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The core of the Sony PlayStation Studios San Mateo music and sound team, from left: Ken Felton, studio designer Chris Pelonis, Marc Senasac, Dave Murzant and Chuck Doud



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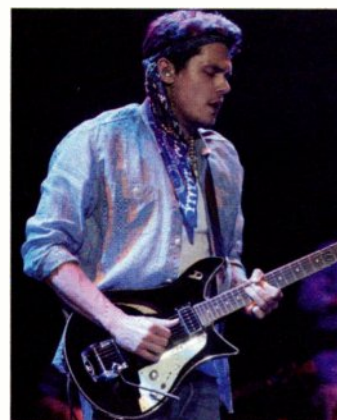
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BY KEVIN BECKA



On the Cover: The new Sony PlayStation Studios in San Mateo, Calif., designed by Chris Pelonis and featuring an Avid Euphonix S3 Fusion console and Pelonis Signature Series PSS215a 7.1 monitoring. Photo: Michael Coleman/Sean Donnelly

Mix, Volume 37, Number 9 (ISSN 0164-9957) is published monthly by NewBay Media LLC, 28 East 28th Street, 12th floor, New York, NY 10016. Periodical Postage Paid at New York, NY, and at additional mailing offices. POSTMASTER: Send address changes to Mix, PO Box 8518, Lowell, MA 01853. One-year (12 issues) subscription is \$35. Canada is \$40. All other international is \$50. Printed in the USA. Canadian Post Publications Mail agreement No. 40612408. Canada return address: BivouChip International P.O. Box 25542, London, ON N6C 6B2.



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WHAT'S IN A COVER?

This is the second time that Sony PlayStation Studios has appeared on the cover of *Mix*. The first time was seven years ago, when the company began its massive build-out across two campuses in California. At the time, there was nothing like it in games, nothing that rivaled Hollywood in terms of sheer production/post-production power and capability. Since then, of course, other publishers and developers have unveiled world-class facilities, but still, nothing on the scale of what Sony has created with its brand new space in San Mateo, Calif., which works hand in glove with nearly identical rooms in San Diego and Santa Monica.

The big difference between then and now is that today we make an effort to put people on the *Mix* cover whenever and wherever appropriate. Engineers and producers with their artists; personal studio owners who have blazed a trail of some sort; or, in the case of Sony PlayStation Studios, a team that comes together from the creative, design and technical sides to build something truly noteworthy. Our guiding message is that with all the emphasis our industry—and our magazine—places on new products, new technologies and upgrades to networked systems, we often lose sight of the fact that creative people are the driving force in professional audio. We all love gear, no question, but talent still rules.



The sacrifice in putting people on the cover, however, is that we lose the room. Ten, 15 or 25 years ago, *Mix* featured a big console in a typically big (and often dark) control room each and every month. The covers often looked like something out of *Architectural Digest*, professionally shot to maximize the dimensions and scope of a million-dollar recording room. We include here an example of what the control room on this month's cover would look like were it strictly a room shot. It sure does look world-class, and it gives a much better look at the width and depth required to take advantage of full-range 7.1 monitoring, but without those five guys in the shot, it somehow feels just a little bit empty.

The best facilities, like the best artists, engineers and producers, bring equal parts of technical accuracy and musical creativity. Left brain and right brain. Yin and yang. One doesn't exist without the other. Studios can be more or less "musical" in and of themselves, but without a guitar player in the live room and an engineer at the board, nobody will ever know.

Tom Kenny
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World Radio History

Cowboy Jack Clement, 1931-2013

On August 8, Cowboy Jack Clement—producer, engineer, songwriter, arranger and musician—passed away at age 82 at his home in Nashville following a bout with liver cancer. Clement's Website describes him as a “visionary maverick [who] combined song publishing, music and film production, a record company and recording studios decades before the current trend of international conglomeration.”

Over the span of a music industry career that began in 1956 at Sam Phillips' Sun Records in Memphis, where he recorded the first rock 'n' roll classics from Jerry Lee Lewis (“Whole Lot Of Shakin' Going On”) and Roy Orbison, Clement guided sessions for Johnny Cash, Louis Armstrong, Carl Perkins, George Jones, Townes Van Zandt, Charley Pride (whom he discovered in 1965 in RCA Studios in Nashville), Don Williams, Waylon Jennings, Frank Yankovic, Emmylou Harris, Doc Watson, John Prine, Mac Wiseman, U2 and many, many more. Clement also engineered the *Million Dollar Quartet* session that took place at Sun Records on December 4, 1956, an impromptu jam session between Lewis, Cash, Perkins and Elvis. In April 2013, the Country Music Hall of Fame and Museum announced that Clement would be officially inducted as a new member this coming fall.

Clement was born on April 5, 1931 in Whitehaven, Tenn., an unincorporated area south of Memphis that includes Highway 61, also known as “The Blues Highway.” He enlisted in the Marines as a teenager, stationed in Washington, D.C., where he began playing bluegrass music. Clement returned to Memphis, and after working at Sun, he moved to Nashville to work for Chet Atkins; then to Beaumont, Texas, where he built a studio with partner Bill



Photo: David McClister

Hall; and then back to Nashville in 1965, where he built four more studios, including Jack Clement Recording (which went on to become Sound Emporium) and finally, the Cowboy Arms Hotel and Recording Spa.

He mentored producers/engineers including Allen Reynolds, Garth Fundis, Dave Ferguson and Jim Rooney. As Rooney noted in 1988: “Jack Music, JMI Records, Jack Clement Recording Studios, and Jack's Tracks were a combination writing, recording, and producing collaborative workshop, which significantly influenced the direction and sound of modern country music.”

Mix magazine remembers Cowboy Jack Clement in his own words, in excerpts from previous interviews.

On Sam Phillips: “He gave me my first job in the music production business. Sam encouraged

me to go out there and be different. There was never any talk of trying to sound like someone else. Get wild. Get crazy. Do everything wrong. Whatever! I'm always looking for that different sound.”

On recording: “When you do it right and let it all hang out, you get lucky. You stay in the studio until you get what you want.

His “Rules for Recording”: Be on time. Be alert. Don't bring or invite anyone.

His overarching philosophy: “We're in the fun business. If we're not having fun, we're not doing our job.”

More information about Clement's life and achievements is available at www.cowboyjackclement.com and www.sunrecords.com. Interviews with Clement from *Mix's* December 2003 and May 2008 issues are posted at mixonline.com.

Error Log: Audio Interfaces

In our August 2013 issue roundup of popular audio interfaces released within the past couple of years, we omitted two models. *Mix* regrets the errors.

The **Avid Fast Track Duo** comes with Pro Tools Express software. It has a bus-powered USB port and offers recording at 24-bit/48kHz resolution with dual high-quality mic pre's. It features two ¼-inch line inputs, two ¼-inch TRS line outputs, two combo XLR/instrument inputs with 48-volt phantom power, Front/Rear Input buttons, two front panel Gain controls, a Direct monitor button for monitoring and recording without latency, Main Output level control, and headphone level control. A Tablet port allows for connecting the unit directly to an iPad (no iPad Connection Kit is required). It also includes a Kensington lock port.



The **Steinberg UR22's** full-metal chassis houses studio-grade converters capable of a maximum sample rate of 24-bit/192kHz resolution. It includes USB 2 connectivity, Yamaha's discrete Class-A analog D-PRE preamps, and MIDI input/output. Two front panel Neutrik combo connectors provide microphone and line input, each with gain control and peak indicators plus an additional high-impedance switch on the second input. The panel also includes a headphone output with a dedicated volume control, a master output volume control and a mix knob for hardware-based zero-latency monitoring. The rear panel features two balanced line outputs, MIDI input/output connectors, and a phantom power switch enabling a 48V supply on both channels.

In Memoriam: Mike Shipley

Grammy Award-winning engineer/producer Mike Shipley passed away on July 26. An eight-time Grammy Award nominee, and three-time winner, Shipley is often remembered for his work as a mix engineer who collaborated with producer Robert "Mutt" Lange on hit albums by Def Leppard—notably *High 'N' Dry* (1981), *Pyromania* (1983) and *Hysteria* (1987)—as well as Shania Twain, Maroon 5, and The Corrs.

But his extensive discography also includes Aerosmith, Winger, Foreigner, Meat Loaf, Tim McGraw, Faith Hill, Green Day, Joni Mitchell, Blondie, Tom Petty, the Black Crowes, Cheap Trick, Thomas Dolby, Nickelback, and much more, including soundtracks for Hans Zimmer and Danny Elfman. In 2011 he won the Grammy Award for Best Engineered Album, Non-Classical and Best Bluegrass Album for Alison Krauss & Union Station's *Paper Airplane*.

Shipley was born in Australia and moved to England as a teenager, and eventually began his music career in London. "I walked into this thing called the recording studio, and it just blew my mind," he told Maureen Droney in an interview for *Mix* in June 1999. "I knew instantly and from that point on that all I wanted to do was to work there." Shipley landed at Wessex Studios, where he was first assigned to work on a Sex Pistols project that became *Never Mind the Bollocks*. "In those days you'd get thrown in the deep end," he recalled. In 1984 Shipley relocated to Los Angeles for sessions with The Cars and remained there for the rest of his life.

"We have lost a beloved industry professional who leaves behind a legacy of enduring work, and our sincerest condolences go out to his family, friends and all those who had the pleasure of knowing him," says Recording Academy President/CEO Neil Portnow.

On Facebook, Kip Winger stated, "He was a dear friend. Mike was a kind, generous, funny, supremely talented and skilled person. He taught me how to really make a record. I owe the majority of my studio skill to him. In my opinion he was a true genius, a title I rarely give out. This is a tragic loss to the world to say the least. I'll miss you, Mike."

"I'm devastated to hear of the passing of Mike Shipley," says Def Leppard singer Joe Elliott. "He was a fantastic engineer and a good guy. Nothing got past him if it wasn't up to scratch, hence Leppard's nickname for him: 'bat ears.' From the *High 'N' Dry* album in 1981 to the last thing we did together, 1993's 'Two Steps Behind,' he was a joy to work with. RIP Shippers."

Read Maureen Droney's interview with Mike Shipley that appeared in *Mix* magazine's June 1999 issue at mixonline.com.



Photo: David Goggin

SPARS Sound Bite Scaling Services, Staying Professional

By Glenn Lorbecki

Question: What's the difference between charging \$100 an hour vs. \$300 an hour for studio time? For a client, the answer is simple: pay less, save more. But as a studio operator, can you deliver top-quality audio for one-third of your regular rate? Is your client willing to accept one-third the service for the reduced rate? Probably not.

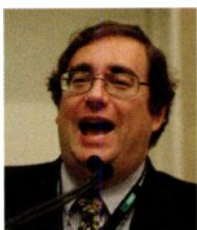
The market for professional audio services has changed rapidly. What if there were a way to provide clients with excellent service and quality audio production, while accommodating a crazy range of budgets?

My business, Glenn Sound in Seattle, handles both music and post-production projects. We operated multiple rooms in a prime downtown location for more than 15 years, but had to face the fact that project budgets were not keeping pace with the rising cost of maintaining pricey real estate. Rather than chase dwindling budgets to fill studio time, we opted for the "Virtual Production Company" model. The studio building was shuttered in 2010, and we shifted our focus to concentrate on producing projects, rather than selling time by the hour or day. Initially, we assumed there would be a decrease in revenue due to the lack of a physical location or from client attrition. What we found was that income stayed flat for the first year, and actually increased the second year. The good news was that overhead dropped by something close to 80 percent; you can imagine what that's done for the bottom line. That trend continues in 2013.

Here's how it works: When we get a major label music project or a commercial post project with a solid budget, we book great studios and use our own engineers to do quality work. When a game company, corporate client or indie film project comes along with a limited budget, we rely on our relationships with all of the small and mid-sized studios in town to find the best studio at the best rate to fit the client's budget.

Another benefit: Our former competition (other studios) are now our allies, as we bring them business every week. Our engineers still do their usual stellar job no matter where they work, and we maintain tight control over the quality of the outcome.

But we still need to educate the client about what we do and how we do it. As the market changes and new (and perhaps less experienced) clients enter the field, it's our responsibility to manage their expectations and show them how a relationship with a professional audio producer/engineer can benefit their projects. This begins with pre-pro. If clients bring us in to consult during the first phase of a project, we will not only save them money, we can provide creative input that will benefit all aspects of their project. It's what we do.



David Bialik

AES 135th Convention to Highlight Broadcast, Sound for Picture

The 135th Audio Engineering Society Convention (October 17-20, 2013, at the Javits Center in New York City) is offering broadcast and streaming sessions developed by David Bialik, who is in his 27th year as Chairman of Broadcast and Streaming Sessions, and a special Sound for Picture workshop track chaired by film sound department professional Brian McCarty.

This year's broadcast/streaming sessions offer Broadcasting During Disasters, a look at how Hurricane Sandy impacted news and other broadcast operations in 2012; Audio for Mobile TV and Streaming and the Mobile Initiative, which both look at the issues audio faces as it moves into the mobile landscape; whether it's time to retire the MP3 protocol for streaming; and Audio for 4K TV, a look at the implications of how new technologies will affect broadcast and streaming audio.

Created by the AES Sound for Digital Cinema and TV Committee, the Sound for Picture sessions will each feature Oscar and Emmy Award-nominated and winning professionals discussing their craft and the latest technology and techniques used for sound capture, mixing, editing, loudness and more. The workshops will include Cinema Sound—Test Evaluation & Screen Performance; Cinema Sound Master Classes (Music Production for Film, Sound Design for Film, Dialog Editing and Mixing for Film); World-Class Cinema Sound Mixers Discuss Their Craft; Sound for Reality Television; Creative Dimension of Immersive Sound—Sound in 3-D; and Film Soundtrack Loudness: Control and Standardization.



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Sheldon Gomberg (l) and Ron Sexsmith

Photo: Penelope Fortier

'SWEET RELIEF III: PENNIES FROM HEAVEN'

Benefit Album Is a Musical Gift

The Sweet Relief Musicians Fund (sweetrelief.org) has been aiding artists with disabilities for 20 years.

The organization's concerts, events and record releases have featured performances by the likes of R.E.M., Pearl Jam, Smashing Pumpkins, Garbage, Lucinda Williams and so many more. It's one of the ways that the generous, talented music community takes care of its own members, like Sheldon Gomberg.

Gomberg has been an in-demand bassist in the L.A. scene for years; his credits include Rickie Lee Jones, Ryan Adams, Five for Fighting,

Warren Zevon and many others. But recently, he's focused increasingly on the production side. He suffers from Multiple Sclerosis, and has built a new musical career that can thrive despite his physical limits.

"When I first started seeing symptoms of it, I had trouble walking," Gomberg says. "When I got to using a scooter, I couldn't get up the stairs into my house. Sweet Relief helped put a lift in so I can get inside, which was a big thing for me. I started to think about how I could repay them somehow."

Gomberg offered to invite some of the tal-

ented musicians in his extended circle to make the organization's first benefit album since 1996's *Sweet Relief II: Gravity of the Situation*. He engineered and produced *Sweet Relief III: Pennies From Heaven* (Vanguard), which features Ron Sexsmith, Shelby Lynne, She & Him, Jackson Browne, Rickie Lee Jones, Ben Harper, k.d. lang and others.

Gomberg worked off his own wish list of artists, and put together a collection of songs with a theme of helping others. Some singers chose songs from his list, while others ordered off the menu, but all recorded with Gomberg in his studio, The Carriage House.

"That was one thing I was adamant about because I wanted there to be some sonic consistency," he says. "I didn't use the same mics on everybody, but the room sound and, I suppose just working with the same person, me, creates some continuity."

The opening track on the album is Sexsmith's poignant rendition of "Pennies From Heaven." "I asked if Ron would do it, and his manager said, 'Let me email him.' In an hour, Ron had emailed me and said, 'I'd love to do this.' That's the spirit! He was like, 'I can be there in two weeks.'"

Gomberg tracked Sexsmith and keyboard player Will Gramling to Pro Tools, with Sexsmith singing into an RCA 44 through a BA6A compressor and playing acoustic guitar to an AKG C12A. Gramling played a pump organ that was captured with a Royer R-122 ribbon mic. The lovely strings on the track were recorded after Sexsmith's whirlwind visit. "That kicked off the whole record," Gomberg says.

Lynne sings track 2 on the album, "Brother Where Are You?" by the great artist/composer Oscar Brown Jr. This was one of two songs (along with She & Him's "King of the Road") that were tracked to a Studer A80 machine. "She sang live with the band Jack Shit, which is Pete Thomas and Davey Faragher [drums and bass, respectively, both of Elvis Costello's Imposters] and [guitarist/singer/Jackson Browne band-member] Val McCallum. She walked out into the room, they started running the song, and I looked at Jason Gossman, who works with me, and said, 'Roll tape.' At that same moment, she looked up and said, 'Are we rolling?' I nodded, you heard the tape start up, and Pete counted us in, and the whole thing was live in one take. That was it. She's so great."

Sessions for *Pennies From Heaven* happened in fits and starts over a couple of years, as schedules allowed, and each track had its own memorable qualities. For example, Ben Harper's track—the Van Morrison song "Crazy Love"—included an X-factor that a musicologist like Harper was bound to appre-

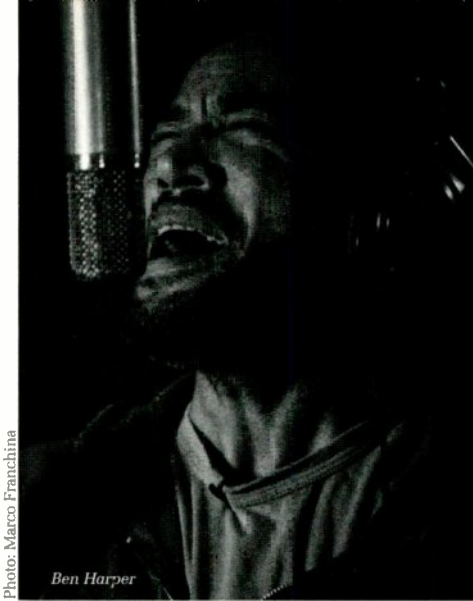


Photo: Marco Franchina

ciate: "I'm friends with Gary Mallaber, who's a great drummer and vibraphonist; he's played with Steve Miller, Bruce Springsteen, Warren Zevon, and he played with Van Morrison for nine records," Gomberg says. "I called Gary and so we got the original guy who played vibes on Van Morrison's 'Crazy Love' to play on Ben's version. Ben was so excited. That song was all cut live as well, except for the vibes."

Some of the other stellar moments on the record come via songs that artists chose for themselves, such as k.d. lang's shimmering take on Merle Haggard's "How Did You Find Me Here?" or Rickie Lee Jones' "Surfer Girl." The Beach Boys classic doesn't exactly match Gomberg's theme, yet the words sound so tender and full of love when Jones sings them, the song magically fits. Both of these artists sang into U 47s, with lang's chain including an 1176 and Jones' a 1073 with no compression. "Rickie hates compression on her voice," Gomberg says.

Just as lovely is a piano-and-voice interpretation of Randy Newman's "I'll Be Home" by Eleni Mandell. "She came in and sang live—a 47 through an 1176—with Steve Gregoropoulos on piano, and then we overdubbed a kick drum [also by Gregoropoulos] and some background vocals by Eleni and Penelope Fortier later," Gomberg says. All of the artists on the album donated their efforts to this worthy cause, many because of their connection to Gomberg.

"Sheldon is great to work with," Mandell says. "He's so knowledgeable and he's never the 'bossman' as a producer. He's in the trenches with the artist and wants everyone to have a good time and feel creative. We've known each other a long time, and it's been tragic but also very inspiring to watch him: the way he handles [his illness], the way he manages to work so much and be so good to me and other artists." ■

TROMBONE SHORTY 'SAY THAT TO SAY THIS'

When he wasn't onstage or supporting young musicians through his Trombone Shorty Foundation, the magnetic musician/vocalist Troy Andrews—aka Trombone Shorty—was in the studio this year making *Say That to Say This*. Andrews and Raphael Saadiq co-produced, with much of the project coming together in Saadiq's Blakeslee Studios (North Hollywood). This time out, Andrews and his band, Orleans Avenue, are all about classic funk and R&B.



Photo: Jonathan Mannion

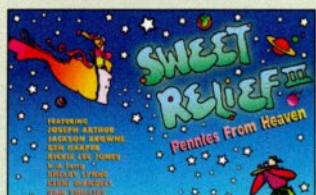
Tracking at Blakeslee was by engineer Justin Merrill, who set the band up live in Blakeslee's Studio A. "Probably 85 percent of the basic tracks were done all together, with the drummer, bass player, guitar player and Shorty in the big room," he says. "They'd jam for a while, find an approach that worked and then just go with it."

Andrews sings and plays every horn part on his albums, so there were a lot of overdubs, too. Vocals done at Blakeslee were through either a Neumann U 47 or Shure SM7; either would go to a Wunder Audio PEQ1R and a UREI LA-2A. On horns, Merrill used an RCA 77, also to a PEQ1R. "His dynamics are so good, so I wasn't compressing him much going in," Merrill says.

Many parts were tracked by Charles Smith in the Music Shed (New Orleans), including the song "Be My Lady," which features a reunion of The Meters helping Andrews cover their own tune. The album was mixed at Blakeslee by Gerry Brown, on one of Saadiq's three SSLs. "I use a method I call Spatialonic Process, where I create as much depth as I can so some things seem 3-D in a 2-D situation," Brown says. "I used a [Thermionic Culture] Phoenix compressor to make the drums a little more dynamic. But the mix was easy. The only reason it took time was sometimes we'd have to wait for approvals from Trombone Shorty while he was on the road."

—Barbara Schultz

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For more on the vocal recordings, visit: mixonline.com/092013

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World Radio History

MIXING THE JULIE RUIN

Engineer/studio owner Eli Crews moved from Oakland, Calif., to Brooklyn about a year ago to become the chief engineer at musician/producer Shahzad Ismaily's new Prospect Heights studio. Things didn't go exactly as Crews had planned; the studio construction was held up by the permit process, with the grand opening now scheduled for the end of 2013.

However, Crews has had no trouble filling his time; he set up a Pro Tools mixing rig, with Metric Halo and UA Apollo interfaces, in his apartment, and he's been happy about the mixes he's getting. "I do the summing through a Shadow Hills Equinox, so I have that analog mix-down stage at the end," Crews says. "I go through a couple different analog stereo boxes; sometimes I'll use the Empirical Labs Lil Freq EQs, and I just got this Elysia Xfilter stereo EQ that I really like."

One of the first projects he tackled was *Run Fast* by Kathleen Hanna's synth-punk project, The Julie Ruin. "Andre Kelman recorded the album at Oscilloscope, the Beastie Boys' studio in Manhattan," Crews says. "We mixed two of the songs there, attended by everybody in the band so we could all spend a couple of days in a room together, which we couldn't do in my home studio."

Crews mixed the other 10 tracks in the space he calls Ham Radio Hobby

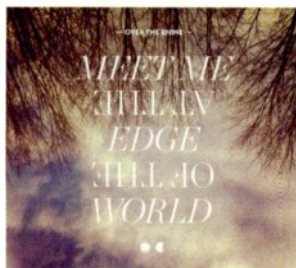


Room. He uses lots of UA and SoundToys plug-ins to push sounds to the next level, such as on Hanna's high, aggressive vocal. "I'll use SoundToys' Filter Freak [as a vocal effect], and generally some kind of delay, too—a UAD Space Echo or Echoplex—to get a megaphone-y sound," he says. "For distortion I love the SoundToys Decapitator or the Devil-Loc.

