequencies thin out and the stereo image widens dramatically.





Figure 2: Precision Delay is a new phase-alignment plug-in that can be misused to create incredibly wide stereo effects.

trol-clicking on one that's already occupied by a plug-in) opens the new plug-in chooser in a separate window. When operating in 64-bit mode, 32-bit-only plug-ins simply aren't listed, so there's no way you can instantiate a plug-in that's incompatible with the deeper memory addressing.

Inside the plug-in chooser's window, you can browse and perform a search for both plug-ins and their presets. Plug-ins are sorted concurrently in different folders according to their manufacturer, format (AU or MAS, for instance) and category (distortion, mastering, sampler and so on). You can edit the folders or roll your own. To create a custom folder of my favorite plug-ins, I had to create two versions—one for mono plug-ins and the other for stereo—as the plug-in chooser wouldn't auto-populate the different channel configurations as needed. For some plug-ins (reverbs, for example) this made sense, while for others (EQ and tape emulators) it was a one-time, minor hassle.

A minor gripe: I wish DP had included a keyboard shortcut, such as option-clicking on an insert slot, to populate the same plug-in across several or all channels at once, as Pro Tools allows. Such capability would make it a lot easier to instantiate tape and console emulators on dozens of tracks.

Loading several large sample libraries at once, I was thrilled that DP8 had no problem handling the imposed 5.7 GB of RAM (including application and system overhead), a hair shy of my installed 6 GB. DP7 surely would've choked on much smaller cargo.

PunchGuard worked marvelously. After recording, I simply edge-edited the resulting sound bite to expose the audio that had occurred before I hit Record and after I punched out. PunchGuard is career insurance!

PRO SOUND  
**BEST OF SHOW**

Winner: Best Of Show  
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"What took so long for this to be invented? The MC3 has been needed for a very long time. It brings music to my ears!"

~ Bil VornDick  
Engineer - Producer:  
Alison Krauss, Bob Dylan, T-Bone  
Burnett, Bela Fleck



"The MC3 is the quietest, cleanest audio router I've ever heard—the headphone amp is exceptionally clear and quiet."

~ Mike Metlay,  
Recording

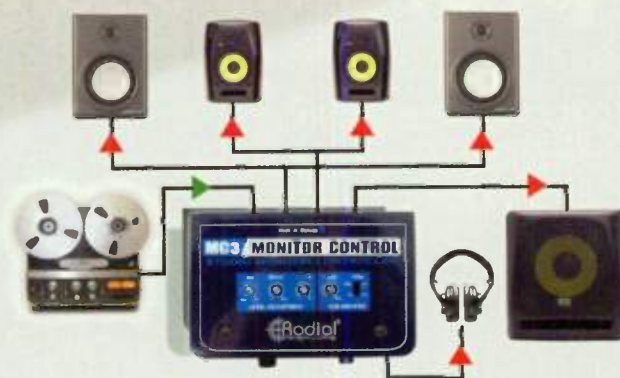


"A device like this stands and falls on its sonic and operational properties and I can report that the MC3 excels."

~ Stephen Bennett,  
Audio Media

"It brings music to my ears!"

~ Bil VornDick



## Introducing the Radial MC3,

a passive monitor controller that connects your workstation directly to your monitors without adding any form of buffering amplifier in between. This means that when you turn up your console, it will not change the tone of your mixes, introduce artefact or add distortion the way most other switchers do.

The MC3 comes equipped with two stereo output pairs, separate sub woofer output and high power headphone amp. Individual top-mounted trimmers let you balance the levels going to the various speakers and you can sum to mono for phase check and AM radio. The adjustable dim control gives you repeatable volume reduction and the large front panel master volume knob delivers a super-smooth taper for optimal control at all listening levels.

The Radial MC3... a studio monitor switcher with straight wire fidelity designed to fit on any desktop.



