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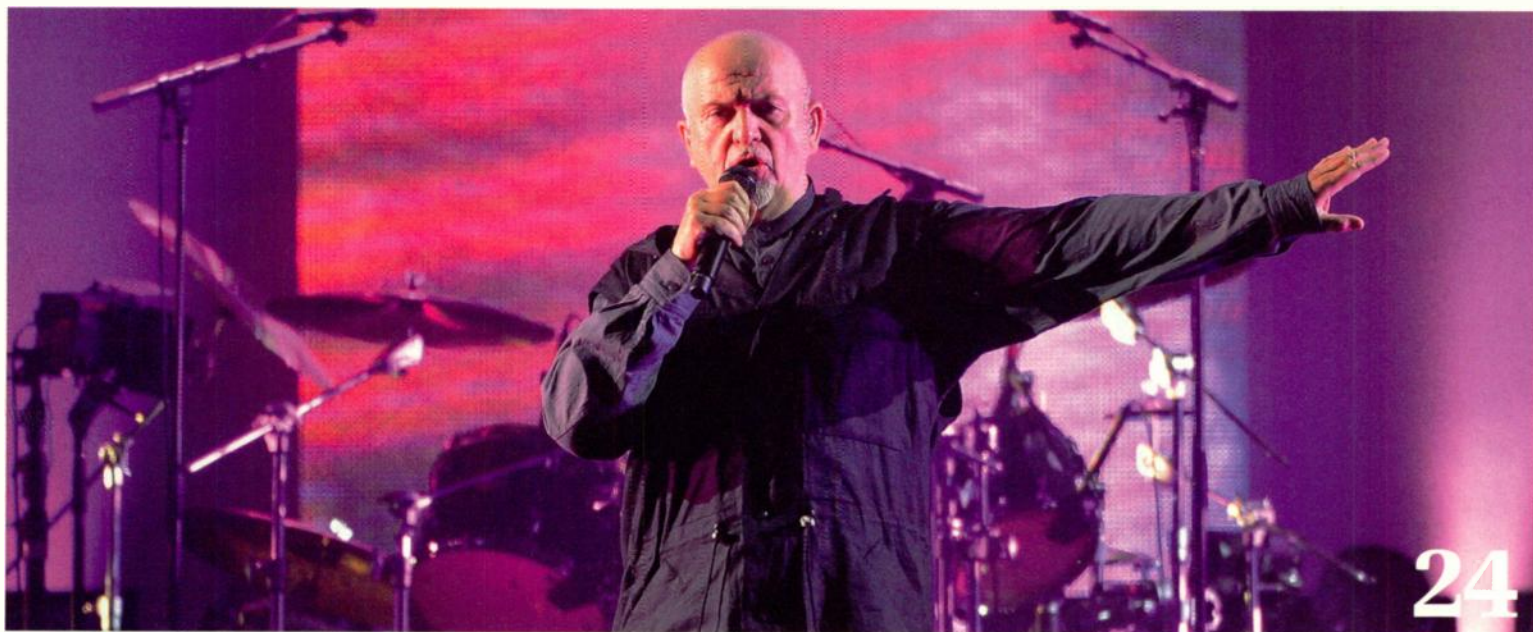
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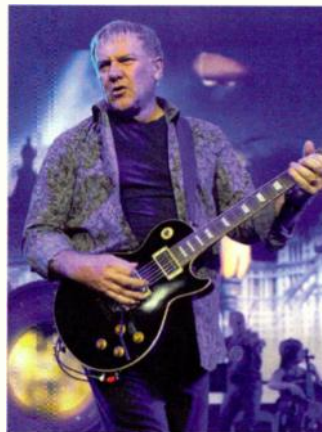
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**On the Cover:** At Todd-AO West, Stage 1, the core audio crew behind Judd Apatow's *This Is 40*. Standing, L to R, George H. Anderson, Adam Jenkins and Marc Fishman; Seated, Tammy Fearing and Judd Apatow. Photo: Michael Coleman/Soundworks Collection.

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# From the Editor

## YOU THINK COMEDY IS EASY?

**T**here might be a few readers who are thinking right now, while looking at this month's cover, "Who is Judd Apatow, and what's he doing on the cover of *Mix*?" Others might chime in, "The sounds of comedy? How hard is that? You record people talking, then you edit and mix it, and you have a movie." *Skyfall* is in theaters. *The Hobbit*. *Jack Reacher*. Give me bullets, explosions, car chases, soaring strings when the plane lands safely and plenty of things that go bump in the night!

Comedy is funny that way. It seems so easy but it's not. Think back to any stand-up performance you might have seen in person, not those specials on TV. If the comic pauses for even a second, or exhibits a flash of uncertainty, they're done. Toast. Impossible to recover. The audience is unforgiving. But if the comic is good, then that is a night to remember. Brian Regan at Cobb's in San Francisco a few years back was 72 minutes of sidesplitting, two-drink-minimum laughter, and when Mike Birbiglia did 80 minutes at the Herbst Theatre, my daughter Jesse and I were hurting from two straight days of laughter. I exaggerate, but you get the point. Comedy ain't easy. But it sure can be good.

Gary Rydstrom, one of the humble greats of film sound, once said to me when he was working on *Jurassic Park*, that it seemed odd but the big scenes almost mixed themselves. The lions and elephants and walrus sounds in T-Rex, the screech and tenacity of the velociraptors as they attacked—it wasn't easy, but it was big, and he knew what to do. One of the most challenging scenes, he said, turned out to be the child alone on the pane of glass, as it's cracking into the spider web design, dinosaurs quiet but still nearby. The threat, as depicted in the audio track, stood naked, exposed, a single sound.

I was reminded of this a few years back while at a dinner with Marc Fishman, a damn fine re-recording mixer who won an Emmy for the John Adams mini-series at the same time he was making something of a name for himself in comedies, most notably those produced by Judd Apatow. He's part of the crew on this month's cover. He had just come off *Superbad* and was talking about how these improv-yet-semi-structured movies were being made. They had character and story and jokes, lots of jokes. From the set and from the ADR stage. And the directors cared about sound, about being heard as they would be in the real world. These movies were fun, he said, but they weren't easy. You often had to stand naked, with no sounds to hide behind. Just like with the kid on the glass. But he still has to hear the punch line.

So that's why Judd Apatow is on this month's cover. He cares about audio, and he cares about music. He is a student of pop culture and he writes with a natural rhythm. He is loyal to his crew, and they are loyal to him. Plus, he makes some damn funny movies. And they sure do sound good.

Thomas AD Kenny

Tom Kenny  
Editor

## MIX

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

### ADVERTISING

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

### ART & PRODUCTION

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

### MARKETING

MARKETING PROJECT MANAGER Tyler Reed treed@nbmedia.com

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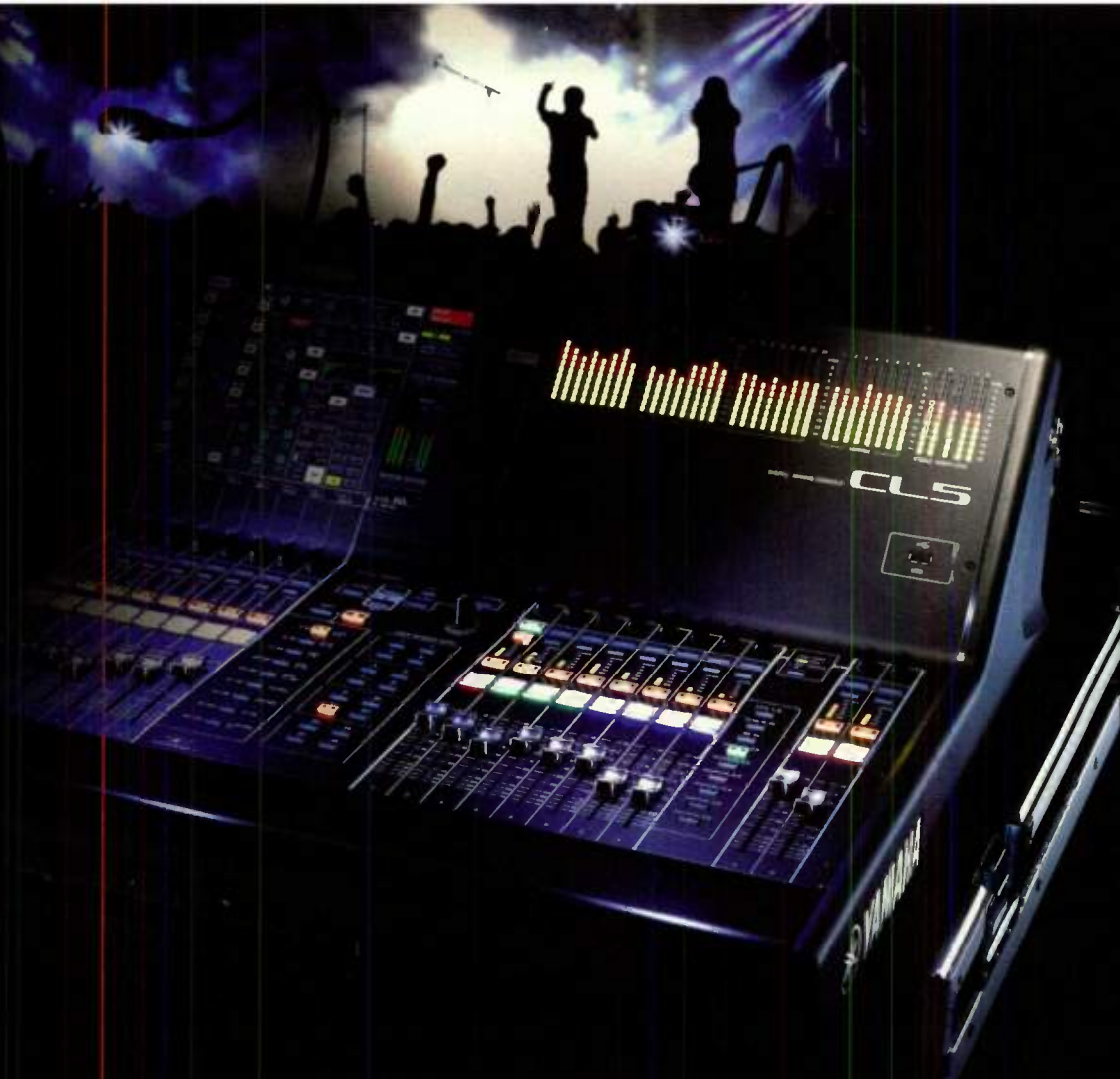
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## Current

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## 55th Annual Grammy Award® Nominations

In early December, The Recording Academy announced its nominees for the 55th Annual Grammy Awards, which will be held on February 10, 2013, in Los Angeles and broadcast on CBS in high-definition TV and 5.1.

Mix congratulates this year's audio production nominees:

**Record Of The Year:** "Lonely Boy," The Black Keys (from *El Camino*)—The Black Keys & Danger Mouse, producers; Tom Elmhirst and Kennie Takahashi, engineers/mixers; Brian Lucey, mastering engineer. "Stronger (What Doesn't Kill You)," Kelly Clarkson—Greg Kurstin, producer; Serban Ghenea, John Hanes, Greg Kurstin and Jesse Shatkin, engineers/mixers; Chris Gehringer, mastering engineer. "We Are Young," Fun. featuring Janelle Monáe (from *Some Nights*)—Jeff Bhasker, producer; Jeff Bhasker, Andrew Dawson and Stuart White, engineers/mixers; Chris Gehringer, mastering engineer. "Somebody That I Used To Know," Gotye featuring Kimbra (from *Making Mirrors*)—Wally De Backer, producer; Wally De Backer and Francois Tetaz, engineers/mixers; William Bowden, mastering engineer. "Thinkin Bout You," Frank Ocean (from *Channel Orange*)—Frank Ocean, producer; Jeff Ellis, Pat Thrall and Marcos Tovar, engineers/mixers; Vlado Meller, mastering engineer. "We Are Never Ever Getting Back Together," Taylor Swift—Max Martin, Shellback and Taylor Swift, producers; Serban Ghenea, engineer/mixer; Tom Coyne, mastering engineer.

**Album Of The Year:** *El Camino*, The Black Keys—The Black Keys and Danger Mouse, producers; Tchad Blake, Tom Elmhirst and Kennie Takahashi, engineers/mixers; Brian Lucey, mastering engineer. *Some Nights*, Fun.—Janelle Monáe, featured artist; Jeff Bhasker, Emile Haynie, Jake One and TommyD, producers; Jeff Bhasker, Pete Bischoff, Jeff Chestek, Andrew Dawson, Emile Haynie, Manny Marroquin, Sonny Pinnar and Stuart White, engineers/mixers; Chris Gehringer, mastering engineer. *Babel*, Mumford & Sons—Markus Dravs, producer; Robin Baynton & Ruadhri Cushnan, engineers/mixers; Bob Ludwig, mastering engineer. *Channel Orange*, Frank Ocean—André 3000, John Mayer and Earl Sweatshirt, featured artists; Om'Mas Keith, Malay, Frank Ocean and Pharrell, producers; Calvin Bailif, Andrew Coleman, Jeff Ellis, Doug Fenske, Om'Mas Keith, Malay, Frank Ocean, Philip Scott, Mark "Spike" Stent, Pat Thrall, Marcos Tovar and Vic Wainstein, engineers/mixers; Vlado Meller, mastering engineer. *Blunderbuss*, Jack White—Jack White, producer;

Vance Powell and Jack White, engineers/mixers; Bob Ludwig, mastering engineer.

**Best Engineered Album, Non-Classical:** *The Absence*, Melody Gardot—Moogie Canazio and Al Schmitt, engineers; Bernie Grundman, mastering engineer. *Ashes & Fire*, Ryan Adams—Glyn Johns, engineer; Bob Ludwig, mastering engineer. *The Goat Rodeo Sessions*, Yo-Yo Ma, Stuart Duncan, Edgar Meyer & Chris Thile—Richard King, engineer and mastering engineer. *Love Is A Four Letter Word*, Jason Mraz—Joe Chiccarelli, Steve Churchyard, Lars Fox, Graham Hope, Tony

Maserati and Morgan Stratton, engineers; Bob Ludwig, mastering engineer. *Slingshot*, Rebecca Pidgeon—Helik Hadar, engineer; Bernie Grundman, mastering engineer.

**Producer Of The Year, Non-Classical:** Dan Auerbach, Jeff Bhasker, Diplo, Markus Dravs, and Salaam Remi.

**Best Engineered Album, Classical:** *Americana*, Modern Mandolin Quartet—Daniel Shores, engineer, mastering engineer. *Beethoven: The Late String Quartets, Op. 127 & 131*, Brentano String Quartet—Bruce Egge, engineer. *Life & Breath—Choral Works By René Clausen*, Charles Bruffy & Kansas City Chorale—Tom Caulfield and John Newton, engineers; Mark Donahue, mastering engineer. *Music For A Time Of War*, Carlos Kalmar & The Oregon Symphony—Jesse Lewis and John Newton, engineers; Jesse Brayman, mastering engineer. *Souvenir*, TrondheimSolistene—Morten Lindberg, engineer, mastering engineer.

**Best Surround Sound Album:** *Chamberland*, David Miles Huber—David Miles Huber, surround mix engineer, surround mastering engineer, surround producer. *Modern Cool*, Patricia Barber—Jim Anderson, surround mix engineer; Darcy Proper, surround mastering engineer; Michael Friedman, surround producer. *Quiet Winter Night*, Hoff Ensemble—Morten Lindberg, surround mix engineer, surround mastering engineer, surround producer. *Rupa-Khandha*, Los Angeles Percussion Quartet—Daniel Shores, surround mix engineer, surround mastering engineer; Marina Ledin and Victor Ledin, surround producers. *Storm Corrosion*, Storm Corrosion—Steven Wilson, surround mix engineer, surround mastering engineer, surround producer.

For the complete list of all nominees, go to [grammy.com/nominees](http://grammy.com/nominees).



## Mix With The Masters

The Mix With The Masters program offers recording and mixing engineers a chance to work closely with A-List record producers, engineers and mixers, and improve their skills in music production. Over the course of a week, a series of discussions and workshops are held ranging from production and mixing techniques to career advice. The program is held in Southern France in Studio La Fabrique (pictured), a residential recording studio in a 19th century mansion in Saint-Rémy de Provence featuring state-of-the-art equipment and esoteric acoustic spaces. Engineers and producers scheduled for 2013 include Tchad Blake (March 25-31), Al Schmitt (May 14-20), Jimmy Douglass (May 22-28), Chris Lord-Alge (July 25-31), Michael Brauer (August 3-9), Manny Marroquin (August 11-17), Tony Maserati (September 2-8) and Joe Chiccarelli (September 17-23). Dates are subject to change, and additional sessions are planned. For the latest updates, go to [mixwiththemasters.com](http://mixwiththemasters.com).



Line 6 President and CEO Paul Foeckler

## Line 6 Announces New CEO and Executive Leadership

Line 6 in Calabasas, Calif., promoted Paul Foeckler (pictured) to President and CEO, while co-founder Marcus Ryle assumed the role of Chief Strategy Officer and Joe Bentivegna was named Chief Operating Officer. Foeckler succeeds Mike Muench, who resigned after a 14-year tenure.

For the past year, Foeckler has led the Line 6 product and marketing teams. Prior to Line 6, he held executive roles in product development, sales and marketing at Digidesign, M-Audio and Avid. "When I originally came to Line 6 to lead the Product team, I was inspired by the organization's track record of introducing truly groundbreaking

products to the market," Foeckler says. "I'm passionate about solving problems for musicians and audio professionals, so working here is a great fit. We've built a world-class team, and I believe that we're uniquely positioned to extend our legacy of innovation to more customers than ever before."

## StudioFilter.com Launches

Studio Filter offers an online searchable database of studio facilities for the pro audio and music production industries, and lets studio owners create facility profiles for free. From the home page, visitors enter their search criteria, such as type of studio and location, which pulls up a list of suggestions. Each individual studio profile page includes its street address, Google map location, contact information, a description, services provided, rates, studio photos, and an equipment list.

The service was created by freelance engineer/producer Paul Cox, who owns Metaphonic Recording Studios in New York City, and developer/jazz pianist Justin Perler. "I have kept spread sheets of recording, rehearsal and mastering studios for years, and would find myself searching around and calling up for specific information and missing new places that have opened," Cox says. "The whole thing seems archaic. As a studio owner, I find it incredibly frustrating to reach people that are in the market for a studio and might not know about my place. If I invest in a new flagship piece of gear, or build out a second room, wouldn't it be nice for people to be able to find me based on those investments?"



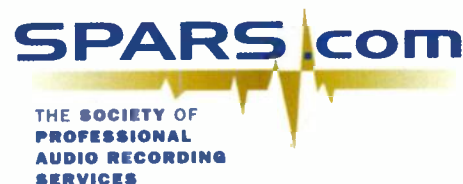
## Correction on Tonelux

In our AES wrap-up in the December 2012 issue, we mistakenly said that Tonelux Designs was distributed worldwide by TransAudio Group. That is incorrect. Tonelux is, in fact, both owned and distributed globally by PMI Audio Group in the U.S., and PMI Audio UK in the UK. PMI Audio Group manufactures Studio Projects, Joemeek, Toft Audio Designs, Trident Audio, and Valley People. *Mix* regrets the error.

## SPARS Sound Bite

### Live Recording: Skill + Experience

By Karen Brinton



The same massive changes that have rippled through the recording industry over the past 20 years have had an equal affect on those who record live shows. Low-cost computers recording software have made it possible for bands and artists to record their own projects. To be sure, portable laptop-based systems can work very well, and they are out there every day in the clubs. If the band simply wants an archive of the night's performance, this makes sense. But what if they want to record the show and then release the tracks? That's where skill and experience come in.

Unlike the predictable, comforting confines of a recording studio, most live shows take place in a hostile environment, with venue, power, interfacing and other issues changing every night. A live date typically involves transformer-isolated mic splits, power isolation transformers and other crucial "black boxes" whose use is second nature to live recording and sound touring personnel, but not to most musicians or studio engineers.

We are all too familiar with live recordings we have heard that exhibit poor sonic quality, not to mention buzz and hum. To insure the best live recordings, it is crucial to involve people who have experience in dealing with the technical challenge of remote recording. Those years of experience also result in an ability to respond quickly, to capture the moment, a crucial need in the concert world. You only get one take and your client is expecting you to deliver that performance. And who wants to lug a ton of gear into a venue, hoping to can hook it up for optimal results?

Our company, Remote Recording, is known for recording some of the best known live projects over the last 32 year—big artists like The Eagles, Rolling Stones, Eric Clapton, Michael Buble and the Academy Awards. We had big trucks, big consoles, and we still do, but our industry has changed. We had to get smaller, more nimble, more cost-effective. So we built a Recording Taxi, with Pro Tools HD, 48-channel fiber optic mic pre interface and Riedel Rocknet remote controller. If we wanted the gigs in New York City, we had to adapt.

Live recording has changed, no question, but don't sell your project short. When it comes to live dates, live recording experience can make all the difference.

*Karen Brinton is a Past President of SPARS and President of Remote Recording*

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## MIXBLOGS



### TechTicker

I recently had a call from Simon Coté at AudioPlus Services who asked if I knew of a system that could bass manage an 11.1 speaker array. Good question, as there isn't a lot of turnkey surround gear out there beyond 7.1.

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



### Robair Report

Michael Huppe, president of SoundExchange, explains how this non-profit performance rights organization collects and distributes royalties from Internet radio, satellite radio, and other platforms that stream sound recordings over the Web.

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### Ask Eddie

In college, I got involved in the theater group doing sound for a Noel Coward play called *Blithe Spirit*. Things were pretty simple then—no mics, only sound effects. Mine were on tape and my partner, Jim Zubernis, brought his Mini Moog!

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## SoundWorks Collection Update

### The Hobbit

In this exclusive SoundWorks Collection sound profile we visit Park Road Post Studios in Wellington, New Zealand, to talk with the sound team of Director Peter Jackson's *The Hobbit*. Featured interviews include Re-recording Mixer Michael Hedges, Re-recording Mixer Chris Boyes, Re-recording Mixer Michael Semanick, Co-Supervising Sound Editor Brent Burge, Co-Supervising Sound Editor Chris Ward, and Dolby Atmos Re-recording Mixer Gilbert Lake.



## Cool Spin:

**Ben Harper and Charlie Musselwhite:  
Get Up (Stax)**



Ben Harper is a modern champion of American roots and soul, and blues harmonica legend Charlie Musselwhite is one of Harper's heroes. These two artists met at a blues festival in Australia in the mid-'90s,

beginning a friendship that resulted in several one-off collaborations. Now they've recorded their first full-length together, *Get Up*, a collection of new blues songs written by Harper, who also sang, played lap steel and guitar, and co-produced the album with his band mates and engineer/producer/bassist Sheldon Gomberg.