"We were going for a crunchy overdriven sound, especially on the drums. Some tracks were already a little distorted; I would take that a little further, again with the Devil-Loc. There's a fine line between getting something punchy and in-your-face and it becoming too abrasive. Finding that sweet spot where it's exciting but not fatiguing is something I strive for."—Barbara Schultz

COOL SPIN

OVER THE RHINE, 'MEET ME AT THE EDGE OF THE WORLD'



Singer/songwriters Linford Detweiler and Karin Bergquist say the 19 songs on this new double album were inspired by the rural Ohio farmland they call home, but the recordings were made in L.A. at producer Joe Henry's Garfield House studio with Henry and his longtime engineer Ryan Freeland. Henry's authentic and

soulful, song-centered approach to record-making makes these tracks glow, with Bergquist's sweet, sometimes jazzy vocal taking center stage among Eric Heywood's delicate acoustic and electric guitars and pedal steel, Jay Bellerose's sensitive drum/percussion work, and varying flavors of keyboard sounds from Patrick Warren, as well as that essential degree of air and space that's a hallmark of recordings that come out of Henry's studio. "Don't Let the Bastards Get You Down" is a highlight, featuring not only a lovely guest vocal by Aimee Mann, but also the elegant pairing of Bergquist with Heywood's strings and some judicious effects that highlight the lonely beauty of the song brilliantly. These are wonderful, well-crafted songs made even better through the team's warm, gentle treatment.—Barbara Schultz

Producer: Joe Henry. Engineer: Ryan Freeland. Recording studio: Garfield House (Pasadena, Calif.). Mixing studio: Stampede Origin (L.A.). Mastering: Gavin Lurssen/Lurssen Mastering (L.A.).

NEWPOLI: ITALIAN FOLK REVIVED



Everything old is new again, and that includes traditional Italian folk music, which is being brilliantly revived by an octet called Newpoli, made up of former Berklee College of Music and New England Conservatory students, most of them (but not all) Italians.

The group's third album, *Tempo Antico*, comes out September 26, and it's a spirited and eclectic mix of southern Italian folk styles, some dating back several centuries, played entirely on acoustic instruments.

The album was recorded at the high-ceilinged Unitarian Universalist Church of Greater Lynn, in Swampscott, Mass. (north of Boston), by engineer Christian Kaufmann. Songs were cut live, including vocals, with no baffling between instruments. His main mic array consisted of an OTRF pair of DPA 4011s, flanked by a spaced pair of DPA 4006-TLs. For room mics, he had a spaced pair of Crown PZM-31S's on the floor facing upward, about two-thirds of the way back, roughly 20 feet apart. Among the many spot mics were a pair of Neumann KMS 105s on the singers, DPA 4099s and 4061s on stringed instruments, and a Royer R-121 on bass. "Eighty to 90 percent of the sound comes from the main mics/room mics," Kaufmann says, "except for the vocals. The band was set up on a raised section behind the altar in a close semi-circle behind the mic array. Just the vocalists were set up on the other side facing the band. Since we wanted the main stereo mics to do most of the heavy lifting, directionality, as well as differences in volume, was our main focus. Each song needed careful placement and orientation of the instruments to ensure a good balance on the recording."—Blair Jackson

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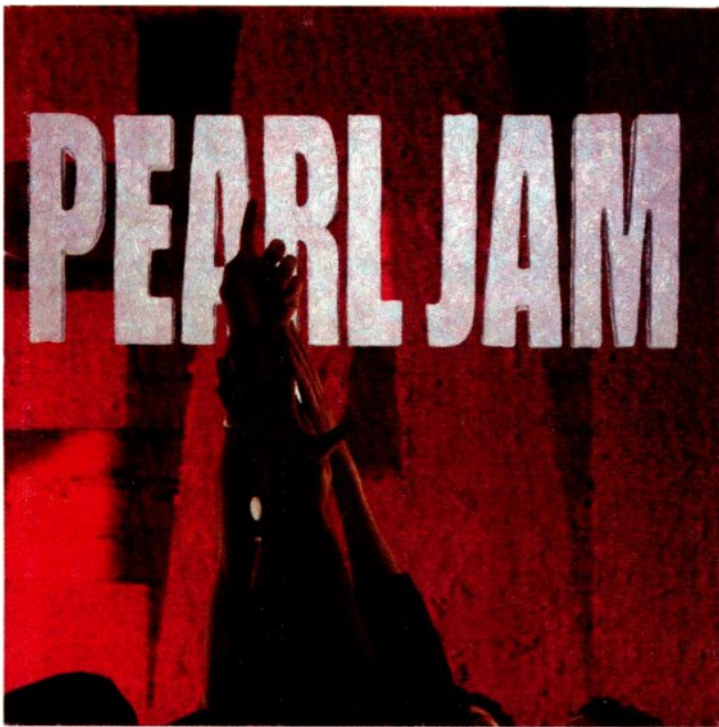
World Radio History



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Classic Tracks

By Barbara Schultz



"EVEN FLOW"

Pearl Jam

Grunge" was still just a noun meaning "dirt" when the newly formed band Pearl Jam made their smash debut, *Ten*. But the vibrant Seattle scene that spawned them was already inspiring musicians and fans.

For example, the band Mother Love Bone, led by Andrew Wood, generated lots of local and label interest in the late '80s. The group—which also included guitarists Stone Gossard and Bruce Fairweather, bassist Jeff Ament and drummer Greg Gilmore—signed with PolyGram, and hopes were high for their first full-length, *Apple* (1990). However, Wood suffered a fatal drug overdose just before the album's scheduled release date, leaving his bandmates to grieve and question their next step.

After Wood's passing, Chris Cornell, of another local band, Soundgarden, asked Gossard, Ament and vocalist Eddie Vedder to record a couple of songs in tribute to Wood. The project, under the name Temple of the Dog, grew into an eponymous full-length album, which was released in December 1990.

Temple of the Dog was a one-off, but Ament and Gossard had found

their new frontman in Vedder. They formed a band, then called Mookie Blaylock, with Vedder as lead singer/lyricist, Dave Krusen playing drums, and Mike McCready on guitar along with Gossard.

The new group, soon renamed Pearl Jam, then signed with Epic. So it was a new band, albeit one with some emotional and musical history together, that began pre-production for *Ten* in Seattle's London Bridge Studios in March 1991.

Ten was produced by Rick Parashar (then also the owner of London Bridge) and engineered by Dave Hillis, a Seattle musician/engineer who was friendly with some of the musicians and who'd had his own successes in the Seattle scene.

"I was signed to Metalblade Records when I was 17 [as guitarist for the metal band Mace] and ended up touring a lot," Hillis says. "When I came back to Seattle, Stoney [Gossard] and Mike McCready and I ran around together, and Mike and I had a rehearsal room together for a while."

Hillis had joined the London Bridge staff at Parashar's request, during the last stages of the Temple of the Dog project. A self-taught engineer, Hillis says that Parashar taught him essentials about acoustics and physics that have helped him throughout his career.

Work with Pearl Jam started with a couple of month-long demo sessions. "Then they came back in and we started the real record, and it was nonstop," Hillis says. "We just worked and worked. They are the hardest working band I've ever been around. We filled so many reels of 2-inch tape, you literally couldn't see through the window to the lounge. Every song was live, take after take; they would do it till they got it right."

London Bridge Studios (londonbridgestudios.com) is a high-end facility with a large, well-tuned live room and prized gear. Sessions were tracked to a Studer A800 machine. The Neve 8048 was the same vintage as the now famous console in Sound City Studios (Van Nuys, Calif.), where, at the time Pearl Jam got rolling, Nirvana was soon to begin final tracking for *Nevermind*. The control room monitors were a pair of Yamaha NS40s that Hillis liked so much, he bought them from the studio and still uses them today.

"Rick and I had most of them together in that big, beautiful room," Hillis recalls. "Eddie was in a small booth area in between [the control room and live room] so he could look at everyone." Vedder sang into a U 87, through a Neve 1081 pre, UREI 1178 Silver Face compressor, and an ADR Vocal Stressor. "Pretty much everything went through that Neve," Hillis says. "The main thing was to keep their vibe and just get things locked in—for everyone to connect and be a band."

Hillis says that McCready added numerous guitar overdubs on the album as a whole. "We had a Sennheiser 421 on his Marshall amp with a 57 next to it through a 1959 Bassman amp that Rick got just for him from Danny Mangold [of Danny's Music, Everett, Wash.], who built gear for Nirvana. We mixed [the 57] with the Marshall, and at the same time, put that through two channels of Neve and printed that to tape.

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Multi Grammy Award-winning engineer mixer and producer

“Another thing I remember doing was that we used two Lexicon PCMs in stereo—two mono ones together—with an Eventide H3000, and we’d bring those up on the bus faders and slowly bring them in and out for any type of reverb or ‘milk and honey,’ as I called it, to put on anything. I also used a lot from the room mics, which were key. In London Bridge, if you have room mics up, you can do anything. But overall, this was pretty straightforward, classic recording. That Neve is so good; other than tape splicing, there weren’t a lot of tricks.”

Tape splicing was actually key on “Even Flow,” a funky, hard-rocking, revealing portrait of homelessness with lyrics by Vedder and music by Gossard. Hillis said that the band played dozens of takes on the song, trying and re-trying till 2 or 3 a.m. to get the take. “They kept saying, ‘It’s not the one, it’s not the one,’” he says.

The experience seems to have stuck with McCready, who said in a March 2009 interview with the UK’s Daily Record, “We did ‘Even Flow’ about 50, 70 times. I swear to God it was a nightmare. We played that thing over and over until we hated each other.”

Then suddenly, after hours of attempts, they knew they had it: “At one point I looked up and saw the tape run out—it goes spinning off the reels,” Hillis says. “And the next thing they’re all celebrating in the room, going ‘We got it!’ and I thought, ‘Oh my God, we didn’t get it.’ We didn’t get the last 10 seconds. I had to grab another take and edit those 10 seconds onto the end of the tape.”

It was a scary moment for the young engineer, but he was able to

make a seamless fix, and once all the songs were in the can, the band members took their record to Ridge Farm Studios in pastoral Surrey, England, to be mixed by Tim Palmer, whose credits before *Ten* included Robert Plant, the Mission UK, Mighty Lemon Drops, Gene Loves Jezebel and Bowie’s *Tin Machine*, to name a few.

Ridge Farm—which closed in 2002 but is still a rentable (un-equipped) space—was a popular residential studio where the property included a 17th-century Medieval farmhouse. The facility had famously hosted sessions with Queen, Thin Lizzy and Roxy Music, among many others. “It was a fabulous studio to work in,” Palmer says. “You basically took over the premises, and the amazing location took your mind away from everything, except for the music.”

Palmer points out that at the time he mixed Pearl Jam, grunge hadn’t exploded yet, so Epic had no preconceived notions about *Ten*’s audience. “That meant that instead of feeling pressured to make a dry, grunge-sounding album, I was free to use all the sonic colors that I chose to use. Reverb, delays and backwards reverbs were all still de rigueur, so I did not feel limited. Had the album been mixed a year later, I am sure that the band would have wanted a more ‘honest’ low-fi sound.”

The mixer goes on to describe the atmosphere at Ridge Farm: “The main control room was set up at one end of the main barn; it was elevated to give a good view of the recording that would take place in the barn below,” he says. “The console was a Neve VR60, and I think they had Quested monitors. I can’t remember for sure, but I think by that point

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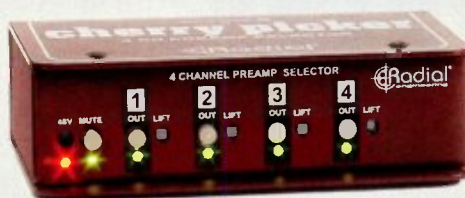


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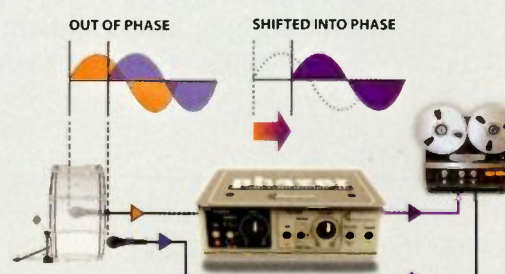


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I was using my Genelec 1031a speakers as near-fields. I really liked the fact that they always had a lot of outboard gear in that room. They had Lexicon 224 digital reverb, AMS Harmonizers, Eventide Harmonizer, MXR Flanger/doubler, PanScan and reverb by EMT, both Gold Foil and 149 stereo plate. The acoustics of the room sounded good; there were no surprises when you listened in another environment."

Palmer recalls that, on *Ten* generally, "I used reverb and delays to add to the depth of the sound: the EMT plates and a Lexicon 224. At that time, I really enjoyed moving from a fairly ambient sound straight into a very dry sound—especially on drums and vocals."

He also remembers adding some drum samples that were "...fired live on an AMS Harmonizer just as support to the snare. I didn't replace any sounds. I didn't need to; the recordings were very good. As we were stuck in the middle of the countryside, getting equipment was very slow. I wanted to add some small percussion parts to a couple of tracks but didn't want to wait around. I just used what was in the pantry rather than waiting; hence my credit for 'pepper shaker and fire extinguisher.'"

Palmer says though he loved the album, he was as surprised as anyone when, after *Ten* and Nirvana's *Nevermind* were released within a couple months of each other, the whole music business seemed suddenly to revolve around the new grunge genre and what some now call Seattle's "big four" bands: Nirvana, Pearl Jam, Soundgarden and Alice in Chains. But if fans loved grunge, "Even Flow" was a natural hit. The song defined the grunge movement's hallmark distorted guitars, intense

dynamic vocals and dark themes. "Even Flow" rose to Number 3 on *Billboard's* Mainstream Rock chart and 21 on the Modern Rock chart.

Pearl Jam suffered a setback after *Ten*; Krusen left the band to check into rehab. However, he recovered and his musical career is going strong. The other original bandmembers stayed together; their current drummer is Matt Cameron of Soundgarden.

Palmer eventually relocated to L.A. and then to Austin, Texas, where he now mixes in his '62 Studio (timpalmer.com). His more recent credits include H.I.M., Blue October, Jason Mraz and The Polyphonic Spree.

Meanwhile, Pearl Jam revisited *Ten* in 2009, when they asked producer/engineer Brendan O'Brien to remix the record as a bonus/addition to the deluxe reissue of Palmer's original mix. The remix employs that "dry, grunge-sounding" approach Palmer described, and the various reissue packages (Legacy, Deluxe, Vinyl and Super Deluxe) sold 60,000 copies their first week of release.

Hillis now owns and operates Starlodge studio (davehillismusic.webs.com), where he often works with Krusen and other stellar Seattle musicians. He says he hasn't, and won't, listen to the *Ten* remix. "Brendan O'Brien is one of the greatest producers ever," he says, "but Tim made it the hit record it was, and to me that's the record."

"I really feel Pearl Jam had tapped into a fresh new feeling, and a new musical page was turned," Palmer says. "Finally there was a move against all the hair bands of the '80s. Pearl Jam offered something with more substance, more mystery; it was raw and ultimately believable." ■

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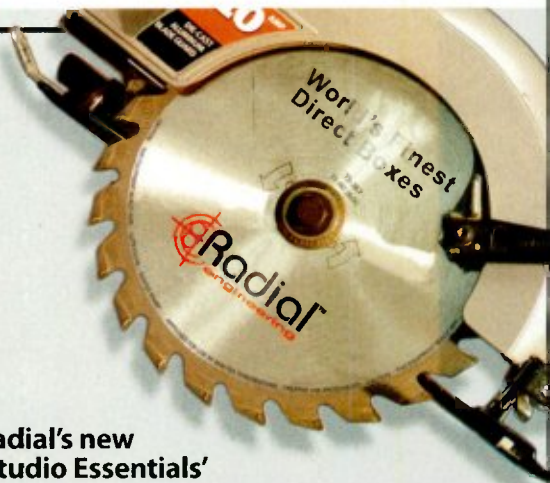


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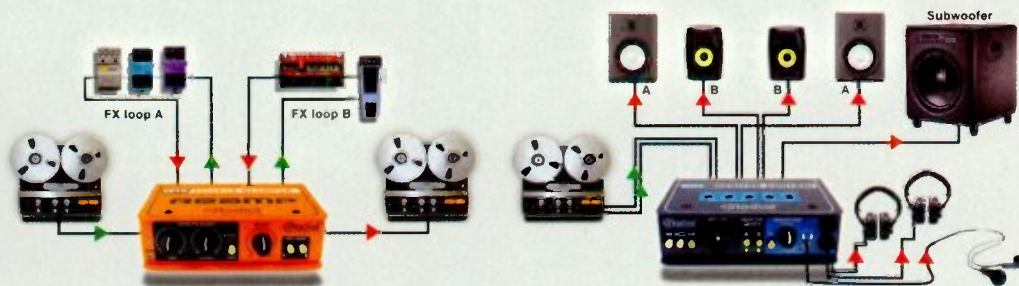


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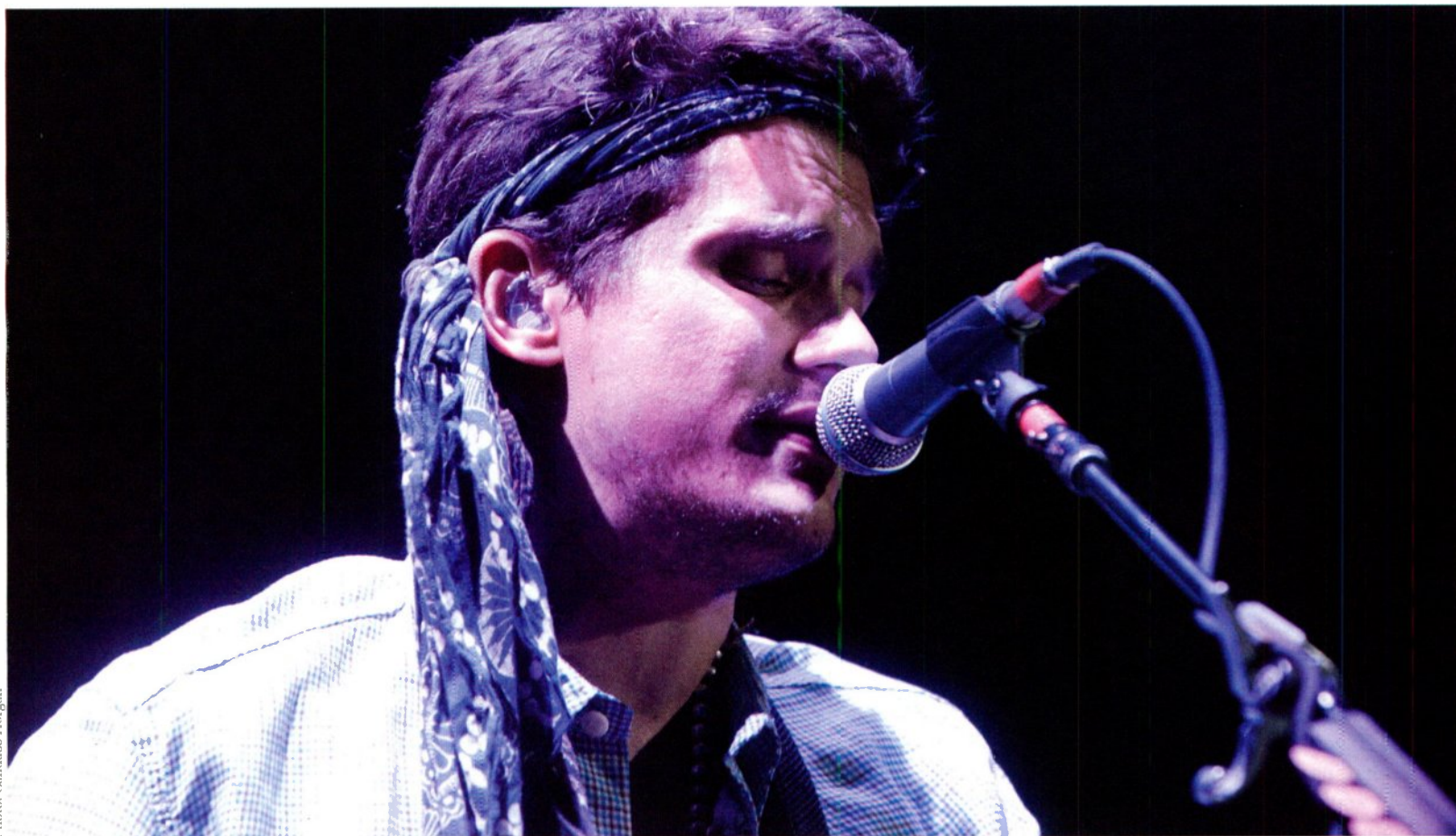
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JOHN MAYER

Mixing It Up at Red Rocks By Candace Horgan

It's late in John Mayer's set at his second consecutive sellout night at Red Rocks in Morrison, Colo. Mayer has had the crowd wrapped around his finger for most of the night, mixing in anecdotes about recovering from damage to his vocal cords that limited his ability to hit certain notes to making peace with the song "Your Body Is a Wonderland." Mayer's band, which includes guitarists Doug Pettibone and Zane Carney, is tight and has followed Mayer wherever he goes musically.

Coming out of "Queen of California," Mayer takes a jam abruptly into the Grateful Dead's "Althea." Wielding his guitar on a long solo, Mayer finishes furiously while Aaron Sterling's kick drum roars from the Clair BT-218 subs. Standing at front of house, you can feel the bass hit you in a way that rarely happens at a big show.

"Some days, we pound the hell out of them," laughs Mayer's front-of-house engineer, Chad Franscoviak, of the subs. "We have 24 subs; most are flown."

Mayer was touring the U.S. this summer prior to the release of his new album, *Paradise Valley*, in August. The sound crew for the tour consisted of Franscoviak, monitor engineer Bill Chrysler, systems tech Scott Frey, monitor tech Ariel Gendler, and P.A. techs Dave Weisman and Matt Van Hook from Clair Global.

Franscoviak has been with Mayer for a long time. He met the singer-songwriter while working as a freelance studio engineer in Atlanta, and engineered several of his albums before be-

OUTSIDE LANDS 2013

PHOTOS BY DAVE VANN TEXT BY MATT GALLAGHER

The Outside Lands Music & Arts Festival, one of the country's largest, pulled into San Francisco's Golden Gate Park in August, featuring Paul McCartney, Red Hot Chili Peppers, Nine Inch Nails, Phoenix, Willie Nelson & Family, Vampire Weekend, Kaskade, Pretty Lights, The National and many others across three days and five stages.

Pro Media Ultrasound based in Hercules, Calif., provided the audio systems, as they have from the beginning. The main stage, the Land's End Stage in the Polo Fields, was fortified with a Yamaha PM5D console at front-of-house A; a 48-channel Avid VENUE D-Show console at FOH B; and a Meyer Sound P.A. system, including 28 LEO line array cabinets (14 per side); six MICA line array cabinets underhung from LEO, three per side; 22 MICA 90 cabinets; 22 1100-LFC subs, 11 per side flown in cardioid pattern; 10 700HP subs; six CQ frontfills; and 32 MILO delay towers.