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### NEW AMP, CAB AND PEDAL SIMS

DP8's Live Stage plug-in is sort of a stripped-down version of DP's legacy Live Room G guitar-cab emulator and is useful, when performing live, for quickly getting the sound of a cabinet miked in a studio. The ACE-30 plug-in models the Vox AC-30/ 6 and AC30 CC2X's preamp circuits. Followed by Live Room G, ACE-30 delivered quality clean to slightly overdriven sounds. The Soloist plug-in emulates the two-channel Mesa Dual Rectifier Solo Head amp from the 1990s. Soloist sounded choked—like it was carelessly gated—on clean settings, but it delivered useful and unique overdriven tones.

Live Room B is a bass-cab simulator that includes four virtual mic channels with sidechain outputs for independent processing and automation. This plug-in sounded absolutely amazing with a virtual subkick

mic on its emulated 4x10 cab; it transformed a bass track that sounded too piano-y into a throbbing bass with huge bottom.

The Analog Phaser plug-in nicely models the dirty sound of the MXR '74 Vintage Phase 90 pedal. For a more jazzy sound, the Clear Pebble phase-shifter plug-in imitates an Electro-Harmonix Small Stone phaser with its Color control switched off. Analog Flanger, a re-creation of the Electro-Harmonix Deluxe Electric Mistress stomp pedal from the late 1970s, served up superb flange and phaser effects—clean or dirty—in a heartbeat, and its comb filtering sounded much deeper than what Analog Phaser or Clear Pebble could deliver.

I didn't like Analog Delay, a plug-in that emulates the DOD 585 compressing delay pedal. It lacked filters and LFOs and couldn't be synched to DP's tempo, limiting its usefulness and making it difficult to work with. And Hi-Top Booster, which emulates the Dallas Rangemaster treble booster, made guitar tracks sound icy and brittle.

The Springamabob plug-in, on the other hand, dished out excellent, authentic-sounding spring reverb on electric guitar tracks, offering three different spring-tank models for which you can adjust the tone and amplifier drive.

Dyna-Squash copies the MXR "script-logo" (vintage) Dyna-Comp hard-knee compressor. I got some cool, in-your-face guitar tones from Dyna-Squash but sometimes wished I had control over its non-adjustable, turtle-slow release time.

### NEW STUDIO FX PLUG-INS

The superb De-Esser plug-in employs single-band, dynamic parametric equalization with look-ahead and key-listen controls. De-Esser bridled searing sibilance on a female vocal without stifling the track's clarity and nuance. The new Dynamic Equalizer plug-in features three parametric and two shelving bands, each

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### PRODUCT SUMMARY

**COMPANY:** MOTU

**PRODUCT:** Digital Performer 8

**WEBSITE:** motu.com

**PRICES:** \$795 list; \$499 street;  
\$395 competitive upgrade;

\$195 upgrade from previous version of DP

**PROS:** 64-bit memory addressing. PunchGuard fixes flawed punches. Roughly half of the new plug-ins sound awesome. Plug-in chooser organizes plug-ins in helpful ways. Adds cross-platform and VST plug-in support. Fourteen snazzy new themes.

**CONS:** A few of the new plug-ins are subpar. Can't add a plug-in to multiple tracks with one command. Ensemble Chorus lacks master output-gain control.



of which has a compressor/expander with independent look-ahead control. Having control over a filter's Q allowed me to selectively zero in on a mix's harsh vocals between 1 and 2 kHz and apply mitigating compression.

Ensemble Chorus lets you modulate delays for its left, right and center channels before its stereo output. Each channel's LFO has its own waveform selector (sine, square, triangle or random) and provides phase and waveform-symmetry controls. Used on group BVs, Ensemble Chorus created a beautifully lush stereo spread. I only wished the plug-in had a master control to adjust the output level of all three channels at once while preserving their offsets.

Precision Delay is a utility plug-in, but it can be used to create an awesome stereo effect (see Fig. 2). The plug-in analyzes two tracks' phase relationship—or compares their phase to that for a sidechain input—and then ostensibly aligns them. It didn't consistently align a dual-mono acoustic guitar track as well as I could by dragging the mouse, but who cares! I used it to create a fantastic mono-compatible stereo spread as wide as a cruise ship (see the "Try This" sidebar).