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**Signal-to-noise ratio<sup>1</sup>**

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**Noise<sup>1</sup>** 5 dB SPL

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Photo: Billy Pavoni

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"When it comes to second albums, I'm staunchly against is the idea of the band completely rewriting the formula of their sound," says Zane, whose long discography includes records for The Walkmen, Holy Ghost, Friendly Fires and Les Savy Fav. "So the idea going in for *Gossamer* was not to rewrite the sound of Passion Pit. It had worked, people liked it, and the last thing I wanted to do was change that.

"This is a pretty ambitious thing we tried to make," Zane continues. "The word I've been using to describe the record is craftsmanship. We've been working on this record for months. People ask, 'Is that a real orchestra?' Yes, it is. 'How do you make it sound so big?' It takes a long time!"

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Capturing all the attitude and musical intensity was the engineering/production team of Adam Landry and Justin Collins, who tracked mostly live sessions to an Otari MTR90 16-track/2-inch machine. Ford's in-your-face vocals were captured with a chain that Landry relies on often. "I actually use a Sennheiser 421, a relatively inexpensive, common mic for vocals," he says. "I like the immediacy of it. That said, the mic pre and compressor have a lot to do with it as well. I go from the 421 to, preferably, an API 312 or 512c pre, and then usually I use a Distressor or an 1176. And I like to get it as hot as possible without distorting, and then put it really close upfront."

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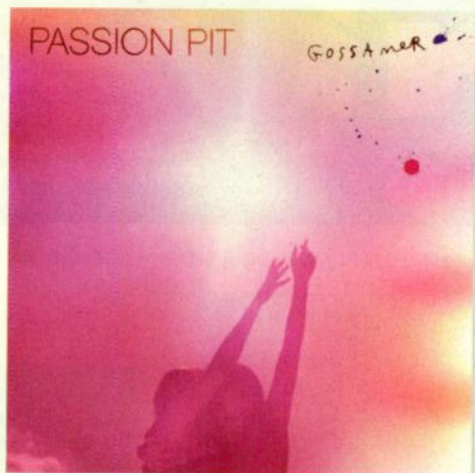
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"It takes something shocking to cut through the noise," Zane says. "With *Manners*, it was the combination of drums that were both live and





programmed, mixed together in a way that you couldn't tell what was what. Then it's the super-vibrant synths which cover everything, and of course Michael's vocals. Those three things create an exciting sound—whether people like it or not, it captures their attention.”

One of the keys to freeing Passion Pit's collective mind for *Gossamer* was the presence of more than 150 guitar pedals and over 50 analog synths at Gigantic—an avalanche of tools that provided benefits psychological as well as aesthetic. “Sometimes knowing that pedals are there makes an artist write and record differently,” Zane explains. “The way it works for us is almost sonic graffiti: Take an otherwise classic sound and put our own little mark on it. *BOOP*. Now it's not the classic sound, it's a deviation. It's the Juno patch, but going through a Wow & Flutter pedal for a detuned effect, or a little filter.”

“The blessing and curse of analog pedals is that when you hear something that sounds good, you'd better press Record because you may never get it back. I think all the possibilities force us to say, ‘This sounds good. Let's record it. Okay, next thing!’”

As Zane points out, one of Passion Pit's distinguishing characteristics are Angelakos' vocals, a stream of emotion, urgency, youth, confusion and aged insight that's unforgettable from the first listen. Despite the band's experimental nature, Zane isn't afraid to have

a system for recording Angelakos' voice. “Nine-and-a-half out of 10 times, I use my vintage AKG C12 through a Black Face 1176, and record the vocals pretty straight up,” Zane says. “I don't like a lot of bells and whistles going to tape. When Michael stacked his vocals, we'd use the Telefunken CU-29 ‘Copperhead’ because it took well to the sibilance.”

“Compression mostly stayed the same, although I have an old tube limiter made by the Department of Commerce that was often used. It's an extreme sound, not only because it imposes a lot of compression, but the frequency response of it is such that there's not a lot going on above 6 kHz or below 200 Hz—so the first thing you notice is that it gets a little smaller, and second is that it's really compressed. But other than that, the vocal stuff is more traditional on the front end, while a lot of the production comes on the back end.”

That limiter lives in a wall of gear at Gigantic that's pretty darn big. With racks of new and vintage outboard at his disposal, supplementing the 60-channel Neve VR, mixing and music production were perfectly congealed processes for *Gossamer*. Working alongside engineer Alex Aldi, Zane and Angelakos recorded and mixed continuously until the day the album was officially done.

“I know it's a cliché to say I use the studio as an instrument, so maybe a more eloquent way to put it is that the equipment used during the mix—whether used correctly or incorrectly—is a continuation of the whole process,” Zane muses. “The metaphor for how we approach a lot of the sounds is the same as theater—everything is extreme because it has to get out to the last row.”

“Something Alex and I are always super-conscious of is how hard we're hitting stuff, and making sure we're hitting it in the sweet spot—should that be just a little harder or softer than it should be? When you're hitting stuff too hard purposefully, there are degrees within that, and those degrees can make a huge difference. How hard you're hitting the mix bus can vary by just one or two dBs, but it will make a world of difference—pops it up, and things just come to life. Doing it the way we like it, more often than not, means it's running hot.”

For those who are new to Passion Pit or long-devoted fans, each song on *Gossamer* is a journey—12 tracks that add up to an aural voyage charted by a gifted songwriter and his adventurous producer/mixer. “A lot of the same Passion Pit DNA is there,” Zane says. “It's just better, or louder, and more of it.” ■

## SING ALONG WITH DROPKICK MURPHYS

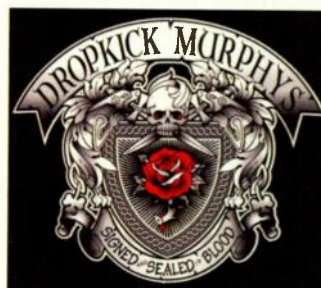
**E**ngineer/producer Ted Hutt (Old Crow Medicine Show, Lucero, Gaslight Anthem) says he gravitates toward projects with acoustic ingredients. “In these days where everything's become downloadable, it's important for people to be able to touch something made of wood,” he says. “That's one of the things that always draws me to traditional instruments.”

With Irish trad/punk band Dropkick Murphys, Hutt gets to track folk instruments, plus raging electric guitars and masses of drums and vocals.

For the Dropkicks' latest, *Signed and Sealed in Blood*, they spread out in Q Division (Somerville, Mass.; [qdivision.com](http://qdivision.com)), with groupings of acoustic and electric instruments in various rooms. “There's a room at the back of the studio that has a window into the main room,” Hutt says. “We put Tim [Brennan] and Jeff [DaRosa] in there playing bouzouki, mandolin, acoustic guitar, things like that. We close-miked acoustic instruments, but we would also run pickups; we had a [Gibson] P90 fitted to the bouzouki, for example, and amped that up to blend it in with the electric guitars a little bit.”

Hutt and engineers James Brown and Ryan Mall tracked to Pro Tools via the studio's restored Neve

8068, using Q Division's collection of vintage outboard gear, and tube and ribbon mics. On vocals, however, he often broke away from the classic tube mic approach in



favor of a live vibe: “I would bring Al [Barr] into the control room with an SM7, put the monitors out of phase and have him stand between the studio monitors cranked up loud. Sometimes it's daunting for a singer who plays live so much to stand with headphones on, motionless, in front of a U47, so this helped him feel the energy he gets live.”

“For our huge crowds of backing vocals, we did a similar thing. Jeff DaRosa had a birthday party, and we dragged all his guests out of the bar down to the studio. We put a couple of P.A. speakers in the live room, and huge sheets of paper with lyrics, and everybody sang along.”

—Barbara Schultz

### more online



Check out Passion Pit's “Take a Walk,” from *Gossamer*. [mixonline.com/january\\_2013](http://mixonline.com/january_2013)



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**ROBERT ZEMECKIS**

STARRING

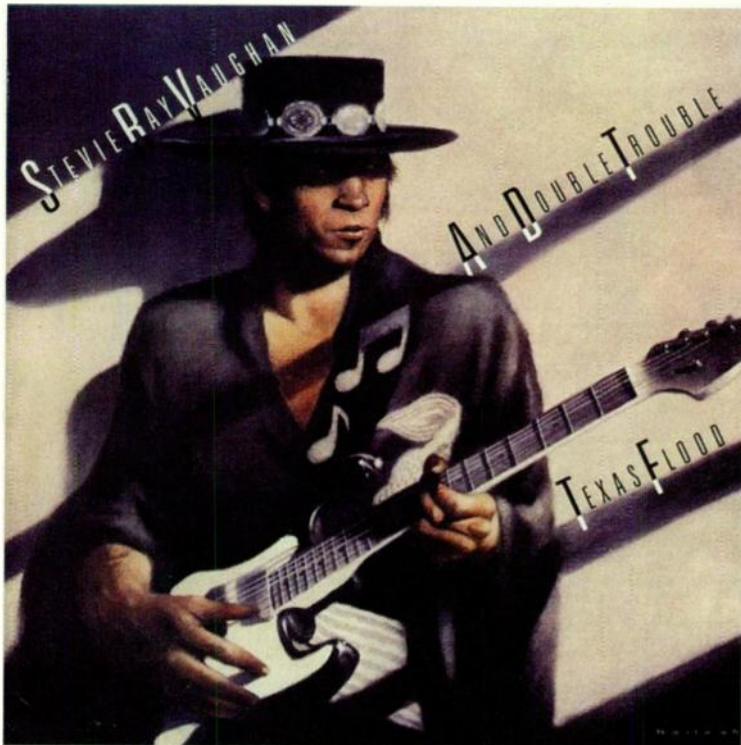
**DENZEL WASHINGTON**

WRITTEN BY

**JOHN GATINS**

# Classic Tracks

By Blair Jackson



## STEVIE RAY VAUGHAN “Pride and Joy”

**T**he story of the recording of this month's Classic Track begins in Switzerland at the Montreux Jazz Festival in July 1982. Mick Jagger and Keith Richards had been wowed by the phenomenal blues/rock/R&B guitarist Stevie Ray Vaughan at a club gig in Dallas on an off-night during the Stones' fall 1981 tour, and subsequently had him and his rhythm section—bassist Tommy Shannon and drummer Chris Layton, known as Double Trouble (after an old Otis Rush song)—play a private party in New York City. The Stones' enthusiasm for Stevie Ray helped to influence producer Jerry Wexler—who had independently been knocked out by the guitarist at a club in Austin—to urge the organizers of the Montreux Festival to book the Texas sensation, even though they had never hired an unsigned band before.

Though Stevie Ray didn't have a record deal, he wasn't exactly a newcomer to the scene. He was 28 when he played Montreux that first time and was already something of a legend in the Southwest. He started playing when he was seven, influenced heavily by his talented older brother, Jimmie (best known as the leader of the Fabulous

Thunderbirds), and was in a succession of bands through his teens and early 20s. On his way to developing his own style, he learned from a slew of amazing guitarists, including the first great Texas electric axe slinger, T-Bone Walker; blues immortals including the Three Kings—B.B., Albert and Freddie—Buddy Guy and Hubert Sumlin; the always underrated picker Lonnie Mack; Django Reinhardt, Wes Montgomery; and, perhaps most importantly, Jimi Hendrix, whose sound and spirit infused so much of Stevie Ray's music.

Back to Montreux '82. Stevie Ray and Double Trouble slayed the crowd, and also attracted the attention of two notable musicians in the audience. David Bowie asked Vaughan to play on the album he was working on at the time—*Let's Dance*, which became Bowie's best-selling disc ever—and invited him to play lead guitar in his touring band. (Vaughan appears on many songs on the album, but declined the tour offer.) Jackson Browne was also at the festival and was so impressed by Vaughan that he offered him free studio time at his personal Down Town studio in L.A.

Four months after Montreux, Stevie Ray's manager, Chesley Milikin, accepted Browne's offer, and right after Thanksgiving flew the band from Austin to L.A. in the hopes of cutting a demo that would get the act signed to a major label and perhaps also be the foundation for a proper album. For a while, Vaughan had been talking about recording with Austin engineer and musician Richard Mullen, whom he'd known for several years (and who had been in Montreux as the band's main engineer), “but Chesley wasn't going to fly me out to California, and they'd already set up these sessions with Jackson Browne's engineer,” Mullen says from his Austin home.

As fate would have it, however, Mullen was in L.A. finishing up a record with Christopher Cross when Vaughan and company arrived, and Stevie Ray invited him to come over to the studio, where the group was doing some preliminary work. The band apparently wasn't entirely happy with the engineer they had been provided with, and after some discussion, Mullen ended up tracking the entire record.

Though the studio building was essentially a converted warehouse, “it was a nice recording environment,” Mullen says. “There was a big main room with plenty of space to do loud rock 'n' roll, and a little cement room way off to the side where they had the equipment. I set the band up like a live gig, because that's what they were most comfortable with. I didn't want them to look at it as a regular studio experience, with everyone wearing headphones and isolated and all that. Basically, we recorded the album in two sets—they had 13 songs or so that they'd talked about doing, and we just set it up like a set and I had them plow through it like they were playing a live gig. They did it one song after another, with no chance to get too heady about the process. They weren't doing any vocals at this point, just the instrumentation, which



I think was a little weird for Stevie at first because he was so used to singing and playing at the same time. Anyway, once they had done the set, I had them go back out and do it again. So basically we had a choice of two takes on each song we recorded.”

The selections the group recorded were a mixture of fairly obscure blues and R&B cover tunes—Larry Davis’ “Texas Flood,” Howlin’ Wolf’s “Tell Me,” the Isley Brothers’ “Testify” and Buddy Guy’s twisted blues take on “Mary Had a Little Lamb”—and originals penned by Stevie Ray, such as this month’s Classic Track. The jumpin’ blues “Pride and Joy” was written about his wife, Lenora, who was also the inspiration for the final song on the album that became *Texas Flood*. “Pride and Joy” was recorded on November 24, 1982. “It was us playing what we played every night,” says bassist Shannon, whose earlier career had included a stint with a much younger Stevie Ray in Krackerjack, and one with Texas blues-rock guitar phenom Johnny Winter. “Stevie said, ‘We’ve waited our whole lives to do this record.’”

Vaughan used a few different Fender Strats on the album—including a ’59 and a ’63—played through two Fender Vibraverbs (with 15-inch Altec Lansing speakers) and a Dumble amp (with a 4x12 cabinet with Electro-Voice speakers). Mullen had first encountered one of Alexander “Howard” Dumble’s amps during the Christopher Cross sessions he’d been working on: “I wanted something that was like a Fender Twin but with more beef to it, and I stumbled across one at the warehouse studio in Burbank where we were working,” he says. Then, coincidentally, he found the same Dumble at Jackson Browne’s place, “and Stevie totally fell in love with it.” So much so that he later bought “six or seven” of them and it became an integral part of his sound. Mullen miked the Dumble and the two Vibraverbs with single Shure SM57s placed three or four inches off the cone. “I tended to like a close-mic situation,” he says. “There wasn’t anything in the way of room mics, but the warehouse was pretty live, so that came through all the mics.”

Tommy Shannon played a ’63 Fender Jazz bass through a Peavey CS-800 amp (“which I really didn’t like much,” he says today) that was miked with a single 57 and also captured direct. Mics used by Mullen on drummer Chris Layton’s kit included “a 57 or a Beyer 201 on the snare, 57s on the tom-toms, and the kick was probably a Sennheiser 421, although I was also fond of this mic Beyer made called the Soundstar, which was like a copy of a 421 in a plastic shell. It was the funkiest mic you’ve ever seen, but it was a great kick drum mic.”

The songs were cut to a 2-inch Studer 24-track, but Mullen says he tried to keep it to under 16 tracks so it would be more compatible with the MCI 16-track he had in his Austin studio, where the vocals were recorded shortly after the L.A. sessions. Mullen describes his own Riverside Studio as “a little cubby hole, about a tenth the size of Jackson Browne’s studio—a real down-and-dirty place; a carpeted room with regular walls. We recorded the vocals pretty much the same way we did the live tracks—we picked the best take of each song and then I had Stevie come in and sing it twice and we’d do a quick comp on the best vocal. I think the mic I used on him was probably an AKG 414.”

The tapes then found their way to legendary New York producer John Hammond, whose decades-long resumé at Columbia Records included “discovering” or giving initial wide exposure to the likes of Benny Goodman, Charlie Christian, Billie Holiday, Big Bill Broonzy, Robert Johnson, Pete Seeger, Aretha Franklin, Bob Dylan, Leonard Co-

hen, Bruce Springsteen and so many others. A true blues aficionado, Hammond flipped over Vaughan and signed him to Columbia affiliate Epic Records. He wanted the tapes to be mixed further, however, and assigned the job to noted New York engineer Lincoln Clapp, who had worked with Hammond in the past.

Clapp mixed the album (and also recut one lead vocal for the record) at Media Sound in Manhattan “on a beautiful Neve 8088,” he says. “John Hammond had an office in the same building that Media was in and we mixed it in just a couple of days. Since it had all been recorded very similarly song to song, and it already sounded pretty good, the mixes went quickly.” He used a minimum of effects, using the Neve’s pre’s and EQ, but adding EMT plate reverb for ambience.

***“There was a big main room with plenty of space to do loud rock ‘n’ roll, and a little cement room way off to the side where they had the equipment. I set the band up like a live gig, because that’s what they were most comfortable with. I didn’t want them to look at it as a regular studio experience, with everyone wearing headphones and isolated and all that.”—Richard Mullen***

“One thing I did that was a bit unusual,” he says, “is I played the [recorded] drums out into Media Sound Studio A, which used to be a church and had great acoustics, and I recorded the ambience of the room using a couple of Crown PZM microphones taped to the control room glass. I added a bit of that judiciously and it gave the drums a little more punch.

“[Hammond] liked to come in and sit in front of the console on this church pew and read his newspaper while we mixed. It was just the band and Mr. Hammond and me.”

The finished album, *Texas Flood*, was released in June 1983 and was an immediate sensation. “Pride and Joy” was a hit on FM rock radio, as was the title song. The band’s fortunes changed overnight. As Shannon notes, “There was a club we used to play in California where we’d usually get about 40 or 50 people a night, and after *Texas Flood* there was a line all the way around the block.”

Though Stevie Ray Vaughan & Double Trouble never became a top-tier act commercially, they were one of the most respected acts on the touring circuit, with a devoted following that grew steadily until Stevie Ray’s tragic death in a helicopter crash following a concert on August 27, 1990. More than 5 million SRV albums were sold in the year after his death, and the catalog continues to attract new fans to his unique and compelling blues-rock style. ■

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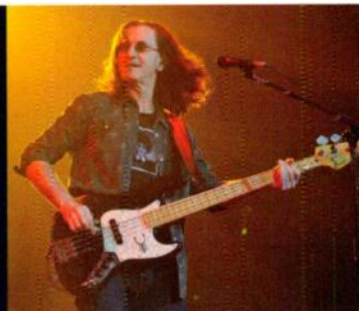
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# Live



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## BARBRA STREISAND

Back to Brooklyn Tour Features Orchestra, Choir, Special Guests Text and Photos by Steve Jennings

**S**he doesn't go out often, but when she does, Barbra Streisand goes big. On her recent 12-night/10-city Back to Brooklyn tour, she fronted a 72-piece orchestra, 80-voice choir, and welcomed guests Chris Botti on trumpet, Italian teen operatic tenors Il Volo, and her son, singer and actor Jason Emanuel Gould. For audio she carried five DiGiCo consoles, a 56-box Clair I-5/40-box I-3 system, 40 wedges, hundreds of mics, and a mobile recording truck helmed by her longtime colleague, producer/engineer Dave Reitzas.

Mix caught up with Barbra Streisand's audio crew at the Hollywood Bowl for production load-in and saw her show at San Jose's HP

Pavilion. Between songs she got intimate—at times chatty and nostalgic, political and motherly. But when the music kicked in, she filled the house with her one-of-a-kind voice and untouchable performance.

Back to Brooklyn marked Streisand's first tour since she returned to the stage in 1993 without her longtime sound partner, the legendary Bruce Jackson, who died in a plane crash in 2011. The legacy remained, however, as three of the core audio crew had been working with Streisand and Jackson since 2006, with front-of-house engineer Chris Carlton having joined the team in 2000 when Jackson took a hiatus to handle sound design for the Sydney Olympics.

Carlton mixed FOH on a DiGiCo SD7 with Kevin Gilpatrick beside him on an SD7-EX007 expander. Ian Newton mixed monitors for the artists using an SD7, Blake Suib handled monitors for the band on an SD10, and Steve Colby mixed down orchestra to stems on an SD10.

"The DiGiCo SD7 is a recent addition," says Carlton. "Great sound, redundant mix engines, redundant PSUs. The channel count capability is paramount for a show this large. What really sets it apart is the Optocore option that enabled us to marry four different consoles to three fully loaded SD Racks. We could share inputs and create loops for stems and submixes all at 96k without any analog splitters or additional AD/DA





Barbra Streisand's FOH audio crew, from left: Kevin Gilpatrick, Assistant FOH Engineer; Chris Carlton, FOH Engineer/Sound Design; Bob Weibel, Systems Engineer/Clair Bros. Crew Chief; and Tom Ford, Audio Stage Manager.

conversion. The SD7-EX was added in Mirror Mode so Kevin could give me a hand at FOH with some of the finer mix details.

"I'm not using plug-ins for this tour," Carlton continues. "Stock onboard reverbs, gates, and compressors were fine for most of the program material. The only additional outboard equipment used was a TC [Electronic System] 6000 for vocal and string reverb, Bricasti M7 for Chris Botti's trumpet, and Summit DCL-200 for lead vocal."

Streisand switched to an Audio-Technica 5400 Series mic this tour, chosen for her, Carlton says, because of its better rejection of unwanted ambience, which in turn helped maintain the orchestral balance no matter how much she moved around the stage.

DPA 4099 mics were used extensively up close on strings, with Schoeps CMC Mk4 for string ambience. French horns and trumpets were miked with Milab DC96B. Woodwinds and reeds had Beyer M160s, and trombones Sennheiser 421s.

The P.A. was all Clair Bros.: 56 1-5 cabinets for main and 180-degree side hangs, 40 1-3 for 270 degree and 360 degree hangs, 36 1DL for delay positions, 10 FF2 and 8 1-Micros for

near-stage fill. Bob Weibel was the Clair crew chief.

Ian Newton handles monitors for Streisand and guests onstage, as he has since 2006, while Blake Suib works with band and orchestra. This is Newton's second time on the SD7, having tried it previously on Roger Waters' The Wall tour. Suib is on an SD10 for the first time. Neither uses outboard effects, though Chris Botti brings his own reverb for Carlton to feed him.