Front-of-house engineer Steve Taylor, who mixed Band of Horses on the main stage, says he was "very impressed with the [P.A.] rig," his first time mixing on a LEO system: "It was very clean, loud and flat. The best definition I can make of this band's style is 'Americana rock,' similar to Neil Young & Crazy Horse with CSNY-style harmonies. My style with them is to be warmer with the mix than the other [pop music] bands I've mixed in the past."



The Land's End Stage featured a Meyer Sound P.A. system with LEO line arrays.

more online: View an Outside Lands 2013 photo gallery from photographer Dave Vann. mixonline.com/092013



Band of Horses' FOH engineer Steve Taylor.

The National played the Land's End Stage on August 9.

Sir Paul McCartney and his band headlined opening day on August 9.

Gary Clark Jr. tore it up on August 10.



Nine Inch Nails rocked Golden Gate Park as the headliner on the Land's End Stage on August 10.

Hall and Oates brought their soul music on August 11.

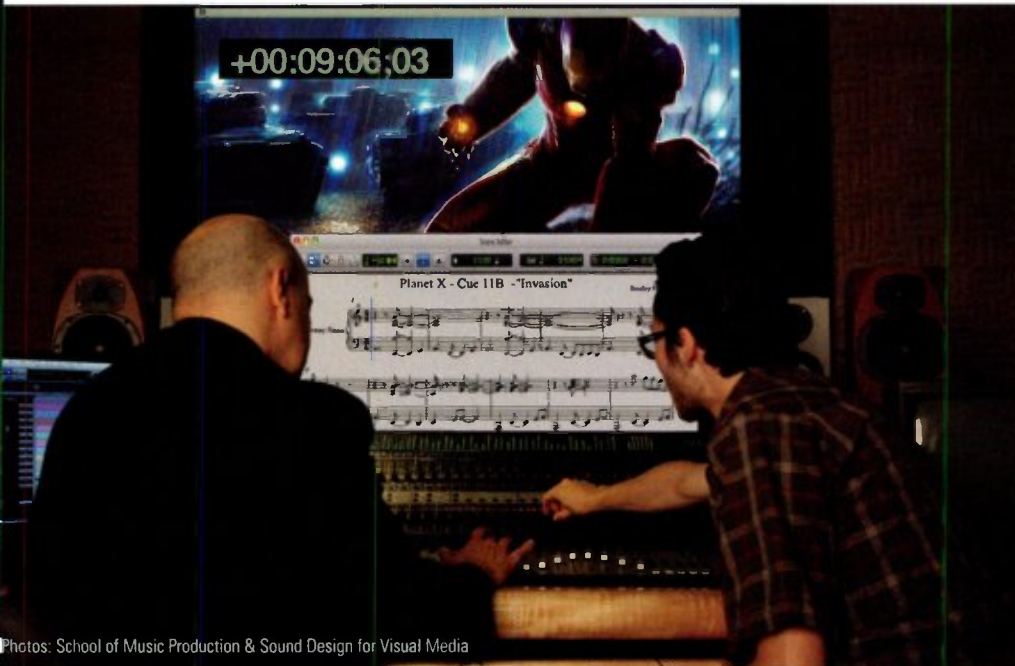
Willie Nelson & Family headlined the festival's Sutro Stage on August 11.

Rolling Stone magazine wrote that "the day's truest rock moments came from Red Hot Chili Peppers," who closed the festival on August 11.



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KID ROCK



Kid Rock, who made quite a splash at the start of his 2013 Best Night Ever Tour by working out a deal with ticketing agencies that guaranteed \$20 tickets for regular fans, played at the Sleep Train Amphitheatre in Wheatland, Calif., in early August.



"I'm mixing FOH on an Avid Venue D-Show Profile console, and it has served me well these past five years," says **front-of-house engineer Steve Cross**, center, with **Vic Wagner (AudioTech/Sound Image)** at left and **John "Haircut" Tompkins (Systems Engineer/Sound Image)** at right. "Some plug-ins I make good use of are the Crane Song Phoenix and one or two of the Waves plug-ins. I try to keep it minimal and only use processing where necessary. We have a lot of inputs, around 85, and the Profile makes it easy to manage them all efficiently. I am a big fan of mixing the music, not the technology, so the simpler the better for me. We have a totally digital chain on this tour. Once the inputs hit the stage racks, we are digital all the way into the amp racks. We did some A/B comparisons at rehearsals of driving AES versus analog outputs; [there was a] pretty significant difference.

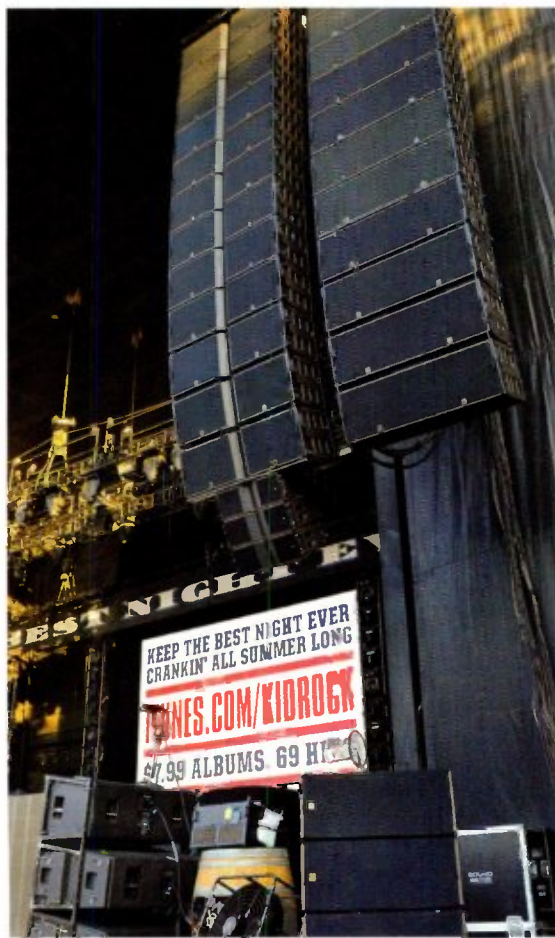


"With 12 people packed into a small performance area, I spend a lot of time trying to get separation on everything, keeping things clean," Cross explains. "But the percussion is a different animal. Last year I started experimenting with opening up the gates on all the percussion. They were never gated very tightly to begin with, but once I opened them up and made some mic placement and EQ changes, it all came to life. Now when percussionist Larry Fratangelo makes any subtle sound effects, they pop right through. Many times he will just have a shaker or something in his hands and not be near any mic, really. I hear all of that now and without all the guitar and drum bleed. It's a really positive thing for the whole mix, a lot of fun to capture all that stuff.



"I'm mixing 11 band members plus Kid Rock on an Avid Venue D-Show Profile console, without any plug-ins," says **monitor engineer Beau Alexander**, pictured at right with Jim "Fish" Miller, monitor tech. "Fortunately, they like to hear exactly what they are producing without any sugarcoating. I am currently around 85 inputs and 27 outputs. The Avid only has 16 auxes and eight groups, so I have to route some things to matrix to make it work for everyone. Some of the band and Kid Rock are using in-ears and wedges, which is the reason for high output count.

"I am carrying 14 channels of Shure UR4D wireless—eight for wireless handhelds, two for a wireless piano, one for sax and one we are using to mike up a Harley motorcycle wirelessly. That leaves two spare channels for anything that may come up. I am also carrying six Shure 900 IEM units for the band and two 1000 IEM units for Kid Rock. We use Shure Beta 58A wireless mics and Ultimate Ears UE 18s.



"For this tour, we have a main L-Acoustics rig," says John "Haircut" Tompkins of Sound Image. "We are hanging 12 Kis with three KARAs per side, 12 KiSBs right next to it offstage, and eight KUDOs per side for a side hang. Fills change [from] venue to venue, but usually we have two KARAs on top of one or two SB28s in front of the thrust. Sidefills for Bob [Kid Rock] are one JBL 4889 on top of two JBL 4880s, per side. This is one of the best—if not the best—audio crew I've been part of. Both engineers work hard alongside of us for the ins and outs. They, and my two Sound Image crewmates, carry more than usual workload helping me out after I was hurt in an accident last year. It's amazing the amount of work a crew full of capable friends can do."

Dave McMurray, saxophone (foreground); back row, from left: Shannon Guffman, background vocals; Hershel Boone, background vocals; and Jessica Wiganer, background vocals.



Stefanie Eulinberg, Drums



Marku Young, guitar, with Kid Rock, vocals, keys, guitar, turntable, percussion



Freddie Beauregard, turntable, with Aaron Julison, bass



Larry Fratangelo, percussion, and Jason Krause, guitar



SONY PLAYSTATION RECORDING STUDIOS

Building the Future of Game Sound and Music



Most, but not all, of the San Mateo-based Sony PlayStation Music and Sound crew in the new facility's live recording room, which can hold up to 35 pieces comfortably, with windows to both the API and Foley rooms and a glass wall allowing for natural light.

There really are no precedents for what Sony Computer Entertainment America has done over the past seven years in its ongoing commitment to raising the quality of game sound. Other developers and publishers have built world-class rooms and facilities, adapting to the sophistication and complexity of modern production chains and more powerful game engines. But nobody has done it like Sony.

To understand the full scope of what Sony has quietly developed in audio up and down the California coast, you have to go back those seven years, to when the company built its first true professional audio rooms in the U.S., in their San Diego facility. At the time, PS2 was maintaining its dominance and PS3 was soon to launch. It was

still a game console industry, primarily, and it wasn't uncommon for a title to bring in \$1 billion or more. Audio, both creation and playback, was considered a major part of the format's success, and the company backed the construction of 20 5.1 edit Pods, a tracking room, a Foley room, voice booths and three mix stages between its San Diego and Foster City, Calif., locations. A couple of years later, identical Pods were added to the Santa Monica development facility.

Fast forward to today, with the launch of PS4 less than three months away, and Sony has upped the ante again, in August opening 17 new edit Pods, an API control room, a D-Control control room, a Foley room, a sweet-sounding live room that holds up to 35 pieces comfortably, and the 7.1 Euphonix S5 mix stage pictured on

this month's cover—all as part of the company's Northern California relocation from Foster City to San Mateo, a half-mile away.

Word first came down from management that the facilities would be relocating about two years ago. While it meant tearing down world-class rooms and moving systems over (all without down time), it was seen as an opportunity to do it all again, on a larger scale, incorporating new technologies and design criteria to both increase the scope of the company's in-house work and improve on interoperability, workflow and collaboration. It was also an opportunity to bring in natural light, improving the comfort and vibe for engineers and sound designers who often work 16- to 18-hour days in the last few weeks before a game's release.

Music engineer Joel Yarger in the 32-channel API 1608-based 5.1 control room.



"It's all about talent," says Dave Murrant, senior director of product development service groups, who also spearheaded the initial build-outs in 2006. "You want to have an environment where they are inspired to be creative. Our previous rooms sounded great, and it broke our heart to leave them. When we approached this next round of build, we thought first of what we could do to enhance the experience for the people who create the sounds.

"Sony has always understood that quality is paramount, and their support of this facility is emblematic of this," he continues. "They see all the awards on the games—*God of War*, *Uncharted*, *Journey*, *The Last of Us*—there has been such a high regard for the quality of the audio on PlayStation games, the executives knew it was important. It's a big investment and we got their backing."

The core group of the creative and design and integration teams that came together for the 2006 build was largely the same this time around: Murrant; Chuck Doud, director of music; Matt Lavine of Bug ID, system design and integration; SC Builders, construction; and Chris Pelonis, studio design and acoustics. Two years ago, they met and began going over plans, joined by music engineering manager Marc Senasac and manager of sound and dialog in San Mateo Ken Felton, among a few others. The approach, by all accounts, was extremely collaborative. The goal was to improve on what they had learned over the years, recognizing that game sound production is an ever-changing target and building with future-proofing in mind.

CENTRALIZATION, CONSISTENCY

Change characterizes the game market, perhaps more than any other media-related discipline. Constant change, in formats, technologies and production pipelines. Any facilities built today have to be flexible and adaptable, interoperable yet isolated. For Sony Worldwide Studios, the need for centralized music/sound design services and audio consistency across campuses, both hallmarks from the beginning, were deemed even more important.

"At Worldwide Studios we have a centralized music and sound team that supports all of our games," explains Doud. "Every game we work on benefits from every other game we work on. We can also dynamically scale up or down as needed throughout the life of the project. Assets are shared

across all three campuses via Isilon servers. The team is not only working in Pelonis-designed audio Pods but also using Pelonis speaker systems, so we have parity across all audio disciplines and campuses."

"We do have best practices that we use," adds Senasac, who records and mixes much of the music heard on Sony games and was instrumental in equipment selection and workflow considerations. "At the same time, every game is a little different, and we have to address that. Sort of modular best practices. The nice thing about this facility is we can dynamically allocate resources. One day we can have half the guys working on one game, and the next day all the guys working on the game, then the next day have 17 guys working on 17 different games."

Just a few days after *Mix's* visit in mid-August, and only a few days removed from the installation of the S5, the room was already working, with engineers assisting the San Diego team on nearly 100 cinematic mixes for *Knack*, one of the announced launch titles for PS4.

INTEROPERABILITY

Collaboration and interoperability are really two sides of the same coin. A team can desire more collaboration, but without the right technologies and workflow and support in place, it can be much harder to achieve. While there has been no real change in Sony's conceptual approach to audio production (other than doing more of it, more efficiently), there were more than a few design changes, most notably in the wiring and the use of light, that led to big improvements overall.

In the previous Foster City facility, also in a modern office park, the wiring had all run through conduit, without Pods connected to a central machine room. Any changes in format or any equipment swap required a run down the hall and an assumption of down time. There were no windows and only peepholes in the doors.

Pods in the new facility have sliding glass doors opening into a narrow hallway that rings the perimeter with floor-to-ceiling windows and views of the surrounding city and hills. The hallway allows for local machine rooms, each serving two to four Pods. The sliding glass doors, with absorptive curtains when wanted, let in the natural light, while custom LED systems allow engineers to change colors in the room with nearly infinite variation. The Pod doors opening into the facility are also mostly glass, encouraging interaction as colleagues pass by. Efficiencies are improved, the comfort level is increased, and collaboration is encouraged.

"I placed the windows where they make the most sense," says Pelonis, who besides seven years of Sony projects has designed facilities for Sony subsidiary Naughty Dog, Valve and several other game developers, not to mention hundreds of recording facilities. "Windows are reflective and must be carefully incorporated into the acoustical design like any other surface. I utilized absorptive curtains over sliding glass doors and diffuse walls to create variable acoustics in the recording spaces. The curtains can be drawn to taste across quite a wide range of sonic characteristics. In the Pods I have absorptive curtains to let the light in or block it out, while also tightening up

Angelica Garde, senior music assistant, in one of the 17 Pelonis-designed 5.1 edit "pods," each with full-range Pelonis PSS110a monitors.



the acoustics depending on what is required at any given moment. It's really about creating an environment where the talent is inspired.

"The rooms we did in Foster City were wonderful, but we've learned things with the equipment changing, the wiring," Pelonis adds. "In the previous studios, the machine rooms were more removed. With the new design, the machine rooms are closer and visible. As well as being much more flexible for equipment changes, this allows us to move more equipment out of the Pod and into the machine room, creating a more open space. This facility is pretty limitless. If they want to record a superstar recording artist, they can. They can record orchestra, do sound effects, Foley, mix, overdub—whatever is required of audio for media. From the Pods up to the main mix rooms, they are capable of doing just about anything you would hear in a game, on TV, on radio or in film."

"To me, interoperability also means flexibility," adds Matt Lavine, owner of system integration firm Bug ID. "We try to make every room flexible enough to do tracking, ADR or orchestral recording, editing or mixing. In the big control rooms, we put in floor troughs to get cabling in and out of the machine rooms easily. Then we have conduit to interconnect other rooms. We installed modular panel I/O systems enabling the end-user flexibility to change cabling and connector type in the future. Basically, all the rooms are connected and upgradeable.

"We also wanted to get the machines out of the room, but close enough for connections like HDMI directly from computer or game system into the Pod, or to hook up a new video monitor or hardware EQ," he continues. "We can get cable through a floor or conduit pretty easily. When technology changes, they don't want to be calling us every time they put in a new piece of gear. If a sound designer wants to customize their Pod with select hardware, they can put it in a rack and run cable through these isolated chases we designed. Very simple."

THE MIX ROOMS

The Euphonix S5 room on the cover is big and wide and built for a multi-format mixing world, with emphasis on 7.1. The team did its due diligence in selecting the board, Senasac says, trying to foresee where the industry itself was heading, whether console games or mobile, handheld or online. Any console/controller they selected, needed to address the future, and the

evolving production chain of game audio.

"Gene Semel, senior manager of the PlayStation Sound Group, wanted to look at better panners for surround material," Senasac explains. "Our work is about 80 percent surround at this point, so we got really interested in S5. We went to Todd-AO and other facilities and got intrigued with the idea of running multiple workstations for more collaboration at the mixing stage. Avid acquiring Euphonix has only improved the Pro Tools pipeline."

Pelonis' patented Edge system, a backwall approach that absorbs low frequencies and gradually transitions into dispersion and diffusion as the frequency rises, is custom to the room, with modular variants appearing in every room throughout the facility. Pelonis Signature Series PSS215a three-way, dual-concentric 15-inch mains were brought over from Foster City and outfitted with new crossovers and bass amps. They measure well below 20 Hz. The Pelonis PS110a monitors that outfit the Pods were designed and developed concurrently with the Sony facilities in 2006, tailor made for the Pods themselves.

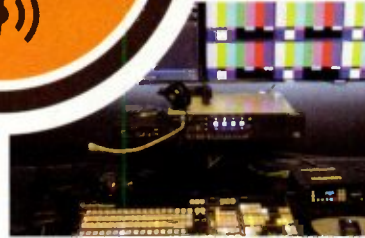
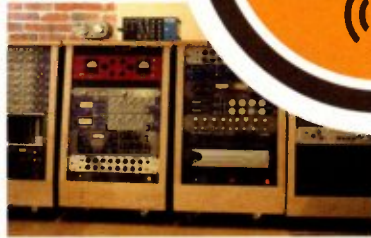
"One thing unique to my rooms, and their rooms in particular, is a wider sweet spot, where you can have quite a few people in there, move around, and everybody is experiencing the imaging and the frequency response in a similar fashion," Pelonis explains. "I'm able to do that because of the off-axis response of my speakers. Both the phase and frequency response stay consistent out to better than 30 degrees off-axis conically, so I'm able to open up the front wall so that the direct trajectory of the tweeter can point past the listener. The response is the same over a much larger, wider area. That's due to the nature of the driver; you can't get that kind of performance with a discrete driver. It's physically impossible. All the rooms are built with this philosophy. The low-frequency control and diffusion and the whole combination of acoustical palettes, built specifically around my monitors, creates a situation where everyone in the room is involved in the response that the engineer is getting. If there are 15 people in there, they are all involved."

Every room in the facility essentially serves three masters—Recording, Post-Production and Implementation—and has been designed to flip on a dime. That said, the Euphonix room is primarily for mixing, and the 32-channel API 1608 room (with companion Avid D-Command surface as a hybrid option) is mainly for tracking music. There is line of sight from control room, through the live room, on into the Foley room. Analog and digital available.

The increase in size and scale of the new facility, not only in the physical dimensions but in capabilities, reflects the company's evolution toward bringing more music production in house. "We are owning more of the process, and partnering with our composer talent in ways that helps them in creating signature-sounding scores for our games," Doud says. "The combination of the talent we have on staff and our production facilities gives the composers that work with us an edge. They have the opportunity to experiment and innovate on a scale that many of them couldn't do on their own."

The studios speak for themselves. They attract top talent, and that talent is in turn given the tools to be creative. Less often stated is the commitment throughout Sony, that extends to the architects, designers, integrators, builders and engineers they have brought on board these past seven years.

"The Sony PlayStation company, in general, honors the creative process," Pelonis says in summary. "They commit to their own team, but also to the people they bring on to facilitate creativity. I never feel shackled when I work for Sony. They give me the freedom I need to do my job the best that I can. And they are extremely collaborative. They make a point to understand what's happening on an artistic level. The second floor is kind of the jewel of the whole facility, and they are proud of it. So am I." ■



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When it comes to videogame audio, Brian Schmidt has pretty much done it all. Besides working on more than 130 titles for most of the major players in the industry (EA, Sony, Microsoft, Sega, et al), he was responsible for developing the original sound and music systems for the Xbox and the Xbox 360 (as well as the 360's XACT interactive mixing tool); he started the GameSound-Con conference, devoted to videogame music and videogame sound education; and he has spoken often at industry events scattered across the globe. It's no wonder he was honored with a prestigious Lifetime Achievement Award from his peers in the Game Audio Network Guild (GANG).

So, every move Brain Schmidt makes is viewed with considerable interest in the gaming world, including his latest foray: A 3-D audio game for the iPhone and iPad called *Ear Monsters*, the first of what will be a series of audio-centric games for portable devices from his newly created company, Ear Games. After so many years in the trenches, working on every sort of videogame imaginable, Schmidt has evidently decided that small is beautiful, and 3-D audio is where it's at.

"If you think about it," Schmidt says, "in a videogame, the video part is actually this small visual bit of this whole created world, and one of the cool things about audio—especially with surround or 3-D—is you can render the audio beyond that visual image and in effect extend the world. It's not too much of a step to get rid of the visual image altogether and rely pretty much on sound."

Ear Monsters is not the first "audio videogame" for iPhone/iPad—the popular horror title *Papa Sangre* came out in December 2010 (and was revamped this year), for instance. But Schmidt is hoping that his game will take the audio gaming experience to a new level. In *Ear Monsters*, creatures from another dimension are invading our world, and even though they are invisible, we can hear them around us, so our critical task is to kill them all to save our universe! It's harder than you might think, and the dimensionality of the audio is critical to know where the foul monsters lurk.

"I'm a big proponent of the more casual arcade-style games that you pick up and play for a few minutes and then put down and then play again a few minutes later," Schmidt says. "Obviously it's a different experience than the big, longer, story-based games. And, of course it's geared to headphone listening.

"The audio engine was developed by QSound Labs—which actually did the 'virtual haircut' 3-D audio demo that has about 15 million views on the Internet," he continues. "They spent a lot of time shrinking their algorithms down to portable spaces, and they've licensed it to various handset and phone manufacturers. They have a real run-time HRTF 3-D engine they built, so I incorporated that into the game. [HRTF—Head Related Transfer Function—refers to how our ears and brain process a sound to determine its location in 3-D space. CPUs can now mimic the sound placement our sophisticated hearing is capable of.] But even the very best run-time HRTF generally won't be as vivid as a really good [binaural] dummy-head recording. So in the game, there are a few plain old dummy-head recordings that give you some of the super-vivid images of planes flying overhead, and let me position the real-time sounds wherever I wanted them."

