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# MIX

MUSIC PRODUCTION • LIVE SOUND • SOUND FOR PICTURE

## REVIEWED

MASELEC MLA-3 COMPRESSOR  
EMOTIVA AIRMOTIV 4 MONITORS  
KRK 12sHO SUBWOOFER

## LIVE BONUS!

TOUR: RED HOT CHILI PEPPERS

TOUR: ZAC BROWN BAND

TOUR: RUFUS WAINWRIGHT

ALL ACCESS:  
DEATH CAB FOR CUTIE

# KENNY CHESNEY

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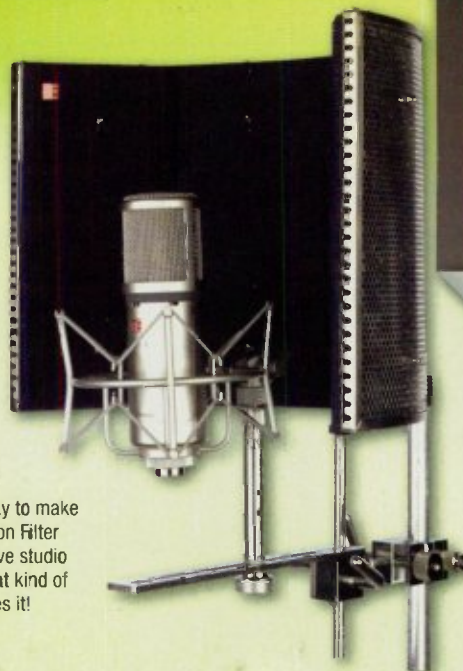


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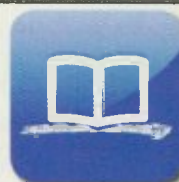


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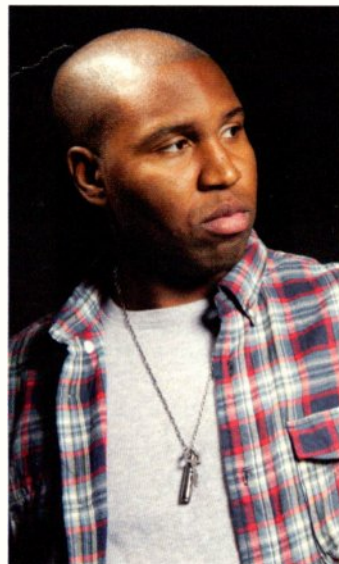
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**On the Cover:** The Kenny Chesney-Tim McGraw Brothers of the Sun Tour 2012 will hit 22 stadiums across North America this summer, backed by an Electro-Voice P.A. and sound by Morris Light and Sound. Photo: Danny Clinch.

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# From the Editor

## YOU CAN'T GET THIS AT HOME

**T**wo days after I write this I'll be going with my daughter Jesse and her boyfriend, Alec, to see the Avett Brothers at the Greek Theatre in Berkeley, one of my absolute favorite venues in the world and it's right in my hometown. It's where I took Molly, Jesse's sister, as a 6-month-old to see Jerry Garcia and Jimmy Cliff. It's where I've seen Bob Dylan, the Dead, Stephen Marley, Ben Harper, Wilco, Michael Franti and a rockin' Death Cab for Cutie show. So many others over the past two decades. Every major town has at least one good venue, and every true music fan has at least one or two favorites, whether it's Roscoe's Bar or Red Rocks. The Greek is one of mine.

I'm excited to be going out for a couple of reasons. First, I'm a big fan of the Avett Brothers, having seen them live for the first time a few years back with the same Jesse and Alec at Outside Lands in San Francisco. We "discovered" them together at an outdoor stage on a Saturday afternoon, and I tell you, there's still no better way to experience music, or to connect with a band, than when they're in the zone and the crowd is right there with them. Four years later, they're back, and so are we.

I'm also excited because it's my first real concert of the season. I've been to a few club shows and the like, but normally by the middle of June I would have been to a festival or two, at least a couple of shows at the Fox Oakland, and maybe once to Mountain Winery. I'm not what you would call a crazy-avid concertgoer, but I am slightly more than casual. Right now I'm itching to be in the crowd and feeling the energy. Hearing great music on a great system. Anticipating a favorite song, then sharing it with family and friends and strangers all around me. I want the experience, the loud guitars and the wailing vocal. Kenny Chesney fans feel the same way, so do fans of Zac Brown, the Peppers, Rufus Wainwright and Death Cab.

Live music, like sports and museums, is something that you will never truly be able to get at home, not even with the best multimedia room or virtual reality suit that money can buy. When a band kicks it in right after the fifth-song ballad and has the house jumping, there's a connection you can't find on Facebook, a brilliant insight that you can't Tweet, a cell-phone video that doesn't capture the moment, not at all.

Besides all that, have you been to a concert recently? The sound is so much better than it was even 10 years ago, indoors or out, large venue or small. That's another reason I'm so hot to go see some great live music. I don't know about you, but I don't have line arrays at home or Dave Rat mixing for my backyard parties.

Every night of music makes a memory, but the great nights make magic. It's summertime. Go out and see some great music. You'll be glad you did. And if you liked the sound, nod at the front-of-house engineer on the way out.