Spatial Maximizer's raison d'être is mid-side mastering for vinyl release. Its control set includes bass distortion, highpass filtering for side



Figure 3: DP8's Subkick plug-in outfully imitates the sound of a woofier m.

channels, multiband dynamic equalization and look-ahead processing.

DP8's fabulous Subkick plug-in emulates the response of a cone woofer used as a kick-drum mic (see Fig. 3). It acts like a drum trigger feeding a resonator with frequency and resonance controls. I actually got a better sound using Subkick than I did using a real speaker to record a kick drum; I could tune Subkick's pitch to the song's key and tweak its resonance control to get killer sounds compatible with genres ranging from rock to electronica. Positively outstanding!

### BEST DP YET

DP8's support for 64-bit memory addressing alone makes it a must-have upgrade. The added features are sweet icing on the cake.

The first time PunchGuard saves an irreplaceable take, you'll consider your money well spent. The new Analog Flanger, De-Esser, Dynamic Equalizer, Ensemble Chorus, Live Room B, Precision Delay, Springamabob and Subkick plug-ins sound terrific. And the 14 snazzy new themes are a sight for bored eyes during long sessions. Powerful, feature-packed, eminently user-friendly overall and now virtually future-proof, Digital Performer 8 is a winner. ■



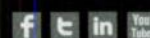
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## SIMAUDIO LTD. MOON 3500 MP PREAMP

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**I**n making a microphone preamp, there are two basic approaches: Personality boxes with transformers, tubes or other color enhancers; or clean, quiet and hands-off. The Moon 3500 MP is the latter, coming from an audiophile company that has been making high-end gear for more than 30 years. Simaudio is a Montreal-based, hi-fi audio manufacturer that has stepped into the pro arena with the release of this 2-channel, super-clean preamp that benefits from the designs of the company's other, and often more expensive, gear.

### CLEAN DESIGN

The front panel of the 3500 MP is simply laid out with a detented gain knob that provides up to 66 dB of power in 2.5dB increments, and a smaller, variable, unity gain and lower trim pot that knocks down the output up to 3.5 dB. Other switches include Mute, Phase and Phantom power for each channel, and a front panel power switch that works in tandem after the main power rocker on the rear of the unit. Ins and outs are on balanced XLRs and the power supply is a slickly designed unit inside the box.

Popping the lid reveals twin circuit boards for the two channels and a secondary power section to the right that is floated from the main chassis and is separately isolated. The power section uses two, ultra-low-noise toroidal transformers: one for the audio sig-

nal circuits and another for 48-volt phantom and control circuitry. Crosstalk between channels revealed by our Audio Precision APx525 test and measurement unit is extremely low at -116.381 dB (channel 1) and -113.667 dB (channel 2; download the rest of the bench test at [www.mixonline.com](http://www.mixonline.com)). All the other details are as you'd expect: There are no electrolytic capacitors in the signal path (non-phantom mode), the potentiometers are Swiss-made with gold-plated contacts, the output stage supplies high current and is capable of driving 600-ohm loads, and the circuit board is made with pure copper tracings and gold plating that yields low-impedance characteristics.

### TRULY REVEALING

I first used the Moon on different drum tracking sessions, mostly on overheads and kick and snare. I first powered a pair of DPA 2011 microphones suspended over a drum kit and loved the results. The combination offered clean, clear transients of the overall kit and a beautiful rendering of the cymbals and hi-hat. After a few sessions, I kept returning to the use of the 3500 MP on kick

### TRY THIS

If you have a clean preamp or two in your collection and you're torn as to where to use it on a larger session, opt for the most-transient instruments.

In my tests with the Moon 3500 MP, this philosophy gave me the best results overall, with punchy, in-your-face transients that supported the rest of the tracks, even when the other mics and preamps weren't my favorites.



and snare. This seemed to give me the best results overall. The experience is hard to explain but the best description is that the transients of these two essential kit elements were always perfect. No matter how close the hits were together, the Moon 3500 MP's power supply was always on the job, ready for the next hit. Each stick and beater hit was punchy and at full power even with the most basic mic choices. I tried both a Shure Beta 52 and Sennheiser e902 on the kick and always went with the venerable SM57 on the snare top.