Schmidt did his own binaural recordings, including some Blue Angels fly-bys he captured in Seattle, where he is based, and various ambient atmospheres that emerge as the player moves successfully through the game: "One of the things I wanted to do, and again this is sort of in the style of an old arcade-style game-play, is it's pretty easy at first—in fact, when you first start the game you have visuals that help you out. Then, as the game progresses, it gets harder and harder until at some point it gets maddeningly tough. One of the things I do to make it more difficult to play the game is in-



roduce additional sound backgrounds that provide some masking. So, when you get to a certain number of points, suddenly you hear some wind crop up, and then the wind gets stronger, and then the rain comes. And each of these sonic elements, as they get layered on, are full binaural recordings I did here, and they also serve to make the game tougher, because it's harder to pick out the sound of the monster—it uses the masking effect to make it a little more difficult. I've got a couple of rainstorms and some thunder.

"I also use a little Wave Arts Panorama as well, which is an HRTF plugin. So, the game sonically is a combination of mono sounds that are positioned in real time by the HRTF engine—the actual monster sounds, the monster hits sounds, the sounds when you swipe at it, the sounds you make, and so on. Then I've got the dummy-head recordings, and also some additional recordings that were processed with Panorama."

As for the monster sounds, "I did some of them myself and a friend of mine at Funky Rustic Productions did some, as well. That's a combination of vocalizations and a lot of pitch-shifting—they get pitch-shifted up, re-jiggered around and flanged, and then I re-pitch them back down again."

Schmidt terms his work environment "a decently equipped home studio. I'm in Sonar, but switching back to Digital Performer, which I used for a long time. I have a standard Dell i7 with 16 GB of memory. My main keyboard is a [Yamaha] Motif 88-key, which I really like—not just because it has a great piano action, it also has great sounds for these sorts of arcade games, where you're looking for a little fanfare or whatever. My main development is on a MacBook that is running Parallels, so that with the switch of a key, I can go from three screens of Mac to three screens of Windows. I like PreSonus for audio I/Os, I've got a little Peavey MidiBass controller, and the standard sample libraries, like the Platinum East West.

"For this kind of work, I've got three different sets of headphones that I rotate through. I've got the Apple earbuds, I have a pair of [beyerdynamic] DT 770s that are sort of my main monitoring headphones, and a pair of Shures. I also have a pair of Ultimate Ears that I throw in randomly once in a while to check things.

"When you're doing iPhone games, you have to do things like roll off everything under a couple of hundred Hz; worry about things getting too tinny in the highs. It's a little funky, because the HRTF processing does a bunch in the 8 to 12k range; that's where a lot of the notch filtering happens for your front-back distinction."

For his initial audio game, Schmidt did almost everything himself, including programming and even the bass and percussion music that pops up from time to time. For the next Ear Games, however, he says he'll probably farm out some of the sound design and other elements. "The first time I always like to try to do it all myself; that way when the second time comes around, and I decide I want to hire somebody to do some piece of it, I have a much better idea of what it is that needs to get done, or what kind of problems they might have. Now that I have a game template and an engine and figured out the whole iOS thing, the hope is the next games go even more smoothly and they get better with each one."

Schmidt is purposely vague about what will come next from Ear Games, noting, "I've got about three to four games penciled out right now. One is pretty detailed penciled out, the other three are sort of sketch-padded out. One is a little more story-based, and I'm thinking it would be great to get some 'name' voice actors to do that. Whatever we do, though, I want it to have straightforward, quick-to-learn game mechanics that can be mapped well into an audio experience." ■

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Photo: Emily Collins

Composer Jason Graves conducting the Nashville Music Scoring Orchestra in Ocean Way Nashville's Studio A for a Sony PlayStation videogame.

The first thing anybody in recording talks about when they talk about Nashville is the players. The pickers, the A-list session players, the speed and brilliance. Next comes the studios, with the tradition-rich rooms, the amazing gear, and the incredible engineering talent. But for all the talk over the past 50-plus years about Nashville being a major recording center (which it is), with some of the finest artists, musicians, engineers and facilities on the planet (which it has), it still has a hard time being taken seriously outside of country music.

It doesn't matter that Kid Rock, Jack White, Kings of Leon, Sheryl Crow or Rush either live or record in town. Or that the majority of sessions across Davidson and Williamson counties on any one day fall under rock, pop, blues, gospel, Christian, Americana, jazz, hip-hop or electronic. The general perception remains, especially along the coasts: Nashville is country.

So imagine the challenge of trying to promote Nashville as a destination

for orchestral scoring to picture. Hint: It isn't easy.

"My joke is that when I talk to people in L.A., San Francisco or New York about recording orchestra in Nashville, the question is inevitably: 'Is that 50 banjo players and a pedal steel?'" says Pat McMakin, director of operations at Ocean Way Nashville, with a wry chuckle. "I exaggerate, but that's how unaware the rest of the world is about the breadth of the talent we have here in town. They just don't put Nashville and scoring together. But we're trying to change that."

Five years ago, McMakin assembled his staff and started to talk about what made Ocean Way unique, and where they could find new clients. He talked to musicians, contractors and colleagues, then started prepping his staff and facility for orchestral work, where down time is not acceptable. After three years of actively promoting Nashville in general, and Ocean Way Nashville in particular, McMakin is seeing results. Over the past two years, he's hosted numerous sessions for the videogame industry, most notably six from Sony PlayStation, but also titles from EA, Microsoft, Sega, Square Enix and others.

THE PLAYERS

It's not as if Nashville doesn't have a long history of orchestral recording, dating back to early radio days, on through the countrypolitan sound of the '60s, the strings-on-every-record days of the '80s, the gospel and Christian boom of the '90s, and all manner of projects over the past decade. It's just that nobody knows about it.

"Nashville has grown a really good core of classical musicians who do session work, full time, from one studio to another," McMakin says. "That developed over the years because they were fulfilling the demands of our industry. These musicians all have a symphonic background, and a conservatory background, but they come here to record, and they do it every day. What I've found out is that when you start talking to people about scoring, they ask about the quality of musicianship before they ever think about the studio or anything else."

Around the same time McMakin was starting to promote Ocean Way and beginning to host sessions, Alan Umstead, a violinist who had played

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From left, engineer Nick Spezia, Sony recording/mix engineer Marc Senasac, and composer Kevin Riepl at the 80-channel Neve 8078 console in Studio A.

in symphonies around the world and came to Nashville with his wife, also a violinist, in 1983 to join the symphony and record on the side, was doing much the same thing from the contractor/player perspective. As concertmaster and president of Nashville Music Scoring, a local recording orchestra, he, too began promoting Nashville as a scoring destination.

"We're like an orchestra that has been playing together for many years," Umstead says. "We have thousands of hours in the studio, with clicks and headphones. It's what we do all the time, side by side. Everyone is an excellent sight reader. There is very little wasted time. Everybody who comes here says that there is no place in the world that works as fast as we do, and as accurately. The L.A. clients will come out and book three days and we're done in a day and a half. We are so efficient, and so accurate. That's our big selling point."

They are also talented. Marc Senasac, Sony PlayStation's music engineering manager who has recorded game scores at Abbey Road, Skywalker Sound, Prague and L.A., says, "They are the only orchestra I know that really plays with feel. A lot of other orchestras have a classical sense about them. In Nashville, there are a lot of young people coming off pop projects or country projects or Broadway or the road, and they have a real sensibility for pop and rock. It's the perfect orchestra for games. We found out how good a set of musicians can be who play together every day, day in and day out, next to each other in ensembles. That doesn't happen anywhere else."

Still, great players will rarely be heard if there aren't great studios to host them. Great doesn't just mean big ceilings and a rich sound. The studio has to be prepared for the demands of orchestral work—no squeaky chairs, a podium that accommodates a spread-out score and timecode display, and the right mics. It's no surprise that about two years ago, around the time of *Uncharted: Golden Abyss*, the first PlayStation project scored at Ocean Way, contracted by Umstead and hosted by McMakin, the two came together in an informal partnership.

"Without Pat making the commitment to make Ocean Way a truly world-class studio for orchestra, it wouldn't matter how good we were," Umstead says. "From the start, it was clear that he wanted Ocean Way to not be a compromise to Abbey Road or L.A. He wanted to be on par with any studio in the world."

THE FACILITIES

To be fair, Ocean Way Nashville was already a world-class studio, and had done lots of orchestral recording since its founding in 1996 and subsequent sale to Belmont University in 2001. Studio A is built into the structure of a 100-year-old Gothic revival church sanctuary, with a 36x50-foot recording space with four iso booths, stained glass along the walls and 30-foot ceilings. The control room houses a meticulously maintained 80-channel Neve 8078 console, a favorite among scoring engineers.

Composer Jason Graves, recently known for his music on *Dead Space 3* and the new *Tomb Raider*, brought the second Sony project to Ocean Way, a Vita game called *Resistance: Burning Skies*. A Raleigh, N.C., native, he has conducted in the best studios around the world, from Skywalker to Abbey Road and all around L.A., yet had no idea of the scene in Nashville, one state away. Five of his past eight live sessions have taken place at Ocean Way in the past year.



"All my projects there have involved sections," Graves notes. "It's perfect for games. The players would fill about 25 percent of the room, giving you the air and the space surrounding the musicians. I wasn't expecting it to be that big, even after looking at pictures. But what really impressed me is that some of the cues I was writing for the Sony game were very melodic and pretty, and then we would switch to completely aleatoric, exploration stuff, with all these specific instructions to play crazy notes or funky passages, and no one had a single question. They nailed the first take. They didn't bat an eye, and these were crazy kinds of sounds."

Though McMakin had the infrastructure and gear already in place to record orchestra, and in fact had been tracking sessions for years, he began looking at what was expected from the new scoring clients.

"One of my concerns was how to handle cues and headphones," McMakin admits. "We had worked with several engineers from the West Coast who were used to having a large desk in the corner of the tracking space and mixing cues out for the different sections. We had just finished our new headphone system, with cue boxes that we originally designed back in 1996. They're 14-channel cue stations with Ocean Way-built mixers and modified Crown amps. We thought that if we put one of those with first chair of each section and they had some control, then the section leader could turn up or down what they wanted. When we first tried it under these circumstances, we wondered if it would be a limitation, but it turned out to be a strength. We feed stems out to those cue stations, then those stations daisy-chain out to stereo cue boxes for each player. It's that simple." By all accounts, from players to composers to conductor to engineer, the cue boxes have proven a success.

Due to a number of factors, from increased budgets to union rules, the destinations for videogame scoring have moved around over the past few decades. Seattle once got a lot of work, as did Vancouver, Salt Lake City, Charlotte, Prague and, as of late, Abbey Road and other European destinations. Why not Nashville? Why not something more permanent?

"I came up in the studio worlds of L.A. and San Francisco, where the facilities were maintained meticulously, and I've seen that go away little by little," says Senasac. "What struck me this time around about Nashville is that it is the place that now represents the epitome of recording. Studios still have full-time techs, mic closets that are pristine, especially Ocean Way. They have a Neve that works like it did in 1989, just like it left the factory! I was struck by the love of the craft of recording there." ■

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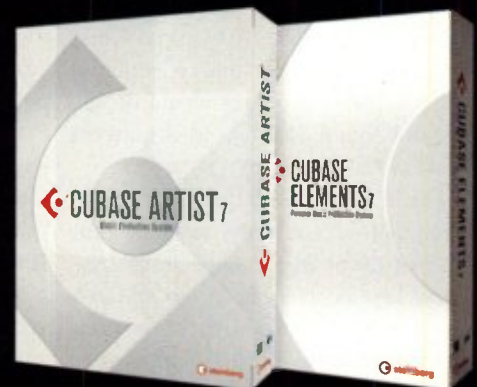
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The Noise Arcade

TOOLS THAT GAME SOUND DESIGNERS CAN'T DO WITHOUT

BY MARKKUS ROVITO

ONE OF THE THINGS THAT IS SO AMAZING ABOUT MODERN VIDEO GAMES IS THE VOLUMINOUS AMOUNT OF TALENTED AND DEDICATED PEOPLE IT TAKES JUST TO HELP 13-YEAR-OLDS FALL SHORT OF THEIR POTENTIAL.

Kidding aside, though, videogame sound designers take on special challenges that don't come up when sound designing for linear video. For games, the sound designer has to create sounds without knowing exactly how far away the sound will be from the character when it plays, not knowing the ambient environment the sound will be in, whether there will be obstructions between the sound and the character, and often not having any visual reference before creating the sound.

Nonetheless, game audio designers have the same tools to work with as other producers and sound designers, so the criteria for their gear may differ a bit. We talked to a number of sound designers and combed over the opinions of game audio professionals in articles, interviews, and online forums and sites such as Gamesound-design.com to come up with some of the most beloved tools on which this singular niche of audio shapers relies. True consensus in such subjective matters may never be achieved, but this collection of mostly software products would delight any game sound addict, at least until the release of PlayStation 11.

Keep in mind though that while the following tools are certifiably awesome, one recurrent theme in the game audio community kept popping up in our research: You don't need a million bucks to sound like a million bucks. Don't get too hung up on gear, because technique and hard work trumps fancy toys every time. Practice, practice, practice, and you will find your sound.

WAVES SOUND DESIGN SUITE

No, no, no, it could not be that easy. You mean to say a game sound designer can just go to one of the one of the most renowned plug-in makers in the history of sound itself, pick the box that says "Sound Design" in the title, and be squared up? That may be an insult to the intelligence of sound designers if it didn't happen to be so close to the truth. Loaded with compressors and EQs, the entire GTR3 suite of guitar amps and stomp boxes, and plenty of radically creative effects, Waves Sound Design Suite (\$1,400 Mac/PC) bundles 36 monster plug-ins into a package compatible with all the major formats and DAWs.

Game sound designers go particularly ga-ga over particular offerings such as MondoMod, a multi-type chorus effect with LFOs, for the ability to take rather mundane sounds and drastically alter them. The same goes for Enigma, a multi-layered modulation effect with BPM sync that stacks filtering, LFO modulation and delay feedback modules together for sound-obliterating results. These effects go far beyond basic modulation to allow designers to input one sound into a mixer track and come up with spellbindingly different and infinite results out of the other end.

Considered practically a must-have for games, Doppler applies the sense of movement to sounds with a highly tweakable Doppler effect useful for vehicles, bullets or any sound that a character in a game can move toward or away from. It includes adjustable reverb and different modes for one-shot or continuous cycling.

On the more meat-and-potatoes side, game audio nerds love the sound of the look-ahead brickwall limiter and level maximizer series of the L1, L2, L3, and L3-LL Ultramaximizer plug-ins. These allow the designer to set-and-forget a limiter on



Waves Doppler



Waves Enigma



Waves MondoMod



Waves Renaissance Equalizer

the master output while they go sick on their twisted audible creations and yet maintain a controlled output. Finally, the Renaissance Equalizer effectively carves out unwanted frequencies and boosts where needed without coloring the sound. It's also prized for its low CPU load.

Although packed with audio-shaping power, the Sound Design Suite still doesn't include all of the Waves plug-ins that game sound designers crave, but it's the highest concentration of such tools in one bundle-priced collection.

NATIVE INSTRUMENTS COMPLETE 9

Another bundle too big to cover entirely, Complete 9 (\$559, Mac/PC, AAX/AU/RTAS/VST/stand-alone) includes the three Native Instruments programs that game sound designers find the most salivating at a price much lower than buying even two of them individu-

ally. Sure, if you wanted to shoot for the moon, you could drop the extra cash on Complete 9 Ultimate (\$1,099, Mac/PC) and walk away with a hard drive full of sounds and some other extras. Either way, you'll capture the videogame world's most wanted NI tools.

The software sampler Kontakt 5 dominates the field, which heralds this extremely deep program for its all-in-one sound-design potential. Designers often have the ability to do all their sound editing, effects processing, pitch-shifting, etc. entirely within Kontakt 5, saving them time when a deadline looms. They can build up libraries of sounds beginning with just raw waveforms, or load samples and use the instrument as a "virtual Foley stage," where they sufficiently alter and then play back the sounds for recording.

Beginning with more than 2,100 atmospheric presets, Absynth 5 lets



Native Instruments Absynth 5



Native Instruments Kontakt 5



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sound designers combine aspects of one patch with another in the Sound Mutation module or get deep into the semi-modular architecture, where FM, subtractive and wavetable synthesis combine with sampling to create Absynth's signature otherworldly sound. Of the staggering amount of soft synths in the world, game audio designers name-drop Absynth the most. It seems tailor-made for all the alien creatures, ships and environments that are so prevalent in sci-fi and adventure games.

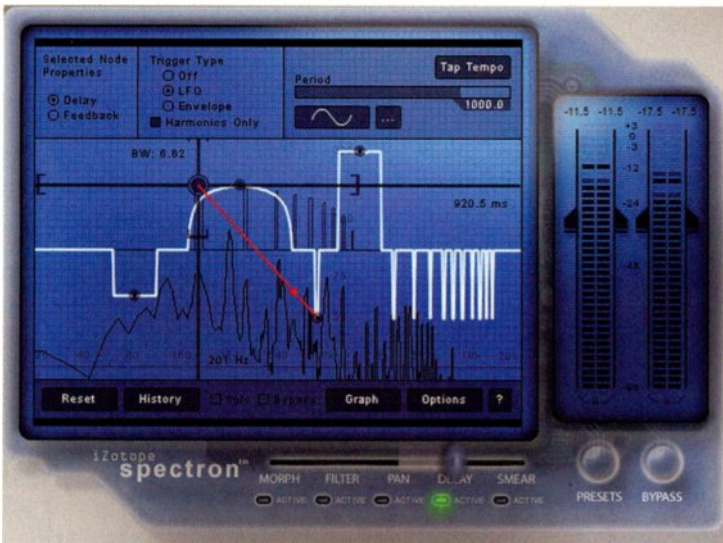
No sound design studio would be complete without Reaktor 5.8, considered an obvious choice for professionals because of its fully modular synthesis structure, where there are infinite possibilities for creating new sounds and even new instruments. It offers more than 70 core instruments out of the box, with thousands more available from its online user library. Game folks revere it because it inspires creativity, leads to unexpectedly awesome results, and because, again, you can potentially take a design project to completion using only this instrument.

IZOTOPE

Among iZotope's strong lineup, a pair of programs have stood out in the game community. As either a stand-alone editor or plug-in, RX 2 (\$349, Mac/PC, AAX/AU/DirectX/MAS/VST) or RX 2 Advanced (\$1,099) frequently save the day as a spectral audio repair tool with batch process-



iZotope RX 2



iZotope Spectron



iZotope Spectron

ing. Game publisher staffers frequently have thousands of Foley sounds from the field or dialog files to clean up, and RX can remove noise, hiss, pops, buzz, etc.; restore clipped audio; perform leveling; and so much more before batch processing them with a sound that many prefer over other pro editors. The advanced spectrgram allows you to "see" problems in the audio, as well. RX 3 was released in September—just before press time—offering cool additions such as reverb removal, real-time dialog processing and more.

Audio geeks love their spectral displays, and Spectron (\$129) earns a spot in game sound designers' hearts for its access to the sound's spectral domain and dynamite string of effects that can mangle the original source into something completely new. With 64-bit internal processing, Spectron includes frequency-level effects chains including delays, chorus/flange, surgical panning, and the Morph module, which lets you modify the spectrum of one signal based on the spectrum of another signal in real time. Users note that Spectron appeals to those with a love of experimentation; the journey may take awhile, but the destination sounds fantastic.

ZOOM HANDY RECORDERS

Zoom recently flipped the portable recording scene on its head with the release of the H6 Handy Recorder (\$499), the first handheld 6-track recorder, which also supports four interchangeable input capsules: X/Y mic



Zoom Handy Recorder H2



Zoom Handy Recorder H4n

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Mix – Chris Grainger

Hilo provided the **richness** and **clarity** I expected in the top end, balanced midrange and full bottom, with extended depth in the lower sub octave range. Hilo was fairly **transparent** in its delivery.

Hilo is a great unit for **mastering**.

The 2-channel Hilo takes a **new look** at how we interact with a converter.

The Absolute Sound - Steven Stone

The Lynx Hilo's **feature set is far more extensive** than any two-channel playback-only audiophile will ever need.

...more flexible than any consumer DAC/Pre I know. It's a cool, **great-sounding, Swiss Army knife** of a digital device.

With every set of headphones I tried the Hilo provided an **exceedingly quiet** environment for the headphones to work their magic.

Sound on Sound – Hugh Robjohns

Technically and sonically stunning. There are countless two-channel converters, but few match Hilo's technical or sonic performance and none offer the routing versatility or potential for new functionality.

As a simple stereo D-A converter, the **performance was astounding** and amongst the **best I have ever heard**.

Controlled and refined... polished and precise... fantastic **sense of depth**... space and separation between the instruments... no detectable coloration or sonic fingerprint, just **sublime neutrality and accuracy**.

Tape Op – Allen Farmelo

In terms of sound, Hilo is an **amazing converter** – open, clean and as quiet as I've ever heard. Like a great camera lens, Hilo brings a **realism and clarity** to the image.

This touchscreen allows Lynx to **add features endlessly** through firmware upgrades, so a Hilo user today isn't going to be left in the dust when the inevitable interface innovations arrive.

I/O is seemingly endless in Hilo.

Given the number of features, plus the great, clear, open sound of the unit, I think Hilo really is a **new-generation converter**.

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(included), MS mic (included), shotgun mic and dual XLR/TRS input.

The H6 is too new to have made an impact yet, but there is a convincing plurality of game sound designers who choose either the H2n (\$349) or H4n (\$549) as their field recorder of choice, never leaving home without one. It's a combination of construction, sound quality and ease of use that has made Zoom the commonly heard brand name in game audio over the many competing handheld recorders. It's not at all unusual for a Zoom unit to handle the bulk of the Foley work on professional game audio projects. However, when they need a more high-end portable recorder, game designers tend to prefer the Sound Devices 702 (\$1,975) or 722 (\$2,595).

CAMEL AUDIO ALCHEMY



Camel Audio Alchemy Version 1.5

When you're faced with hundreds, if not thousands, of original sounds to create on a deadline, you want an environment where you can create and modify new sounds fast, as well as keep them organized. Camel Audio Alchemy (\$249, Mac/PC, AU/RTAS/VST) rates highly among all virtual instruments for its five types of synthesis, including a virtual analog engine, and for its deep programming.

Yet game sound designers in particular see Alchemy as an oasis of possibility due to its sampling capabilities that let you import your own sounds and then develop them with one of four types of re-synthesis: granular, additive, additive + spectral, and spectral. With those endless options, designers can import their banks of Foley, voiceover and other sounds to create instruments out of vocals, for example, or to transform simple instruments, such as an acoustic guitar, into an angelic cosmic echo twinkle. The options are staggering, but creatively liberating.

Alchemy comes with 5 GB of samples and more than 1,000 presets, with bundle options to add up to 26 more sound libraries for more than 4,000 presets. When you add that to the thousands of new sounds that a game designer will likely create, it's a good thing that Alchemy also boasts one of the the most sophisticated sound browsers in the business. All the presets are labeled by category, genre, articulation and timbre, so it is quick to find a sound according to those tags. You can rate sounds and then search by rating, or add your own tags to search by project name, client name or whatever you like.