Thomas AD Kenny

Tom Kenny  
Editor

One more thing: I would like to publicly welcome Lori Kennedy to the *Mix* team as managing editor. She comes to our pro audio world from *Keyboard* magazine, and before that *Remix* and *Electronic Musician*. She has a wicked (as in, dark) sense of humor, a great love of language and detail, and a wide-ranging appreciation of music. You will be seeing her byline shortly. Welcome, Lori.

## MIX

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BY DAVID SCHWARTZ, PENNY RIKER AND BILL LASKI

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# Current

COMPILED BY THE MIX EDITORS

## InfoComm 2012

The Music Group made a lot of news with a pre-show announcement of the acquisition of Turbosound, adding to the Behringer-Midas-Klark Teknik family. Then they debuted the Midas Pro1, with 24 mic/line inputs with preamps and GUI based on the flagship XL8, 48 channels of processing, 24 analog outs and 96kHz 40-bit floating-point processing throughout. And it's only \$9,999.

Not to be outdone, DiGiCo showed the SD5, fitting nicely between its SD7 and SD10 models and a replacement for the D5 (trade-up supported). It includes 124 input channels, 56 configurable buses, and the Waves effects package built in. It comes with a MADI connection to a star router, a 24x24 matrix, and a 56-channel SD-Series rack.

Line 6, having made a bold announcement at NAMM of its musician-centric live system, added to its wireless packages and range of monitors by showing the StageScape M20d touchscreen visual mixer, with digital processing on every channel, including multi-band feedback suppression, as well as multichannel recording and remote control capabilities via one or more iPad devices.

PreSonus has integrated Smaart software from Rational Acoustics into its remote-control/editor/librarian software for StudioLive. The first module to be implemented will be Smaart Spectra, a time-frequency-level analysis tool for locating problem frequencies causing feedback. It is part of PreSonus Universal Control 1.6, a free upgrade.

QSC has turned its spotlight on integrated system control, bringing its large-scale, stadium-size Q-Sys technology to restaurants, nightclubs, schools, hospitals and churches with the Q-Sys Core250i/500i. The Core 250i provides up to 64 network channels and the Core 500i up to 128 channels. QSC also showed solutions for seamless video/audio network control at large-scale venues.

There's a whole lot of talk about control these days, whether network or system. Lectrosonics introduced the 32x32 Aspen Dante network processor, able to address both the ASPEN and Dante matrices and add mixing, gain and delay functions to the digital audio signals. The company also displayed the new Breakout Box, with 8-in/8-

Midas Pro1



out, two Dante ports and iPad control.

Shure, meanwhile, had a crowded booth every time this writer walked by, with much of the focus on the addition of dual and quad receivers to the ULX-D Series, single-rackspace units with individual gain controls, LED meters and XLR outputs for each channel. The new dual and quad receivers feature fully digital audio processing and RF transmission, as well as AES 256-bit encryption and integrated Dante networking.

DPA Microphones showed its d:vote range of instrument mics, building on the design of the company's 4099 instrument clip mic series. It was also a first look for many at the d:facto vocal mic series, introduced last year and based on the clas-

sic 4011 design, and the d:fine headset mic.

It wouldn't be an InfoComm show without new speakers, and there were offerings from Martin Audio (MLA Compact), D.A.S. (Artec Series), Outline (EIDOS 265 LA Compact Line Array), Atlas Sound (AH Series) and JBL (CBT-200LA-1 constant directivity; 6.5 feet tall, emphasis on vertical coverage), and Yorkville Sound (PSA-1, part of the Paraline Series of compact full-range loudspeakers).

This InfoComm debuted a new speaker company, as well, Vue Audiotechnik, headed by industry vets Kenny Berger and Jim Sides. Vue debuted three lines: the more affordable A Class, the booming H Class and the i Class for installers. Be sure to check out the HS-28 subwoofer online.

Auralex showed five new products, including pads and diffusion. But the most popular seemed to be the Utilitek absorbent panels, based on the ProPanel Series but more affordable, and the SheetBlok-AF, pliable but dense sheets of isolation material that is PVC coated and ready for painting.

Primacoustics also has recognized the demand for acoustics to work with aesthetics, debuting its line of Paintables, a series of panels made from 2-inch thick high density 6-pound glass wool for even absorption. The front face and edges are encapsulated in a fiberglass mesh and the panel is then finished in white paintable latex.

Furman showed its SmartSequencer power products, but bragged about its remote-control Blue-Bolt energy management system.

Hosa, one of those companies whose products you can't do without, debuted the CBT-500 cable tester. It's solid and field-ready, with every connection you might think of, including MIDI, Speakon, 3-pin, 5-pin and USB-A to USB-B. Only \$69.95.

Kaltman Creations, makers of the acclaimed Invisible Waves spectrum analyzers, has added to the line with the RF-id Solo and RF-id Station.

Though it was announced at NAB, Gepco gave contractors their first look at RunOne powered speaker cables, each combining one channel of power with 2, 8 or 12 channels of 110-ohm balanced audio for line level, mic level or digital AES audio signals.