Next, I used the DPA 2011/Moon combo to record a Yamaha C3 Grand Piano. The mics were placed on a stereo bar in an ORTF pattern just inside the outer edge of the piano with the lid on the high-stick. This was a live session with an upright bass and a live drum kit, all in the same room. The kit in this case was on the other side of the open lid, which provided some isolation but there was still some "friendly" leakage from the other instruments. I say friendly because I didn't place the players too far apart, making the delay time shorter off-axis, and there were gobos separating the instruments. Having the DPAs with their excellent off-axis response and the clean Moon power made it all sound very natural. The piano was up front in the mix, being the main chording instrument, and it sounded fantastic.

On the same session, I then used a single channel of the Moon to power a Lauten Atlantis FC-387 on a tenor sax overdub. The Lauten has some unique features, including the ability to switch the capsule between three circuit paths, essentially giving you the ability to apply EQ from inside the mic. I set the FC-387 to the Gentle setting, which has the most roll-off on the top end and a thick bottom. This toned down the brashness of the sax sitting it perfectly in the track. The mic was placed pointing above the bell right at the keys, level with the player's heart. I didn't realize how great this sounded until I took the tracks home to mix. I put a bit of SP2016 Room reverb on the sax and that was it—pure butter. The instrument sounded rich, perfectly balanced across the frequency range, breathy and needed no EQ. The experience was one of those head shakers where the sound is right where it needs to be without any manipulation—just hit Record and print it.

I also used the front-address DPA 2011s and Moon 3500 MP combo to record acoustic guitar. This was a bit tricky, as the DPA's capsules are not near the end of the mic and the results were unexpected. The first placement was a wide array with one DPA pointing at the soundhole from the south end of the guitar and the other placed where the neck meets the body. This was beautiful. You could sit with your eyes closed and easily picture someone playing the guitar right in front of you. In a later session, I heard the 2011s placed in an X/Y configuration with the mics positioned with the ends aligned, as you'd expect would work. The results were disconcerting, with the stereo image jumping all over the center. A quick call to Bryce Boynton at DPA in Colorado



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## PRODUCT SUMMARY

**COMPANY:** Simaudio Ltd.

**PRODUCT:** Moon 3500MP

**WEBSITE:** moon-professional.com

**PRICE:** \$4,499

**PROS:** Excellent transient response; clear, precise detail; superb electronic design.

**CONS:** No DI inputs.

revealed that the capsules are not at the ends but back about 1.5 inches, more toward the middle of the body. After a quick and non-intuitive adjustment, the image returned and it was beautiful. At the end of the day, the wide placement provided a more believable result and a lesson was learned.

## POWER PLUS

I used the Moon 3500 MP on as many sessions as I could and it was a revelation. I heard the source, room and microphone at their absolutely most transparent selves. The biggest problem I had with the unit was deciding where to "spend" it. I honestly wished I'd had eight channels to record an entire drum kit or small ensemble.

What I liked most about the unit is what I learned. After using the 3500 MP, I've changed the answer to a question I'm asked all the time: If I had to choose one thing that would improve any mic preamp, what would it be? Better pots? Cleaner gain? Nope—I would say it is the power supply, hands down. I first heard about the benefits of clean, readily available power when I was building my mix room. Michael Griffin from Essential Sound Products read me the gospel on clean and nimble power and why it is so important. The Moon 3500 MP carries that philosophy forward into a preamp. Think of having an elite athlete on hand just to open and close your car door for you; it is overkill but they can do it all day long without breaking a sweat.

If you're looking for personality or color, don't look here. But if you want the cleanest possible path from your mic to your recorder, the Moon 3500 MP is your preamp. Its no-corners-cut design, massive power supply and clean gain is all you need to take the veil off any recording and let you know what is really going on at the source. The 3500 MP tells you the truth, and you can't argue with that at any price. ■

Kevin Becka is Mix's technical editor.