SOUNDTOYS



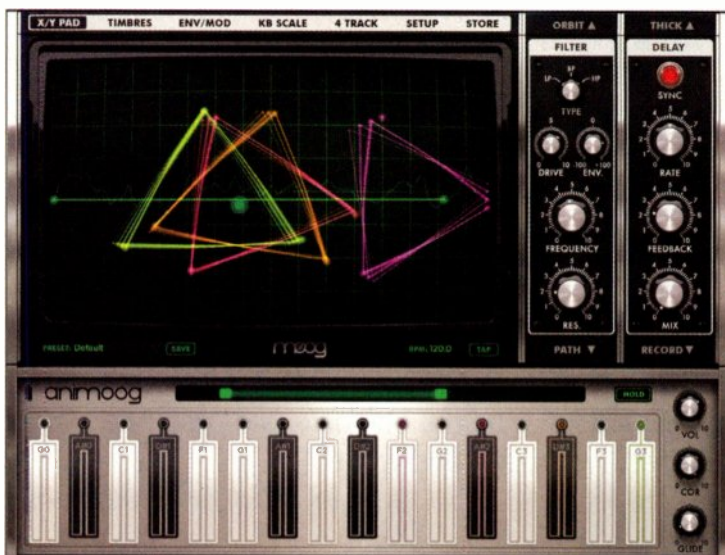
SoundToys Crystallizer

Prized for their clean, simple interfaces but more importantly for their outstanding sound, both Decapitator and Crystallizer (\$179 each, Mac/PC, AU/RTAS/TDM/VST) feel a lot of love from the game sound community. Decapitator models many types of vintage gear to mix up an analog saturation effect that reacts to the dynamics of the input signal.

SoundToys based Crystallizer off the Crystal Echoes preset from the Eventide 3000, which ruled radio in the late '80s. How about a little granular reverse echo slicing combined with vintage, glitchy pitch processing? That's why you insult Crystallizer by using it for basic delays. SoundToys also polished it up with MIDI sync, Gate/Duck control and filters. Crystallizer's bizarre reverse delays make it perfect for the fictitious worlds of videogames.

MOOG ON THE IPAD

In our day, you couldn't buy a Moog synthesizer for 30 bucks! You had to mow lawns in the snow for three years just to save up for a half-working monosynth from Radio Shack. Well, thank God those days are over. Moog has brought its two most famous legacies, its filters and synthesis, to the iPad in wonderfully modernized apps. The polyphonic Animoog (\$29.99) represents the proud debut of Moog's Anisotropic Synth Engine (ASE) optimized for the iPad's touchscreen with an X/Y space for controlling its dozens of timbres. The sound lives up to the lofty expectations of the Moog name, and there's professional modulation and filtering options, as well. Sound designers love the convenience of this handheld Moog synth. You can record your creations, and there's an optional 4-track recorder, as well.



Moog Animoog

For Moogerfooger lovers, Filtatron (\$7.99) delivers a similar experience on the iPad or iPhone. Its processing suite includes a modeled Moog filter, envelope follower, LFO, overdrive and delay. You can record the result of effecting loaded samples, the built-in oscillator or the input from the iPad's mic, making it great for spontaneous Foley sessions in any location.

INA GRM TOOLS

Resulting from years of study by a French musical research group, the effects of GRM Tools Complete Collection 3 (\$800, Mac/PC, AU/RTAS/VST) now shows up in the sounds of a great deal of videogames on the market today. The 15-plug-in suite comprises three smaller bundles that go from basic to mild. Besides a good collection of filters, delays, EQ and a crucial Doppler effect, the most characteristic plug-ins of GRM Tools radically and dynamically effect the sound by shifting and rearranging frequencies, evolving resampling, modifying spectral resolutions and more.



Ina GRM Tools

GRM's unique sonic outcomes have made it a staple of the sound design scene. In one notable example of its use, Benjie Freund, as a challenge to himself, designed the sounds for the popular Tribes: Ascend game using only simple signal generators in Pro Tools and the GRM Tools Collection.

STEINBERG WAVELAB 8

While there is hot competition for the audio editor of choice among game sound designers, both from the industry standards like Sony Sound Forge Pro 11 and from the inexpensive upstarts like the Cockos Reaper DAW, the recently updated WaveLab 8 (\$599, Mac/PC) editor and mastering program has a strong cross-platform following, as well as the features and performance to back it up. The most ardent game sound designers in the Wavelab camp sing the praises of its batch processor, its smooth VST integration, auto-cutting of certain files, the convenience of handling marker placement, and many other features. While some editors prefer the destructive editing of Sound Forge to retain the same file name quickly, Wavelab sticks to non-destructive editing. ■



Steinberg WaveLab 8



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BY BARBARA SCHULTZ

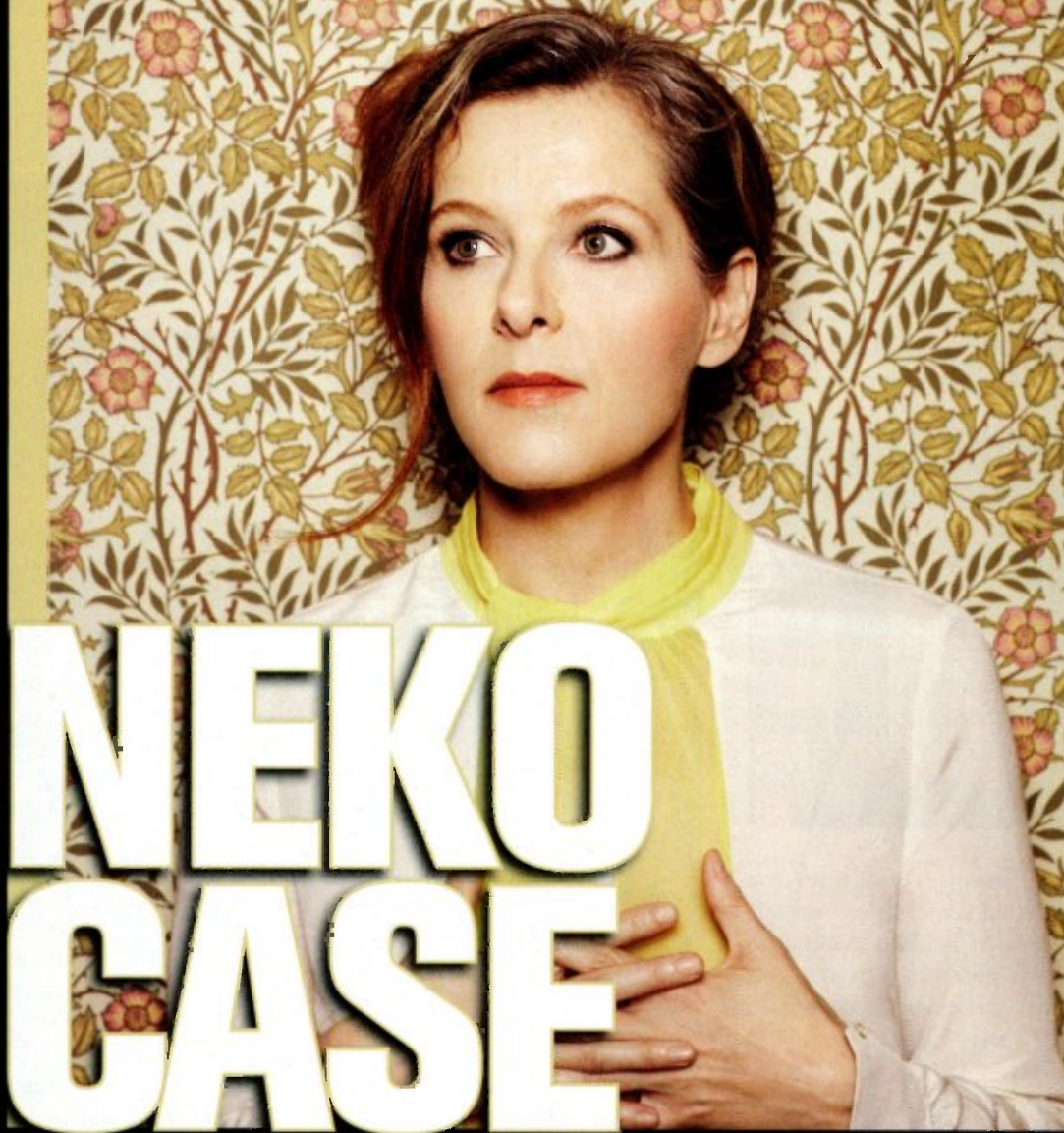


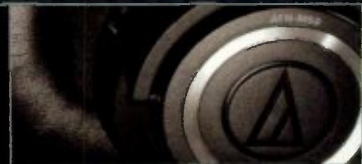
Photo: Emily Slat

MAKING MUSIC INSIDE, AND OUTSIDE, THE COMFORT ZONE

Craig Schumacher describes the process of making Neko Case's latest magnificent album as a process involving critical relationships and balance: "When she's here, it's all about the studio, and my dog and her dog, and feeling good, and going out to eat at the right time, and hanging out with the boys, and getting in the right headspace to come back and do vocal takes and have them feel right. We have a process that's all about friendship and the comfort that allows her to feel confident that these basics we're doing are good enough to push forward."



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Photo: Karen Luedig

Craig Schumacher (left) and Chris Schultz

a great arrangement of it, but she was like, 'My band doesn't get this. It's a feel thing and I can't explain it,'" Schumacher recalls. So he and Schultz asked Case to play the acoustic guitar and sing the song, the way she heard it in her mind. Then, they spent some time playing with her guitar part to adjust the timing to match her vocal performance. But when Case returned to the studio, she felt the timing was too rushed in places, and she wanted guitarist Jon Rauhouse to play the guitar part. She asked Schultz and Schumacher to un-fix the timing to convey that feel to Rauhouse, rather than focus on turning her performance into the final take.

"We made a guide track out of her acoustic part, which she felt got to a place where it was 'If I could play it how I wanted to play it, then this is how it would feel,'" Schumacher explains. "We sent that to Jon so he could practice and then come in prepared with all of that feel, the push-and-pulls that she wanted there, so they could perform it together."

In an interview with NPR last spring, Case was still in the thick of album sessions, and she admitted that her songs were proving somewhat elusive in the studio: "I've never worked on a record where I couldn't recognize the songs when I went to rehearse them," Case said, going on to talk in detail about sounds for the song "Where Did I Leave That Fire," an echoing, ominous-sounding song about struggling with identity and inner strength. The artist told NPR that the song made her feel like she was living in a submarine, so she asked Schultz to create an intro for the track using submarine sounds. The effect is brilliant: What sounds more strange and lonely than submarine signals?

Case doesn't do all of her recording at engineer/producer/owner Schumacher's Wavelab Studios in Tucson, Ariz. But *The Worse Things Get, the Harder I Fight, the Harder I Fight, the More I Love You*, Case's latest collection of eloquent, varied original compositions, is the fourth album running where she's used the studio as a home base. It's at Wavelab that she, along with some of her favorite musicians, begins to explore musical ideas and sets about taking those ideas from brain to tape. Co-producer Schumacher and his engineer, Chris Schultz, continue to be integral to Case's creative process, which is all about finding the right way into each song.

There are a lot of full-band tracks on this album, some with half a dozen guitar and/or synth parts added, but that's not always Case's desired approach. The song "On From Nowhere," for example, shines from a more simple place, with a folksy arrangement of acoustic guitar and delicate vocal arrangements. "It was originally a band song, and we had



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"I just went online and found free submarine sounds, sonar sounds," Schultz says. "I kept scrolling and trying them, and Neko would pop her head up and say, 'Oh, I like that one!' I probably found eight that we liked, and ended up actually using five or six. I made a loop of one and then started making loops of the others, but they were different lengths so they would start and end at different times. The fact that they're not in time with each other makes it more fun."

The dark, questioning mood of "Where Did I Leave That Fire" is further realized with some low, looped synth and guitar tones; processed, hissing percussion; and watery-sounding piano glisses, like rushes of bubbles; and of course Case's gorgeous, carefully arranged vocals, which are always captured with the same model microphone.

"That's always an Audio-Technica 4050, in omni, to an Avalon AD2022 mic pre, and this time an Alan Smart C1 compressor going in, just to tame any transients," Schultz says. "She's really familiar with that mic and she knows how to work it."

"With the 4050 in omni, you're not going to get a lot of proximity effect," Schumacher points out. "It's really gentle on the female voice, so the dynamic range of her voice can go from whisper-quiet to super-loud, and she knows, and we know, that the mic is always going to come through for her. It's been her mic for the past three records."

Schumacher estimates that, though some parts were recorded in other studios, in New York, L.A. and Oregon, about 85 percent of the lead vocals on the album were done at Wavelab. Conversely, the album's mixing engineer, Tucker Martine, says a similar per-

centage of the harmonies and backing vocals were done in his studio, Flora (florarecording.com), along with additional guitar parts, percussion and other elements.

"We ended up doing more than had been planned," Martine says. "The first chunk of time when Neko was here had originally been scheduled as mix time, but when she got here, the record was still in a somewhat amorphous state. We rifled through things, and spent time discovering what parts were essential and what she wanted to be redone. It was, 'open up the hood' and take stock of the anatomy of the whole thing. I think that often, the way Neko works is to have a starting point, then jump in. The puzzle definitely revealed itself as we went along; we didn't always know what the next piece would be."

At Wavelab, Schumacher and Schultz had recorded numerous parts to their MCI JH16 24-track machine, and others into Pro Tools. Schultz transferred everything to Pro Tools files before sending the tracks to Martine.

One song that incorporates elements and ideas put forth in both Wavelab and Flora is the first single, "Man," a big, full rock 'n' roll track that makes a strong statement about gender roles and delivers a powerful impact musically.

"That's one of the songs that, when I first got the batch of materials, was making me scratch my head," Martine recalls. "It was skeletal and it wasn't quite making sense yet. It was hard to wrap our heads around it until we added several more electric guitars. Neko played some and Steve Turner from Mudhoney, and Matt Ward [of She & Him] played on that, too."

Drums had already been laid down in Wavelab, with Kurt Dahle of New Pornographers



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playing the studio's Ludwig kit; Schumacher says he switched out the kick for a larger 26-inch drum at Dahle's request. But Martine says the bigger guitar sounds were making the drums "smaller and smaller. I wasn't able to get them to have so much impact in their organic acoustic state." So, he and Case embellished with a prominent tambourine part and some drum samples.

"I reinforced the drums with samples just on this one song, because it seemed that for it to work, it really needed to be hitting hard," Martine explains. "I have a library of drums that I've amassed over the years, some of which I played myself. This was right after I got the Drumagog plug-in, and I used that as well. I also ran the snare samples through some distortion with the Thermionic Culture Vulture."

The distorted samples create a hissy, arresting sound. "I wasn't sure I wanted to go that direction, but I heard Neko from the back of the room say, 'Yeah, that sounds awesome!'" Martine says.

The time Martine had blocked out for Case's mix quickly evaporated, so when he needed to move onto a different project for a while, Case returned to Wavelab.

"At that point, Neko had a scratch vocal on 'Man' that was recorded to an SM58. She texted me from Tucson saying, 'I'm trying to re-do the vocals on "Man" with the 4050, but it's not as cool. Can we use some of the old vocals from the SM58 along with some new vocals that were done with the 4050?' I told her, 'Yeah, we'll make it work,' because I got the impression that they were struggling to duplicate something about the vibe of the old vocals."

The tracks then came back Martine to be mixed. "But then I had to try

to figure out which of the vocal recordings were done with the 4050—and then I went down the rabbit hole of trying to match the 58 vocals to that the best I could. I ran the SM58 vocals through two Pultecs—to one I added some 10k, and the other I added some 16 for some top end and then for some air. Then both of those went through a [Empirical Labs] Distressor."

Martine says he sent all the album tracks through an SSL G Series compressor and a Retro 2A3 EQ: "That Pultec-style EQ adds a little bit of air," he says. "Also, all the electric guitars usually went through the [Manley] Massive Passive for a little bit of 3k, which I think the Massive Passive does really well."

"Also I had this setup going where my console has eight stereo bus return faders, and on each one, I patched in a different compressor or effect so, at any moment, I could say, 'I wonder what these drums would sound like if they're hitting the Chandler TG1? Or the Neve 33609? Or if I send the snare to the spring reverb?' Any one of those things could be done at the press of a button without having to patch a bunch of stuff in."

"I've always loved Neko's records and been fascinated by how unique they are and wondered how they came together," Martine says. "Something about them sounds really natural and organic, and then something has this other dimension to it. So, anytime she might make a request that I'm not sure can be done, my answer was always, 'Yeah, let's find a way.' I love those challenges anyway because that's when I really start learning things. I like getting out of my comfort zone if I have faith that at the end of the day we're going to wind up somewhere we want to be." ■



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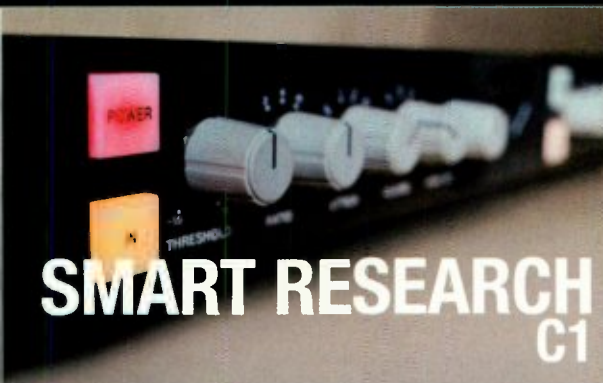
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MIX REGIONAL: NORTHWEST U.S.

ROBERT LANG STUDIOS



Photo: Lami Linton of Seattle Music Photography
Producer Toby Wright at the SSL Duality SE V3 console.

Seattle's legendary Robert Lang Studios and Brick Lane Records recently announced a strategic partnership to provide artists access to an SSL Duality SE V3 console. The Studio—which has retained a solid place in rock history, having hosted bands such as Nirvana, Linkin Park, Train, Foo Fighters, Dave Matthews, Soundgarden, Death Cab for Cutie, Eddie Vedder, and Taking Back Sunday—has installed the Duality in its brand-new second control room.

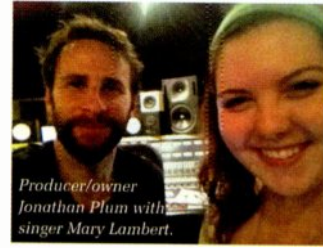
Forty-year studio owner, designer and builder, Robert Lang is elated about the purchase of their Duality SE V3. He credits the technical engineers at Solid State Logic for coming up with a universal configuration between the digital and analog world. In addition to being used for music production, Robert Lang's student recording programs will benefit from the addition of the Duality.

Fastback Studios

The Fastback Studios crew is currently putting together a 16-channel custom API 7600 console. The modules are the API 7600s, vertically oriented with faders and a meter bridge. There is a 7800 master module that sums all of the channels together, allowing for soloing, busing, aux sends, mute groups and the infamous API Legacy sound—all customized for the Fastback space and hybrid workflow. The console will boast a 212L pre, 225L compressor and 550A EQ on each channel. Jason Lackie, head engineer/producer at Fastback, says, "This beast will be like a 1604 on steroids!" Complementing the monitoring/summing section will be the Chandler Limited Mini Mixer/Summing amp. This is an all-discrete unit based on the EMI TG12345 console. Mounted alongside the all-discrete API console will be the Avid Icon D-Command control surface for quick control of Pro Tools.

Fastback Studios is a 3,000-square-foot recording, mixing, mastering and music production facility in North Seattle. It's made up of a large, acoustically balanced live room with vaulted ceilings; three integrated iso-booths; an acoustically isolated control room; and a dedicated mastering lab. There is also a lounge, and next to the studio is a full-size basketball gym that doubles as a tracking room and reverb chamber.

London Bridge Studio



Producer/owner Jonathan Plum with singer Mary Lambert.

London Bridge has been busy recording new artists for its affiliated recording company, London Tone Music Group. The label is signing 52 musical artists to singles recording contracts, recording the 52 and releasing a single a week for 52 weeks beginning this fall. Stay tuned for 52x52—A Year in Your Ear.

Meanwhile, Mary Lambert (singer on Macklemore's song "Same Love") just finished re-recording her version of the same song, titled "She Keeps Me Warm," which was produced and mixed by studio owners Jonathan Plum and Geoff Ott.



Portland Recording Studio control room

Portland Recording Studio

A rare and coveted Stradivarius violin recently made its way to Portland Recording Studio via renowned

violinist HN Bhaskar from India. Bhaskar, along with drumming teacher Shankar Viswanathan from Portland and his son Shiva, have been recording a few different kinds of Indian music, including raga, meditation, classical Indian, and will soon be recording fusion. Shankar and Shiva both did some drumming for Bhaskar. "We will start recording the fusion music soon and have asked Bibi McGill—Beyoncé's guitarist and musical director—to perhaps come and join us on the fusion effort," says Rex Colin Johnston, Portland Recording Studio owner. "Bibi has recorded here with us a couple times and is an amazing person, as well as one of the best 'wire benders' on the planet. Bhaskar and Shankar asked me if I would put down some piano, synth, drums and some percussion on some of their recordings, which I was more than happy to do for them." Portland Recording Studio engineer Justin Calhoun is mixing the tracks.



Fastback live room

SESSIONS: NORTHWEST U.S.



Flora Recording & Playback

FLORA RECORDING & PLAYBACK, PORTLAND

Singer-songwriter Neko Case worked on her latest album, *The Worse Things Get, the Harder I Fight, the Harder I Fight, the More I Love You*, serving as producer along with Tucker Martine and Craig Schumacher. Martine and Chris Schultz engineered the album... Scottish indie-pop band Camera Obscura worked on *Desire Lines*, with Martine producing and engineering... Singer-songwriter Laura Veirs worked with Martine (producer and engineer) on new tracks... Aoife O' Donovan worked on her latest album, *Fossils*, with Martine (producer and engineer).



Control room at The Hive

THE HIVE RECORDING STUDIO, SEATTLE

Engineer Chris Pyle and producer Glenn Kennedy worked with hip-hop artist Clent on *Ambitious*... Rockers Prelude to a Pistol recorded and produced *Not Sorry*, with Pyle engineering and co-producing... Alt-rockers Sevens Revenge recorded and mixed *Distortion of Reality*, with Pyle engineering and Kristen Cadenhead producing (along with Pyle)... Hip-hop/rock band BattleCry Melody worked on their self-titled album with Pyle engineering and producing (the band also co-produced).



Jackpot! live room

JACKPOT! RECORDING STUDIO, PORTLAND

Folk-rocker Battleme recorded a session with Doug Boehm (producer/engineer) for an upcoming album... Indie electronica/folk-rock band The Ian Fays worked with producer/engineer Kendra Lynn on their upcoming album *Most Spectacular Party*... Space-rock band Wooden Shijps worked with Lynn (recording engineer) and Larry Crane (mixing engineer) on *Back to Land*... Folk/country artist Jolie Holland worked on new material with producer Douglas Jenkins and engineer Crane.



Dead Aunt Thelma's Studio

DEAD AUNT THELMA'S STUDIO, PORTLAND

Mark Orton was scoring and tracking parts with director Alexander Payne on his new film *Nebraska* for Paramount... Orton also engineered the debut album for Portland artist Sarah Gwen, produced by Scott Weddle... Mike Moore was working with jazz great David Friesen on his new self-produced release *Brilliant Heart*... Moore was also working with blues artist Terry Robb on a new recording to be completed this fall... Indie alt-rockers Neon Culpa are working with engineer/producer Dean Baskerville on a new recording... Ronn Chick is finishing an EP with local rocker Tommy Hlogan.