Vue Audiotechnik H-12





## BOB WALTERS, 1924-2012

Bob Walters, a member of the Mediasound Studios operations team in the late-'60s/early '70s, then co-founder of the legendary Power Station studios with Tony Bongiovi in 1977, passed away in early June at the age of 87.

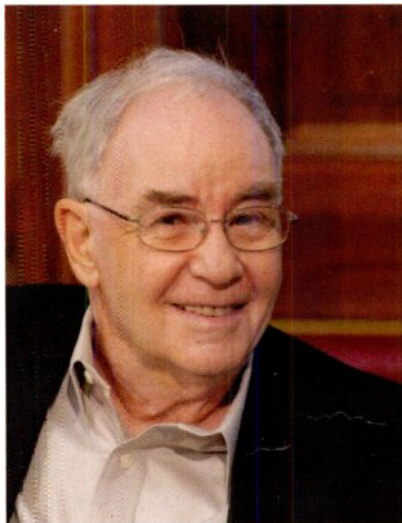
While Bongiovi—a producer known for his work with Gloria Gaynor, Chic, the Ramones and Talking Heads—gets a lot of the credit for designing and building Power Station, Walters was his operations partner in every sense of the word and helped build the facility into an internationally recognized brand synonymous with the making of hit records: Chic's *C'est Chic*, Bruce Springsteen's *Born in the U.S.A.* and *The River*, David Bowie's *Let's Dance*, Madonna's *Like a Virgin*, Dire Straits' *Brothers in Arms*, Steve Winwood's *Back in the High Life* and Peter Dinklage's *So*, just to name a few of the hundreds that came out of the former Con Ed building on West 53rd in Manhattan.

"Bob and I had a true working partnership," Bongiovi says. "Bob essentially ran the business side—anything to do with clients, labels, staff—while I designed the place and produced projects. He made it possible for me to be creative, and we had a run as a very successful team. I'm real saddened by the loss of Bob, and he will be missed by all of us."

A young engineer from Media Sound, Bob Clearmountain, also made the move to Power Station and became their first staff engineer, working with The Boss, Bowie, Roxy Music, Rolling Stones and countless others. "Early in 1977 Tony Bongiovi told me he was thinking of building a new studio in New York and asked if I'd like to be involved," Clearmountain recalls, who today owns the Neve 8068 from Studio A. "He said the only problem was that he needed someone like Bob Walters to run the business part of it. A week later Tony said he found that guy and, in fact, it was Bob Walters! This was a good thing because I believe the Power Station would never have become the iconic recording Mecca it was without Bob's influence."

Zoe Thrall, now studio director at Studio at the Palms in Las Vegas, pestered Walters for months for an internship fresh out of school, and after four months got her foot in the door, soon becoming an assistant, then studio manager through the '90s. "The thing a lot of people said about Bob is that he did have a knack for picking good people," she says. "Think about the engineers and producers that came out of that studio—Bob Clearmountain, Neil Dorfsman, Jason Corsaro, Scott Litt, James Farber, Roy Hendrickson, Ben Fowler, Robert Smith and so many others. It was a very special place, and a very special time in New York. Bob gave this shy but motivated kid a chance, and it changed my life. I'm forever grateful."

Walters is survived by a sister, three children and six grandchildren.



## George Marino, RIP

George Marino, a three-time Grammy-winning engineer who mastered such classic albums as Stevie Wonder's *Innervisions*, John Lennon & Yoko Ono's *Double Fantasy* and Guns N' Roses' *Appetite for Destruction*, died June 4 after a yearlong bout with lung cancer. He was 65.

Marino got his start in the mastering department at Capitol Studios in New York in 1967, then joined Record Plant as a partner briefly before moving to Sterling Sound in 1973. He worked at Sterling until the time of

his death, his most recent Grammy coming on Arcade Fire's 2011 Album of the Year, *Suburbs*.

"Sterling Sound and the music industry as a whole has suffered a tremendous loss," the company said in a statement. "Words cannot express the sorrow we feel. George was family to us all, and we will miss him dearly."

## SPARS Sound Bite

### The Internship Value

By Kirk Imamura

One of my heroes, Ray Bradbury, passed away recently. In my youth, I devoured his books and he was one of a few who influenced me to pursue a technical career. Later, I had the good fortune of seeing him speak on several occasions and discovered how inspiring he was as a person. He often talked about pursuing your passion for something and letting it drive what you do in life. He was a real-life example of that. "You must live life at the top of your voice!" he said.

In our case, having the same kind of passion for audio engineering is what we look for in our interns. The ideal candidate has the notion that spending hours toiling in a studio environment, no matter what the task, is fun as opposed to work or drudgery. A lot can be gleaned about the business if you learn to pay attention to details, even the most seemingly insignificant minutiae. That has to be the mindset required nowadays because things are not easy.

Looking at it from the intern's perspective, what kind of inspiration do they glean from working for you? What does your studio or facility stand for? What kind of work ethic do you display? What does your assistants' behavior say about the values exhibited by your business? Sharing your thoughts with interns is certainly important, but they'll learn far more by observing your actions and the example you set in dealing with employees and clients.