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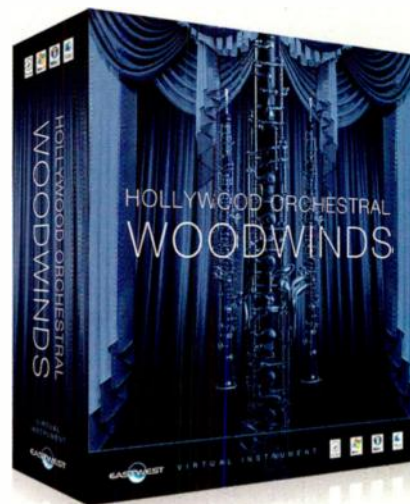
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# TechTalk

## MONTREAL LIKES ITS HIGH END



By Kevin Becka

I just back from Montreal. I had heard for years about its culture, its charm, and its active and hip music scene. But I had no idea how entrenched high-end audio is in that city. Heck, they've even imported George Massenburg as a full-time faculty member at the Schulich School of Music at McGill University!

My first stop was Audio Plus Services HQ, comprising offices and a 32,000 square-foot warehouse, which sounds common until you dig down. Daniel Jacques and Simon Côté explained that pro audio lines like Focal, Vovox and Moon Professional are only a tiny bit of what they do, with their main emphasis being audiophile gear.

Audio Plus doesn't sell to consumers, but to dealers across all of North America. They aren't interested in being a mass distributor, but have chosen to represent a limited and quality-centric group of products. The warehouse is filled to the brim and constantly turning over inventory, and the entire operation is well managed and efficient. But the quality really shows in their level of service. It is seamless—if you're in the U.S., you'd never know the gear came from Canada because they have a shipping and receiving operation across the border in New York. They've done all their homework regarding the intricacies of border crossing, which makes the process speedy and service-oriented. Audio Plus handles all repairs for all products—all on-site by one of their seven techs.

Along for the ride on this trip were some excellent colleagues with great ears, including Larry Crane (TapeOp), Lorenz Rychner (Recording) and Strother Bullins (PAR). We next went to Simaudio's manufacturing facility and listening rooms. Simaudio has been around for more than 30 years making audiophile gear for the well-heeled. Got \$12k to drop on a monoblock amplifier? They can help. Their first pro audio product is the Moon 3500 MP pre-amp reviewed in this issue, but that's not close to the whole story. Simaudio makes every piece custom upon order. I've been to a few factories, and this is unusual. They also make nearly every part on-site, which raises the quality bar even more.

At Simaudio, I met local engineer René Laflamme from Fidelio Musique, a Canadian classical label specializing in high-end DSD recordings. René had just completed a session with six channels of Moon 3500 MP preamps powering some of his incredible mics, so we then went into one of Simaudio's playback rooms and lis-

tened to that and other recordings he'd made. His work is remarkable. If you're interested in high-end audio, Fidelio should be on your must-hear list ([fidelioaudio.com](http://fidelioaudio.com)).

Next we visited Le Lab, a Montreal mastering facility, and I wanted to move in and never leave. We met two of the four engineers at the facility, Marc Thériault and Carl Talbot, who told us about the history of the room. Le Lab is a 20Hz room designed by Tom Hidley. For a long while the room went private as a post facility until Marc and Carl resurrected it four years ago. Since then, they've been building the business and are starting to create some buzz. Just like you can't adequately describe taste, sex or how to ride a bike, I can't put this listening experience into words: But of course I'll try.

*"Just like you can't adequately describe taste, sex or how to ride a bike, I can't put this listening experience into words: But of course I'll try. First, there's zero room interaction, which may be unnerving to some... During playback, you quickly forget the monitors and your surroundings; the experience is transcendent."*

First, there's zero room interaction, which may be unnerving to some. Marc pulled one of the cloth wall panels and the traps are sizable and circuitous. The signature Kinoshita monitors that came with the room weren't a fit for them, so they employed two Focal Grande Utopia monitors and two subs powered by YBA amps. During playback, you quickly forget the monitors and your surroundings; the experience is transcendent. We all brought tracks, and to the last listener, everyone was floored. Le Lab is easily in my Top Two listening experiences.

In closing, I loved Montreal, especially the people. Forget the clichés, Canadians really are a happy bunch. God's Frozen People (thanks Garrison) don't spend time worrying about the cold. They have some high-quality audio to listen to! ■





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