Tango Alpha Tango

SUPERNATURAL SOUND, OREGON CITY

Indie-pop band Wild Ones recorded and mixed *Keep It Safe* with recording engineers David Pollock and Clayton Knapp, with Pollock also mixing... Blues-rockers Tango Alpha Tango recorded and mixed *Black Cloud* with Pollock (recording and mixing)... Supernatural set up a mobile studio at Pendarvis Farm—where The Decemberists recorded *The King Is Dead*—for Typhoon to work on the forthcoming album *White Lighter*. Sessions were engineered by Paul Laxer, mixed by Jeff Stuart Saltzman and Phil Ek.



SophiaHat Studios

SOPHIAHAT STUDIOS, SEATTLE

Jazz pianist Hal Galper produced and recorded *Airegin Revisited*, with recording engineer Chris Spencer and mixing engineer Floyd Reitsma; mastering was done by Dan Dean... Jazz vocalist Mercedes Nicole worked on *Beautiful Alignment* with producer Thomas Marriott, recording engineer Spencer and mixing engineer Don Gunn... Jazz bassist Jon Hamar produced and recorded *Idyl Wild* with recording engineer Spencer and mixing engineer David Lange; mastering was done by Ross Nyber.

Cloud City Sound



Opened two years ago in Portland, Cloud City Sound is a two-studio complex primarily operated by engineers Justin Phelps and Brandon Eggleston. Also frequented by independent engineers and producers—including Steve Berlin, Billy Anderson and Dave Friedlander—Cloud City Sound has been busy with recording, mixing, mastering and voiceover work. Some of the more noteworthy recording projects have included Pink Martini/Uke Saori, *1969* (recorded/mixed by Friedlander); The Mountain Goats, *Steal Smoked Fish*, (recorded/mixed/produced by Eggleston); MarchFourth Marching Band, *Magnificent Beast* (recorded/mixed/mastered by Phelps, produced by Berlin); Leftover Salmon, *Aquatic Hitchhiker* (recorded/mixed by Phelps, produced by Berlin); Emily Wells, *Mama Acoustic Recordings* (mixed by Phelps and Wells); and Witch Mountain, *Blood Hound* (recorded/mixed/produced by Anderson).

Cloud City Sound features a Trident TSM console, three Pro Tools HD systems, Studer and Otari tape machines and a large selection of new and vintage microphones and outboard equipment. The facility also includes a well-equipped mastering room operated by Rick McMillen (owner). Phelps and Perry Lancaster. Recent projects include Emily Wells, "Mama" (mastered by Phelps); Everyone Orchestra, "Brooklyn Sessions" (mastered by Phelps); and Peter Buck, "10 million" (mastered by McMillen).

The studio has also been host to a steady stream of music video recordings and webcasts. They have had recent sessions with Modeski, Martin and Wood, Scars on 45, Just People, and Need to Breathe recording live to video.

Future plans for the studio include the launch of an in-house record label and a revamp of Studio B as a vintage analog studio, featuring hand-built tube preamps from Coffman Labs, a 2-inch 16-track tape machine and an extensive collection of vintage Altec equipment.

DJ EARWORM

Mashup Pop's Top Chef

ALEX BEHR

DJ Earworm, the pseudonym of Jordan Roseman, is funny and relaxed, yet underneath, his computer-wiz intensity and composing skills have led to mashup fame. Earworm's "United State of Pop: Blame It on the Pop" busted out on the Internet in 2009. The YouTube video, now with more than 43 million views, seamlessly blends beats and lyrics from Lady Gaga, Beyoncé, Taylor Swift and other top pop stars. Earworm compiles these annual four-minute pieces from the Top 25 *Billboard* hits of the year. *Mix* spoke to Earworm about how the video in 2009 launched his career. "It was time for mashups to explode in general," he says, adding that 2009 was a tough year economically, and the uplifting message he crafted resonated with people.

Earworm travels the world for live DJ gigs, including the 2012 London Olympics. His recorded mashups have guest-starred at the London Olympics and on *E!*'s 2013 Live at the Red Carpet pre-Grammy Awards show. At his home in San Francisco, Earworm is developing new software for live DJ technology, and he will appear at SXSW gigs this March.

When you work on the annual "United State of Pop," do you start with the beat?

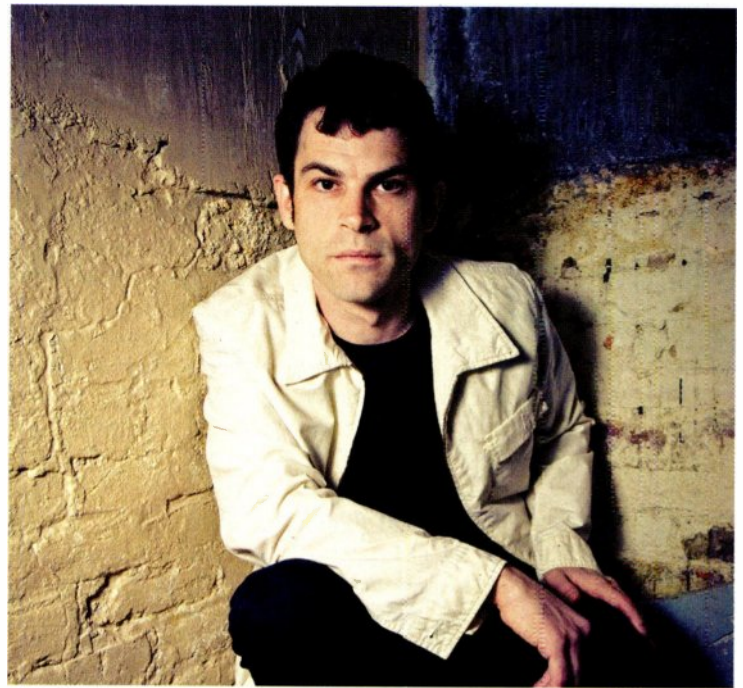
It's a combination of finding the big hit that represents the feeling of the year and other factors, such as, is it mixable? Will it drive the energy for something that represents a year-end summation? You need something that everyone will say, "Oh, that shows now." I have to transpose all the songs to one key, so I have to consider which key will do the least damage to the bulk of the songs. Then I try to find to find an instrumental that will help drive it.

What software are you using?

I use Ableton Live because it's so easy to use and can make music happen really fast. It specializes in warping and pitch-shifting music in real time with very high quality, which is great for mashing up.

How do you isolate the tracks?

I try to find the unmixed files from the studio. Whether they're floating around on the Internet or through connections, if I can get the actual file, that's number one. Outside of Ableton, I preprocess the audio for extracting the various bits. I use Adobe Audition, specifically the center-channel extractor. It can isolate or suppress frequencies depending on where it pans in the stereo field. I also use Prosoniq sonicWORX Isolate. This program extracts audio based on its fundamental frequency, trying to separate its harmonics from other audio signals.



You're storing all these files in a massive folder to combine later?

A lot of times I only need a couple of words, so I'll have separate files with just those words. Then I'll have other files of a cappella pieces...For the video, I mostly use Final Cut Pro X, which I know will induce snickers, but its native handling of all of my video assets and its XML import functions come in handy.

Is your aesthetic mainstream, or have you moved to that because of what you're doing right now?

I've always been aware of pop, but I didn't used to be such an active consumer of it. So many people are listening to this mainstream music that if you have something interesting to say, you can hijack pop culture to your own ends. Then you have a much bigger audience. You are saying interesting ideas in the common tongue, so people are seduced into listening to new ideas without realizing it.

Why did you move into mashups as an art form, or musical form?

I thought it was a relatively unexplored art form. I started in late 2003, and most people were doing A vs. B mashups: an a cappella of one song and an instrumental of another.

Like the Grey album [by Danger Mouse, released in 2004]?

Yes. That was the standard, and I didn't know why people hadn't taken it much further with a compositional approach. One reason is that it was frowned upon, and it wasn't considered serious music. It's still not considered serious music. And there were licensing issues. You can't monetize it. It doesn't attract the top talent. I was lucky enough to be in a position where I didn't care. I didn't expect to make a living from it.

Then you moved into live DJing.

It was intimidating at first because I'd put myself out online as DJ Earworm without having DJed. Then I started getting gigs, so I had to live up to my pseudonym. That was a bit of a scramble. But that was many years ago and I enjoy it. It gets me out the house [laughs], and pushes me to be in a challenging position, which is very healthy.

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PRODUCER RYAN HADLOCK

BY BLAIR JACKSON

It wasn't a slam-dunk that Ryan Hadlock—owner of Bear Creek Studio outside of Seattle and producer of high-profile projects by the likes of The Lumineers (their Platinum-selling, Grammy-nominated 2012 debut), The Gossip, Blonde Redhead and Ra Ra Riot—would pursue a career in the music industry. Yes, his father, Joe, a recording engineer, had built Bear Creek in its lovely sylvan horse farm setting in the late '70s, and young Ryan was a fixture at the place when he was growing up: “I have pictures of me soldering stuff when I was five,” he says with a laugh. “I used to get coffee for people and do various things around the place.”

Still, as his high school years ended, Hadlock determined, “I didn't want to stick around and hang out with my hippie parents. I didn't want to be a rock 'n' roller. I didn't think it was cool. Originally, I wanted to go into business, so I went to business school, but it didn't take me that long to decide that was definitely not the world for me,” he laughs. “So I transferred to Evergreen [State], which has a really great music production program and studios with API consoles and all sorts of other good equipment.

“From there, I jumped right into assisting on sessions at Bear Creek—the Afghan Wigs, The Deftones, the Foo Fighters—and I became friends with the guys in the bands, and friends with their friends, and started working on more unsigned bands. I worked my way up into the world of indie rock bands. The indie labels in the mid-'90s were actually easier to deal with than the major labels. The checks came on time, they were really good people, everything was on a handshake, and the music was great. So I kind of climbed the ladder through some touching-post bands—Blackheart Procession, Blonde Redhead—and went on to work with Steven Malkmus, The Gossip, The Strokes, eventually producing bands full time, which is not something my dad had done.”

At the studio's heart is an enormous, high-ceilinged early 20th century barn that has been exhaustively re-worked through the years to be a state-of-the-art tracking space, with an adjoining control room (“the Wood Room”) stuffed with a Trident TSM console, Neve BCM 10, analog and digital recorders, scads of outboard gear (including plenty of Trident and Neve mic pre's), a wide selection of top mics by the usual suspects (Neumann, Telefunken, AKG, RCA, Sennheiser, etc.) and all the extra guitars and keyboards any band could want. As a residential studio, Bear Creek offers a variety of accommo-



dations in different spaces on the property, all of them nicely appointed. In short, it's a wonderful place to both kick back and also to seriously dive in to a project. It's no wonder they get so much repeat business, and it also explains why Brandi Carlile even named her most recent album *Bear Creek*.

“I really like getting people together and having that interaction; musicians playing together. That's the way my dad always worked, too,” Hadlock says. “The indie rock world was all about the art and the performance, and I think that's one reason I was attracted to it.”

Case in point, The Lumineers. After Hadlock flipped over the group's demo CD, which a friend had given him at SXSW, “We brought them out to Bear Creek and played them some of the things I'd done and it seemed like a good fit. We had a great time doing it. It was really spontaneous and it went quickly. I think it was two-and-a-half or three weeks of tracking.

“They had drums and acoustic guitar and some ideas for background vocals—'ho'-ing and 'hey'-ing and stomping and clapping ideas [as on their smash, “Ho Hey”] they had on their demos. The cellist was new in the band at the time. We spent a lot of time getting the sounds right and the performances, but I think it comes across as

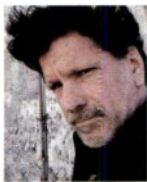
a really live-feeling album. I'll put room mics up and put some distant mics that sound good, but I also want the punch of the close stuff. There was quite a bit of work done on the tracks—editing and comping. I want to have a level of precision, but I don't necessarily want to show it. I like to be able to craft the song as it goes along.” Hadlock's go-to engineer for the past two years is Bear Creek's Jerry Streeter.

The success of The Lumineers has brought a flood of offers Hadlock's way and he is staying very busy, mostly working with relatively unknown artists (as The Lumineers were!), including Australian singer-songwriter Vance Joy, an indie rock band from Estonia called Ewert & the Two Dragons, Colorado folk group Elephant Revival, the Ontario-based indie/alt-country band The Strumbellas, and others. Would he like to work on The Lumineers second album?

“If it worked out and they wanted to do it, that would be great,” Hadlock says. “But I'm also excited about the possibility of working with the next thing like that; the next thing that's going to be a wave and make everyone go, ‘Whaaat?’”

RobairReport

QUALITY AND CONTROL



“Who, here in this room, has made a record that has been released?” Nearly every hand went up.

“How many of you have gone to the major retailers—be they download, streaming or physical—and bought your own product to make sure that everything was cool with it?”

Less than half of the two-dozen participants raised their hands.

These were the initial questions put to members of the Producers & Engineers Wing of the San Francisco Chapter of the Recording Academy attending *Lost in Translation*, a presentation by Andrew Scheps held at Fantasy Studios in Berkeley, Calif., in July. The reason he asked, and why he put this presentation together in the first place, was to demonstrate the wide range in quality people hear when they listen to music.

Of course, audio professionals already know this, and Scheps knows that we know. Yet, his second question cuts to the quick: Perhaps we are not paying close enough attention to the results of our work once it leaves our studio?

What Scheps provided over the next two hours was a rare chance to hear how music is transformed through today's distribution methods, which he introduced with a list of the file formats and resolution levels used by several popular online sites, including iTunes, Amazon, MOG, Spotify, YouTube and Rhapsody. The range was 128 kbps from YouTube at the low end to 192 kHz, 32-bit from high-res download sites. Whenever possible, Scheps made sure that what we heard from each service came from the same master source.

This wasn't a double-blind listening test, nor did it need to be. The exercise was not about selecting which one sounded best. Rather, we examined each format or service as if it was a filter through which a song passed. The value of the presentation was hearing music that we know well—for example, the Beatles' "Strawberry Fields Forever"—through as many of these filters as possible, to get a sense of the degree to which a mastered recording changes based on how it is served to the consumer, who delivers it and what resolution is used.

It was easy to distinguish between a 24-bit, 96kHz version of the Beatles' tune and an unofficial version streamed from YouTube. The difference was less obvious when we compared a CD-quality (16-bit, 44.1kHz) version of another song to the same piece streamed in real-time at 320 kbps. Here, Scheps noted that lossy codecs do a great job of decreasing file size while retaining listenability: an MP3 can be 1/10th the size of the uncompressed file, yet we wouldn't say that it sounds only a tenth as good.

The bigger issue in terms of audio quality was YouTube, though the service itself was not at fault. YouTube streams audio at 128 and 384 kbps, depending on the video resolution you select. The issue is that consumers are often the ones who upload music files to YouTube, which the service transcodes—putting a file that has probably already been data compressed through yet another codec. This step lowers the file's audio quality even further. Unfortunately, this is the platform where most people go to explore new music, even though much of it has not been uploaded legitimately.

Scheps noted that the digital services are not the bad guys. The people who work for these companies—many of whom sat through his presentation earlier in the day—are music lovers who want to deliver the highest quality they can. However, their job is to deliver content, and that content needs to appear instantaneously on the listener's playback device, no matter what platform is used.

In many cases, the tech representatives were just as surprised by what they heard during the presentation as the P&E Wing attendees. Hopefully, by experiencing it directly, they will be more likely to improve their services sooner rather than later.

In the meantime, what can we do about all of this? The label delivers a high-resolution file to the digital distributor, who creates the file types needed for their service. Next, those files go to delivery services that may have additional file requirements for delivering audio to their customers. Before the consumer even hears the song, there is potential for misnamed tracks, truncated endings and swapped channels.

Yet there are things we can do to maintain a bit more control over the project. Scheps suggested performing any necessary sample rate conversions yourself before delivering the file to the distributor. For example, Apple can accept 24-bit, 96kHz files, but it converts them to 24-bit, 44.1kHz before creating its AAC files for the iTunes Store. Why not use your favorite sample-rate converter to create the 44.1kHz file? He also noted that by leaving additional headroom in the mix, such as lowering your masters by 0.5 to 0.7 dB, the music will sound better when encoded, even at lower bit rates.

“The other side of the argument is that [lossy encoding] is a passing fad,” Scheps added near the end of the event. “One could say, ‘I couldn't care less about what sounds best for MP3: I just want the best-sounding thing—period.’” We're not as bandwidth challenged as we once were, and at some point soon we won't have to use data-compressed files.

However, Scheps' initial question is still valid: There has to be QC once a project leaves our hands. Maybe that's not our job on certain projects, but someone should check the material at each distribution point. There is still room for error, even in digital delivery. ■

Tech // new products



SMART RESEARCH C1LA

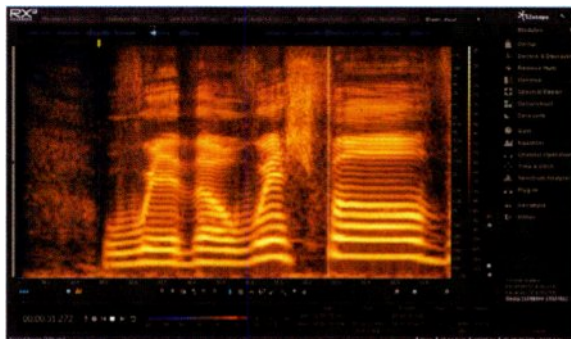
500 Series Comp/Lim

To commemorate the 25th anniversary of the release of the original C1, Smart Research has jumped into the 500 Series arena with a 2-channel Compressor/Limiter (www.smartresearch.co.uk, \$1,750). The two-module-wide unit features three operating modes: Independent/Ganged, Stereo Linked/Sum, and Stereo Linked/DC. Features include a switchable meter (Input, Output—VU, and Gain Reduction for L or R—PPM), and three sidechain filters: 65, 130 or 205 Hz. The C1LA also provides automatic distortion null circuitry, "Soft" compression curve, 12 attack and release settings, four auto settings and all settings and circuitry from the original C1.

IZOTOPE RX 3 ADVANCED

Audio Rescue and Restoration

The iZotope RX 3 Advanced (www.izotope.com, \$TBA) offers cutting-edge restoration tools, enhanced workflows and a redesigned user interface. Features include operation as standalone or a plug-in, up to six times faster operation, removal or reduction of reverb in the new Dereverb module, and dialog cleanup on the fly with the real-time Dialogue Denoiser. The spectral audio editor adds a visual dimension to cleanup, while the unlimited Undo history is saved automatically with audio data into the new RX document format. While pricing is not yet announced, customers who purchased RX 2 Advanced after July 1, 2013, will receive a free upgrade to RX 3 Advanced upon release. Other upgrade information is available on the website.



MAAG AUDIO EQ2

500 Series Tone Shaper

The Maag Audio EQ2 (www.maagaudio.com, \$699) is a one channel, two-band, 500 Series EQ featuring the same high-quality components found in Maag's six-band EQ4. Features include Air Band, Low Mid Frequency (LMF) bell boost from Sub to 1.4 kHz, and an Input Attn control offering down to -12.5 dB of attenuation. The EQ2's Air Band is equipped with an additional frequency selection @ 15 kHz, plus the LMF provides both tight or wide bell curve options. EQ adjustments are obtained with minimal phase shift and detent controls allow for easy recallable settings, even on the Input Attn. The EQ2 is compatible with the API 500-6B lunchbox® and 500VPR rack systems and any other 500 Series spec rack.

MUTECH MC-3+ SMART CLOCK

Generator, Re-clocker, Distributor

The Mutec MC-3+ Smart Clock (www.sonicus.com, \$799) uses the company's proprietary iG-Clock technology for the first time in the MC-3+ Smart Clock. Running a frequency synthesis on a specifically calculated high clock rate, the process promises elimination of typical jitter-inducing artifacts present in all standardly implemented DDS processes. Features include BNC Word Clock input + 10 MHz, 75 ohm termination switchable, AES3/11 input (XLR), optical input for S/PDIF, Toshiba Toslink, EIAJ RC-5720, Cinch input (coaxial) for S/PDIF, (6) BNC outputs for Word Clock, terminated, unbalanced, individually buffered, adjustable in pairs. Other outputs include, XLR AES3/11, Cinch (coaxial) for S/PDIF, and optical for S/P-DIF, Toshiba ToslinkTM, EIAJ RC-5720.

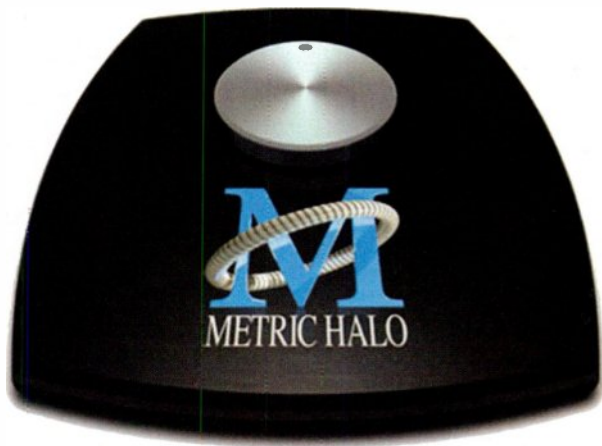




PUEBLO AUDIO JR4 AND JR2/2 PREAMPS

Clean, Modular Design

Pueblo Audio's JR4 preamps (www.puebloaudio.com) come as separate preamp (\$1,760), power supply (\$545) and phantom power modules (\$960.) The JR4 features four DC-coupled preamps (no phantom) offering low noise gain from 7.5 dB to 65 dB in 2.5dB steps. There are also two analog outputs per channel, offering bonus features like zero-latency monitoring, splits to a recorder and parallel effects sends. For those needing phantom power, the P4 Quad Precision Phantom Network uses precision-matched components, independent voltage regulation and on/off switching for each channel. The P34 power supply unit provides 160 watts of clean, centralized power for the entire Pueblo Audio range (up to four units). For those only needing two channels, the JR2/2 is a self-contained, 2-channel preamp with phantom power (\$1,360; P34 needed for operation).



METRIC HALO MIO CONSOLE V.5.6

New Features and Compatibility

A free software upgrade for all users of the Mobile I/O family of audio interfaces, version 5.6 of Metric Halo's MIO console features I/O inserts for accessing external hardware from within the MIO Mixer, ConsoleSync hardware/software synchronization technology, AAX ConsoleConnect plug-in for compatibility with Pro Tools 11, and saving of system boot states and support for EuCon 3.0. ConsoleSync is a unique enhancement to the Mobile I/O family, allowing the MIO Console to read the complete state of any attached hardware seamlessly, automatically and without any disruption of running audio. ConsoleSync auto-loads the mixer configuration, complex signal processing chains, Monitor Controller settings, analog I/O configuration and even window layout from the hardware.