Streisand is not on ears, and 40 wedges ring the stage. "The A-T mic works very well with her movement," Newton says. "I'll fade them up and down as she moves about the ramps on-

stage to minimize spill into the orchestra mics. I'm sending the same mix to all the wedges using the Copy to Mix feature on the SD7. It does get heavy in the outputs."



Barbra Streisand's monitor engineers, from left: Jason Bruce, RF Tech/Monitor Assistant; Blake Suib, Monitor Engineer (Orchestra); and Ian Newton, Monitor Engineer (Artist).

The 48 outputs on the SD10 are much appreciated by Suib. "We are traveling with all the first orchestra chairs and the whole woodwind section," he says. "I have 16-channel Aviom personal mixing systems that I send stems to—all the band and some traveling orchestra have them. Then it's just normal mixes for the people that don't need to change anything."

"There are not many chances these days to work with this caliber of band and crew," Suib concludes. "Sound is very important to Barbra, and she makes sure we have what we need to give her and the band the best there is. I think that she is the best singer of our time, and it shows every night. This is the first tour in a long time where everything is live, no tracks! It's been just a real pleasure."

## CELINE DION'S SEARCH FOR MONITORING PERFECTION

If you read *Mix*'s December 2012 cover story on recording Celine Dion, you know that the pop chanteuse is quite particular and demanding when it comes to being able to hear herself in the studio. The same is true in concert, and it has taken a lot of trial and error, spearheaded by Dion's monitor engineer, Francois Lalonde (pictured)—who also happens to be her vocal recording engineer—to perfect their current live monitoring setup.

The key element, Lalonde says, was getting Dion a custom pair of Ultimate Ears 7 in-ear monitors "that are like a hybrid between molds and comply foam. With a normal shell, when a singer opens and closes her mouth, that changes the canal a bit and that changes sound. With Celine's UE7s, the actual tip that's going into the ear canal is foam; the rest is a mold, so it brings down the noise, but it can expand when it's in there, so the feel is always the same and the sound is always the same." Lalonde says that it took about a year to perfect the system, working in coordination with Ultimate Ears' Chuck Reynolds and designer Boone Chanthavong, along with David Gutierrez and Jeanette Smith-Coffey.

Dion sings into a wireless Sennheiser mic with a Neumann capsule, transmitted to a Sennheiser EM 3732 receiver. Lalonde's monitor rig also includes Pro Tools 10 HDX (at 192 kHz "to get the latency down to 0.4 ms," he notes); BSS Varicurve EQ; Sound Performance Labs TwinTube De-esser; Alan Smart Cr compressor; Neve 33609 compressor; TC 4000 reverb; a Digidesign mic preamp for wired mics; and a Shure PSM1000 transmitter.

Besides Lalonde, Dion's live sound team also includes FOH and Tour Manager Denis Savage, sound system specialist Francois Desjardins, wireless and audio specialist Marc Theriault, and monitor engineer Charles Ethier. "We really work closely together to always improve the monitoring system," Lalonde says.

—Blair Jackson



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See more photos of Barbra Streisand's performance.  
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# PETER GABRIEL

## Performing the Album 'So' Live

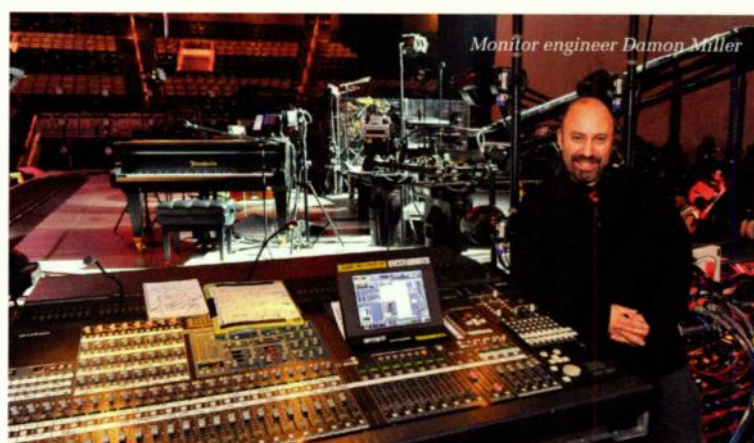
Text By Matt Gallagher /// Photos By Steve Jennings



The Back to Front tour carried all of its own production. Findlay stands behind a 96-input Avid Profile D-Show console, using a combination of native processing, plug-ins and outboard gear. "The ability to do virtual soundchecks gives you a massive advantage," he says. "You get to hear all the band parts at show intensity, which you never get from an attended soundcheck. You can make the snapshot starting point razor sharp, so that each entry is at exactly the right level. The primary objective is to make all contributions made by the band as intelligible as possible, so if you see something happening on the stage or screens, you hear it. The vocals must be clear and understandable, but should not dominate the band."

Miller at monitors is on a Yamaha PM5D. "There are three sections to the show [acoustic, electronic, and the *So* album], so I had to run the desk in scenes and all sections required a very different mix," he explains. "I had six musicians to look after, and they were quite specific about their needs." Band members were on Sennheiser 2000 IEM systems, except for Sancious, who used floor monitors provided by Firehouse Productions. Vocal mics were all Audix OM6s.

The P.A. was an L-Acoustics K1 line array overseen by Firehouse Produc-



**I**n fall 2012, Peter Gabriel celebrated the 25th anniversary of the release of his multi-Platinum album *So* (actually released in 1986) by embarking on a brief North American tour comprising 13 stops. For this tour, dubbed Back to Front, Gabriel reassembled his original touring band for *So*: Manu Katché (drums), Tony Levin (bass), David Rhodes (guitar) and David Sancious (keyboard), as well as Jennie Abrahamson (vocals/background vocals) and Linnea Olsson (background vocals).

Mix caught the show in October at the HP Pavilion in San Jose, Calif., where fans were treated to three sets that included Gabriel's earlier solo hits and culminated in the *So* album live. The band's energetic and dynamic performances were captured for the audience by veteran front-of-house engineer Ben Findlay, who began his audio career working in Gabriel's Real World Studios in Bath, England, and monitor engineer Damon Miller, who has had Gabriel as a client since 2004.

tions' Jamie Pollock, who Findlay says is "one of the world's best system techs." The main hang comprised 16 K1 elements per side, with an underhang of six Kara downfills per side, eight flown SB28 subs, and eight ground-stacked SB28 subs. The side-hang comprised eight K1 elements and six KARA underhang. Front-fills were KIVA, dV-DOSC and ARCS, arranged as needed. "It was like mixing with a mastering engineer [sitting] beside you through a huge pair of studio monitors, in a big clang-y room," Findlay says. "That was a very good place to start."

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See a photo gallery of Peter Gabriel at the HP Pavilion in San Jose, Calif.  
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Hilo is a **VERY ATTRACTIVE DEVICE, BOTH VISUALLY AND INTELLECTUALLY,** and everything worked reliably and logically during my tests.

The headphone output proved capable of generating very significant sound-pressure levels even with high impedance headphones, and the **SOUND WAS SUBLIME** on my AKG K702s and Sennheiser HD650s.

Sound on Sound - July 2012 *Hugh Robjohns*



The frequency and transient response is topnotch on playback (monitoring, line out and headphones) **GIVING A CRYSTAL CLEAR REPRODUCTION** of the source. The stereo imaging is a match for this performance and combined make monitoring a real pleasure. Small shifts in a source/mix are easily picked out and adjusted without overcooking.

The Line Input and AD conversion has the same story to tell and makes for a very trustworthy path for mixes, masters and any kind of tracking. The **HEADPHONE AMPING IS IMPRESSIVE** and you could spend hours picking out the ear candy in your favourite recordings.

Hilo is oddly **PEERLESS IN ITS FEATURE SET AND ORIENTATION,** being part interface, part monitor controller, and part mix/mastering high-end stereo AD/DA. We've **NEVER HEARD (AN INTERFACE) WITH QUITE THIS LEVEL OF SOUND QUALITY.** Hilo offers a unique blend of features with an equally unique price/quality ration. Results? **10 OUT OF 10.**

Future Music July 2012 *Robbie Stamp*

Hilo takes a **NEW LOOK AT HOW WE INTERACT** with a converter.

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The final test incorporated an **ANALOG STEREO CHAIN ON THE LINE INPUTS AND OUTPUTS** and route the signal through the matrix to the outboard units for some quick mastering. It was **EASY TO GET THE OUTBOARD GEAR INTEGRATED** using the touchscreen and control the levels. **The HIGHER (SAMPLE) RATES REALLY BROUGHT OUT THE FULL RANGE OF IMPACT** that the track needed. **HILO IS A GREAT UNIT FOR MASTERING.**

Mix - November 2012 *Chris Grainger*



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This touchscreen also 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.** You can assign any input to any output and you can set relative input and output levels for each port. Operating the matrix took me less than 30 seconds to figure out.

Given the number of features packed into the relatively small box plus the great, clear, open sound of the unit, **I THINK HILO REALLY IS A NEW-GENERATION CONVERTER.**

Tape Op #90 *Allen Farnelo*

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## RUSH: CLOCKWORK ANGELS TOUR 2012

Geddy Lee, Alex Lifeson, Neil Peart... now that's a power trio. *Mix* caught Rush on its 2012 Clockwork Angels tour in November at the Honda Center in Anaheim, Calif., for a rockin' two-and-a-half-hour show.

**Neil Peart's drum kit mics:** Snare Top, Audio-Technica 23he; Snare Bottom, A-T AE3000 and Shure SM 98; Rim Shot/X-stick, Shure SM98; Kick, A-T AE2500 dual element; Hi-Hat, A-T 450; Ride, A-T 5100; Toms 1-2-3, A-T 350; Toms 4-5-6-7-8, A-T 3000; Splash Cymbals, Shure SM98; China Cymbal, A-T 4050; Overheads, A-T 4060 Tube Pre Mic; Piccolo Snare Top, A-T 23he, Bottom A-T 3000; Cowbells, A-T Ribbon Mic.



**FOH engineer Brad Madix first started working with Rush in 1990** (Presto tour) as the fifth man on a four-man sound crew, back when Robert Scovill was mixing FOH and Ted Leamy was the System Tech for Electrotec. He came on as full-time FOH mixer on 2002's Vapor Trails tour, jumping into digital systems early with the Yamaha PM1D. In 2006, the band switched to Avid Profile.

"I really like the ability to use TDM plug-ins in the live environment," Madix says. "I gravitate toward plug-ins that warm things up—Waves Vintage stuff, for example, or Cranesong Phoenix. But there are also a few go-to problem solvers like Waves C6 and the H-EQ for feedback control."

The band has been using the Audio-Technica AE6100 vocal mics for a few tours now. This tour includes a small string section of six violins and two cellos, which required a

bit of research into what was new in piezo pickups. "I was looking at preamps to go along with the pickups and wasn't really happy with the selection," Madix says. "I wanted to avoid placing eight boxes—each with 3-band EQ, feedback suppression, compression and what-have-you—across a riser in front of eight people. I just wanted to get the signal to the preamps with as little degradation as possible. It turned out Radial was just releasing the PZDI, and it was exactly what we needed. We settled on Fishman V200 pickups for the violins and Mighty-Mini pickups for the cellos, all running through the PZDIs into a rack of Harrison preamps just behind the string riser.

"For P.A., we're using a Clair Brothers i5 system, 14 deep per side with a matching complement of the i5b bass bins," he continues. "On the offstage, we're hanging ten deep i5s without the b's. Across the front of the stage, we've got a timed array of eight double-18 subs, spaced eight feet apart, each with a small front-fill on top to hit the front row."



"Neil's acoustic kit has seven different sample pads," Carpenter says. "He also utilizes an entire Roland V-Drum kit; we call it the Back Kit. The ones that are strictly used for samples go to a Roland 5080 sample playback/synthesizer system, the ones that are associated with the Back Kit go to a Roland TD-30 drum module and then MIDI out to the Roland 5080 system as well. This gives them the choice of using the stock installed sounds in the TD-30 or to use something more customized through the 5080"

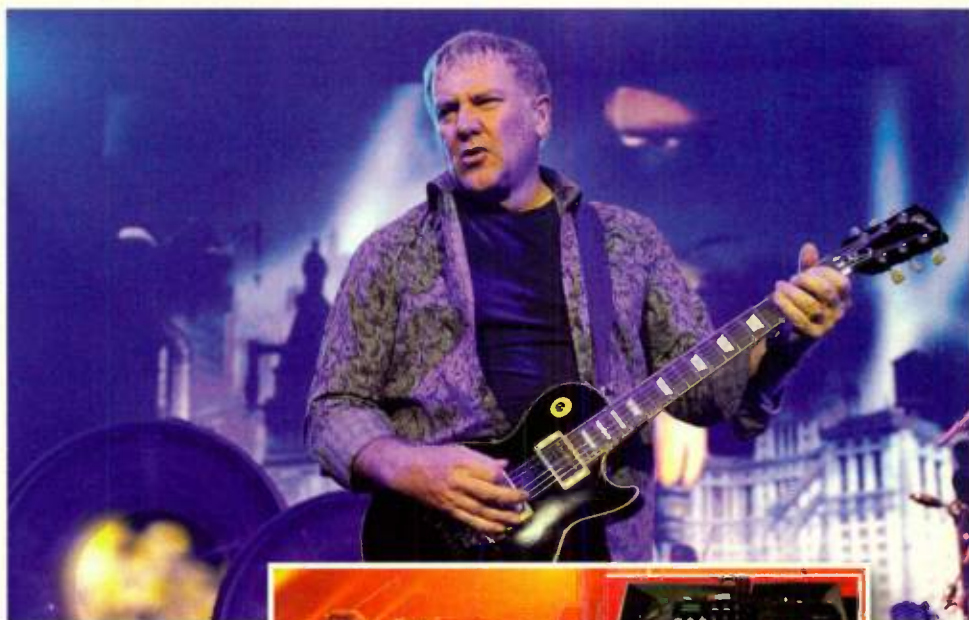


**Guitarist Alex Lifeson uses the new Lerxst amps from Mojotone.**

"It is basically a copy of the old 2553 Marshall Silver Jubilee heads that haven't been made for quite some time," says guitar tech Scott Appleton. "We are also using a Mesa Boogie MK5 and a Hughes and Kettner Coreblade. No mics, as there are no speaker cabinets. We use a Palmer PDI-03 Speaker Simulator to run each of them direct.

"Our rack consists of the Fractal Audio AxeFX II for effects on the Lerxst and Mk5, as well as Apple's MainStage program running Native Instruments Guitar Rig 5, UAD and Apple plug-ins," Appleton continues. "We also have a Dunlop rackmount Crybaby Wah, a Mesa Boogie High Gain Amp Switcher, two RJM Music Amp Gizmos, an RJM Music Effect Gizmo, two Apple MacBook Pros, two UA Apollo Quads and a backup AxeFX II. We are also using a third AxeFX II for the piezo electronics. Last, we are using Audio Technica 5300 Series wireless and two RJM IS-8 Input Selectors."

"Alex's foot pedal gear [pictured in inset photo at upper right] are an Axxess Electronics FX-1, a Tech 21 Midi Moose, an Ernie Ball volume pedal and a Dunlop Crybaby controller pedal."



**Geddy Lee's Bass Tech is John "Skully" McIntosh.**

He maintains four Shure UR4-d wireless systems; his rack consists of SansAmp, Avalon U-5, and Palmer PDI-5 Direct and Palmer PDI-05 as a cabinet simulator after an Orange AD200B MKIII Bass Head (no cabinet).



**Monitor engineer Brent Carpenter** also works on an Avid Profile. "I use the input side of the board—preamps, gain, EQ, comps, gates, plug-ins, etc.—pretty much as an analog console. I very rarely use the software to change those parameters. I do, however, extensively use it to change output information—routing, aux sends, VCA assigns etc. There are over 300 snapshots for this show. Not much for a theater gig but quite a few for a rock show."

He also makes extensive use of plug-ins, including McDSP MC2000, Analog Channel, Channel G and Channel G Compact, the 6030 Ultimate Comp and Classic EQ, Eventide Anthology II for reverb and delays, Cranesong Phoenix, Digidesign Eleven, and Impact!

The band is on ears, with six channels of Shure PSM 1000 with Ultimate Ears UE-i8 Pros.

**Tony Geranios is Rush's Keyboard Tech:** "Onstage, Geddy uses three MIDI controllers: a Roland X7 and two Korg MPK 130 MIDI pedals. Alex has two MIDI controllers onstage: one Korg MPK 130 and a Roland JUNO DI. These five controllers are routed to my workstation off stage right [pictured in inset photo]. The gear I use consists of two racks with three MacBook Pros with solid-state HD, two Anatek Studio Merge, two MIDI Solutions M8, four Roland MKS 900 MIDI displays, two MOTU 828s and one Radial SW8 Audio Switcher. I run Ableton Live for sample playback. I also have a Moog Little Phatty to test and edit the patches and samples. During the show I monitor the samples and change the song patches."







# THE RHYTHM OF COMEDY

*Dialog, Music and a Couple of Effects in Judd Apatow's This Is 40*





Photo: Suzanne Hanover/Universal Pictures

**C**omedies don't generally get nominated for the big film awards. With the exception of Woody Allen, or the occasional comic actor who might get nominated for a dramatic role or an original screenplay, it's rare, the perception being that somehow comedies aren't really that hard to make, or that "serious" in their message. You won't find one nominated in Best Cinematography or Visual Effects, and you're unlikely to find one nominated for Best Sound.

That's too bad, because comedies are hard to pull off in nearly all ways, both in production and post. It's hard to be funny for two hours, to get the pacing right so that the audience sticks with the story, believes in it, and laughs in the right places—and sometimes even the wrong places. In the story/character-driven comedies of writer/producer/director Judd Apatow (*The 40-Year-Old Virgin*, *Knocked Up*, *Funny People*), the challenges are compounded by a massive amount of material from the structured-improvisational set, where a scene might involve eight takes, six of them with completely different jokes. Then in post he wants to add new jokes in ADR, and he wants the end result to sound natural. That's not always easy. But thankfully he has developed a process that allows his sound team the time to be creative and to keep the track real.

"Judd gives us the time to get the movie to sound right," says dialog/music re-recording mixer Marc Fishman from Stage 1 at Todd-AO West, where the film was mixed. "That's not normal today, with budgets on most films taking time out of the mix at the end. But it's because Judd cares about how his films sound; he knows what they should sound like. Then he gives us the time."

#### AUTHENTICITY

Everyone involved emphasizes that Apatow likes a natural track, one that sounds just like the places he shoots, most of which are near his home in Los Angeles. No truck-bys to cover noise in a quiet, semi-exclusive neighborhood. No lawn mowers when dad comes home from work. And a punch thrown on a quiet street needs to sound like a real thump to the midsection, not like a Hollywood roundhouse.

"Judd knows what rings true and what doesn't," says Adam Jenkins, effects re-recording mixer. "He knows that when we come into the club, we should be hearing it though the wall before we en-

ter, and at what level. When kids are heading to class at the elementary school, you can't continue to hear them outside. There is no hiding. There is no room for hyper-reality or a Doppler car horn ringing out on the street across a cut. That's not his movie. It has to be true to life."

Much of that authenticity is realized through the way he and his core sound team work—the process. A small crew comes on early, consisting of music supervisor Jonathan Karp from the script readings, supervising sound editor George H. Anderson and dialog supervisor Tammy Fearing soon after that. They work hand in glove with Brent White, the film editor, as he whittles the massive amount of footage down to a reasonable first preview, all in his Avid with an LCR monitoring setup.

After the first preview, new jokes will be written, recorded, mixed, placed in a new version and put before a new audience. Then new jokes, new ADR, another Avid mix—Apatow might screen a film up to eight or nine times, each with a new temp mix. The process has proven to be good for his films because he finds out what works. It's also proven hugely beneficial to his sound team.

"We strive to get the sound of the film to be as realistic as possible from the first day," says White, who has worked with Apatow since *Freaky and Geeks*, *Anchorman* and *Virgin*, and who shepherds the tracks through the preview process. "I sit with Jonathan, George and Tammy, and we mix the film every time we preview it. We fine-tune things, we line up things, so a lot of the decisions have been made long before we get to the final mix. We bring the sound and music supervisors on early and carry them with us so that we can get closer sooner, and we don't have to reinvent the wheel on the mix stage."

"I like to come on at least a month before the first preview," adds supervising sound editor George H. Anderson, a tall, unassuming man with a front-porch wit. "I want to go to all the lo-

BY TOM KENNY



## THIS IS 40 SOUND CREW

cations and record backgrounds. I want to make sure the dialog is as comfortable as possible, and I want to be well-prepared. We try to move the movie forward at each screening so that we are as close to final as possible by the time we bring it to predubs and the final mix."

### DIALOG AND ADR

Dialog rules. Everybody agrees. All editors and mixers say it, whether in action or drama or documentaries, but it's especially true in comedies. And it's especially true in a Judd Apatow comedy, where the jokes fly by yet subtlety abounds. A bad tail on a word can wreck a joke. A half-frame-beat can throw off the timing.

"There is a rhythm to language, to the way that words come together," White says. "That's something I look for when I cut. Jokes and certain phrasings have a specific rhythm, almost like a math to them. Each actor has that in their delivery. So I'm aware of how Will Ferrell phrases a line or how Paul Rudd or Leslie Mann puts things together. You don't want to superimpose anything on their natural rhythm when you edit or clean

*The core sound team has worked together on numerous Judd Apatow-produced comedies over the past several years.*

Marc Fishman: Re-recording Mixer  
Adam Jenkins: Re-recording Mixer  
George H. Anderson: Supervising Sound Editor  
Tammy Fearing: Dialog/ADR Supervisor  
Jonathan Karp: Music Editor/Supervisor  
Joe Schiff: ADR Editor  
Larry Kemp: Dialog Editor  
Jim Matheny: Dialog Editor  
Greg Steele: ADR mixer  
Greg Zimmerman: ADR recordist  
Cherie Tamai: 1st Assistant Sound Editor  
Anne Couk: Assistant ADR Editor  
Additional ADR Recording: Bobby Johanson  
Additional ADR Recordist: Michael Rivera  
Andy Malcolm: Foley Artist  
Goro Koyoma: Foley Artist  
Jenna Dalla Riva: Foley Recordist  
Sandra Fox: Foley Assistant  
Ken McLaughlin: Production Sound Mixer  
Scott Jacobs: Boom Operator  
Brent White: Film Editor  
Lisa Rogers: Post Production Supervisor

things up or reach for an alternate. Same for a joke. If the rhythm isn't right, the audience won't get the gist of it. And if they don't get the gist of it..."