There have been a few articles in the press lately regarding the increased use of unpaid internships and a couple of cases of exploitation, which resulted in lawsuits. It would be a shame if opportunities for internships were reduced for fear of lawsuits. I don't want to downplay the seriousness of taking advantage of interns, but I think people know the value and benefits of an internship when it works.

Go back and remember what got you into this business in the first place. What excited you and where do you want to see the industry go? It is our responsibility as owners and managers to help shape that direction, one intern at a time. Isn't the long-term viability of our industry ultimately more important than short-term gain for your business? If you inspire your interns, a lawsuit would never be a concern. At the very minimum, you have to offer something of concrete value in return—school credits, a job opportunity, letters of recommendation or even some counseling/guidance. Keep in mind that a former intern could become a future customer.



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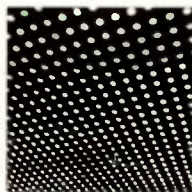
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Don't let the band's name fool you. This is not sunny summer pop—at least not in the conventional sense. As the ever-growing legions of Beach House followers know (out of the box, this album made it to Number 7 on the Billboard Album chart and hit Number One on both the Indie and Modern Rock charts), there's a darkness and mystery in many of the songs that the Baltimore-based duo of Victoria Legrand and Alex Scally have turned out over the course of four albums, and especially on this latest effort.

>>[mixonline.com/cool-spins](http://mixonline.com/cool-spins)

## SoundWorks Collection Update



The SoundWorks Collection talks with the sound team of director Ridley Scott's latest science fiction film, *Prometheus*, including Supervising Sound Editors Mark Stoekinger and Victor Ennis, Sound Re-Recording Mixers Ron Bartlett and Doug Hemphill, Sound Designers Ann Scibelli and Alan Rankin, and Sound Effects Researcher Charlie Campagna.

>>[mixonline.com/post/features/video\\_sound-works\\_collection](http://mixonline.com/post/features/video_sound-works_collection)

## PopMark Media Update



Every month, we get to interview people in the "trenches" of our industry, working hard to make things happen and finding ways to achieve success in less-than-stable times. Every once in awhile, we have the pleasure of talking with someone who's achieved great success. Last year, we talked with Grammy Award-winning producer/engineer Andrew Dawson, who is best known for his work with hip-hop star Kanye West. We figured there would be no one better to profile a second time—especially considering the exciting projects he is working on. Check out the next installment of "Confessions of a Small Working Studio" at [mixonline.com](http://mixonline.com) to find out what those projects are and how there seem to be no limits on where they will take him.

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# Music

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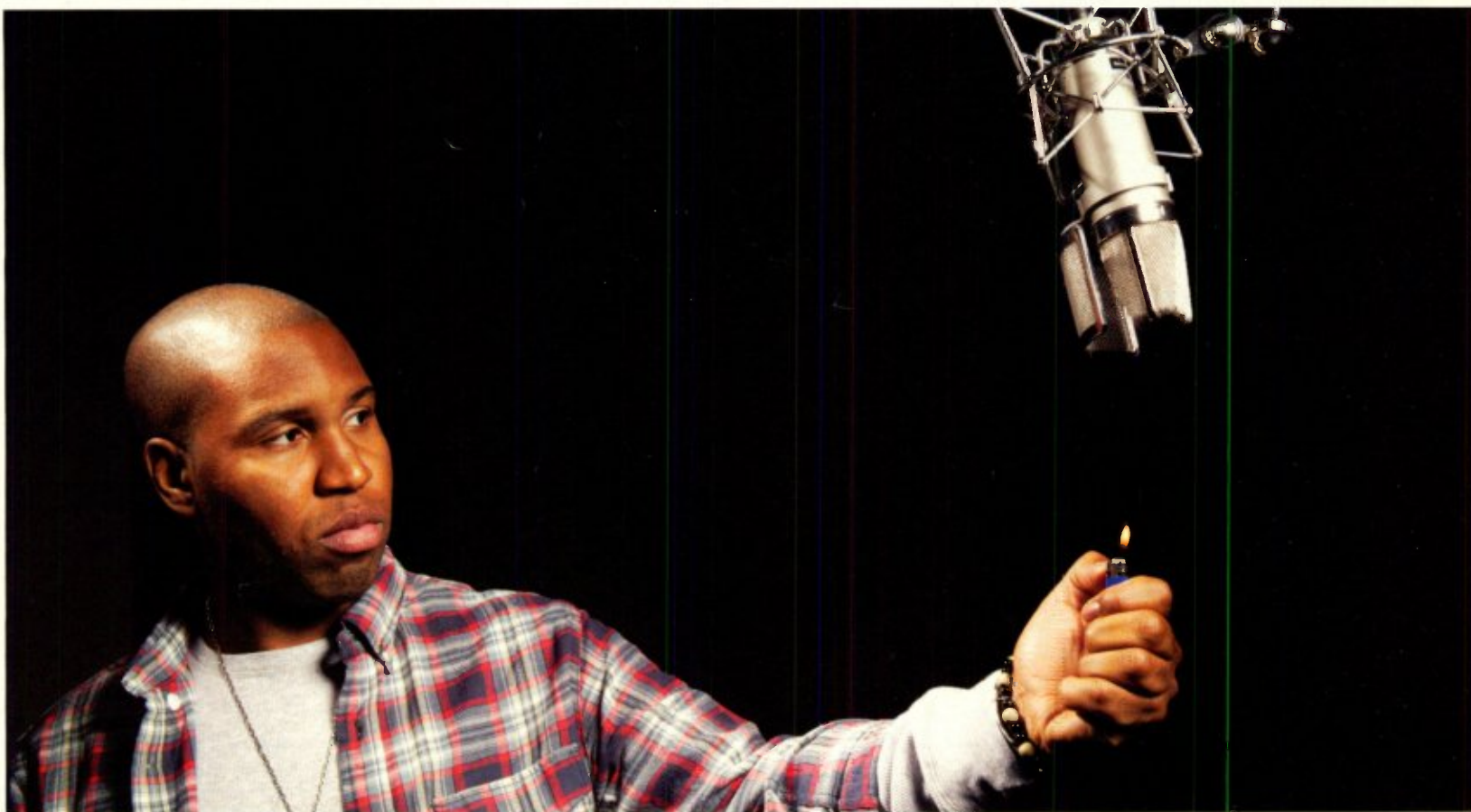