TASCAM DA-3000 RECORDER

Audiophile-Grade 2-Track

Offered as an upgrade to the DV-RA1000HD, Tascam's DA-3000 (www.tascam.com, \$999) features BurrBrown A/D converters, up-graded mic preamps, and a sleek, modern design. This master recorder/ADDA converter records up to PCM 192 kHz and DSD 5.6MHz and may record to SDHC or Compact Flash media. Bright LED level meters ensure readability in brightly lit studios and venues, and multiple units can be linked simultaneously for increased channel recording. Other features include XLR I/O, unbalanced RCA I/O, I/F AES-EBU, S/PDIF for PCM and SDIF-3/DSD-raw for DSD, a USB port for playback, and clock frequency accuracy of 1ppm by TCXO.

MACKIE MRMK3 STUDIO MONITORS

Renewed and Redesigned

Mackie has released the MRmk3 Powered Studio Monitors (www.mackie.com), which fully replace the previous generation of monitors and expand the range with the 6.5-inch MR6mk3 full-range monitor (\$259.99) and MR10Smk3 studio subwoofer (\$449.99). The three speakers in the series share flexible I/O, customizable frequency controls including two levels of bass boost and boost/cut control over high frequencies, custom-tuned rear ports, and all-wood construction. The MR5mk3 (\$199.99) features 50 watts of Class A/B amplification, 5.25-inch polypropylene woofer and 1-inch silk-dome tweeter; the MR6mk3 offers 65 watts of Class A/B amplification, 6.5-inch polypropylene woofer and 1-inch silk-dome tweeter; and the MR8mk3 uses 85 watts of Class A/B amplification, 8-inch polypropylene woofer and 1-inch silk-dome tweeter.





VUE AUDIO-TECHNIK AL-8 LINE ARRAY

Compact. Complete Solution

The al-8 is the second member of VUE's al-Class, joining the al-4 Subcompact Line Array System introduced earlier this year (www.vueaudio.com).

The al-8 features beryllium compression drivers, Kevlar/Neodymium transducers, onboard networking, and full compatibility with VUEpoint beam steering technology. The al-8 system components include flying, transport and handling accessories, the al-8 acoustic element, and the rackmount V6 Systems Engine, which provides system amplification, DSP and networking capabilities via the SystemVUE control software. The al-8 acoustic element

houses a pair of proprietary 8-inch LF transducers with large 3-inch voice coils for improved thermal performance. The LF transducers flank four 4-inch Kevlar/Neodymium midrange units equipped with VUE's unique lateral acoustic shades. High frequencies are delivered by a pair of neodymium compression drivers with Triextent beryllium diaphragms for extended high-frequency response beyond 25 kHz. All transducers are housed in a birch plywood enclosure protected by a 12-step Dura-Coat LX finish.

New Sound Reinforcement Products

JBL PRX700 SERIES LOUDSPEAKERS

Portable, Powerful, Versatile

Promising an unprecedented combination of power and mobility, JBL Professional's PRX700 Series portable loudspeakers (www.jblpro.com) offer large improvements in power, SPL and connectivity. The PRX700 Series comprises seven new models: the PRX710 10-inch, 2-way multipurpose loudspeaker; the PRX712 12-inch, 2-way multipurpose loudspeaker and floor monitor; the PRX715 15-inch, 2-way full-range main system/floor monitor; the PRX725 15-inch, 2-way bass reflex loudspeaker; the PRX735 15-inch, 3-way full-range main system; the PRX715XLF 15-inch, self-powered bass reflex subwoofer system; and the PRX718XLF 18-inch, self-powered bass reflex subwoofer system. All PRX700 Series loudspeakers are powered with 1500W Class-D amplifiers and feature new Differential Drive woofers that provide better heat dissipation, lower power compression and higher dynamic range versus conventional single-coil designs.



YAMAHA STAGEMIX 4.0

Upgrade Brings Big Features

Yamaha has made StageMix 4.0 available for its CL, M7CL and LS9 digital consoles (www.yamahaca.com, free). Updates include new dynamics parameter editing, output port delay editing, output port levels (gain/attenuation), PEQ copy and paste, phantom power switching, mix send pre/post switching, HPF slope parameter (CL V1.5 only), retina display support, and other enhancements for iPad control. The StageMix App provides greater control and flexibility for digital mixing consoles and enables the mixing engineer to freely adjust console parameters and sound levels by wireless control, rather than at the mix position. The App also provides features like mute group masters, channel naming, channel pan, send levels in meter bridge, tap tempo, Selectable Input and output meter positions, and DCA faders (CL and M7CL only).



WAVES SOUNDGRID EXTREME

Plug-in DSP to Spare

The most powerful SoundGrid DSP Server ever, Waves SoundGrid Extreme (www.waves.com, \$2,490) boasts 500 instances of Waves stereo SSL E-Channel or C4 Multiband Compressor plug-ins, with latency as low as 0.8 milliseconds. The unit features an Intel i7 Extreme microprocessor delivering over 40 percent more power than the SGS Server One. The unit lives up to its name by delivering some impressive stats: Latency (roundtrip total) 40 samples/0.83 ms, 80 samples/0.83ms; IR-Live, 30 instances @ 48 kHz, 18 instances @ 96 kHz; L3 Multimaximizer, 158 instances @ 48 kHz, 64 instances @ 96 kHz; and C4 Multiband Compressor Stereo, 512 instances @ 48 kHz, 288 instances @ 96 kHz.



se·lec·tion [səˈlekSHən]

noun

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



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Tech // reviews

EMOTIVA STEALTH 8 SELF-POWERED MONITORS

Solid Sonics, Amazing Value

You may have seen the advertising for the Emotiva Stealth line of monitors. They can be purchased only direct, and the company mantra states: “Here’s our manifesto in 7 words: superior gear, unmatched prices, 30-day trial.” Have you ever tested a speaker at a store, only to find it sounded completely different in your environment? Emotiva gives you 30 days to fine-tune the speaker, break it in, and see if your mixes translate to other systems. Let’s see if it worked for me.

INSIDE AND OUT

One of the prime directives of the Stealth 8 design is “in the box.” They tout a 2-inch, solid MDF front baffle, CNC’d to greatly reduce resonance, which can skew the characteristics of the drivers. Plus, a “three-phase internal damping” with extensive bracing adds to the inert quality of the cabinet design. The results of the CNC operations on the front baffle are a unique series of angular contours, designed to reduce edge turbulence and diffraction. The result is solid, phase-coherent imaging, with a very wide sweet spot. The cabinet measures 16.5(h)x12(w)x15(d) inches; a good working size for a monitor on the bridge of a console, or on elevated stands in desktop production.

Being a rear-port design, there is always the consideration of physics; be careful when placing these against a wall, as the rear-port can cause bass build-up, producing a false sense of where the bass frequencies sit in a mix. While listening to these in a free-space environment, as well as on the bridge of a professional desktop, I can say that the bass response is accurate; there are no unusual build-ups or resonance, with very minimal diffraction. The rear port is very thin and runs the length of the width of the cabinet, unlike most circular ports.

FROM SOUP TO NUTS & BOLTS

Drivers, amplifiers, crossovers—according to Emotiva, each of these components has been developed specifically for the Stealth series. The most notable and immediate observation is the drivers. On the low end, Emotiva uses an airmotiv 8-inch driver built of Curv woven polypropylene, with a die-cast basket and a synthetic butyl rubber surround compound producing a fast, punchy, linear low-end response that is similar to woven Kevlar, but without the

resonance and “over-the-top” low end that Kevlar can produce in some inferior designs. A limited damping factor of the power amplifiers can contribute to this “tubbiness,” and although that specification is not given in the Emotiva manual, I can attest to the amplifier’s ability to work with the driver in these regards. I did not experience the “more bass” characteristic that I’ve heard in similar designs. Accuracy is key, be it in a \$300 or \$30k speaker—what can you do with technology at that given price point? Emotiva has done well in the coupling of these amplifiers.

The other obvious observation is the ribbon tweeter. Make no mistake; this is a unique way of dealing with reproduction of the upper frequencies—in this case, above the 2kHz crossover setting. I’ve experienced “ringing” at certain frequencies with other designs, plus a lack of accurate midrange response in the vocal range. Emotiva has, to my ears, addressed these issues by creating a system of high-frequency reproduction that is much smoother compared to similar designs. Granted, I have been impressed with systems in the \$8k price range, but at under



Power for the Stealth 8s are A/B design, 200W RMS to the 8-inch driver, and 200W RMS to the ribbon tweeter

TRY THIS

Move your speakers! See what they sound like against a wall, on the bridge and in a “free space.” Use the adjustments found on the speakers to see how smooth you can get the response in that particular location. Buy a reference mic and learn to use it through a real-time analyzer. Set it up in these different locations. You will be amazed at what you learn from these exercises. This will help you get your mixes to translate better, and more accurately, through many different systems. The more you know about your speakers and how they respond in various spaces will make you a better mixer. It’s amazing how much the sound can change with just a slight variation of placement on the bridge. Measure it, and know what you are listening to!

\$1.5k for the pair, the Emotiva Stealth 8s have set some “new bars” to be addressed by other manufacturers.

The onboard amplifiers are discrete, A/B design, providing bi-amplified power of 200W RMS to the 8-inch driver, and another 200W RMS to the ribbon tweeter. This power can produce up to 120dB SPL; these speakers get plenty loud when running music through them. The stated frequency response is 30Hz-23kHz, ± 1.75 dB, 28Hz-32kHz, ± 6 dB. Okay, the first spec is pretty impressive. And the active crossover, set at 2 kHz, works extremely well with the ribbon tweeter. On the back panel, a combination XLR and ¼-inch TRS input is provided, along with an input sensitivity adjustment of ± 6 dB; 1V RMS input gives you the maximum SPL rating. Further adjustments are provided by the Bass Roll Off, Bass Tilt and Treble Tilt. Curves are graphically shown next to the DIP switches on the back panel.

Bass Roll Off starts at 250 Hz, and gives you a gradual roll-off of -2dB, -4dB, -6dB or -8dB by the time the signal gets to 40 Hz. This is good for adjusting the low-end response for your particular environment, especially where bass buildup can occur if your speakers are placed next to boundaries. Bass Tilt is much more severe, as it starts at 1,250 Hz and gives you a -2dB, -4dB, -6dB or -8dB decrease in response down to 40 Hz. This could be advantageous when working with a subwoofer, but I find the starting point to be too high for that particular application. The Treble Tilt is much more subtle, giving you a +1dB, -1dB or -2dB shelf starting at 2 kHz, with the stated addition or reduction in gain happening above 3k. It is subtle, but a welcome addition to controlling the speaker in a slightly live, or slightly dead, environment.

DO THE RIBBONS ROCK?

First impressions? These speakers have an absolutely amazing ultra-wide sweet spot. Move your head; the sound stage stays in place, with the imaging being smooth in its transition from one speaker to the next. The imaging and midrange reproduction is rivaled by my \$3k reference monitors with only slight reduction—and I mean slight—in vocal clarity compared to my titanium drivers. Clarity and separation is remarkable considering this price point. Piano harmonics? Striking reproduction. The power of the piano can be not only heard, but also felt. This is simply the best ribbon I've heard to date. The kick drum punch, clarity, and harmonics—stellar. Toms? All the punch and harmonic reproduction you would expect from a studio monitor. They were a bit tubby before break-in, but after that, simply remarkable. For you death metal fans, no ringing in the upper frequencies—guitars stay put where they are tracked and mixed. Synthetics, strings and percussive patches are reproduced with breathtaking clarity.

Orchestral music was remarkably well balanced; no

PRODUCT SUMMARY

COMPANY: Emotiva

PRODUCT: Stealth 8

WEBSITE: emotivapro.com

PRICE: \$639 each (direct only)

PROS: Plenty of power. Wide sweet spot. Smooth crossover transition between drivers. Plenty of accurate low-end response, not tubby. No ringing in the ribbon driver.

CONS: No networking or software adjustment. No VESA mounting. No EQ cut/boost for desktop production (Roll Off and Tilt only). No low-end cutoff for subwoofer operations.

section was “popping out” of the mix unusually. Vocal chorales recorded in massive concert halls were reproduced accurately, with the reverb depth being only slightly diminished compared to speakers twice the price. Ultra lows were uncannily hitting me in the chest; a subwoofer will be needed only for higher SPL reproduction. From acoustic guitar to piccolo, double bass and synth bass, these speakers held up to my references, time and time again.

CONCLUSIONS

Factory direct means saving you, the end-user, money. These speakers are currently being sold for \$639 each, an amazing value. After listening to everything from orchestral, opera and synthetic orchestra to modern pop productions and original Pro Tools files of my own, I can wholeheartedly recommend these speakers as an alternate to the more traditional designs of silk-dome and titanium tweeters, along with the now-common Kevlar woofer. These are, without a doubt, some of the best ribbon-driver technology boxes you will find. I can certainly see these becoming the reference point from which other designs in this category are judged. ■

Bobby Frasier is an Arizona-based engineer, guitar player and avid Beatles fan.

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ARGOSY SPIRE SPEAKER STANDS

Free-Standing Mounts With IsoAcoustics Technology

Argosy Console, studio furniture manufacturers, is known for combining solid, well-constructed pieces with timeless design and appeal. Many studios I work in contain Argosy furniture either from their traditional lines or one of their custom builds. The company recently introduced the Spire line of freestanding speaker stands. While most traditional stands should provide better acoustic isolation than placing your speakers on your desk or console, Argosy has upped the ante and incorporated patented IsoAcoustics technology.

I was already familiar with the isolated coupler concept after speaking with several studio and acoustic designers in the past, and I've employed related products in my studio for some time. IsoAcoustics' claim is to place monitors on a surface that will only allow motion in the same direction as the speaker cones and resist movement in any other. Mechanically isolated speakers should (in theory) allow for enhanced bass response and better overall imaging and clarity. We wanted to see if there would be a difference in an integrated stand-coupler package.

SOLID BUILD

The towers, bases and platforms were easy to assemble, and the instructions were simply stated and easy to follow. The sturdy bases are 16x16 inches, and mounting platforms are 7.75x9.875, each supporting up to 75 pounds. The beveled edges of the mounting towers with die-cast holes were visually pleasing once set into position. I received the 36-inch stands (\$379); overall, the pair took about half an hour to put together.

The iso couplers mount onto poles (two different lengths) that fit into the stands' platforms, allowing speaker angle to be adjusted up to 6.5 inches up or down. The stands with the couplers put into place ended up being a couple inches higher than my previous mix position. Take this into consideration if you have fixed desk and/or chair height that you're accustomed to.

THE PROOF IS IN THE POSITION

After getting the stands in place in my control room, I mounted my PMC TB2 monitors with Bryston 120W Power Packs on the stands, first without the couplers, for a quick listen and reference. I then added the IsoAcoustics couplers and repositioned my monitors. I tried the same test with a pair of Tannoys. I placed the stands in my control room in my normal position, but the



The Argosy Spires come in two fixed heights, either 36 or 42 inches, but angles may be adjusted via the isolators.

bases were a little larger than my previous ones. I had measured previously to place the stands one-sixth of the room width from each side wall, leaving two-thirds of the width between each stand. I spaced the back corner of the stands the same amount of space from the front wall that I had used from the sides so there would be little to no bass proximity.

I spent some time listening to material that I know well. Immediately I noticed a difference in bottom end from adding the couplers. Some recent mixes I had completed for electro-punk act Five Knives sounded bigger and wider—the kick drums and bass synths certainly felt more extended in the low end than before. I noticed much more detail

TRY THIS

When auditioning speaker isolation, you're only relying on your ears in the room, as it's not a "recordable" experience. When A/B'ing setups, you want to listen for changes in the stereo image and bottom end. Pick a track with a vocal or sax and concentrate on just the center-panned items. If the image with the isolators seems to come directly out of the center, is not drifting and is well-defined, then you've made a difference for the better.

PRODUCT SUMMARY

COMPANY: Argosy

PRODUCT: Spire 420i (42-inch) and 360i (36-inch)

WEBSITE: argosyconsole.com

PRICE: 420i (\$399); 360i (\$379)

PROS: Improved bass response, overall clarity and detail.

CONS: Adding the couplers made my mix position slightly higher.

from a reference master for acoustic pop artist Holly Maher. The acoustic guitars and strings and vocal sounded much closer to being in the room with me, as I could hear the attack of the instruments and the intimacy of her vocals prominently. I thought that this was maybe just the difference in the master and my original mixes, so I referenced those as well. My ears were not deceiving me

I then chose some records in varying genres that I know well and normally use when I start work in different studios to get to know the control room. I heard some new things, and was really enjoying the “new” experience from these records. Jazz and classical especially came to life; hearing the spaces they were recorded in was more apparent with the couplers in place. My one issue was adjusting to the speakers being a bit higher than my normal mix position, but a minor issue at that.

After listening through the rest of the day and the following few days, the bottom end felt tighter, the monitors had more detail, clarity and imaging overall than previously. A couple of my frequent clients also noticed the difference right away from walking into the room to listen and asked what I had done to change anything. I pointed to the Spires, and explained the couplers to them. I repeated the before and after tests with them, and both had very similar experiences to my first listen.

Having the IsoAcoustic couplers built into the stands allowed me to find a more consistent base when re-placing them upon returning from the road. Having spent a considerable amount of time with the Spires in my studio, I feel more confident in the consistency of my workflow, and that my mixes are translating well in other places. The built-in couplers made an impression on first listen, and the stands' overall construction have allowed me to feel more confident about how the music is being translated into my room. After a short amount of listening, you will be glad you invested in them. ■

Chris Grainger is a Nashville-based recording engineer/producer.



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iZOTOPE TRASH 2

Distortion Plug-in With Attitude

Over the past decade, dozens of tools have emerged that have allowed guitarists to step away from traditional mic-on-amplifier recording techniques. From Line 6's Amp Farm to IK Multimedia's Amplitube, to the stock guitar amp emulators now offered by Avid's Pro Tools, Apple's Logic Studio or PreSonus' StudioOne, there are so many choices. In the case of all of these examples, however, the interface is based on the look and feel of an actual guitar amp, and to serve the purpose of familiarity, the sounds produced by these software amp models remain similarly traditional. iZotope's original Trash plug-in broke free of that mold and introduced a tool that still offered models of amps and effects, but also did so much more.

INTERFACE

The GUI of the plug-in breaks into pages that represent, basically, sub-plug-ins. These include Filter 1, Trash, Filter 2, Convolve, Dynamics and Delay. The default signal flow is from left to right, though any desired order can be achieved by simply dragging and moving blocks in the Graph page. Each of these sub-plugs is a powerhouse alone, and because each is essentially its own entity, there are individual bypasses within each page, and buttons along the bottom of the main plug-in window to engage or disengage each piece. The beauty of having all of these tools housed in one plug-in is that presets can be loaded globally, affecting every page at once.

Each of the two filters offers identical controls and exists redundantly, simply to offer the ability to use different options at different points in the processing chain. The filter provides six bands of processing, each highly customizable. The default setting for each band is a Clean filter, which behaves like a familiar EQ plug-in. The bands are preset to high and low shelving and four peak filters across the frequency spectrum. Compared to most other basic EQs, it seems that you really have to crank boost or cuts in the GUI in order for the changes to be noticeable; however, numerical displays of boosts and cuts affirm that the changes aren't as extreme as they appear.

Once I got comfortable with that, the sound was reasonably good—on par with a stock DAW EQ. That said, while the Clean filters were the least dazzling, they were the only filter type to offer the full gamut of HP, LP, BP, shelving and peak filters. The other filter types had fewer options but great musical flavors.

The Rez, Retro and Saturated filter types each offer HP, LP and BP filters varying greatly in terms of flavor. The Retro was



Trash 2's interface includes separately addressable processing sections for adding effects to the signal.

round, warm and smooth. The Rez had a nice edge to it and added a bit of fizz at the filtering point. The Saturated took this even further. A Screaming flavor available in a peak and LP filter had even more extremely hyped harmonics, and the Synth setting offered four different colors of LP filtering, each displaying flavors reminiscent of old modular analog synth filters. The last filter type, Vowel, offered very specific filtering patterns that seemed to hover around different characteristics of human speech as the frequency slider was moved.

The Vowel filter was particularly pleasant when automated, rather than just parked in a static position. In fact, that could be said for most of the more colorful filters. They really showed their harmonic personalities when grinding across the frequency spectrum. Because of that, my favorite part about the filter section was the way that it could be musically automated within the plug-in. Any filter type could be modulated based on the envelope of the content, the envelope of a side-chained sound or by an LFO.

The second page was the Trash processor, which offered an incredible wealth of interaction and customization. The heart of this processor was the Waveshaper display, which appeared as a grid split into four quadrants with the top and bottom halves representing the positive and negative portions of a waveform. From a bank of about 30 presets grouped into categories, a preset curve was selected and displayed in red in the grid. From there, a black user curve could be drawn freehand

TRY THIS

When mixing music, it is always important to think about the best- and worst-case playback scenario. The worst case is often a tiny mono speaker built into a cell phone. When it comes to bass guitar, lows that may sound great through your monitors will be lost on the phone's speaker. Adding a little distortion to the bass will introduce harmonics that will register in a frequency range that will still be audible through tiny speakers, making the bass line perceptible even in the worst-case scenario.

using break points or using different tool types between the break points, including triangle wave, staircase or square wave, for example. The portion of the user curve being edited appeared in gold. The result of modifying the original curve by the user preset produced a third curve displayed in blue.

Within each stage, the processing could also be broken into as many as four different bands, with each having its own processing curve. Each band also had its own pre-processing gain control, drive control, a Style control that could alter the personality of certain preset curves, an output gain, and wet/dry mix control. Imagine tape-like saturation on the low-frequency band, with tube-like distortion of the highs, without either effect muddying up the midrange. This led to very powerful processing options on everything from a single instrument to a drum subgroup, and even across an entire mix.

COMPLETELY CONVOLUTED

After things were saturated by the Trash module, the standard signal flow brought them into the Convolve processor. When I think convolution, I usually think Altiverb, Space Designer or other processors that model reverbs based on great-sounding spaces. After spending some time using TL Space for sound design in the past, and trying their impulses of flower pots, buckets and hoses, I've been really turned on to the idea of using convolution in different ways. Trash 2 just takes this idea to the next level. While some of the preset's names evoke images of

familiar-sounding guitar amps or objects through which sound could plausibly be impulsed, like helmets and fishbowls, others seem to be presented merely to give an impression in one's mind of what the result may appear to sound like. For example, in the MechAnimal category, you'll find impulses named Goose, Snake and Tortoise, among others. As a vegetarian who took to using these impulses often, I would rather not speculate as to how they were captured.

DYNAMIC QUATRO AND DELAY

The next step in the interface is the dynamics processor, which can provide anywhere from one to four bands. Each band provides a compressor that ranges from 1:1 up to 30:1. Accompanying the compressor is an expander/gate per band. A scrolling display tracks the waveform of the audio being processed and a red line shows a volume curve of the processing. If the compressor reduces gain, that is displayed as a dip on the red line, and as the makeup gain is adjusted, the scrolling waveform displays the end result.

The delay processor is simple and straightforward. There were no complicated multitap functions, just simple delay. Different models are available here, with a tape delay emulation offered in addition to a tape delay with tube saturation. An analog bucket-brigade-style delay rounds out the analog set, with lo-fi digital delays presented in addition to a clean, modern digital delay. It seemed that all bases were covered with an appropriate delay flavor for any given necessity.