The dialog track is a living thing to Apatow, and he will continually add jokes throughout post, sometimes a lot of jokes. "Judd loves ADR as a tool, not for technical reasons but as a bridge between shots, or to add a new joke," says Dialog/ADR Supervisor Tammy Fearing, who has worked with Apatow since *40-Year-Old Virgin*. "He definitely wants production dialog there as much as possible, so most of the ADR fixes I do are to get a syllable—the 't' in 'toe' or the end of a word."

But the other part of her job, and the part she seems to enjoy the most, is the post-production writing that takes place, often on the fly, on the ADR stage. Herself, Apatow and the actor, mixed by Greg Steele. Judd writes the jokes, and they're recorded, edited, then predubbed. Sometimes all in the same day.

"I started off doing Foley, effects, then dialog editing, but I fell in love with ADR," Fearing says. "You get to bring something to the picture that wasn't there, you get to add a joke. Judd is there as



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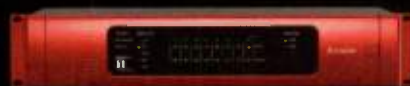
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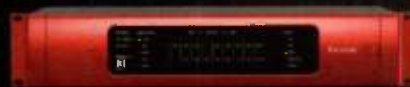
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the writer, the actors that he works with understand that they are adding something new, and my job is to make sure that we match what is happening on the screen.”

There is usually a lot happening on screen, some of it production, some of it ADR. There’s ensemble cast at a party, we duck into a club, there’s a bike chase with people yelling at our hero as they drive by. The seamless blend of production dialog and ADR is the key to keeping the dialog track natural and the rhythm on pace. One scene in particular proved deceptively challenging for Fearing, though most audiences will never know it.

“The clothing store that Leslie’s character owns,”

Fearing laughs. “That was challenging. There was so much sound coming through the front door of that shop while they shot it. And there was a big difference between whether the traffic light was red or green out on the street. There was no traffic-stop, and you might not hear it on set as you go along through your day, but when you sit to edit, it is crazy! The background was different on every line, and it’s a whispering scene, a low-level conversation with traffic! And it’s such a funny line for Paul [Rudd], where he’s whispering about whether Megan Fox is wearing underwear. That’s the joke, and you have to hear it. We ended up adding a lot of ADR, but then we had to add the traffic back in for fill, so the ADR could pop out at low level. That was a tough one for dialog.”

There were other challenging scenes: the visit to Albert Brooks’ house, near LAX with planes flying overhead and 3-year-old triplets bouncing off the walls and piping in with ADR jokes from the backyard. The dance club with the hockey players. Or the climactic backyard birthday party with the attendant grill sounds, bartenders, swimming pool shots and wounded-family conversations.

For Fishman, the first scene of the movie, but not the first scene he mixed, proved the most challenging for dialog. “Half of it is ADR, half production,” he explains. “Paul and Leslie are in the shower, so there is a lot of water, there’s shower reverb, a glass door. Judd loved the way it sounded, but it was hard on production, so Tammy and I had to get the ADR to match. It cuts in and out of production and ADR four or five times in a 10- or 15-second chunk. That was one of the scenes where we used the Magic Spectrum.”

Fishman introduced Fearing to the DUY Magic Spectrum plug-in on a previous movie, and it’s become a secret weapon for both—but only when used judiciously, “like fairy dust,” Fearing says. *[Laughs.]*

“Dialog, obviously, is the source of all comedy, and I’m very much a purist dialog mixer,” Fishman adds, admitting that he wasn’t always so. “I use as little outboard gear as possible. I will use a Junger B42 dynamics processor for de-essing, and some Dolby 430 to help control background noise. But no plug-ins, just the compressors and EQ on the

*Continued on p. 73*

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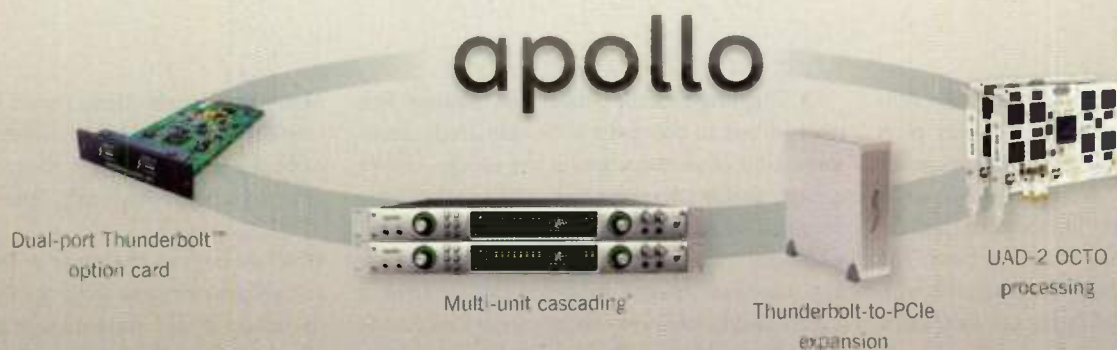




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# FOR ALL THE WRONG REASONS

## *Graham Parker Reunites With The Rumour*

BY BARBARA SCHULTZ

**I**n Judd Apatow's latest comedy, *This Is 40*, British new wave survivor Graham Parker plays himself: a 60-something singer/songwriter who had a few hits a few decades ago, but who's been living a relatively quiet life for years. Back in the '70s and '80s Parker had a backing band, The Rumour, and he was a young major-label artist with a soulful voice, songs full of biting sarcasm, and a career full of promise.

Parker still writes and records regularly near his home in upstate New York, and his talents have aged more than gracefully. He's maybe more philosophical, but no less brilliant today than he was back in the '70s, when more people mooned over how brilliant he was.

A longtime Graham Parker fan, Apatow first reached out to the artist a bit tentatively about some kind of participation in the movie—maybe a song, maybe an appearance. Then Parker let it drop that he had recently re-formed The Rumour, who were set to record together for the first time in 31 years, and Apatow decided to cast the artist as a high-quality has-been whose career Paul Rudd's character—an aspiring label exec—hopes to resurrect. Far from being insulted, Parker told *Rolling Stone*, "I'm basically a metaphor for abject failure in Judd's movie—and I couldn't be more thrilled."

Mix contacted Parker and his engineer, Dave Cook, last spring, while the reunion record, *Three Chords Good*, was in mastering engineer Toby

Mountain's hands. Here, Parker tells the story of how the album and his involvement with Apatow came about, and Cook describes the fun he had engineering and co-producing *Three Chords Good*.

### *Which came first: the movie or The Rumour?*

I was just writing the songs for this album around the winter of 2010 into 2011, with absolutely no idea of a record with The Rumour. The last couple of my albums were made as I've done now and again over the years, where I go into a studio with a drummer and record, and then I play bass guitar, and have a keyboard player come in. They've been very self-contained albums. For these songs, although I didn't think they were much different from the al-



bums that preceded them, I thought I better do something a little fresh this time. So for some reason, unbidden, the idea of the Rumour rhythm section—Steve Goulding and Andrew Bodnar—popped into my head: Wouldn't it be great to go in the studio with Steve and Andrew, and record with them as a three-piece? It would be a little bump of interest to people, but also I thought it would be fantastic music, because they're excellent.

I emailed Stephen and Andrew, and both said, "Great, let's do this," and Steve made a little joke in his email, saying, "What if you got Martin [Belmont, guitar], Bob [Andrews, keys] and Brinsley [Schwarz, guitar]—that would be a proper band! Hahaha, kidding." But like a kind of zombie, I went to the computer and emailed Martin and Bob, and they both came back and said, "Hmmm, let me think about this for a minute—yes." Suddenly I had four Rumour members, but then came the hardest part because Brinsley Schwarz is always rebuilding his house or something, and his electricity's down, and his email doesn't work. The guy hasn't played with a band since 1989, when he was with me last. But he said, "Oh, okay."

And I thought, "I've got the entire Rumour! Oh, shit! Oh no! What a can of worms I've opened. The recording costs. What am I going to do?" I'd thrown myself into this position without thinking it through, and that is always the best thing to do. Do not think. If I'd thought about it, I would have stopped the thing right there and then, because my philosophy on old bands re-forming is they do it for one reason: money. That means they're stadium-sized bands, and the guys in the band didn't make any money off the songs, or they're running out of money after 30 years of hating each other, and they start to soften up as they get older; the drummer would like to make some money for his old age, so they do a tour. They make a record, which nobody wants to hear, and they tour, and they make a lot of money.

Graham Parker and The Rumour were a band that finished our career at the theater stage. This is not a money making proposition. And so I ended up doing it for all the wrong reasons, which are musical, musical and musical.

#### Where do all these guys live now?

Three of the guys live in England: Andrew, the bass player, lives in Yorkshire. He's a librarian. Martin Belmont lives in London and plays in various little bands, and he's also a music teacher. Brinsley Schwarz lives in Hampshire, and has been a luthier, working in a guitar store, since about 1989. Steve Goulding lives in New York, and Bob Andrews lives in New Orleans. The studio [Dreamland] is about 20 minutes from me, so I had to bring them all here.

#### When did the movie come into this?

It was May 2011. We had the studio [Dreamland, 20 minutes from his home] booked, and the band on the hook, when my publishing company, Primary Wave, got an

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Mix magazine

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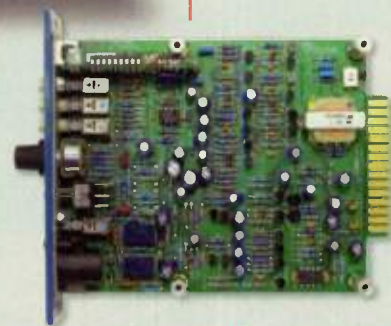
## After a year, I'm still impressed... and occasionally startled.

~ Andy Hong, TapeOp

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email from Jonathan Karp, the music supervisor who works with Judd Apatow a lot, saying, "Judd would like to have a chat with Graham."

We met up in New York, and he talked vaguely about this film, how two of the characters from *Knocked Up*, Pete and Debbie—Paul Rudd and Leslie Mann—are in it. It was alluded to in *Knocked Up* that Pete was working for a major record company and wasn't all that happy with it. In this new movie, he's started his own record company called Unfiltered Records. And what he wants to do is sign acts that he considers to be "real music"—'70s, '80s, maybe '90s acts—and one of them he'd love to get is Graham Parker.

Judd was filling me in on this, saying, "It would be great if we could have a song of yours or something"—kind of feeling me out. And I said, "Well, guess what? I just re-formed The Rumour, and we're about to make an album. So not only does your fictitious record company man get me, he gets me and the reunion of The Rumour after a gap of about 31 years." And he was like, "Whoa, okay, that's interesting."

We kind of left it at that, and a short time after, Judd emails me and says, "I got a lot of cool things we're gonna do together." And the next thing I know, it's like, "We're going to fly The Rumour to L.A. and we're going to do a two-day shoot. You're going to be in the movie acting as yourself. Let's film you in a club. Pete the record company guy is showcasing you and The



Rumour." And then the other thing that Judd added to this mix was to give me a three-page email with ideas of songs to write.

### Music for the film?

Yes, more music. It was during two weeks of rain in the summer here, and I just sat down and wrote a bunch of songs. The songs have got nothing to do with The Rumour album. I wrote nine songs based on Judd's ideas, and about three weeks ago, they had me out in L.A., recording four of them, with a producer and composer, Jon Brion. This was a very weird thing for me, because I'm kind of a control freak, or I have been over

recent years. I like to do the album cover, the concept of the album, everything about it. But this was like: I recorded the songs with Jon doing percussion, and then I left and said, "Okay guys, good luck." It's rather refreshing, but also rather scary. [Brion later fleshed out those tracks with music from avant-bluegrass group The Punch Brothers.]

### How was it, going back into the studio with The Rumour?

It was basically like a Monty Python sketch. We just couldn't stop laughing. That's all we did. I don't know how we got any work done. We just cracked up at the very idea of this thing happening, and it was all filmed. Judd insisted that we film this whole thing.

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## Recording 'Three Chords Good'

Engineer/producer/mixer Dave Cook has been working on and off with Graham Parker since the artist made *Struck by Lightning* in 1991.

"The last couple of albums he made were done on a small budget," says Cook, whose recording credits also include B-52s, Buckwheat Zydeco and Nick Cave. "He said that this time he wanted to go back to a big studio, and he wanted to cut live. So we said, let's go back to Dreamland [Hurley, N.Y., [dreamlandrecording.com](http://dreamlandrecording.com)], which is where I used to be chief engineer and where we recorded and mixed *Struck By Lightning*. It's a great place; it closed for a number of years, but it's back up and running, and it's one of the few big studios left in this area.

"I think on all except one of the tracks, Graham cut vocals and guitar live in a booth, which was amazing because when you hear it—the fact that he can go in there with the band and cut this stuff live blows me away."

Dreamland has a large recording room with four side rooms to be used as iso booths. Cook set Parker up in a booth, with sight lines to the other musicians, using a Neumann U67 mic for his vocal and a Neumann SM2 for Parker's acoustic guitar. Goulding's kit was in the big room along with bassist Andrew Bodnar, and guitarist Martin Belmont, whose amp was gobo'd off in a corner. Schwarz had his amp with him in his own booth.

Keyboardist Bob Andrews played Hammond and piano. "He played the Hammond in the big room with the Leslie gobo'd, and the piano was in another room, fully isolated," Cook says.

Cook miked Belmont's and Schwarz's guitar amps with the same type of mics, but placement varied: "Brinsley likes to hear the distance between the amps and the microphones," the engineer says, "so I made sure that I had at least one mic, an SM57, close to the amp for presence, but I would place a Beyer M160 ribbon about three feet back, and an AKG 414 even farther away. I'd have to play with the phase relationship between the mics, but Pro Tools makes it easy to move things around to be sure there wasn't any unwanted time shift. For Martin's guitars, I used a 160 and a 57 close to the speaker cone."

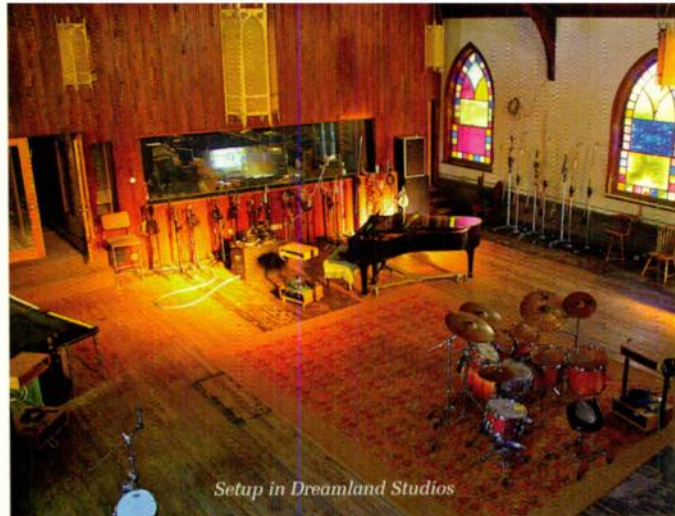
Cook also notes that he used "standard drum miking," including U87s on overheads as well as for piano. A Neumann FET 47 and DI were used on bass.

Cook tracked 10 days of sessions to Pro Tools, and "I cut everything with the API [console] preamps, and a couple of outboard compressors here and there. I used Tube-Tech, dbx and Neve compression, but preamps and EQs were all API.

"It's rare and also loads of fun to go into a studio with a live band and record everyone playing all at once these days," says Cook, who mixed the album in his personal studio, Area 52 in Saugerties, N.Y. "I would say a good portion of the record is no more than the third take—a couple of tunes are first takes. Graham doesn't like over-thinking things too much. He wants to capture the initial, fresh energy and I believe we accomplished that."

Suddenly I've gone from having a very simple, enjoyable life, playing little solo gigs and earning a living, to this. It's weird. Ambition is something I lost a long time ago, and now this huge spanner has been thrown into the works, so it's quite a prize really, I must say. ■

*Barbara Schultz is a contributing editor to Mix and Electronic Musician, as well as a book editor and reviewer.*



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# Padding the Mix

## iPad Control of Digital Mixers for Live Sound

By Michael Duke

Mobile devices and Wi-Fi have become ingrained in our daily lives, so it's not terribly surprising to see that these technologies have been adopted as tools in the pro audio world, as well. The Apple iPad has proven to be particularly well suited for this, with its generously sized touchscreen, wireless capability and the relative ease with which custom apps can be written for it.

Performers are taking iPads onstage in place of notebooks full of lyrics and bulky sheet music, while others are incorporating surprisingly powerful instrument apps into their live shows. Increasingly, iPad apps are controlling digital mixers for live sound. PreSonus, with its StudioLive mixers and related apps, was a pioneer in this area, and since has been joined by such companies as Yamaha, Allen & Heath, Behringer, Line 6, Mackie, Soundcraft and Roland.

From small-format mixers to large pro consoles, the latest digital mixers offer wireless connectivity, and most now have iPad apps that can control some or all of their functions. Mackie has even gone so far as to eschew physical faders and knobs on its DL1608, relying on an iPad (or iPads) running its Master Fader app as its mixing surface.

Having mobile mixer control has untethered front-of-house and monitor engineers, making it possible for them to move about freely while still maintaining control of their consoles. This freedom has spawned new workflows, and given live engineers an additional level of flexibility when doing their jobs.

I spoke with a variety of users of these mixer-control apps, mainly live engineers, to find out how they're integrating them into their work.

### WALKABOUT

An iPad mixer app provides freedom to tweak settings while roaming the venue. FOH engineers seem to be particularly enamored of this aspect; not only does it let them hear how things sound from different parts of the room, it also saves them from the





FOH engineer David J. "Milky" Millward controls an Allen & Heath iLive-80 digital console with an iLive MixPad app.

tedium of running out front, listening, then running back to the console to make an adjustment, then back out front, etc., or having to relay such messages to a second party.

"Using the MixPad app has been very liberating," says David J. "Milky" Millward, FOH mixer for Morrissey, as well as acts like Tindersticks and Tokio Hotel; he often uses Allen & Heath's iLive digital mixing system and controls it with its accompanying MixPad app. "If possible, I try to break up each system I come across into as many usable zones as I can, using the many matrices available on the iLive. That way, when I do the initial system setup, I have full control and can switch zones on and off to listen to them individually and also balance the various elements as I walk around, without having to keep asking the local P.A. techs to go and make adjustments for me, or continually walking back to the console, which can be very time consuming."

Stephen Pattison, another iLive user, mixes FOH for Spiritualized and Glasvegas, and formerly for Amy Wine-

house. He adds: "The app allows you to be where the audience is and hear it from their side of the fence, and control it in real time, so there's no need to run in and out of FOH to tweak the mix or change the EQ. It's much more direct."

Dick Franks is a live mixer for bands on the Seattle club scene, including The Machine, The 5 Johnsons, and No Rules. He has used iPad control apps for both the Mackie DL1608 and the Behringer X32 mixers. "I like to move around at least a few times during the gig with the iPad to check the room," he says.

In addition to allowing adjustments from different parts of the room, the freedom to



Behringer XiControl

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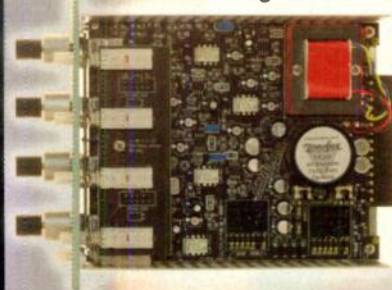
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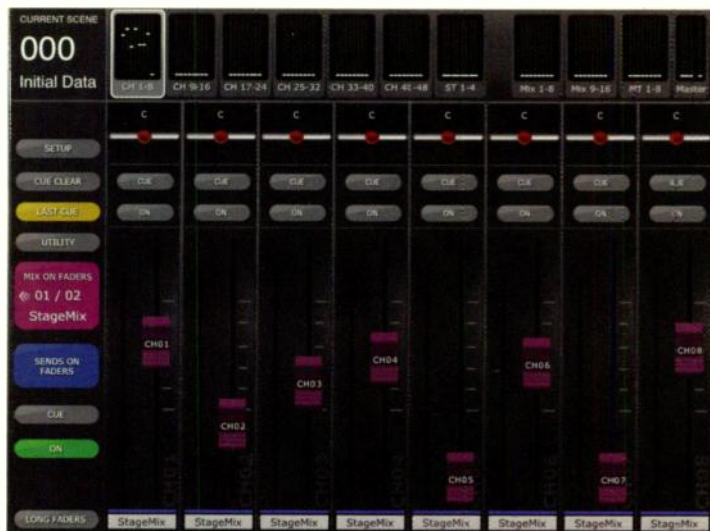
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StageMix is Yamaha's iPad app.

room frees up an engineer to walk up to the stage area to troubleshoot a problem while still mixing. "If something were to happen on stage during the set, such as a mic needing replacement," says Matthew Woods, engineer for the band The Black Dahlia Murder, "I can grab my iPad and take care of it, and still be able to mute effects, et cetera, from the stage." Woods recently started mixing on a Yamaha M7CL mixer and using StageMix, Yamaha's iPad app.

The utility of iPad mixer control is not strictly a boon for engineers. Performers who mix themselves can situate an iPad within a hand's reach of where they're standing, allowing them to make mix adjustments without having to walk over to the mixer on the side of the stage.

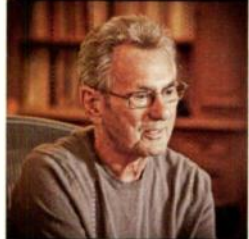
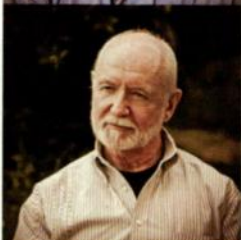
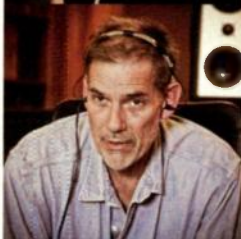
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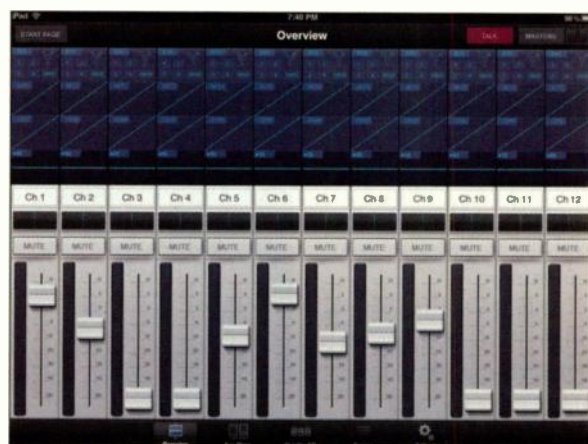


**"IPAD MIXING HAS REALLY CHANGED THE WAY I WORK. I CAN BE FREE TO INTERACT WITH THE BAND FACE TO FACE, AND GET THE MONITORS DIALED IN QUICKLY." — BRIAN FOISY**

Singer/keyboardist Nicholas Peper, who plays casuals, clubs and corporate gigs in Southern California, and self-mixes with a Mackie DL1608, tells of an instance at a corporate gig where the ability to roam while controlling the P.A. with Mackie's Master Fader app came in really handy.