Photo: Rayon Richards

## CLAUDE KELLY

Hit Songwriter Goes for Feeling Above All

By David Weiss

**T**here isn't a swing or slide in sight—but don't tell that to Claude Kelly. Seated inside the control room of KMA Studios in New York City, one of the millennium's most successful songwriters expects a full day of serious fun to unfold in front of him.

"I consider the studio my playground," Kelly says. "It's one of the few places where I feel totally uninhibited and free. The beauty of it is I have great people around who get me, and all the toys and tools are there to help enhance my imagination and the stories I'm telling."

While a lot of people have to work hard to attain the stratospheric hit levels Kelly has reached, apparently all he has to do is...keep playing. A short list of chart-toppers that he's written or co-written include Bruno Mars' "Grenade," Ledisi's "Pieces of Me," Fantasia's "Bittersweet," Kelly Clarkson's "My Life Would Suck Without You," Britney Spears' "Circus," Chrisette Michele's "Blame It on Me," and Miley Cyrus' "Party in the USA."

Just one of those bonanzas might satisfy some songwriters, but the New York City-born Kelly, whose songs have sold more than 25 million cop-

ies to date, seizes every day as a chance to pen an exciting new tune—preferably in a different genre from yesterday. "The business model that I created for myself is that I refuse to be pigeonholed," he states. "I won't be forced to do R&B, rock, country or pop every time. Taking out those boundaries gives me a lot of freedom. When I come into the studio, I have no idea what I'm going to do that day. It's a fun adventure."

On a recent visit to KMA, the intimate world-class studio that Kelly co-owns in Times Square's legendary Brill Building, his genre-busting creative workflow was visible in full force. There, he was in different stages of development on two songs with the emerging artist Masha, whose powerfully expressive voice is central to a collaboration between Kelly and Nashville-based producer



Masha (left) and Kelly

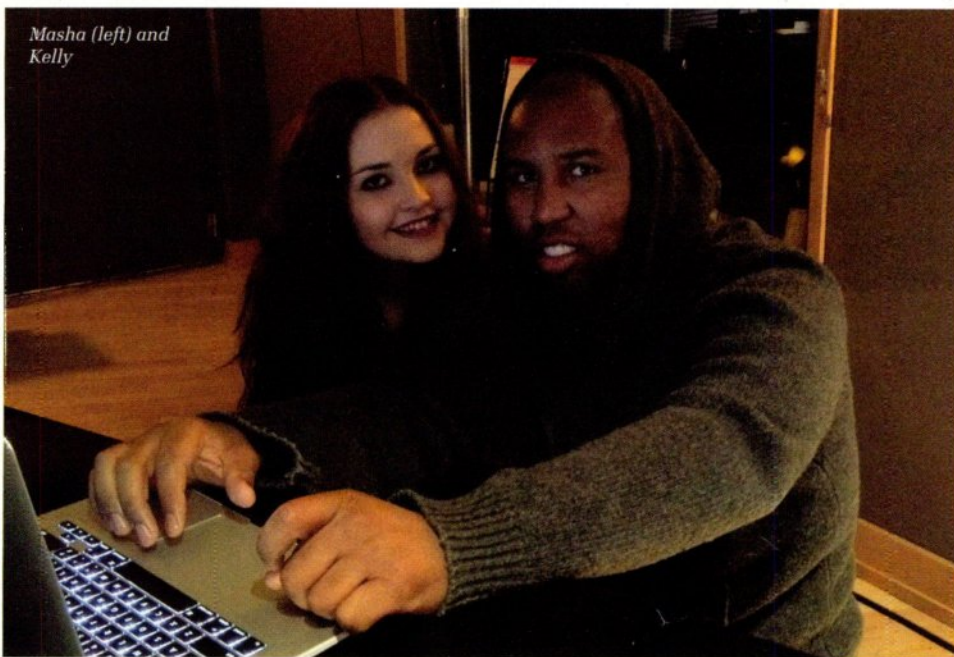


Photo: David Weiss

Nathan Chapman (Taylor Swift).