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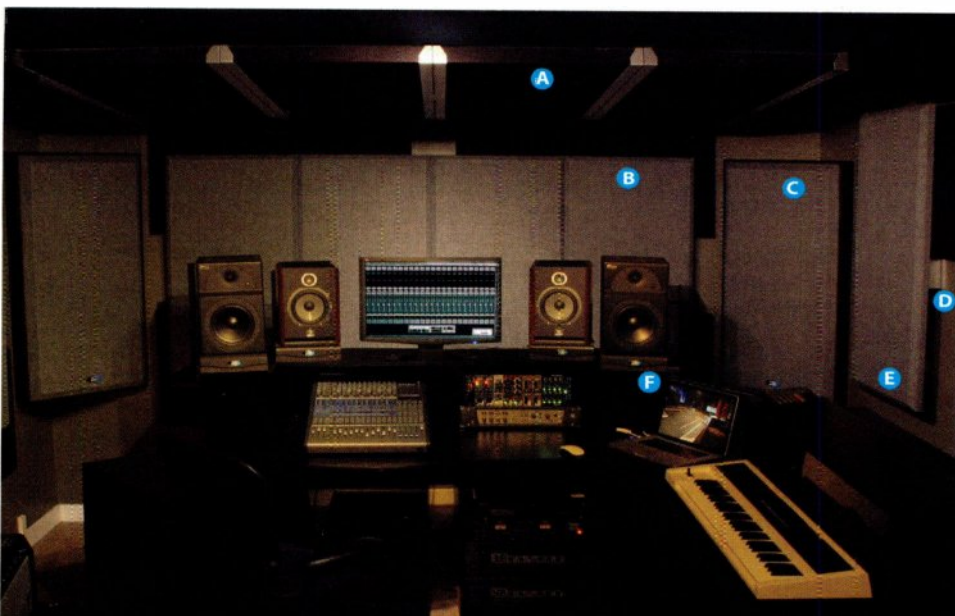
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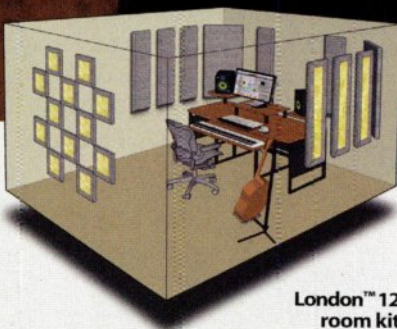




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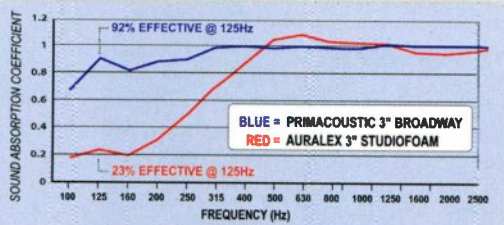
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IN USE

When I first installed Trash 2, I had just started working on a sci-fi/horror film. This software couldn't have come at a more perfect time, as the Trash module added terrifying grit to screams and squeals while the Convolve module added convincing airy breathiness to these sounds. It served as the perfect tool for altering recorded human and animal vocals and turning them into something unfamiliar, yet still organic.

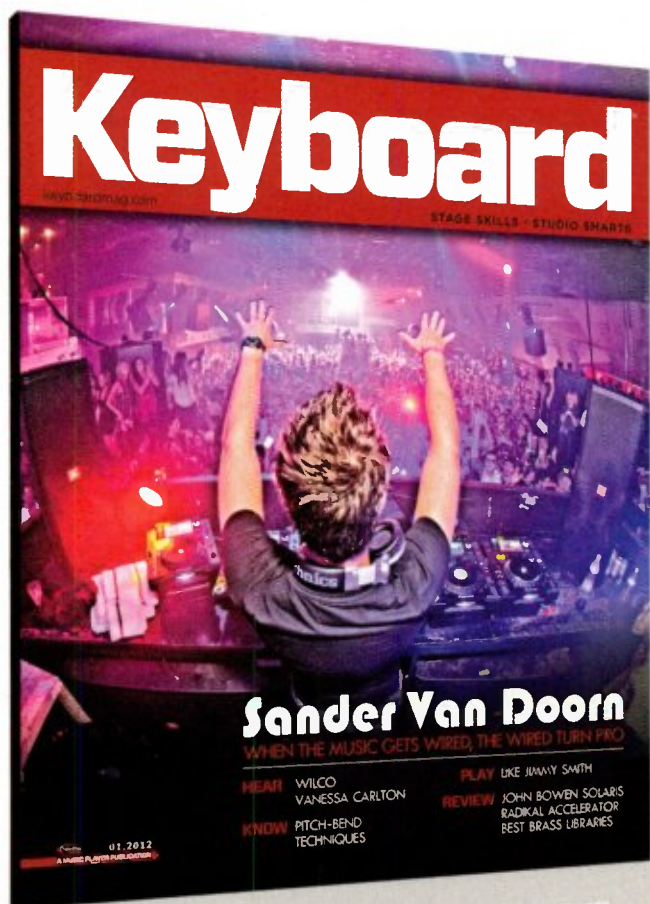
From there, it seemed logical to try Trash 2 on electric guitars. While clicking through presets, I was able to find certain sounds that seemed like reasonably good starting points, but then when it came to tweaking effects, I found myself missing the conventional amp simulators that looked like Marshall amps and stomp boxes. I did like the Jerry Garcia-like, Mu-tron-style sound I was able to produce using the envelope filter, but in the end, I feel that this plug-in would not be my first pick when it comes to processing a DI'd guitar to sound like an amp. I really started to fall in love with Trash 2 on the music side of things when I received the Classic Textures expansion pack. I threw up a tube saturation preset on a track that I was mastering and could immediately tell that it was going to be good. In fact, I hit a number of presets in a row, each of which seemed to enrich the different aspects of the harmonic structure to the point where the track sounded significantly louder and punchier, while metered loudness stayed nearly the same. This was great, because I didn't have to crush things, and the result was a crisp-sounding master that could still compete with other tracks on a playlist in terms of perceived loudness.

I have always heard certain distortion sounds in my head that I wanted to use to process synths, drums, other non-guitar instruments and sound effects. Pulling out an amp simulator has consistently disappointed me or made more work than necessary. With Trash 2, I was able to actually produce the sounds I had imagined. The ease of use of the modulated filters led to discovery of new production techniques that I will use often, and I can't imagine finding a way to do them that would be easier than using this plug-in. Aside from that, I could see the Classic Textures package being a go-to when futzing music, or maybe when looking to liven up dull tracks and give them some pseudo-analog magic. Altogether, I would call this a one-of-a-kind processor that could find a home in any type of workflow. ■

Brandon Hickey works as an independent recording, post and production sound engineer.

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UA OCEAN WAY STUDIOS PLUG-IN

Universal Audio Model Rooms From an Iconic L.A. Studio

Universal Audio's Ocean Way Studios Dynamic Room Modeling Plug-in is a mouthful. Anticipated for more than a year now, it had been subtly shown in the background of a few different Universal Audio ads, causing rumors to start. The May 2013 UAD-2 software upgrade 7.0 brought it to the UAD platform. Install and setup on my Windows 8, 64-bit system running Sequoia 12 was simple and easy. For us Windows users, there is a new installer, which worked well and caused no issues. Despite the hefty 640MB download (all plug-ins for the platform, along with the DSP drivers are included), the install went quickly.

STEP INSIDE

The plug-in's idea is simple: Capture the rooms at Ocean Way Studios and make them available within a DAW setup to give your recorded tracks the depth that only using room mics in a wonderful-sounding room can bring. This is not a simple reverb plug-in. UA and Ocean Way Studios owner Allen Sides teamed up to model not only the rooms, but the microphones and their placements that Sides has used on a variety of sessions from various sound sources.

As so many of today's recordings are made in less-than-desirable spaces, along with more use of direct recording, the depth and air is missing from many of the tracks that come across my desk for mixing. As a mixing engineer, I often feel more like a fixing engineer—the life is missing from the sound I am given to work with. Often my clients will layer 8 to 10 tracks of guitar trying to make the sound bigger, when the sound they are looking for comes by capturing the room.

The plug-in provides the user with a comprehensive interface. The layout is fairly quick to understand, and the options available yield some great results. You can use the plug-in in either Re-Mic mode (similar to Re-Amping, with no original dry signal passed through), or Reverb mode, where you can vary the amount of original dry signal, as you would with a standard reverb running on your track or aux bus.

CHAIN, CHAIN, CHAIN

The first step is to select one of the two modeled rooms—Ocean Way Studios A or B. Once the room is chosen, you are able to pick the sound source, which sets up the chain. For example, choosing Drum 1 loads the default microphones and its preferred placement for such a sound source based on Sides' knowledge of the rooms. You are then able to change the distances of the mics



from the source or swap them out for a different pair.

There are three channels per instance, and, in each case, the studio's console preamps were part of the signal chain along with all microphones used in the emulation. Each of the three stereo channels represents a location of the stereo pair of microphones you have chosen, one representing the near mics that can be moved right up to the sound source, such as close-miking a cabinet. The second and third represent the middle and far pairs. Each Mixer channel allows you to choose from an excellent array of microphones and set their distances from the source and each other. You can also reverse polarity, set HP and LP filters, and pan, mute, and alter volume. Other features include a pre-delay setting, master EQ section, a L/R swap, mono sum and output volume.

One of the nicer features is the ability to click the distance button and have all mics automatically aligned to the source. This is something that is not naturally possible, but is interesting nonetheless for combining microphone groups having different room captures together, then adding pre-delay to achieve distance.

LIFE AND DEPTH

I used the Ocean Way plug-in on a few projects to see if it would add depth in its own way and not like the short reverbs I normally use. Projects that I track here at Eclectica Studios always have the benefit of the stereo room mics for the added flavor, but projects that show up here weekly for mixing rarely have any room capture. In the case of Micah Wagner's new album being produced here, an outside cello player provided tracks through our FTP server. The playing and recording was beautiful, but it was a single mono track recorded in a small dead room.

I used the OWS plug-in in Re-Mic mode to simply place the cello into a room. After dialing in, the track came to life; it did not sound like I simply placed a reverb on it. It was "in" a room, just like the acoustic guitar sounded—rich and full of life and depth.

On a mix for a track I produced for Anita Brown, I had a stereo piano recorded remotely by Larry Ashby using the Alicia Keys VSTi, and though there was some built-in reverb, it was very much a direct sound. I used the OWS plug-in again in Re-Mic mode to simply move the piano into a better space. Later, a few revisions into the mix, I realized that we started recording this song as an R&B song with the vocals very up front and tracked the vocals without our room mics, but as the song came to life in the mix, I decided to try using the OWS plug-in in Reverb mode on an aux bus and feed all the vocals into it. I added so very little, it was almost undetectable, but you can feel the depth. The client, upon hearing the revision with the OWS on it, emailed me, "What did you do? It just sounds so polished now!"

Although the Source selector contains presets for drums, pianos, vocals, horns, amps and others, you should break some rules and experiment. For instance, the VSTi piano ended up sounding best at the side position using source Drum1.

ROOM TO BREATHE

The Ocean Way Studios plug-in has ended up on everything that leaves my studio in one form or another. We all hear talk about a tape simulator being a magic button, or a specific bus compressor being the end-all be-all, but I still hold to the fact that after a great song comes a great performance. A big part of the life and energy that comes from a track is the excitement created by the performance in a space. I have vocalists all the time come into the control room to go over a part and comment on how they just cannot sing in the CR, saying, "It's so dead-sounding in here." Yet through the door

PRODUCT SUMMARY

COMPANY: Universal Audio
PRODUCT: Ocean Way Studios Plug-in for the UAD-2 platform
WEBSITE: uaudio.com
PRICE: \$349
PROS: A well-thought-out product that achieves what it sets out to do. Adds depth and life to recordings.
CONS: Its purpose may get lost on engineers who do not have experience with what a real room can bring.

into the live room their voice and performance comes to life!

I'd highly recommend the OWS plug-in. From the microphone choices, the presets made from years of Platinum record making, to the rooms themselves, this is a complete package tailor-made for this job. If you subscribe to music having depth and space, the OWS plug-in delivers. ■

Tim Dolbear is a producer and mixing engineer at Eclectica Studios (eclecticarecordings.com) in Austin, Texas.

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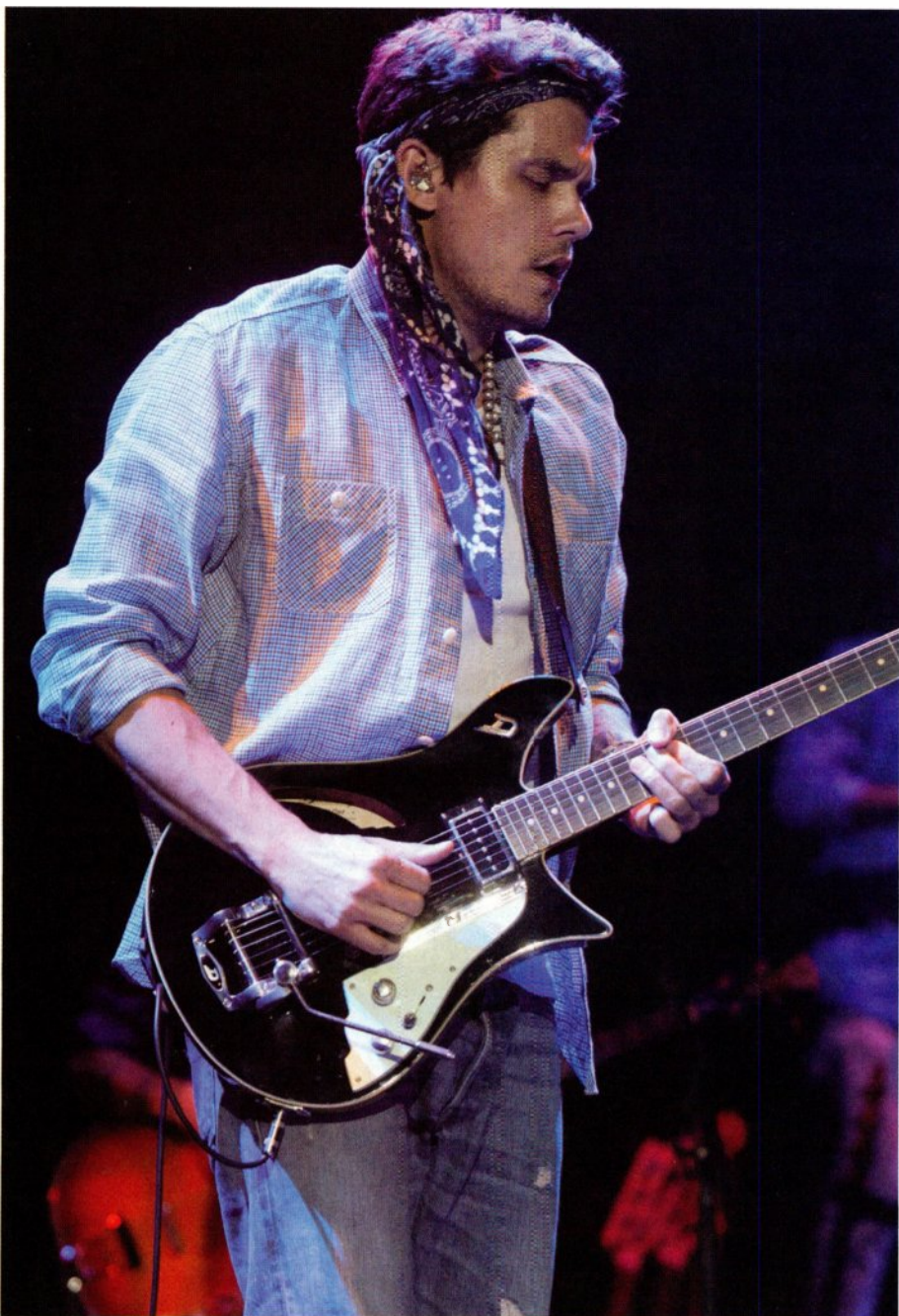


Photo: Candace Horgan

and there are a lot of levels thrown at us. We do use snapshots, but they never play the same song the same way twice. John is always throwing solos out to different people off the cuff, he is always rearranging songs on the spot, he's always playing a new song that we've never rehearsed before in the middle of a set, so you just have to give in to it. There's never a section of the set where I'm not on his vocal fader and not on whatever I can reach with my other hand."

"John also calls audibles a lot," Chrysler chimes in. "It will be a song we know, but the band isn't actually on the instruments on the song they are going into, so they will play the song just on what they are on, and we can't go to the snapshot for that song. I keep a jam snapshot, too. You can make any changes to it and it won't make any changes to your existing snapshots.

ing from the previous night's show.

"I like to come in after he has done an initial tune on the system," Franscoviak says. "If I spend too long on it, I don't want to go down a wormhole. I want to walk in with him feeling like he's in a good spot, and then I can say, 'I think you are really close; here is what I hear.' I'll play a song from the previous night's show. It's immediately familiar, and I know what it should sound like. If I want to touch up mixes, I'll listen on near-fields, but when I go to the system, I'll know how it should sound in relation to how it sounds on my near fields, and then I can make any changes and see how the room is reacting. It's another upside of the VENUE system; it's so easy to do all of those things. I can make any adjustments I want and then apply it to my mix right then." ■



It's mixing on the fly."

The microphone setup is pretty simple, consisting mainly of beyerdynamic M 88s and a series of Radial DIs for the keyboards and acoustic guitars.

"We use Shure Beta 58s on vocals, Neumann KM 184s on overheads, and then Shure 57s on snare top and bottom," Franscoviak says. "We have some Royers on the Leslie, and a 421 on the bottom of the Leslie. We have a Subkick. Attention Yamaha: build an attractive Subkick, 'cause I like using it but I hate looking at it. It's literally M 88s on bass drum, tom toms, guitar amplifiers, the horn players when we have them. John is just using a Beta 58 for vocals. We also have a beyer M 160 on the percussion for the background singers. We've tried every microphone, and there's always something we like about it and something we dislike about it. I am a huge believer that if something works well, I am not a big experimenter. I really like keeping things simple and consistent."

For this tour, the crew is using a Clair i-5 system with 12 i-5s a side, eight BT-218 subs flown and four more per side on the ground, and then six FF-2s for front fills. For bigger venues, they can also add six more i-5s a side for side hangs. Initial tuning of the system is done by Scott Frey.

"Chad and I aren't heavy with SMAART," Frey says. "We just use it as an analyzer for RTA. There are a couple of songs we use, and pink noise, to get the system as balanced as possible. We also when needed can flatten out the top speakers to better hit the lawn in sheds, as well as the high seats."

After Frey has done the main tuning, Franscoviak will fine-tune it, usually by playing a record-



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- John Vanderslice
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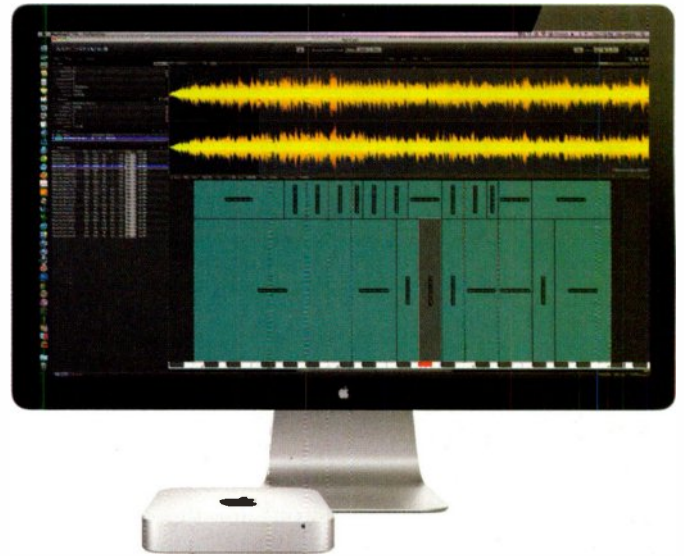
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THANK YOU, GEORGE!



By Kevin Becka

Just before sitting down to write my column, I heard that George Duke had passed away in Los Angeles. I had the great opportunity to assist on a number of records George and longtime engineer Erik Zobler (hereafter known as Zobbie) mixed at Lighthouse Recorders, where I was on staff in the late '80s and early '90s.

George was as funny as he was talented, and I loved the music. I first heard about George from a high school friend, engineer David Rideau. We had both moved to L.A. from Phoenix and shared a house. David got a job at Westlake Audio and first met George in 1978 when he was on staff as an assistant at the newly built Beverly Boulevard studios. He would come home and talk about the musicianship, the fun they had at the sessions and how great the records were going to be. I literally wore out my vinyl of George's *Reach For It*, *Follow the Rainbow*, *A Brazilian Love Affair*, *Dream On* and more. You could tell from the records, that the core of the band—Byron Miller on bass, Leon "Ndugu" Chancler on drums, and George—were all monsters and were having a blast. Zobbie says, "Those three guys, they do this thing. They just intuitively know where the music's going...like a hand in a glove. Funky breaks where the music would stop and start again, with all of them completely in time with each other. There were no count-offs, they would intuitively know what to play."

The Lighthouse had a large roster of high-end clients, and I always looked forward to working with George and Zobbie. They always brought the tech and talent in a big way. I remember we mixed two Rachele Ferrell records, one from Najee, Chante Moore's *Precious* and others. They were on the edge of digital tech then, and those records sounded great. The majority of our clients used analog tape then, but George and Zobbie would bring in two Mitsubishi X-850 32-track digital recorders, and some of George's keyboards if there were overdubs to be done. That was my first experience with digital reel-to-reel machines, which at the time were more than \$100,000. He later added a RADAR system to increase their track count even more. George stopped coming to the Lighthouse because he bought a Euphonix CS200, a digitally controlled analog console, which enabled him to track and mix entirely in his home studio. The console is almost 20 years old and is still in use.

The biggest thing I took away from those sessions is how it helped my own chops—I learned a lot. Like a pro athlete, George made it all look so easy, but underneath was a great pair of ears and



L to R: George Duke, Kevin Becka, Gerald McCauley, David Rideau

a production style that put the artist at ease, promoting fantastic performances. That was just part of his artistic genius; I could talk endlessly about his compositional ability, singing, playing and the range of styles he could shred. He played with Frank Zappa, Jean-Luc Ponty, Miles Davis, Cannonball Adderley and Milton Nascimento, to name a few, and has been sampled by Kanye, Daft Punk, Ice Cube and countless others.

I asked Zobbie what he remembered most about George and what he'd learned from him. "There are so many ways I could answer that question," he said. "Overall, he helped me train my ear from a technical engineering standpoint to a musical one. I also, hopefully, took in some of his funk. It is infectious. I think I'm much more sensitive to rhythm than I used to be." Zobbie went on to talk about how George would move things around in Pro Tools. "There would be times where I would be sitting with him and he would be so precise with it—not looking at anything, just using his ears. He would never look at the grid and would say, 'that needs to move back just a little bit.' The speed by which he would do it, how quickly he would get something in time, would always astonish me."

The planet is a little less talented without George around. I was watching a promo video for his last record, *Dreamweaver*, just released in July of this year. George's wife, Corrine, had passed just last year, and he dedicated the record to her. George said, "You never know what life's going to bring, and we have to learn to accept the challenges we are given. And it's how we react to them that is testimony to who we are, and where we are in our life."

The world will miss you, George. Goodbye, and thank you for what you brought us. ■

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