"The corporate bigwig who was paying for everything wanted to make some announcements," Peper says. "I took that opportunity to stand about 40 feet in front of him with the guests, and made adjustments to his mic level on the fly as needed. Corporate executives almost always have really poor mic technique, and in this case, I was able to save the day without anyone being aware of what I was doing with the iPad."

Many of the app-controlled mixers can be simultane-



PreSonus SL-Remote

## UPCOMING SESSIONS AT STUDIO LA FABRIQUE

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ously addressed from more than one iPad. "Multiple engineers on this tour use iPads daily, including our current monitor engineer," says Woods, referring to The Black Dahlia Murder's recent opening for Dethklok, in which two M7CLs were used, one for FOH and one for monitors. "His and my iPad are both connected to the monitor console so that either one of us can make changes we need from anywhere."



Line 6 StageScape Remote

Using multiple iPads to control one console makes it possible to have a monitor engineer who uses an iPad with a remote app controlling the monitor sends on the FOH console, instead of a dedicated monitor board. For small venue situations, that could work very nicely.

It would certainly be feasible for band members to each have an iPad to control their own monitor level. For many bands, that could lead to a feedback frenzy, but with enough discipline, it could allow a band without a dedicated monitor mixer to avoid those wild gesticulations to the FOH mixer to turn them up. PreSonus makes an app called Qmix, which will run on iPhone, iPod touch or iPad, and is designed to allow musicians to control their own mixes.

## TURN ME UP!

Remote control apps have been a major boon for monitor engineers. Brian Foisy mixes monitors for Al Jarreau, Dave Koz and others, often using a Yamaha PM5D or M7CL mixer, and gets plenty of use out of an iPad running the StageMix app, an application originally designed

## Controlling Interests

Here's a brief look, in alphabetical order by manufacturer, of the apps discussed in this story, and their parent mixer(s).

Allen & Heath's MixPad is the control app for the company's modular iLive digital mixing system. It's the only digital mixer control app that's not free, costing \$99.99 at the App Store. It controls quite a few of the iLive's functions, focusing on channel and mixing functions, including individual channel volume, mute, pan, preamp gain, pad, phantom power, tap tempo for delay, and many others. Allen & Heath also offers a free app, iLive Tweak, which runs on iPhone, iPod touch and iPad, and offers controls over input faders, channel faders, FX sends and returns, and monitor faders.

Besides the expected volume and mute controls, Behringer's XiControl for its X32 digital mixer can handle many key functions like bus levels for individual channels, aux input levels and more. A cool feature is its Mute Enable button; when disabled, it eliminates the possibility of accidentally muting a channel. XiControl also has a dedicated metering page that shows all the inputs and all the bus levels.

Line 6 recently released the StageScape M20d, a 20-channel digital mixer with its own touchscreen interface, which can be controlled by one or more iPads running the company's StageScape app. The app offers control screens that mirror those of the mixer, allowing for a truly integrated remote-control experience.

Mackie's Master Fader app is not an auxiliary control surface for the DL1608 mixer; it is the control surface. The DL1608 has a front end that's a docking station for an iPad; the app provides all the controls, while all the mixing, effects, etc. takes place in the hardware of the DL1608. You can run it docked or wirelessly, and can support up to 10 iPads running the app at once.

The PreSonus Studio Live mixer line has a couple of different control app choices. SL-Remote controls most of the mixer's functions, and multiple iPads are supported. The app has to be networked to a Mac or PC running the company's Universal Control software in order to operate. PreSonus also offers an iPhone/iPod touch app called Qmix, which is designed to allow individual musicians to control their monitor mix through the Studio Live from onstage.

Roland's M-480 is a 48-channel digital live mixer that can be cascaded with a second unit to provide 96 channels. It's controlled using the M-480 Remote app, which lets you adjust virtually any parameter you need for mixing volume, effects, monitors and more. It has a Long Faders option that lengthens the throw of the virtual faders, providing for more precise control.

Yamaha has three different versions of its Stage Mix mixer control app, each one corresponding to a different mixer, including the M7CL, CL, and the LS9. The app was originally designed primarily to allow monitor mixers to make adjustments from onstage at the performers' positions, but has been adding more and more features with every update.

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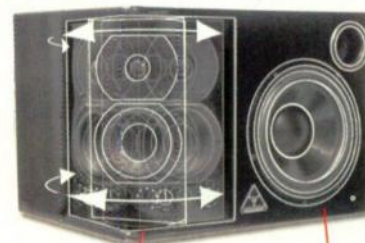
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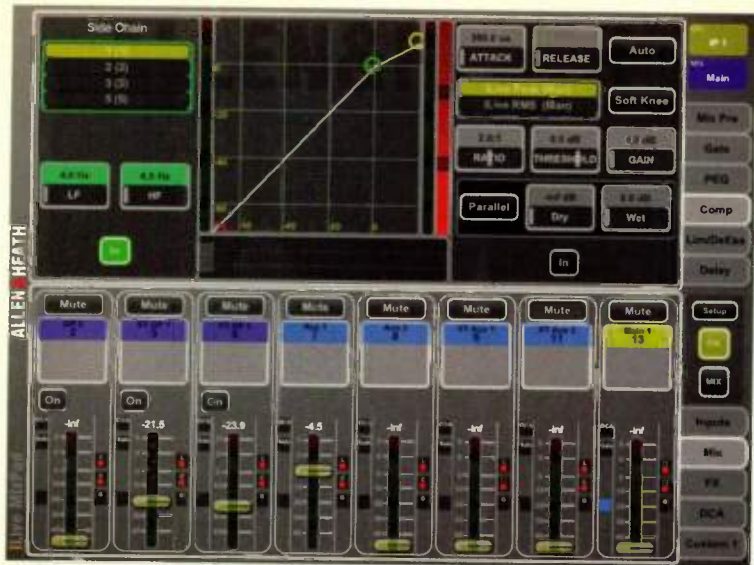
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Allen & Heath  
MixPad

with monitor mixing in mind.

"iPad mixing has really changed the way I work," Foisy says. "I can really be free to interact with the band face to face, and get the monitors dialed in quickly. I can do all of my own line checks while testing each instrument—all while not relying on anybody to help me."

Rob Bull, who mixes monitors for Martina McBride, is a self-described "analog guy," but now uses a Yamaha CL5 and the StageMix app to augment his Paragon monitor console. He says it's helped him in several different ways.


"Having another touch surface—such as mute groups—at the ready, and having the console screen on another page, allows me the speed I need to have for monitors," he says. "Second, it has helped a situation where I walk out to the musician who was having issues, and they see me make the change in front of them, and hear the difference. It makes it more comfortable for them. Third, being able to put the iPad on my analog console, keep my eyes on the stage and still control the CL5, is key."

Another advantage to remote control is the freedom to tailor the system setup to the physical limitations or quirks of a particular venue. "Every once in a while we will do a show in a small club where it might not be possible to put the monitor desk near the side of stage," says Foisy. "The iPad allows me to put the console elsewhere and still be present in the sight lines of the band."

#### WHY FI?

Digital mixers with app control communicate with the iPad by creating a closed Wi-Fi network. A router is connected to the mixer's network port or to a USB port using a USB-to-Wi-Fi adapter, and creates the Wi-Fi signal.

"You do need a strong router for the desk/app to get maximum coverage," cautions Woods. "It would suck pretty hard if you weren't near the desk and planning to mute an effect on the app, and all of a sudden it dropped out or disconnected. I always bring my own router so I can ensure that it stays stable. I go for stability over range. The



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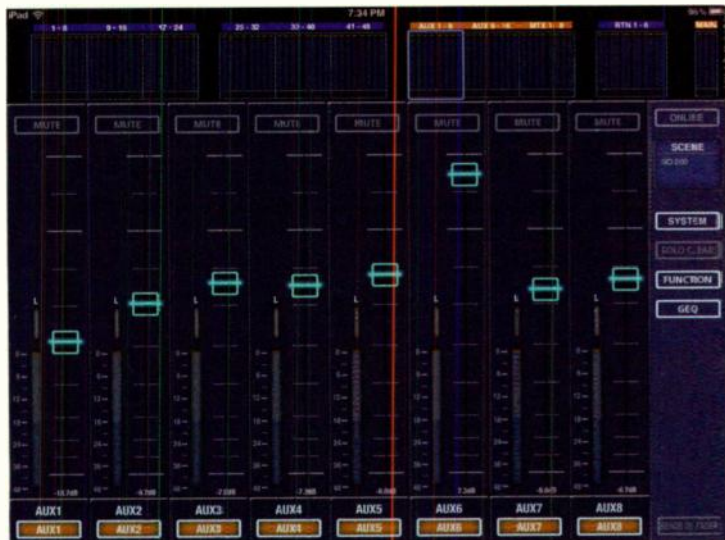


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Mackie Master Fader





Roland M-480 Remote

other reason for using my own router is I can have it locked with a password, to be sure that nobody else can access my console."

Pattison also takes precautions so that nobody can log onto his network during a show. "The main things I do to a router," he says, "are to make sure it doesn't broadcast

Singer/  
keyboardist  
Nicholas  
Peper



the SSID [network name] and that it only broadcasts on 5 GHz, which can't be seen by most people's telephones, so they won't try and connect to get their emails or the sports scores."

Millward says that interference can be an issue, and that he, too, uses a 5GHz network. "The only real problem would be when there is interference from a lot of other

networks in the building," which can cause a slowing down of the network, sluggish response, and sometimes dropouts in the iPad connection.

There's also the issue of interfering with other wireless systems in use for the show. "I find a 5.4GHz router works best," Franks says, "as it doesn't interfere with wireless mics like a 2.4GHz router might. Additionally, with my own router I control security, so I don't have to worry about that. I've been using a Cisco E2500 router that costs under \$40, and it works great."

#### UNDER CONTROL

These digital mixer/app combinations are relatively new, or in some cases brand-new systems, and they're still evolving. It's hard to imagine that the integration between app and mixer won't become even better as these systems get more use in the field, and more needed features are identified and implemented. Indeed, virtually everyone I interviewed for this story mentioned "wish-list" features for the systems they worked with.

In a relatively short time, the iPad mixer control app has become an indispensable accessory for the live digital consoles that support them. It's clear that remote control apps, in combination with the touchscreen and convenience of the iPad, have streamlined the workflow of the live engineer, and made it possible for them to do their jobs even better.

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# MIX REGIONAL: LOS ANGELES

## BIFFY CLYRO ROCKS THE VILLAGE



Scottish three-piece Biffy Clyro and producer/engineer Geggan Richardson worked at The Village in West L.A. for five months to make the rock band's latest album, *Opposites* (Warner Bros.). They cut 23 tracks, intended for release as a double-album, but their label determined that the long version will be limited-edition, with a 12-track single disc going out for wide release. Sounds on the album, however, remain huge.

Frontman Simon Neil played every chord on multiple guitars, to a split signal that went to multiple amps, so that by the time all the guitar tracks were assembled, "Every time you would hear one chord, you hear 14 guitars playing the one chord," says Richardson (Rise Against, Red Hot Chili Peppers, Rage Against the Machine). James Johnston's bass sounds were also multiplied. Richardson insisted on drums being meticulously tuned to each song, and taken to tape, though the rest of the tracks went to Pro Tools. Vocals were captured on an SM7 microphone to allow freedom of movement, and Richardson had Neil sing every verse four or five times, then stacked the takes.

"We also used every possible inch of The Village studio building," Richardson says. "We did one song where we had five guys playing drums up in Studio V. We had a Mariachi band in Studio D for one track. We did some drums in the big temple hall. We also went to a church in Pasadena and miked a huge pipe organ. We have a choir on the album. We even got [Eric Rigler], the guy who played on the *Titanic* and *Braveheart* soundtracks, to play bagpipes." But then, what would a Scottish rock record be without bagpipes.

View Geggan Richardson's photos of the sessions at [mixonline.com](http://mixonline.com).



## Grohl's Homage



Dave Grohl took some time away from fightin' foos to create his directorial debut, *Sound City*—a tribute to the legendary rock 'n' roll studio in Los Angeles.

Grohl conceived the documentary after he purchased the Neve 8028 console from Sound City Studios in 2011. Grohl also shares a personal connection to the studio: Nirvana's magnum opus, *Nevermind*, was recorded at Sound City.

The film premieres at Sundance this month, and will be released theatrically February 1. For \$10, you can pre-order the HD digital download (DRM-free) and stream February 1 via [soundcitymovie.com](http://soundcitymovie.com). Those who pre-order the movie receive a letter from Grohl, who excitedly (and quite adorably) explains what this movie means to him and how it came together.

*Sound City* features interviews (conducted by Grohl) with numerous artists associated with the studio, including Tom Petty, Trent Reznor, Stevie Nicks, Rick Rubin, Lars Ulrich, Butch Vig, Mick Fleetwood, and Frank Black, among others.



# SESSIONS: LOS ANGELES

*Editor's Note: To relaunch our long-running Sessions & Studio News column, we called a few major studios in L.A. and found that the death of the commercial studio has been greatly exaggerated.*



Dino Herrmann, Steve Churchyard, Josh Groban, Ghazi Hourani, Daniel Zaidenstadt, Lester Mendez in SSL 4

It's been a busy year at Record Plant (Hollywood). Josh Groban recently recorded strings with arranger David Campbell, producer Lester Mendez and the talented engineer Steve Churchyard in SSL 4...Will.i.am has been producing a wide range of artists and working on his solo material in SSL 1. Not to mention getting the first single played on Mars via the Curiosity Rover...Producer Dr. Luke has been working on upcoming material for Katy Perry, Miley Cyrus and Keyshia. Songwriter/producer Benny Blanco has been laying down tracks with Maroon 5, Bruno Mars and B.o.B. Offspring mixed their new album with Bob Rock in SSL 2...Shwew!



Mix engineer Manny Marroquin at his SSL 9K

Meanwhile, up in Burbank at the bumpin' Larrabee, Manny Marroquin was in Studio 1 (SSL9080 XL K-series) in September mixing Bruno Mars' upcoming album with producers The Smeezingtons; he also worked with Blue Note Records Chief Creative Officer and producer Don Was in November on The Rolling Stones. Chris Galland and Del Bowers assisted...Jaycen Joshua has been holed up in Studio 2 (SSL9080 XL K-series) mixing the latest from Chris Brown with various producers, as well as mixing tracks for T.I. with producers

Jazzy, No I.D. and T-Minus. Trehy Harris assisted...Noted Miami-based engineer Jimmy Douglass and engineer Chris Godbey camped out in Studio 3 (SSL9080 XL K-series) with producer extraordinaire Timbaland working on an undisclosed artist's project. Hint: He's big! Alejandro Baima assisted.



Johnny Hallyday with Village CEO Jeff Greenberg

The Village just keeps humming. Having opened a huge new room for T Bone Burnett this year, and maintaining residence for John Mayer, Ed Cherney, John Alagia and others, the rest of the multi-room facility stays busy. Just a small sampling of Q4 clients: Thomas Dybdahl, Sarah Brightman, Janet Jackson, Sons of Anarchy, Johnny Hallyday, Nine Inch Nails, George Benson, Rod Stewart, Thomas Newman, Carole King, Sara Bareilles and the Secret Sisters.



EastWest studio owner Doug Rogers with Matt Bellamy of Muse, a 2012 client

Candace Stewart reports in from EastWest Studios, riding high with having worked on 14 Grammy-nominated projects: The red-hot Grammy-nominated Frank Ocean spent a lot of 2012 in various rooms, most recently in November...Stephen Stills & Friends stopped in with Stephen Stills, Jerry Harrison and Kenny Wayne Shepherd producing (John Hiler additional producer), and first assistant Brendan Dekora...Also, Alan Parsons was in producing Steven Wilson (formerly of Porcupine Tree), assisted by Dekora; and Bob Rock producing Michael Buble? Yes! I want to hear that. Assisted by Jeremy Miller.

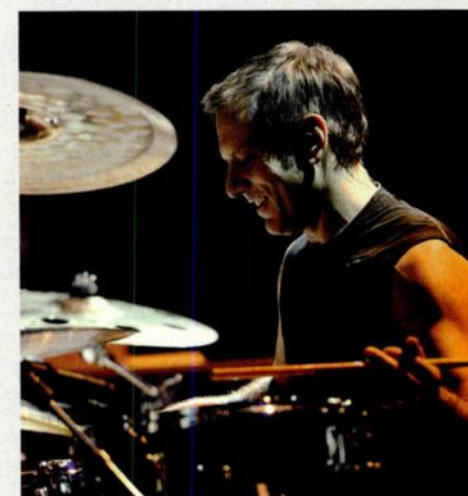


At Ocean Way (L-R), bass player and recording engineer T Longoria, drummer/backing vocalist Roz Bentley, Izzy Stradlin, and Hammond organist Joey Huffman

At Ocean Way, owner Allen Sides has been working with mega-producer Rob Cavallo on the Josh Groban mixes, with strings. And rock icon Izzy Stradlin, co-founder and former rhythm guitarist of Guns N' Roses, recorded and mixed his recent single, "Baby Rann," in Ocean Way's renowned Studio B.

## Dave Weckl Connects

Los Angeles-based drummer Dave Weckl (daveweckl.com) is heading into 2013 with a large-scale, multifaceted independent music project. Weckl reunited with keyboardist Jay Oliver to compose and produce a new album featuring guest musicians, which they will self-release in the spring. To help fund the project, Weckl and Oliver turned to PledgeMusic, a crowd-funding Website, where they are creating incentives for fans who pledge dollars, including a play-along package for rhythm-section instruments (including charts and performance videos) and a behind-the-scenes DVD offering production and engineering insights.



"Our campaign is the only way to get updates on the project in real time," Weckl says. "We will be using a three-man crew to capture footage during the writing, recording and mixing sessions. I get a lot of inquiries through my Website about studio techniques, gear and drum tuning for the studio. Since Jay and I are both adept in the studio, we'll have a lot to say."

Weckl says that he and Oliver "will be doing a lot of tracking in my studio [The Garage, with Pro Tools HD], though he also has a studio where he can handle some of the recording and mixing. When we record the 'double drum' track, which will feature a yet-to-be-named drummer playing with me, we'll probably need a studio with more physical space."



# JAYCEN JOSHUA

## Mix Engineer in a Hit-Making Groove

Jaycen Joshua doesn't mince words in person. He has definite opinions about recording, and having paid his dues as an assistant and achieving a level of success where you can no longer label him an up-and-comer, he isn't afraid to say what he thinks.

Joshua has earned three Grammy Awards, and he has a credit list that reads like a who's who of R&B meets pop—Chris Brown, T.I., Rihanna, Beyoncé, Ludacris, Justin Bieber, Keyshia Cole, Katy Perry and Nas, to name just a handful. He works today out of Larrabee, where he started as an intern in 2005 before assisting the legendary Dave Pensado for the next two years. He formed a partnership with Pensado, the Penua Project, where they shared mix duties. Today he is on his own, and he is one of the hottest mixers on the planet.

We asked Joshua to kick off our new column, Mix Tips. Here is what he had to say:

**Q. The mix order? "The first thing I do when I get a Chris Brown track is..."**

The first thing I do when I start a Chris Brown record is organize. Spend an hour in setup, save four hours in mixing. Then off the rip I immediately attack the beat. The most important thing in today's R&B is the *knock*. You have about 4 to 8 Bars to catch the consumer's attention and get their head nodding. The consumer in my case is Chris Brown. If he does not feel the beat *bang* instantly, you are toast. Uptempo or ballad, it does not matter. Once that is accomplished, I add in the vocals. After that I build around the vocal with the music.

**Q. How do you approach a male rap vocal vs. male R&B vocal? Female?**

This is a trick question because R&B vocals are getting to be very similar to rap vocals. What I mean is a lot of the R&B and pop vocals, for that matter, are becoming very dry. Most R&B tracks that hit the radio are uptempo or mid-tempo, so generally, I want my mixes to feel tight, up front, and in your face, using my reverb judiciously. That includes vocals. I use delays, or subtle flangers instead of reverb, and if I do use reverb I'll gate them and/or roll off the high end so you don't notice it as much. Another trick is parallel compressing your vocal. This makes the vocal bigger without using much effects. Nine out of 10 times I use either the 1176 (Blue Stripe) or the CLA plug-in version. I like them both. I really crush it and slowly add it back into the original vocal until it feels about right. This really helps your vocal sit up front in your face. You can also automate its intensity for feel.

**Q. Beefing up the drums. How do you work with real instruments and sampled supplements? Or do you?**

I always subgroup my drums. I compress, limit and EQ the drums entirely on their own drum buss. I also build my drum sound going into the compressor hearing what the compressor is going to do while I am working. Most of the



time I am trying to obtain the loudest hard-hitting drums possible, and to do so compression is a must for me. I also love multiband compression. A lot can be achieved in maximizing your sound with this, but use it wisely. The Waves C6 and the ML4000 and FilterBank by McDSP are great. Finally, I parallel compress my drums—individually or the entire subgroup. 160x to the Pultec or the 550A works for me. You can also do this in the box. I like using the UAD SSL Compressor into the UAD Pultec. This is an awesome tool for solid, tight low end.

**Q. Going quiet—the ballad. What's the secret of intimacy?**

Automation! I like to approach a ballad like I am watching a movie—scene by scene. I just finished working on Celine Dion, and each record was like a roller-coaster ride. One second you want her to feel like she is whispering to you, the next you want her singing on a mountaintop. Playing with front-to-back distance is really the key to me. I automate my compression and EQ to play with the proximity effect and really try to take the listener through a musical moment.

**Q. Compression: When and where and why?**

Everywhere! Sorry Bruce Swedien. Most important to me is on the 2-bus. I would rather compress myself then leave it to mastering. I get the mix to about 80 percent and then apply whatever compression or limiting I might want to add to the overall mix and push into it. I mix on an SSL 9000 but I do not use board compression. I print my mix back into my session through an aux that has my compression and/or limiting on it through a hardware insert or plug-in insert. My plug-in use varies for stereo bus compression, but I am a big fan of iZotope 4 and 5. Hardware, I love the SSL G384 compressor.



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# RON SEXSMITH AT FROOM AND BOARD

by Barbara Schultz

I really wanted it to be troubadour-style record, almost '60s-oriented, so everything was based around his vocal and his guitar playing," says producer/musician Mitchell Froom about his fifth album with Ron Sexsmith, *Forever Endeavour*. It's a fitting approach to the work of a singer/songwriter whose elegant compositions have a vintage song-centered quality.