First, Kelly listened via the Griffin main monitors in KMA's spacious control room as Masha overdubbed a dynamic lead vocal on the song "Ugly." "I have an anything-goes mentality in terms of what I'm listening for on a vocal recording," he explains. "I really don't care too much about pitch. I believe in good pitch, but that's never as important as emotion to me."

"For that matter, no plug-in or mic is so precious that I'll take it over emotion," he continues. "The problem with a lot of studios and musicians is that they boast a lot of fancy stuff. I say, 'Yeah, but do I believe or feel anything coming out of the studio?' All of this stuff was invented to aid in us getting chills, not prevent it. I always remind myself that AutoTune and Pro Tools are great, but are they aiding us in getting songs that will be the soundtrack to our day? If not, I don't want anything to do with it."

An avowed multitasker, Kelly hits his email for a few minutes to get caught up on multiple projects, then quickly refocuses on Masha as he hits the live room, where he'll move a new song forward with the singer and her musical collaborator John Lardieri, playing acoustic guitar.

Seated behind the piano, the Berklee-trained Kelly quickly helps flesh out the as-yet-untitled song, which has most of its lyrics and a simple melody line written, but little else. As Masha sings, Kelly is able to track many things at once—tempo, pocket, bridge, counter-melody, and lyrical ideas—and seems to sculpt the song on-the-fly. Throughout, he maintains a sense of humor and perspective to ensure that the music, and not his ego, remains the most important thing

in the room.

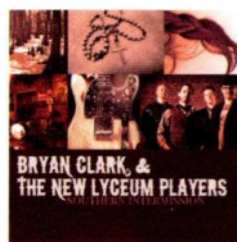
Meanwhile, Kelly's longtime engineer, Ben Chang, mans the Avid ICON in the Studio A control room, recording every second—a measure Kelly insists is made, no matter how much hard drive space it takes up. "There's a lot that's recorded that's probably wasted space," he acknowledges, "but it's worth it for the two or three seconds of experience when you want to find it. Sometimes two hours after you start writing, the tempo slows down—you want to be able to go back to the beginning and hear what your natural instincts were."

"For me, the hope is that we'll catch synergy, so keep the mics going so I can hear everything. I may get up, hit the bongos and give us exactly what we needed. I learned that early on in Berklee: Everything had to be rehearsed perfectly and presented there, but it's actually the things you can't control that might be essential. I've studied some of the old Michael Jackson recordings, and he sold millions of records because he didn't sacrifice the feeling. The people around me have learned that philosophy: Those are the things that make a song magic."

Far from keeping his sauce secret, Claude Kelly is on a mission to show as many people as possible how a song unfolds in production. "We in the studio need to be more open about our process," he states. "If people realized how hard we worked to make a two-minute-and-30-second song the best possible, they wouldn't steal it. Beyonce and Lady Gaga take nine months to make an album for a reason: It takes all that time to record, mix and master it so it becomes something that people can dance to."

## BRYAN CLARK AND THE NEW LYCEUM PLAYERS

Playing with familiar forms and attempting to update them is central to the music-making process—as is championing a particular regional sound. Taking something familiar and making it your own, however, is an elusive feat. On *Southern Intermission* (Rainfeather Records), Nashville-based Bryan Clark and The New Lyceum Players take traditional American rock and roots influences and elevate them beyond their Music City, Memphis and Delta foundations.



Clark is a remarkably literate songwriter and storyteller, and The New Lyceum Players (Clark on guitar and vocals, Adam Fluhrer on guitar, Benjamin "Mo" Levine on bass and John Toomey on drums) are an ace band,

able to inject these vivid songs with performances that are red-hot one minute, nuanced and subtle the next. The album's centerpiece, "Leave the Devil's Garden," displays the instrumental thrills, arranging dynamics and lyrical craft.

Produced, engineered and mixed solely by Clark at his Rainfeather Studios, he gives the instruments plenty of breathing room even when the band is wailing, so as horns or strings enter the mix, the songs never crowd, only deepen. Recorded live in the studio, with ribbon mics (no EQ) through a Tascam DM-4800, with vintage outboard gear including an EMI TG12413 Zener-Limiter and a Shadow Hills Optograph into Sonar X1 Producer, the album is infused with a warm sonic richness that allows for little touches of Hammond and gospel vocals to sharpen the tracks.

Plus, *Southern Intermission* is a guitar player's feast. Clark and Fluhrer seamlessly cover tremendous stylistic ground. A chicken-pick riff might drive one section only to segue into some liquid, Allmans-inspired dual-leads the next. Tasteful lines reminiscent of Mark Knopfler laying back give way to grimy slide vamps. There's something like John Scofield jamming with Lynyrd Skynyrd here, and modal jazz runs meshed with full-tilt, '70s tube-driven boogie there.

Producer/engineer/mix engineer: Bryan Clark. Assistant engineers: Mark Lange, Alan Litten. Recorded at Rainfeather Studios, Brentwood, Tenn. Mastering engineer: Jim Demain at Yes Master!