"I tried to have everything else be complementary to those instruments and not cover them up, so I left a lot of space in the drum ideas, and I used horns and strings and some woodwinds to finish the picture," Froom says. He wrote charts around Sexsmith's guitar/vocal demos, using instrument libraries to represent various parts.

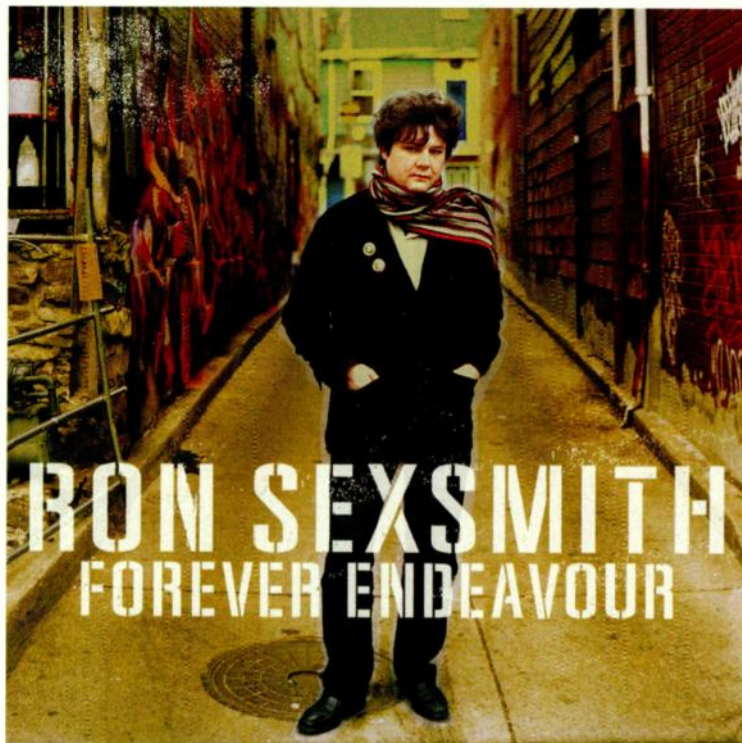
Then in Froom's personal studio, Froom and Board (Santa Monica), engineer David Boucher began by tracking Sexsmith playing acoustic guitar and singing, either on his own or accompanied by just a drummer or percussionist.

"We didn't want to use a click track; it's just not natural to the way Ron's music flows," Froom explains. "So on the more groove-based songs, we had Ron and a drummer or percussionist playing a rhythm and vocal track, and built things from there."

Froom's studio is what Boucher calls a "one-room schoolhouse. There's a drum booth, but the main tracking room has Mitchell's incredible array of keyboards and a 7-foot Yamaha grand plus the console and all the outboard gear."

Boucher feels the limitations of the space, but he enjoys being in the room with the musicians. "I just bought an EMT 140 plate," he says, "and it's taking up space where the mic stand [for his piano-miking setup] would normally go, so space is a commodity. But it also keeps everybody bonded together; there's no disconnect."

While Boucher captured Sexsmith's vocal mainly with a 1938-vintage RCA 44B, he occasionally employed a Neumann U48 or an RCA BK-5A. "We were going for a sound that matched the era of the writing style," the engineer says.



Sexsmith's acoustic was also taken via a BK-5A, and Boucher stresses that he used it 'on everything, he was playing and singing at the same time. There are no vocal overdubs, except for the harmonies Ron added later. Mitchell's concept was that the 'instrument' Ron creates between his voice and his guitar was sacrosanct."

Froom's arrangements were realized gradually, with Boucher tracking additional instruments, or sections, in stages. Recording the song "Nowhere Is," for example, started with Sexsmith and a drummer (recorded via an AKG D25 on kick and a pair of U67 overheads), and then the track took more percussion, harmony vocals, organ, horns and strings.

The L.A.-based Calder Quartet played all of the string parts on the album. "I had some close mics in case of a solo where something really had to be able to speak through

the mass of a rhythm section," Boucher says. "But the sound you hear comes primarily from the section mics, either a pair of U67s or a pair of RCA DX-77s. If I wanted it to sound older, or a little darker, then I'd use the ribbons; if I needed it to stand up to a stronger track, I would use the 67s."

Boucher recorded the tracks to Pro Tools and laid the mixes back to an ATR-102 half-inch machine. Mixing on Froom's Amek Media 51 console was mainly an analog affair, and Boucher emphasizes the contribution of his anniversary-edition UA 1176s, and Requisite Audio's PAL Plus pre/limiter. "The PAL is all over everything I do," he says. "It has a knob that effects negative feedback on the tube amplification stages, which kind of changes the era of the sound. It's labeled zero to 20, but it should be labeled 2010 to 1940."

Boucher's approach certainly suits Froom's feeling about Sexsmith's gentle style of writing and performing. "His music often sounds like it could have been written a long time ago," Froom says. "This record is more stylized than the other four albums I've made with him, but it seems really right for the group of songs."



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# RobairReport

## WORKING WITH LIMITATIONS



By Gino Robair

**A**fter a recent lecture about DAWs, one of my students asked me which audio recording program I used back in the '70s. The wide-eyed pupil was very curious to hear what it was like to record when I was his age. But he and the class were shocked to learn that we didn't have personal computers to make records back then. Our recording program was a strip of plastic moving at a fixed speed over a magnet.

On the surface, the question seemed naïve, but I ran with it because it led to a discussion of how limitations shape the creative process. In an era of inexpensive nonlinear, nondestructive recording formats with virtually unlimited everything—tracks, effects, undo levels and recording time—it seems unimaginable that things were any other way.

Rather than just fetishize about the sound quality of tape, I explained how it molded our workflow. The example I used was my Teac 3440 4-track reel-to-reel deck, a common item in the home studio of the time. The biggest surprise for the students was the machine's limited track count, the finite amount of recording time per reel (and the cost of the blank media), the single level of undo (an erase head), and the idea of destructive editing. I explained how we would increase the track count by bouncing a submix of three tracks to the remaining track, and how we would physically cut and paste the tape to combine takes.

The takeaway message was that a finite track count on a linear format forced you to make important musical decisions while recording and required a higher level of musicianship and performance. And preproduction was a must if you planned to push the limits of track bouncing the way Les Paul did.

Another thing they were surprised to learn was that the choices in affordable recording gear were fewer back then. We didn't have a glut of cheap OEM mics, preamps and mixers coming in from offshore, so we made the most of what we could get. What was available was expensive but well made: I still have the gear I used in the '70s, and all of it works.

So I put the question to them: What are the limitations today beyond talent and skill?

Today it's easy to get lost in a sea of options and marketing hype. Search for "large-diaphragm condenser mic" on the Web and you'll find several models at every price point. Now the temptation is to purchase the least expensive item we can find; the impulse buys that, at the time, seem like a no-brainer. Consequently, we acquire poorly made products that don't hold up to serious use or have subpar sound. In his November

2012 TechTalk column, Kevin Becka explained how purchasing quality gear, though costlier upfront, is cheaper in the long run: not only will it last longer than the alternative, it has a better resale value should you decide to upgrade. But such a high outlay of capital requires planning if you want to get the most from your purchases.

The question that students are likely to ask at some point during the semester is: "What microphone should I buy?" What they're really asking is, "What's the best mic I can get if I don't want to spend much money?" Again, this leads us into a discussion of limitations. Can you do everything you want with only one mic? What about your mic preamp? Do you want to spend \$2,000 on a mic and record everything through a \$99 audio interface? No, of course you don't, but you have to start somewhere.

***"Do you want to spend \$2,000 on a mic and record everything through a \$99 audio interface? No, of course you don't, but you have to start somewhere."***

Assembling a high-quality recording system on limited funds requires vision, planning and focus. You need to know what you want to achieve in your dream studio (the vision) and how to get there affordably (the plan), while avoiding sale items you don't need and other gimmicks that distract you from the foundation items, which takes discipline (the focus). You may change your mind about specific product categories from time to time as technology progresses or as your ear develops, but it's important to plan ahead and stay the course. This seems obvious, yet so few people make such a plan.

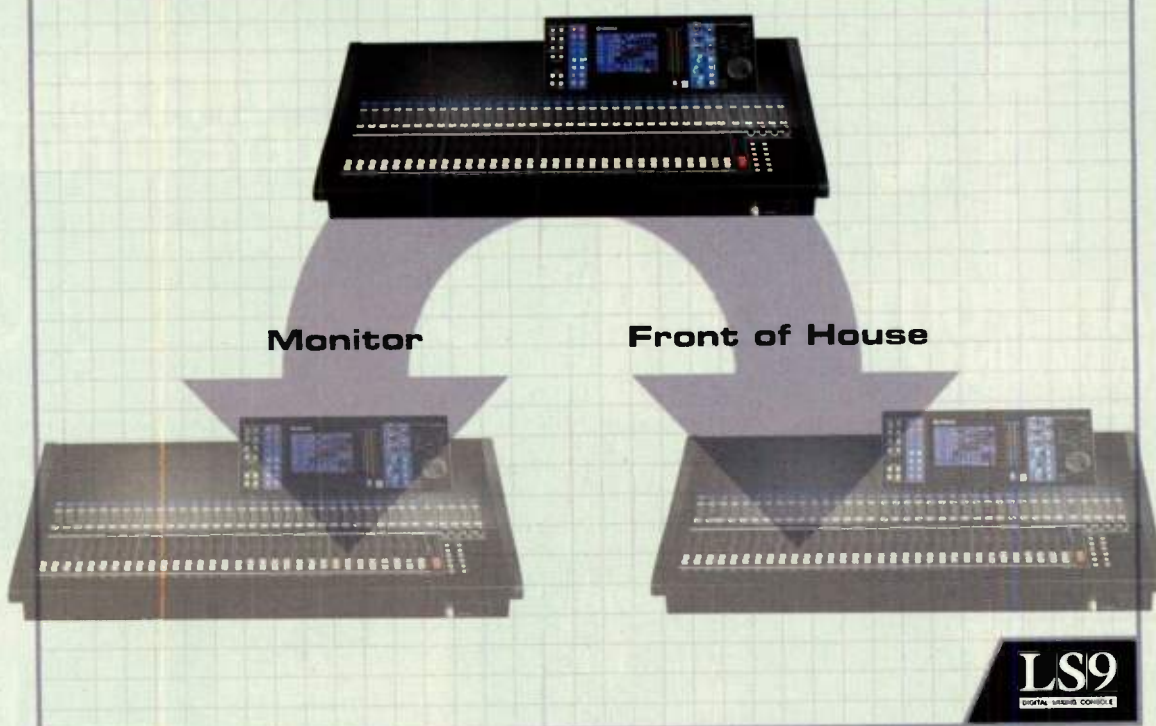
Pros focus on the items they need, ones that help them get the job done. I once asked Grammy-winning engineer/producer Jacquire King about his mic closet, thinking that he'd have quite a collection. "I don't have that many," he said. "Microphones are only useful for the first part of a project. I'd rather spend my money on something I can use for recording and mixing, such as a compressor." Now that's resource allocation.

So despite having more technology than we know what to do with, we still bump up against limitations, even if they're only financial ones. That's where talent and skill come in, just as they always have in the recording biz. ■



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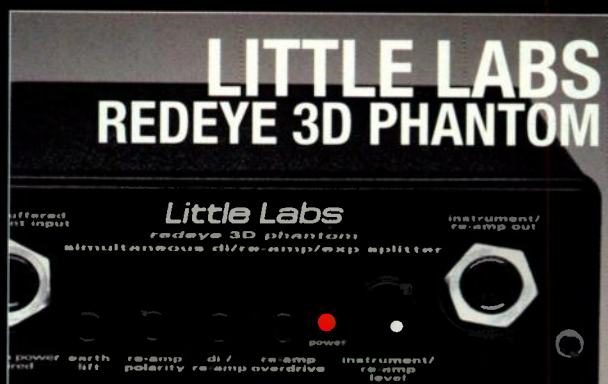
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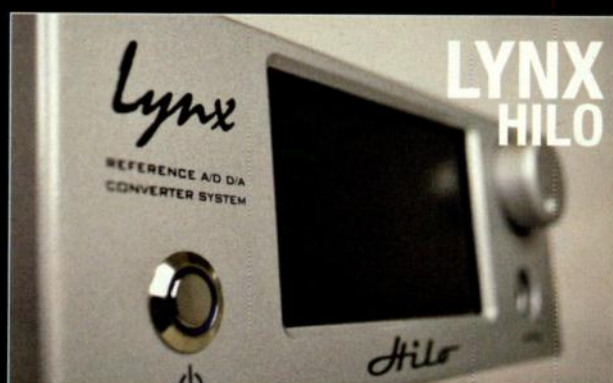
## LITTLE LABS REDEYE 3D PHANTOM

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## BAE 1073 DMP

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# Tech // new products



## NUAGE CONSOLE

### Custom Control and I/O Solution

Yamaha and Steinberg ([yamahaca.com](http://yamahaca.com)) have collaborated on and released the Nuage post-production console (\$18,000), a recording and control system comprising networkable audio interface units and a software-based digital audio workstation. With Steinberg's Nuendo DAW software at its core, Nuage allows engineers to choose and combine components to match individual application and workflow requirements. Coupled with the power of Dante networking, this advanced production system provides unrestricted system design and expandability in studio, live and broadcast applications. Three types of high-end audio interfaces are available, used individually or in combination for up to 128 channels. Sixteen-channel analog, 16-channel digital, and

8-channel analog plus 8-channel digital can be controlled at once with two encoders per channel, or all encoders can be mapped to one or two highlighted channels in the Channel Setting Mode.

## SLATE DIGITAL VBC BUNDLE

### Modeled Gain Control

Slate Digital ([slatedigital.com](http://slatedigital.com)) has released Virtual Buss Compressors (VBC; \$199), a new plug-in bundle in the company's Virtual Analog Series. VBC offers three analog-modeled dynamic processors that include the exact nonlinear characteristics of their transformers, tubes, VCAs, amplifiers, phase distortions, harmonic distortions and timing. The three units—the FG-4014, FG-8014 and FG-MU—all model a specific product, and then add the characteristics of other famous gain controllers to the mix for a distinctive blend. Each compressor can be used in series, which can be rearranged by dragging and dropping or compared A/B/C style on source material.



## FREDENSTEIN F660 VALVE LIMITING AMPLIFIER

### New Spin, Old Limiter

The F660 from Fredenstein ([freenstein.com](http://freenstein.com); \$3,999) combines classic compressor design with a digital in-

terface. Features include a large LCD, menu-driven interface, one knob control, and separate long scale (true peak) level and gain-reduction LED meters. Other features include 100 recallable presets and computer-controlled tube operating points promising perfect tube balance, wider frequency response and lower noise floor. The Fredenstein 660 promotes authentic, vintage tube performance with audio passing only through relays (for input gain), transformers and tubes—no solid-state components appear in the signal chain.



## TRITONAUDIO FETHEAD

### In-Line Mic Preamp

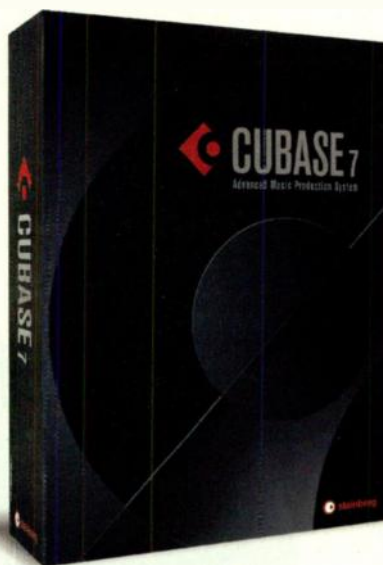
The phantom-powered FetHead (\$99.99) from Triton Audio ([tritonaudio.com](http://tritonaudio.com)) uses low-noise Jfets configured as a double Class-A amplifier to make dynamic mics more responsive over a broader frequency range. FetHead promises improvements on the simplest moving coil dynamic mic up to ribbon microphones, which benefit from FetHead's 20dB boost and better impedance match, lessening the impedance load on the microphone and improving transient response characteristics. FetHead's high-quality, low-noise signal amplification can reduce the need to crank a passive ribbon mic's preamp and keep phantom power from sensitive ribbon transducers.



## STEINBERG CUBASE 7

### Redesigned DAW

Cubase 7 (\$599.99) from Steinberg ([steinberg.net](http://steinberg.net)) features the new MixConsole mixer, channel strip, and Chord Track, as well as significant workflow improvements, new content and more. With Channel Zones, users can specify which channels and the order in which they are to be displayed, while View Sets offers immediate recall of EQ, dynamics, sends and inserts. Other MixConsole advances include customizable track icons and Control Link and Quick Link for grouping channels and parameters. Other mixing features include the ability to drag and drop channel settings, do A/B comparison, global bypass on effects, plug-in search and integrated control room functionality. The new VST Connect SE collaboration software offers talkback and chat functionality, as well as real-time video and audio streaming.



## BLUE CAT AUDIO STEREOSCOPE MULTI 2.0

### Improved GUI and Features

Blue Cat Audio's ([bluecataudio.com](http://bluecataudio.com)) StereoScope Multi 2.0 (\$99 stand-alone) features a redesigned user interface with improved workflow and readability. Other features include a new preset manager with new presets, MIDI and automation mapping, Windows AAX support, multiple display sizes, and more. The plug-in is available alone or as part of Blue Cat's Multi Pack (\$179), the company's multiple tracks audio analysis solution or in Blue Cat's Analysis Pack bundle (\$260), which contains the company's complete collection of audio analysis plug-ins. Demo versions can be downloaded on Blue Cat's Website in VST, RTAS, AAX, Audio Units and DirectX formats (32- and 64-bit).

## PROXIMITY PLUG-IN

### Manipulation of Depth and Distance

Created in a collaborative effort by Tokyo Dawn Labs and Vladg Sound, Proximity (kvraudio.com; free) is an easy-to-use distance "pan-pot" based on several psychoacoustic models. The plug-in allows the user to control the depth of several sound sources in a straightforward and convincing manner. Features include the control of distance gain loss, absorption of high frequencies in air, stereo width manipulation, proximity effect and more. Support includes 32- and 64-bit versions for Windows and Mac OS X in VST and AU formats.



## ZYNAPTIQ UNVEIL

### De-Verberate Me

Zynaptiq's Unveil ([zynaptiq.com](http://zynaptiq.com); \$399) is a real-time, de-mixing plug-in that allows attenuating or boosting reverb components within a mixed signal of any channel count, including mono sources. Unveil Version 1.5 brings VST, RTAS and AAX Native support for both Mac OS X and Windows systems. Features include new preset management functionality accessible from within the plug-in, multi-mono capability in Logic Pro 9.x, a completely redesigned automation system for improved automation workflow and new factory presets. The free Unveil V. 1.5 update is available now.





## ETYMOTIC RESEARCH MUSICPRO EARPLUGS

### Advanced Hearing Protection

MusicPRO 9-15 earplugs (\$399) from Etymotic ([etymotic.com](http://etymotic.com)) provide two modes of protection in the same device by combining two high-fidelity passive earplugs—Etymotic's ER-9 and ER-15 Musicians Earplugs. The result is intelligent, high fidelity adaptive-electronic earplugs that allow natural hearing when sound levels are safe, and provide automatic protection from both loud, sustained music and loud percussive sounds. The soft sounds of music and speech can be enhanced if desired. Full-fidelity sound reproduction is delivered through the combination of high-definition, balanced-armature drivers, high-sensitivity microphones and advanced signal processing with a 40 to 16k Hz bandwidth.

## New Sound Reinforcement Products

### GRUND AUDIO DESIGN GT '01' LOUDSPEAKERS

#### Seven Sonic Solutions

Optimized for use in houses of worship and other fixed installations, Grund Audio Design's GT Series ([grundaudio.com](http://grundaudio.com)) comes in seven sizes and uses a two-way design with a horn (with the exception of the GT-5301, which is a three-way system). The 13-ply birch enclosures are available in black or white finishes, or natural wood that can be stained to taste. All models use a 90-degree circular horn pattern where a wide energy spectrum is required, enabling the GTs to provide optimized coverage throughout the space. All models incorporate powder-coated, perforated steel grilles to protect the transducers and, for connectors, provide either NL4 speakOn or 5-Way Binders. Prices range from \$179 to \$1,049.



### AUDIO-TECHNICA SYSTEM 10

#### Digital Wireless System

System 10 from Audio-Technica ([audio-technica.com](http://audio-technica.com); prices start at \$489.95) offers features and functions comparable to those of wireless systems costing thousands of dollars more. Operating in the 2.4GHz range, System 10 is said to be immune to TV and DTV interference and eliminates the need to hunt for frequencies. Up to eight channels may be used together without any frequency coordination problems or group selection issues. System 10 receivers and transmitters offer an easy-to-read digital ID display. Multiple

system configurations are available, with handheld vocal microphone/transmitters and UniPak body-pack transmitters designed for use with lavalier, headworn and instrument microphones, as well as electric guitars.

### ROLAND M-200i

#### iPad Controlled Digital Desk

The Roland M-200i ([rolandus.com](http://rolandus.com); \$3,495) is a 32-channel compact digital mixing solution providing the flexibility and mobility of comprehensive iPad control mated with the precision of a professional digital mixing console. The free iPad app provides full functionality on all key mixing and control aspects including channel strip, effects and scenes. The M-200i can also be fully controlled via the built-in LCD screen and navigation buttons. It contains 17 motorized faders, 8 Aux, 4 Matrix, 8 DCAs and 24 physical inputs and 14 outputs. The M-200i also includes a Roland Ethernet Audio Communication port providing expandability options that include multichannel playback/recording, remote inputs and personal mixing system.





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# Tech // reviews

## PRESONUS ADL 700

Channel Strip With Tube Warmth, 4-Band EQ



I'm a big fan of using channel strips and typically travel with one or two of my favorites when I am recording away from my own studio. They allow me to make quick decisions to create the sounds I'm looking for without having to patch in a lot of extra gear. For this review, PreSonus sent me the ADL 700, manufactured in collaboration with legendary tube and analog circuit designer Anthony DeMaria, who had input into the design of the company's ADL 600 dual-channel mic preamp.

### POWER PLUS

I unpacked the ADL 700 and noticed right away that the unit is very sturdy. However, I was disappointed that the knobs didn't feel a bit more high-end; I wanted metal, not plastic. [Ed. Note: PreSonus reports that current units have metal knobs.] The ADL 700 incorporates a high-voltage (300-volt power rails), all-tube (one 12AT7 and two 6922 vacuum tubes), Class-A, dual-transformer design with selectable input source switching. You can also choose variable microphone impedance (150, 300, 900, and 1,500 ohms), which is a feature I have grown to love and tend to reach for first before an EQ. The ADL's impedance settings are very useful, and I tended to favor the higher settings the most. There is an unbalanced ¼-inch instrument input on the front panel, along with XLR balanced line and mic inputs and single balanced XLR output on the back. There is a dual-mode VU meter for monitoring output and gain reduction. A master level control on the right side of the unit adjusts the overall output from -80 to +6 dB.

The ADL 700's gain is selectable in 5dB increments via the eight-position gain switch (35 dB of gain/73 dB overall), and the fully sweepable variable trim adjustment allows a ±10dB gain

change, which is useful for fine-tuning or riding gain. Different sensitivities for mic, line and instrument inputs result in varied and eminently useful gain adjustment ranges for each: +18 to +72 dB for mic; -12 to +40 dB for line; and -5 to +42 dB for instrument outputs. Other features include 48V phantom power, polarity reverse and a -20dB pad that allows the user to control the input stage for hotter source signals.

The FET compressor provides transistors to emulate triode tube sound, and results in faster attack times and better repeatability than the optical compressors sometimes found on similar channel strips. When the threshold is turned fully counterclockwise to the ST position, the onboard controls are bypassed, and compression is controlled externally via a Stereo Link connection to a second ADL 700.

The 4-band semi parametric EQ (with bypass switch) and accompanying -12dB octave highpass filter (0 to 200 Hz) are all sweepable knobs that you can tweak to desired settings. The EQ was designed with musicality in mind, combining isolated filters and optimized, per-band Q to provide subtler signal shaping without harsh artifacts. All bands have Gain (±16 dB) and Frequency controls, with overlapping frequency ranges and fixed Q (0.6). The low and high bands are switchable between shelving and peak. When the LF Peak switch is engaged, the low band becomes a standard peak filter with a fixed Q of 0.6. When it is disengaged, the low band is a shelving filter. When the HF Peak switch is engaged, the high band becomes a standard peak

### TRY THIS

Warm up a harsh or brittle-sounding signal by sending it out of your DAW into the line level input of the ADL 700. Saturate the signal with the tube preamp and/or compressor/EQ to suit the track you're working on.



# THE PRODUCER'S CHOICE



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All New MixConsole provides the ultimate, production experience  
Integrated Channel Strip Module for epic pro-console sound  
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filter with a fixed Q of 0.6. When it is disengaged, the high band is a shelving filter. The ADL 700 includes a switch that allows the user to engage the compressor before or after the EQ, a nice touch when you desire a bit of sweetening after the compression shapes the sound in certain applications.

#### ALL TUBED UP

After warming up the ADL 700, I first tried it on acoustic guitar with songwriter Kyle Andrews. We recorded a bit of each take with a Universal Audio 6176, a Pendulum Audio Quartet II and the ADL 700. After some critical listening, we decided that his Gibson blended

#### PRODUCT SUMMARY

**COMPANY:** PreSonus  
**PRODUCT:** ADL 700  
**WEBSITE:** presonus.com  
**PRICE:** \$2,495  
**PROS:** Anthony DeMaria design. Simple yet detailed front panel.  
**CONS:** Compressor ratio stops at 4:1. Lower-grade knobs.

into the existing tracks perfectly through the ADL 700. The tube pre really warmed up his soft touch and also the additional high-string acoustic guitar we incorporated on a few songs. Some subtle EQ and compression balanced the overall sound and level, and we were able to nail down the parts very quickly.

I next used the ADL 700 on a drum session for South Dakota rock band Showbaby. One of my favorite go-to sounds when mixing is a mono room mic placed a few feet off the drum set between the kick and snare. I tend to squeeze that track considerably with compression and back the attack off quite a bit, then play with the release time, depending on the drummer's amount of activity song to song. I've found channel strips to be perfect for this way of tracking, as I can stay focused on one unit's controls and dial in the sound to taste. The drums and drummer for this session are both incredible, so it didn't take much to get the sound in place. I found myself struggling a bit with the limited amount of compression, as the ratio tops out at 4:1. I felt like I needed a bit more over the top here, more like 10:1 or 20:1 in some cases, and I wished that the ADL 700 included some higher ratios. I loved the sound that it was providing, but I wanted it to go to 11, so I disengaged the compressor and added one that went for more after the pre and EQ.

Finally, I tried the unit with Columbus, Ohio, indie pop band Fever Fever, to see how the ADL 700 would react to the subtle vocal delivery of the band's singer. I wanted to first test it with just the preamp, and then add some EQ and compression to the chain. The preamp sounded great, but I wanted a bit more air to pop out from his vocal, so I added 4 kHz with a sharp Q, and then some top around 8k with a wide Q. I noticed I had to dig in with gain a bit more than expected, but nonetheless achieved the sound that I was after. I then employed the highpass filter around 100 Hz, and a bit of compression at 2:1 with a fast release and attack to balance the dynamics in his voice.

#### COMPLETE PACKAGE

Many of my clients ask what the key is to getting good sounds at home like we do in the studio. I always suggest upgrading their signal path with a mic pre, and often suggest getting a channel strip of some kind. It allows the user flexibility of employing different stages of signal coloration plus helps them understand what each part of that path is doing to achieve the desired sound. After putting the ADL 700 through a variety of applications, I would certainly recommend taking this channel strip for a test drive and adding it to your arsenal of channel strips.

*Chris Grainger is a producer/mixer/engineer and owner of Undertow Studio in Nashville. Visit his Website at [itsgrainger.com](http://itsgrainger.com) and follow him on Twitter: @itsgrainger.*

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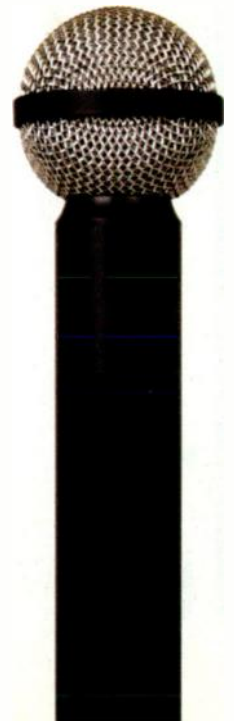
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## RAIN ION AFX COMPUTER

Low-Noise, High-Power PC Designed for Audio



*[Editor's Note: Though Mix typically does not review computers, they have become such a centerpiece of studio production that our technical editor here shares his process and needs, as well as his evaluation, when picking out a system for his home-based mix room.]*

**R**ain Computers is a New Jersey-based company that specializes in building high-end computers for audio, video and graphics professionals. You can purchase directly from Rain's Website or through one of its many dealers, including Amazon, B&H, American Music & Sound, and others. I chose the direct option and found that like other computer companies, Rain's Website will let you custom pick your processors, memory, drives, graphics card and more. However, Rain steps it up by adding beefier power supplies, liquid cooling and Rain Ensemble Plug & Play Sessions as options. I first purchased the rackmount Rain ION Studio, and then later upgraded to the Rain ION AFX, which wasn't available at the time. This review will focus mainly on the ION AFX, but will sometimes compare it to the original platform when appropriate, because this review adds

a complete system upgrade to the story.

The ION AFX is an impressive machine. My liquid-cooled, rackmount unit features six 3.2GHz Intel "Sandy Bridge-E" Xeon processors, 16GB 1,600MHz DDR3 Quad-Channel SDRAM by Corsair, one 240 GB SATA III Solid State Drive (C:), one 1TB SATA III mechanical drive, 8x USB 2 ports, 4x USB 3 ports, and 2x eSATA port. Also onboard is an NVIDIA GeForce 8400GS (1GB), two DVI outputs, 4x PCIe (x16), 2x PCIe (x1), and 1x PCI slot. This was more than enough to get started, but ION AFX has room to grow both RAM and drives if the need arises; the chassis has four drive bays and can handle up to 64 GB of memory.

### TRY THIS

Swap your C: drive to a smaller SSD for a marked improvement in upload and DAW operation speed. After jumping to an SSD with my system upgrade, I noticed that programs and plug-ins loaded faster, and former glitchy Pro Tools timeline stutters disappeared. SSDs are more expensive than mechanical drives, but if you limit it to your main OS, you can buy a smaller drive and have a larger mechanical drive or two for projects.





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## A PC? REALLY?

In early 2012, I was finishing building a personal high-end mix room for projects and reviews and was looking for a computer. Wanting to expand my range, I did some research on the feasibility of having a PC as my DAW platform. Many friends shook their heads and asked: Why a PC? This wasn't an easy move for me. I've been a Mac-head since the '80s and have always been attracted to Apple's dedication to music professionals and artists through regular upgrades of their towers and releases of high-end software solutions like Final Cut Pro, Logic Pro, MainStage and Compressor. However, in the past two years the company's focus has changed, so I thought it was a good time to add an alternative.

One of the PC deal breakers would be my experience. I had mix clients and reviews waiting for the completion of my room and had no desire to hump an El Capitan-like learning curve. So with open mind (mostly), off I went on my search and found Rain Computers. Their Website was very easy to navigate and I put together my dream system in about 10 minutes. I then jumped to Apple's Website and did the same thing and noticed that the ION Studio was more than \$1k less; plus, it had faster processors and more pro-level options. While AppleCare and RainCare warranties were comparable, there was no Plug & Play remote setup, which was key to making a smooth transition to a PC.

To get more background on the company, I called Rain and talked to CEO Kevin Jacoby, who I found was a musician and songwriter, as well as a businessman. Kevin handed me off to Rain's director of technology, Jami McGraw, who is also a musician and Cubase user. Jami asked me what I'd be running and how my studio was configured. After gathering all the info, he explained that the computer would ship with my DAW(s) of choice and he'd also have the drivers loaded for my Lynx Aurora converters. These were big hurdles jumped before I even opened the box. We made the deal and my computer was sent soon after.

## SETTING IT ALL UP

The ION Studio came in a sturdy double-box that held the rackmount unit, keyboard, cables, mouse, documentation and discs. The chassis was aluminum and not as substantial

## PRODUCT SUMMARY

**COMPANY:** Rain Computers

**PRODUCT:** ION AFX

**WEBSITE:** raincomputers.com

**PRICE:** Based on configuration

**PROS:** Smooth operation and excellent service. Transition between system upgrades was easy.

**CONS:** Chassis feels a bit light and flimsy but offered no resulting problems.

as an Apple product. Once I racked the unit, I forgot all about it and it was sturdy enough to stand many mounts and dismounts as I got my rack together.

I opened the lid and loaded my Lynx AES16e cards and UAD-2 Quad card, then installed the ION in my rack and plugged in all my I/O, dongle and monitor cables. The next day, Jami logged into my computer for my first Plug & Play Session and started to configure everything. There were some initial, perplexing plug-in problems, but after two phone sessions, I was up and running with Nuendo as my DAW of choice.

The system ran very well, but the fan noise was more than I was comfortable with. My room is 9x12 and I don't have a machine room, so everything is within arm's reach, which can be good for workflow but bad for noise. I talked to Kevin Jacoby about it, telling him how I planned on buying an isolation box. He hinted that there was going to be a new model available that would solve my noise problem, plus increase the processing power, speed and more. We agreed on the upgrade, and eight months later I made the swap to the ION AFX. Once again, Jami had pre-loaded most of my plug-ins, DAW software and drivers, and the Plug & Play sorted out the rest. I also added Pro Tools 10 with the Complete Production Toolkit and the new UAD-2 Octo card. The liquid cooling is attached to the lid of the computer and made navigating the card swap tricky, but after a few times I gained some confidence and it all worked out.

I can't say enough about the liquid cooling: It is whisper-quiet, and I saved the dollars and space I'd need for an iso box. I was wary about liquid being so close to electronics at first but did some research, learning that liquid has higher thermal conductivity

than air and can move heat more efficiently. Sometimes a computer is so hot that components produce more heat than the air around them can absorb and fans have to be at high rev just to keep things operational. Not good for a listening environment. Liquid cooling is a hands-down winner.

## MIXING ON THE ION AFX

Working in Windows was rough at first. I was very conversant in the Apple OS language and found Windows 7 to be frustrating. But jumping directly into a mix was the best way to learn this box. I started a project in Nuendo, having just finished mixing another on Apple OS X, so at least the DAW was familiar. After two or three songs, I started to feel Windows slide to the background. From then on, it was all DAW, listening and loving the performance. The solid-state drive in the ION AFX was a major jump from the ION Studio, giving me quick uploads and better timeline performance. The 12 virtual cores gave me plenty of plug-in instances. I seemed to get more in that regard when running Nuendo rather than Pro Tools. Now that I have the UAD-2 Octo, I don't think I'll be running out of plug-in horsepower.

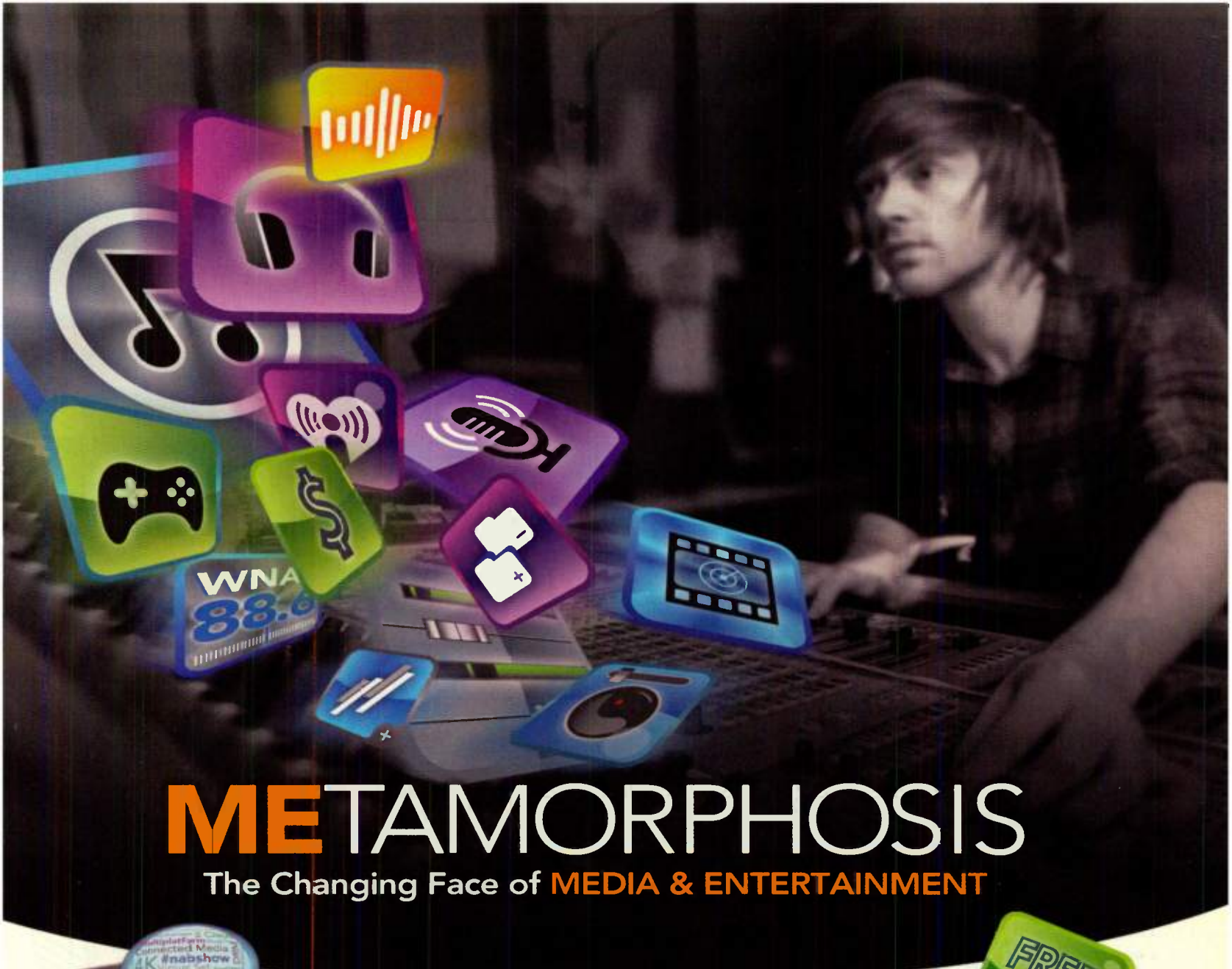
I recently tried to get my system upgraded to Windows 8, which Rain said would improve performance by 10 to 15 percent. After a couple of attempts, Jami told me I'd have to unload all my cards and then upgrade to W8. I've never had this experience with Apple OS upgrades but was glad I did. Luckily, before I unloaded my cards to try again, I had the foresight to contact my plug-in and hardware companies and found that some of my key gear wasn't W8 compatible. Bullet dodged; I've opted to wait for Windows 8.

## WOULD I DO IT AGAIN?

I'll always own Apple products; I have an Apple system for tracking, not to mention laptops and iPads for personal and business use. The Rain ION AFX and the excellent service have been a positive experience that I would recommend to anyone. It exceeds Apple performance with much lower noise. If you've been thinking about a PC, you should check out the ION AFX; its features, service and performance are designed for the audio pro. ■

*Kevin Becka is Mix's technical editor.*





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+4dB signals from the output of a DAW interface or tape machine. This is a good thing because when using the return, you won't be tempted to use the input level control to make the return louder—thus screwing up your record level and possibly creating level mismatches for subsequent punches. In a mobile or location recording situation, you can use the 8MX2 to monitor microphone signals going to your recording device when tracking, then switch the channels to "Ret" and monitor the outputs from the recording device for playback.

Because each channel may be switched independently between input and return, the 8MX2 permits latency-free DAW monitoring. When doing mobile overdub sessions with the 8MX2, I used the first two channels as returns from the L/R output of my DAW. A vocal microphone was plugged into channel 3 and patched to input 3 of the interface. The vocalist and I monitored via the output of the 8MX2 (as opposed to monitoring the output of the DAW interface), allowing us to hear the

***"In a mobile or location recording situation, use the 8MX2 to monitor microphone signals going to your recording device when tracking, then switch the channels to "Ret" and monitor the outputs from the recording device for playback."***

vocal mic on the way in to the DAW combined with the L/R outs coming from the DAW (i.e., there was no latency in the monitor path). When it came time to listen back, we switched channel 3 from Mic to Ret so we could hear the output of the vocal track, which was routed to output 3 of the interface. If you are using

a hardware recorder, the Returns can be used for monitoring multitrack outputs, negating the need to carry a separate mixing console. The Returns may also be used for analog summing of DAW outputs, with the output of the 8MX2 patched back into the DAW for stereo mixdown, or to an external stereo recorder (see the "Try This" sidebar).

#### **CLEAN MACHINE**

The mic preamps on the 8MX2 are clean, quiet and flat (I measured 20 to 20k Hz +/- 0.3 dB)—just what you want for a mobile tracking setup. Ditto for the returns. Limiters and phase switches apply only to the mic preamps (not the returns), which is a good thing because it confirms that what you hear is being committed to the recording. In most cases the limiter will be used to prevent distortion, though I liked what it did sonically for snare drum and voice-overs. When used on a bass DI, the limiter held the bass to a consistent level without making itself obvious.

The 8MX2's cue function is set up as an ei-

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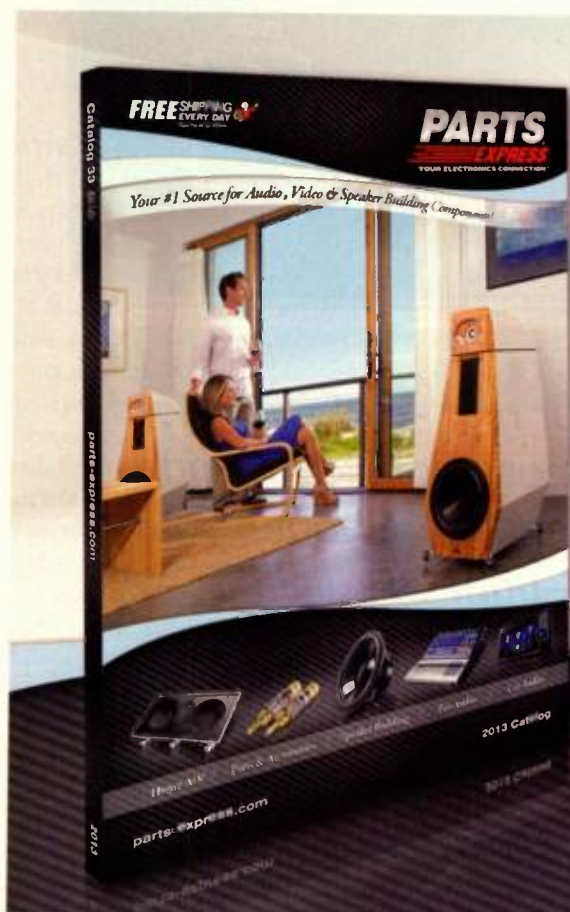
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ther/or system whereby the switch in the master section decides whether cue applies to the mic inputs or the returns. You can simultaneously cue any of the eight channels, but you cannot simultaneously cue the return on one channel and the mic input on another channel, a minor inconvenience. The engineers at JDK made the smart decision to start the meter scale at -3 and run it up to +24, with red LEDs at +21 and +24. This means you won't see very low signal levels when you PFL, but I'd rather have the resolution at the top of the scale, especially since what you'll hear accurately reflects the meters; when you hit the +24 segment you will hear distortion.

#### GREAT PERFORMER

If I were creating a mobile recording rig, I'd build it around several 8MX2s because they simplify the process, occupy only a single rackspace and eliminate the need for a mixing console. As an added benefit, the 8MX2's robust headphone amp had no trouble powering my old and notoriously difficult-to-drive AKG K240 'cans. Combine those attributes with excellent preamps and the ability to expand the system at any time, and you have a formidable tool for mobile work. ■

*Steve La Cerra is a New York-based recording and live-sound engineer.*

#### PRODUCT SUMMARY

**COMPANY:** JDK dio  
(designed and manufactured by API)

**PRODUCT:** 8MX2

**WEBSITE:** JDKAudio.com

**PRICE:** \$3,195

**PROS:** Clean, quiet audio path with plenty of headroom. Versatile routing options. Built-in power supply.

**CONS:** Master metering is summed for left and right output buses. Headphone output level is tied to monitor output level.

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## PEARLMAN 250 CONDENSER STUDIO MICROPHONE

Hand-Built, Nouveau Classic Tube Transducer

**T**he Pearlman 250 is a tube studio condenser microphone built to sound like the famous Telefunken ELA M 250E. The Pearlman 250 is hand-built, one at a time, by Dave Pearlman in the tradition of the Neumann and Austrian classics as they were originally designed and constructed post-WWII.