—Malcolm Rhoads



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## CHICK COREA AND GARY BURTON MARK 40 YEARS

Two of jazz's busiest and most prolific players, pianist Chick Corea and vibraphone master Gary Burton, have managed to get together periodically to make beautiful and challenging music for 40 years. They celebrate that milestone on their forthcoming September release, *Hot House* (Concord/Jazz), on which the duo takes a spin through imaginatively arranged tunes by Jobim, Brubeck, Monk, Gershwin & Weil, The Beatles, Bill Evans and more. There's also one track written by Corea featuring a string quartet—the delightful “Mozart Goes Dancing.”

The album was recorded by Corea's longtime engineer, Bernie Kirsh, at the pianist's Mad Hatter Studios East in Clearwater, Fla. (except “Mozart...,” which was cut at Avatar in New York City). “We set them up fairly close together with no baffles between the instruments,” Kirsh comments. “The vibes were set up to the left of the piano—on the side of the piano opposite the lid opening—and Chick and Gary were facing each other.

“I used two mics on each instrument—they were all the AKG C12 VR model. For preamps I used a pair of Neve 1073s for the piano and a pair of Neve 1081s for the vibes.

“The mic placement for the piano was a near coincident pair—like an ORTF setup—inside the piano, about where the curve of the piano is located. For the vibes, I used a spaced AB pair over the instrument. When I mixed, I panned the piano hard left and right, and panned the vibes somewhat less wide, which seemed to work out well.” —Blair Jackson

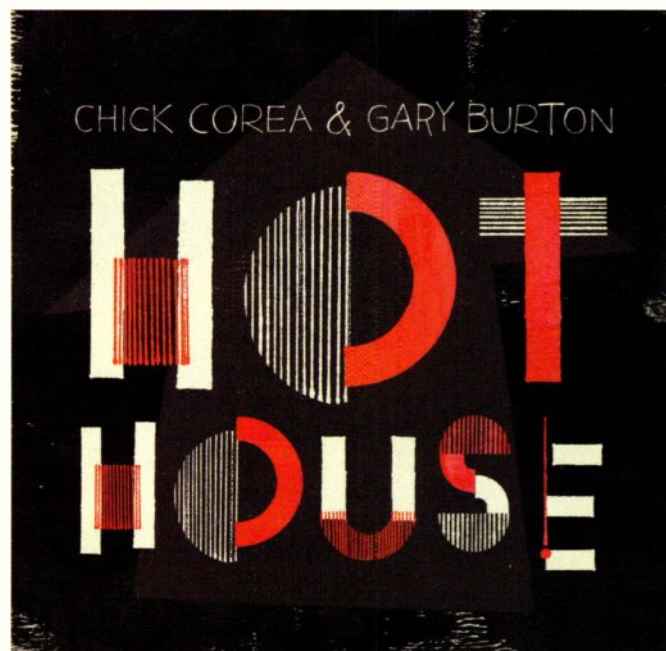


Photo: Drew Crozier

## THE VILLAINS RECORD IN NASHVILLE

The Villains, out of Atlanta, draw inspiration for their vocal-driven, country-inflected rock from the catalogs of The Band, The Eagles and Fleetwood Mac. For their 2012 sophomore release, *Velocity* (Toucan Cove/Universal Republic), the band turned to producers Stan Lynch (Tom Petty and The Heartbreakers, Don Henley) and Billy Chapin (Backstreet Boys, Edwin McCain), recording in Nashville's Sound Emporium and Sound Kitchen, with Gordon Hammond engineering. “The Villains have three lead singers, and each singer required a style and ‘scale’ of production that allowed his voice to shine,” Lynch says. “It’s like making three different records at the same time that have to all work together. Billy and I had never worked with the band. The songs had not been ‘road tested’ and we had two days to rehearse, so we all worked hard and fast to arrange the tunes and give them a band feel.”

—Matt Gallagher

## ZEHNDER: LIVING IN THE MOMENT

Los Angeles-based band Zehnder (bassist Timothy Gibbs Zehnder and guitarist Tom Zehnder, with drummer Mike Boggio) set out to simply have fun in the studio as they produced their latest self-release, *Now*. “The basic theme was that sense of play, getting back down to your roots, to be light-handed on what we’d add to the two vocals, bass, guitar and drums,” Tim Gibbs Zehnder says. “We allowed each song to have its own approach.” They recorded and mixed in Tom Zehnder's Vapor Trail Productions, a 280-square-foot room with a Pro Tools|HD 3 system. “I mixed everything in the box,” Tom Zehnder says. “In general, I used room mic tracks along with small-room reverb plug-ins. Before any of the reverbs were engaged, I contoured the individual channels with EQ and compression, but not on every channel. I chose to squash some drum channels and not others.” —Matt Gallagher



Photo: Joel Lipton



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# Classic Tracks

By Barbara Schultz



## THE B-52S “Love Shack”

**W**eddings, bar mitzvahs, backyard barbecues... it just wouldn't be a party without “Love Shack,” The B-52s' campy, happy dance song from their 1989 album *Cosmic Thing*. It's become the alternative, tongue-in-cheek equivalent of Kool & The Gang's “Celebration.” It's odd to think that this monster hit was sort of an afterthought.