Same as the Telefunken ELA M 250E, the Pearlman 250 has both omnidirectional and cardioid polar patterns. The Telefunken ELA M 251E is a three-pattern version that adds figure-8. First sold in 1959, the M 250s and 251s used a hard-wired (soldered in place) Telefunken AC701k tube, while a socketed 6072A tube was used in the export variant identified with a large "E" just below the pattern slide switch on the front of the microphone. 6072As were more readily available and easier to replace outside of Europe. Both microphones were manufactured by AKG and badged "Telefunken"; both used AKG's famed CK12 capsule also used in the C 12 microphone.

Made in Burbank, Calif., the Pearlman 250 uses a hand-selected NOS 6072A (my review microphone came with a hand-selected, Russian 6072A/12AY7) mounted in an inverted, shock-mounted ceramic socket. Like the exported Telefunken ELA M 250E/251E mics, this was done to replicate the shorter wire lengths—tube to the capsule—of the non-export mics.

The Pearlman 250 uses a C 12-type capsule made in Denmark by Tim Campbell. It is 33.3 mm in diameter (same as the CK12), edge-terminated and with a 6-micron, gold-evaporated diaphragm. It is mounted on a copy of the AKG's mount and insulated from mechanical vibration using rubber posts.

The NOS carbon resistors and styrene capacitors are RoHS compliant and all hand-soldered, point-to-point, on a small, custom fiberglass board. The output transformer is epoxied to the internal steel frame and is made by Cinemag. It is the company's direct replacement for AKG's C 12 and ELA M 250E/251E mics.

For reliability, longevity and consistent operation, a single Wima



polypropylene output (DC blocking) capacitor replaces the electrolytic that was originally used. There are two mini toggle switches mounted to the internal steel frame: one for cardioid/omni switching that replaces the problematic pattern slide switches in the original Telefunken; the other is an on/off switch for a gentle high-frequency roll-off starting at 4 kHz.

The Pearlman 250 kit includes an attaché case, leatherette carrying pouch, standard shock-mount basket, AC power cable, 20-foot multipin Mogami cable with Neutrik connectors, and power supply.

### RECORDING ACOUSTIC GUITAR

For recording acoustic guitar, the size and heft of the Pearlman 250 required the use of a Goby GBM 300 stand/boom positioned at about the same close-in distances I prefer for small-diaphragm condensers. I used 25 dB of mic gain from my RTZ 9752 Combo Microphone preamp and recorded into Pro Tools|HD3 Accel (Pro Tools Version 10.2) at 24-bit /96kHz using a Benchmark ADC1 A/D converter that also clocked my Avid HD 192 I/O.

I started with cardioid pattern and tried 12-inches away and over the 12th fret of a Martin Custom D Classic Rosewood Acoustic Guitar (D-28). I found it easy to get a rich sound by staying well away from the sound hole. I liked this pattern/distance for single-string picking and arpeggios—the 250 produced a thick, fat tone and good articulation without sounding artificially bright. I found its wide cardioid pickup pattern to work well for a natural musical balance.

### TRY THIS

If you record vocals in larger spaces, such as in a main tracking room, switching to the omnidirectional polar pattern on the Pearlman 250 offers a way to change the singer's microphone "presence"—the difference in sound between using cardioid (with its proximity) or none at all while in omni. Changing polar patterns, having the vocalist sing on/off axis to the capsule, and source-to-mic distances are all acoustical ways to get more depth and difference of the same singer's tonality recorded into each track—especially good when the same singer does stacks of doubles, octaves and harmonies.



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For full chords, I switched the 250 to omnidirectional, moved closer—about 6 inches—and shifted its location laterally toward the sound hole, about halfway between the 12th fret and the end of the fret board where the neck joins the body. The toggle cardioid/omnidirectional switch is an awesome feature for choosing between the two patterns quickly when looking for the best pattern and sweetest spot.

Because the mic distance was halved, I reset the RTZ preamp to only 20 dB. In cardioid pattern, the 250's nominal output level is in the same range as modern condenser microphones, but it has slightly less output level when switched to omnidirectional pattern. For loud strumming and without the cardioid proximity effect, the 250 produced a balanced sound with enough pick attack and thickness, making it perfect for a guitar/vocal session.

#### VOCALS

Today, both the vintage Telefunken 250/ 251E mics are bankable industry standards associated with great-sounding vocals—especially female singers. But individual results may differ, and, of course, it

#### PRODUCT SUMMARY

**COMPANY:** Pearlman Microphones  
**PRODUCT:** 250 Studio Condenser Microphone  
**WEBSITE:** [pearlmanmicrophones.com](http://pearlmanmicrophones.com)  
**PRICE:** \$3,000  
**PROS:** So close to a Telefunken, it's scary!  
**CONS:** Too pricey for some.

depends on what kind of a voice/singer you have in front of them and the particular microphone with its unique personality and temperament.

Using the same signal chain as before and back in cardioid pattern, I positioned a Pete's Place Blast Filter stainless-steel windscreen/pop filter so that it nearly touched the 250's screen. Close-in (somewhere no further than 12 inches from the screen), quiet to medium-loud singing into the Pearlman 250 reminded me of everything I love about using a vintage and pristine Telefunken 250/ 251E. Depending on the distance to the microphone and following compressor setting, I used 20 to 30 dB of mic gain and got a bright, open and airy sound.

I found that Pearlman's 250 was more useful for a wider range of both male and female singers and for most contemporary singing styles and genres. Pearlman's 250 copies the same circuit as the classics and its overload characteristics are similar when super-loud vocalists sing inches away from the diaphragm.

For ultra-close and loud singing on the Pearlman 250, it's the same as using a Telefunken 250 except that with the addition of the high-frequency roll-off switch there is a way to lessen some of the brashness of singers with loud sibilants and fricatives that may have precluded using a Telefunken.

#### EXCEPTIONAL MICROPHONE

The Pearlman 250 is a solid, reliable choice for recording vocals using a respectful, handmade copy of an all-time classic Austrian mic. The 250 doesn't represent an attempt to modernize or improve on the Telefunken ELA M 250E, but offers a way to extend its legacy with the best homage ever. ■

*Barry Rudolph is an L.A.-based recording engineer. Visit him at [barryrudolph.com](http://barryrudolph.com).*



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Continued from p. 32

console. That said, I do use the Magic Spectrum, but only as a finishing tool and probably on less than half the matches in ADR and production. In the predubs, I'm getting as close to the final as possible. I've come to learn that I want the dialog to be able to play straight. So after I've found the overarching problems, I let the DUY sliver the audio into hundreds of frequency bands and correlate the EQ and tone, then calculate the match between the two samples. If you're going from radio to boom, or production to ADR, it's uncanny. It does things you can't do with console EQ alone."

## MUSIC

Apatow may be tuned in to a line of dialog that rings false, or a background that doesn't fit, but he *knows* music. A huge fan. He writes with songs in mind, and he uses lyrics to drive narrative. He set a portion of the film inside the music industry, and he even based a story line on a mutual career-resurrection between the Paul Rudd character, a fledgling specialty-label owner, and

Graham Parker & the Rumour, a band that hasn't been heard from in 31 years. And it works! Graham takes the stage! Twice!

"We had a lot of concert set pieces in the film," says Jonathan Karp, who served dual roles as music supervisor and editor. "Graham performs with the Rumour and with Tom Freund. And Ryan Adams performs with an amazing band. We also shot a whole piece where Pete [Paul Rudd] scouts bands for his label. None of these were done with pre-records. We used the DesignFX Remote truck with Scott Peets and Trini Alvarez engineering. We shot and recorded it all live."

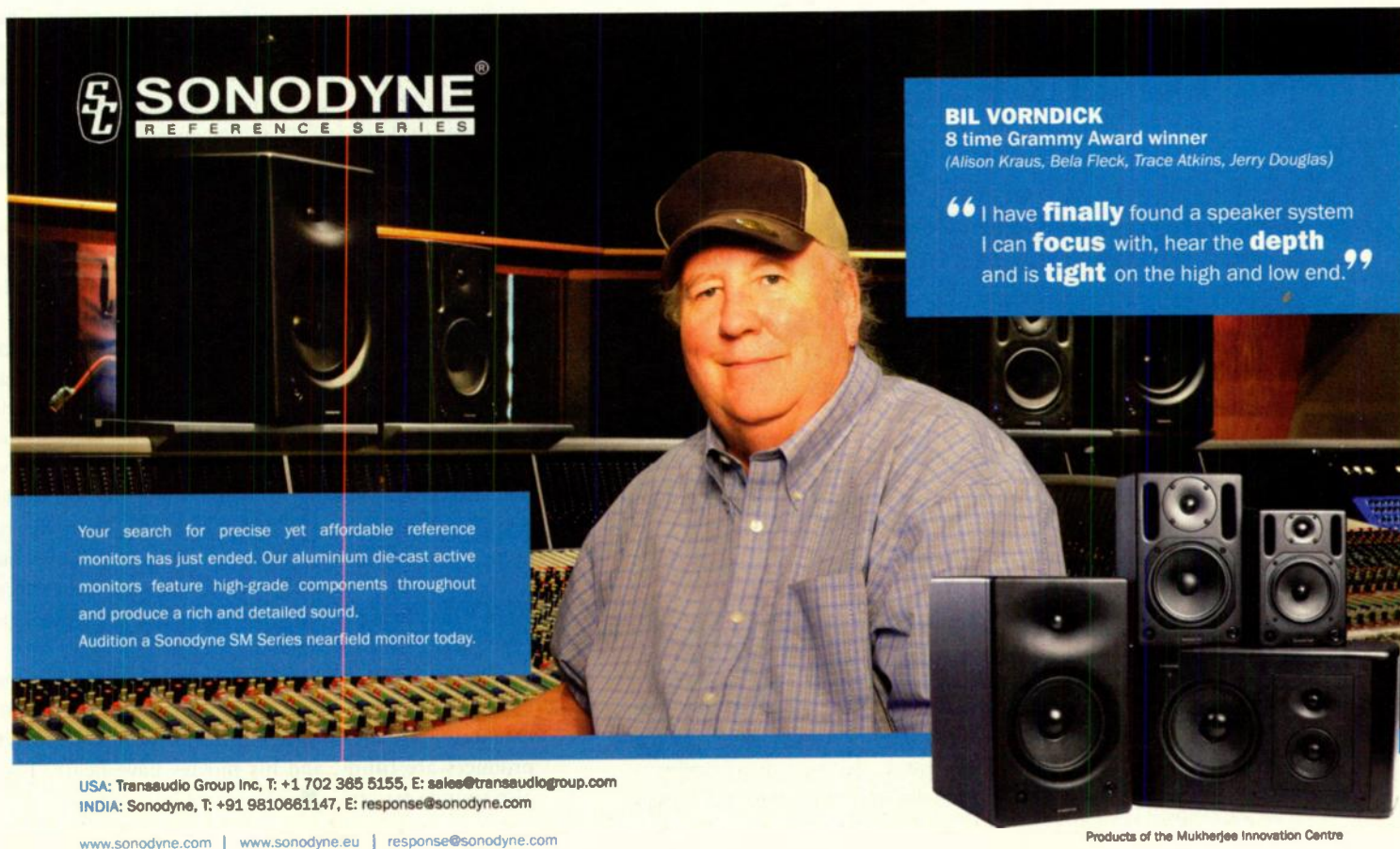
Those tracks then came to Fishman 32-channels wide, and at the final he mixed for a very front-soundstage kind of feel, taking into account the perspective changes. Six stereo pairs of crowd ambience were provided. For those brief moments, he said, he felt like he was mixing an album.

At other times he felt like he had to spread the music out to serve the film, in deference to Apatow's desire to occasionally play source music so that the audience hears it how the character feels it, rather than how the iPod dock might be playing it. In those

cases, he and Karp would sometimes spread the stereo masters from McCartney, Simon, Alice in Chains, the Pixies, the Avett Brothers and others using the Penteo processor to upmix to 5.1. Fishman is a big fan, but again, he uses it judiciously.

"The music on *This Is 40* is kind of unique," Fishman says, "in that we had everything from mono DMEs from the *Spongebob* TV show, to composite mixes of the *Lost* clips, to stereo masters from some of the artists, to BG vocals and instrumental splits on some of the pop songs, to full-on production splits from Wilco, and then to the Graham Parker and Ryan Adams live performances right off the trucks, 32 channels. Some of the scenes are fairly straightforward and I just try to find a good level. Others I try to set it up fairly big so I can poke dialog through with EQ moves to clear out some space—pretty wideband centered at 3k. I've found that if you do that on anything with good rhythm or percussion on it, it doesn't change; it sounds natural."

His favorite scene for music? Something to listen for? "The party scene near the end was challenging," he says. [Laughs.] "But it was fun to do. It



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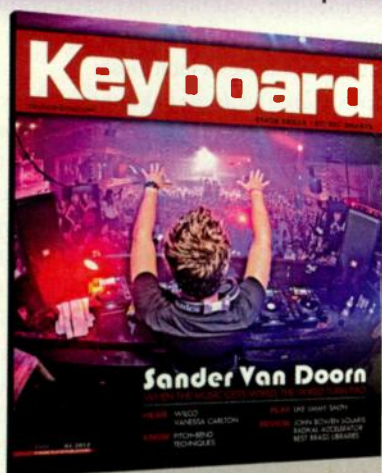
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starts with score and the arrival of the guests, then to Stone Temple Pilots, to the Band, to Sublime, to Lindsey Buckingham, to score, to a party scene, to inside the house—a great portion of Reel 6, until about 15 minutes in, it's all music. Score, source, subjective use. Megan Fox goes underwater and STP plays as score, then it's source when she pops up. That's a great scene. A lot of fun for a dialog mixer."

### APPROPRIATE EFFECTS

The biggest potential sound effects scene in the movie, Paul Rudd's mad-dash bicycle escape from his own party, plays under an original Fiona Apple song. "This might just be the least amount of effects I've ever brought to a final," says supervising sound editor Anderson, accepting in good humor that dialog comes first, music a close second, and effects a distant third. "The heavy lifting is done by dialog and ADR, we know that going in. I edited dialog for so many years, but as a supervisor, I have no agenda. I like to think that whatever needs to be there will be there."

Anderson is nothing if not prepared, and his reputation is that everything he provides is just right, perfectly salted, and he is unflappable amid changes or chaos. Many credit him with their entrée to the audio branch of the merry band that is Apatow Productions, Fearing and Fishman among them. Anderson goes back to *Virgin* days, and he's done nearly every Apatow-produced or directed film since. He works in tandem with his wife, sound effects editor Cindy Marty, whom he met back on *Young Sherlock Holmes*. They are true partners in crime. He will go out and do original effects recording for all the films, including backgrounds from the real locations. Then they typically prep and edit and build the library at home, in their space called The Beat Lab. [Editor's Note: Go watch Step Brothers.]

"She has that touch," Anderson says. "She has the patience to sort through a million options, and she's so fast. I have to slow her down! She loves doing cars, and she dazzles me with crowds."

From an effects mixer's point of view, considering he had lost the battle of the bicycle dash, Adam Jenkins still found his moments. "The party scene was fun," he says. "The grill sizzling away, bartender noises, things moving in the frame. I like to have things move from the camera's point of view. Your backgrounds change as you move in the real world, and it feels natural to do that in a movie. There are no scenes that really stand out for the effects in this movie, but I'm very proud of the fact that everything plays in the effects track. The effects job holds up very well in doing what it's supposed to, which is to add the realism."

You don't have to like Judd Apatow's brand of comedy, with its hints of sincere pathos mixed in with incidental fart jokes. But the movies he writes, directs or produces are funny, and his movies have heart. They also sound very real. ■



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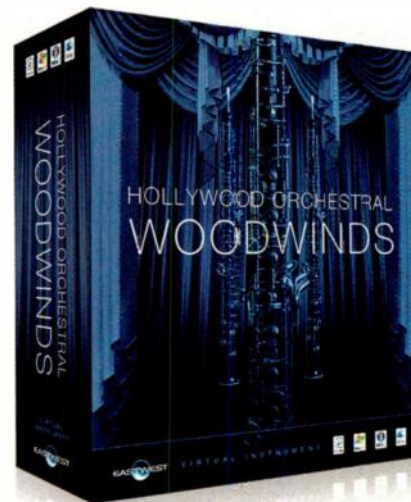
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# TechTalk

## GIVE YOURSELF A LITTLE CREDIT



By Kevin Becka

**A**t the last few AES and Winter NAMM shows, I've been invited to a gathering of producers, engineers, and manufacturers put together by Maureen Droney, Director of the P&E Wing of the Recording Academy. A number of important topics are discussed, one of which is the effort to help album credits make it across the digital divide. It used to be that record companies would herd all this data and print it on CD and album jackets. But with the death of major labels and the rise of the indie label, cheap and fast bandwidth, and popularity of listening via mobile devices, downloads have supplanted physical media and credits are lost in the shuffle. Yes, there are Websites that list album credits, but this falls into the Wiki zone where spelling and certifiable data can't be relied upon.

Credits are important; music is the legacy of its creators from the artist down to the assistant engineer. Can you imagine being left out of an award, recognition, a job, or getting paid for work because days or years after the fact, no one can verify your involvement on a project? As much as the Internet and metadata are a no-brainer to handle this job, there are some important and unanswered questions that make dissemination of credits a tough prospect. Who will wrangle all this data? Where will it reside? Who will fact check for misspelling and accuracy? Who do you trust? How do you pay for it? And there's the rub: The truth is that no one wants to do this work because there's no way yet to monetize it. Engineers and producers don't have time, studio managers are riding on thin margins, and paying someone to enter metadata isn't practical. Who else in the production chain could do it? Labels? The DAW manufacturers? The artist? An intern? The download site?

You can look at existing sites like [imdb.com](http://imdb.com) as a model. The movies have it over audio because the credit list is mandated as part of the production process. Even an indie film with a modest budget or a film for download-only has credits. It's part of doing business in film and television. Credits are mandatory.

On our side of the fence, [allmusic.com](http://allmusic.com) and [albumcredits.com](http://albumcredits.com) fall short on accuracy. These sites are driven by users who submit their CDs (!?) to the sites for inclusion in the database, but the credits can be inaccurate. I just did a quick look at my credit list and I come up as Kevin Becka, Kevin Becker and Kevin Becak, all for the same record. And CDs as the submission criteria? How 1990! What about music as a download? We know we can't count on the labels to make this work.

One solution discussed at the most recent P&E Wing meeting at

the San Francisco AES was to create a central Website where trusted credits would reside, then offer slick value-added material to make the site sticky. This could generate income through advertising and payments for album "extras." Could you imagine being able to download an engineer's plug-in list from your favorite record? (Tier 1) How about the engineer's plug-in settings for his/her vocal chain? (Tier 2) Or watch fly-on-the-wall videos from the tracking or mix sessions (Tier

*"Could you imagine being able to download an engineer's plug-in list from your favorite record? (Tier 1) How about the engineer's plug-in settings for his/her vocal chain? (Tier 2) Or watch fly-on-the-wall videos from the tracking or mix sessions (Tier 3)?"*

3)? This cool factor could drive behavior—first, from the consumer, who is hungry for rich content; then, from producers, labels and others who see this as something that could drive sales. Consumers may not even know they want this, but that never stopped Steve Jobs. It's been proven over and over that if you make something cool, word of mouth and social networking will drive people to possess it. It worked for the Pet Rock, Cabbage Patch Dolls, iPhone, iPad and what's next?

So, does  $A + B = C$ ? If you put a cool shell around a trusted credit site to monetize it, would people pay for access? If it was done right I'd say yes. It wouldn't have broad "Gaga" appeal, but there are many creators of music worldwide who would buy access to insider production knowledge. I know I'd love to see how C.I.A. mixes three songs a day, or how Jacquire King mixes the Kings of Leon or captures that Norah Jones vocal. And it wouldn't have to be a set amount: the donation model at Kickstarter or the payment slider at PreSonus' Nimbit.com have changed the way creators drive dollars to their creations. Consumers will support cool goods and content.

No matter how it evolves, the P&E Wing will be all over this effort and they can use your support. Everyone can get involved via [givefansthecredit.com](http://givefansthecredit.com), where you can sign a petition to get digital music services to take some responsibility. Easy access to accurate production metadata comes down to your wallet—credits are money. ■





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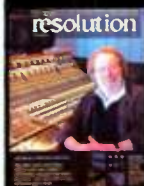
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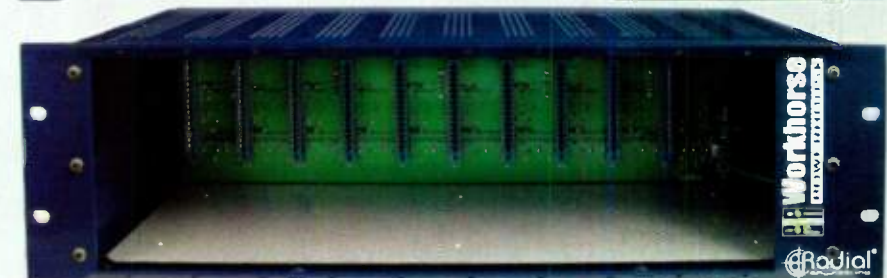
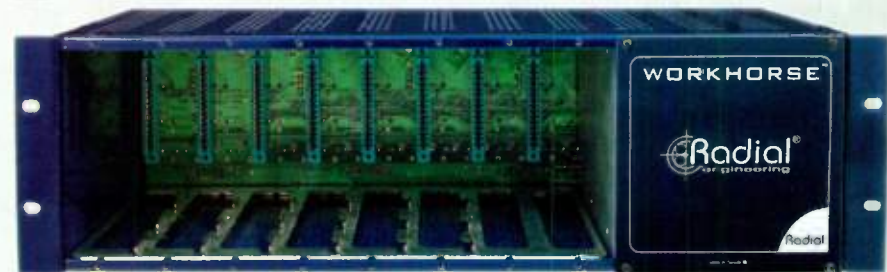
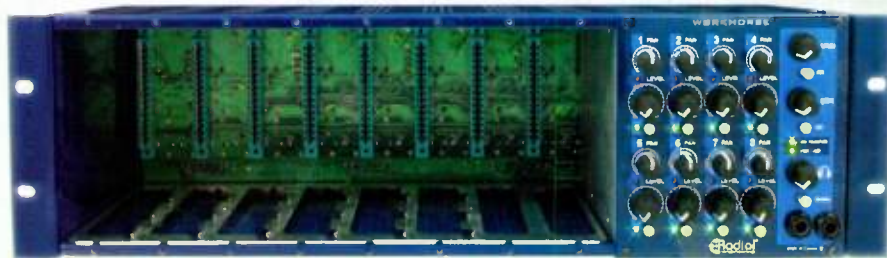
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