By all accounts, the members of the B-52s were feeling somewhat fragile when they reunited to make *Cosmic Thing*, the follow-up to *Bouncing Off the Satellites*. The group that hit big with their off-the-wall approach to groovy dance/surf punk had scored mega-hits in the late '70s and early '80s with songs like “Private Idaho,” “Planet Claire” and, of course, “Rock Lobster.” Built on the band's funky experimental sounds, their first four albums all made it to *Billboard*'s Top 40.

However, as is well-known, guitarist Ricky Wilson—brother of vocalist Cindy Wilson—was doing his best to mask his decline as he suffered from HIV/AIDS during the recording of the band's fifth record, *Bouncing Off the Satellites*. He passed away during the sessions. In the few years that followed Ricky Wilson's death, the band took a hiatus and debated whether

to re-form. But after taking a little time, drummer Keith Strickland took on the guitarist's role and began working on new material. By summer 1988, original vocalists Cindy Wilson, Kate Pierson and Fred Schneider, as well as now-guitarist Strickland, were ready to make the next B-52s album.

The band split *Cosmic Thing* between two musician/producers, recording half of the songs with Nile Rodgers and another handful with Don Was, who says he had come to love The B-52s back in Detroit, where he began his career and where he recalls The B-52s were considered an R&B group. “So, the fact that they called me must have had something to do with Was (Not Was), and us being white people who made this dance/party music that wasn't disco,” Was says. “Whatever reason they called me, I was thrilled to do it.”

The band sent Was demos of four of the songs they wanted him to produce. “But ‘Love Shack’ was not included,” he says. “It was ‘Bushfire,’ ‘Dry County,’ ‘Junebug’ and ‘Channel Z.’”

Was traveled to Woodstock, N.Y., where the band went into a few days of pre-production/rehearsals in a barn on the property of Bearsville Studios. Then they moved to Dreamland Studios, also in Woodstock, to record. “We had booked seven days in that studio, and everything went so smoothly with those three songs that we had an extra day before we were going to break down and do overdubs,” Was recalls. “That's when they said, ‘Well, we've got this other song, and as long as we're set up, we could try it. But it's 12 minutes long and we don't know what to make of it.’”

“Now, the way they write songs, they would just jam on a groove, and they would sing stream-of-consciousness riffs; a lot of it would be unremarkable, but some of it would be amazing,” Was continues. “And when someone said something amazing, they'd write it down on a piece of yellow legal paper and tape it to the wall. They'd start at the ceiling, and when they got down to the floor, they'd figure, ‘We must have a song.’ It was all disjointed stuff, a little like George Clinton: ‘Free your mind and your ass will follow’—that kind of thing.”

Was took the band members out on the lawn outside Dreamland, where they spread out all of those pieces of paper. “It started as this disconnected thing on a groove that was just like ‘Cool Jerk,’” Was says. “We untaped the pages, and I guess it took someone objective to say, ‘Well, it looks like this is about...a love shack. And maybe this thing that you have in here once—’ ‘The love shack is a little old place where we can get together’—maybe that's the chorus. Most of those yellow pages had nothing to do with the love shack, but once we had that form, we cut it down to four or five minutes.”

So, with their extra day, the band went back to work, recording the song that had become “Love Shack,” with Was and Dreamland's then-chief engineer Dave Cook.

“The process for recording ‘Love Shack’ was the same as it had been for the other tracks we recorded,” Cook says. “In the big room, which used to be a church, we had [Charley Drayton's] drums. Keith's guitar amp was in an iso booth along with Sara Lee's bass amp. We put the three singers in a





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smaller room off the main room that the control room looked directly into; it had a small booth that Fred was in by himself, peering through a very small window, which looked kind of amusing, and we built booths for the girls out of gobos. They were somewhat cramped, but we wanted to isolate them as much as possible and still be able to cut all three vocals live."

All of the Was-produced tracks were recorded analog, to a Studer A80 machine, using the studio's early '70s vintage API console. "I used Neumann U 87s on all of the vocals," Cook recalls. "All the preamps were onboard, in the console. I used a couple of Pultecs on drums, and probably dbx 160s on their vocals; [Shure SM] 57s on guitar amps and a Neumann U 47 fet on the bass amp, as well as a DI. The biggest challenge was to get the vocals isolated so we could get all the punches we needed. Later we would do doubles and fixes, and add the horns. I remember we listened very quietly on Auratones while doing vocals. Don was very focused on the vocals, and he heard pitch best when he listened quietly on small speakers. It is a method I've used myself ever since."

All of the basic tracks were live, full takes, of which there were many—to the point where the band almost gave up on the song. "The first take was great, but when it started to kick back into that 'Love shack, baby love shack' part, it fell apart," Was says. "So we went for take two, take three. It got up to take 25, and every take felt worse. We knew it better, but it lacked spirit. We went to dinner really bummed, but we said, 'The first take felt great, right? It just fell apart at the end.' We went back and listened, and it was amazing. It had spirit that none of the other takes had, and that's when it occurred to us: Why don't we just punch everything in after 'Your tin roof—rusted.' All we have to do is get the ending right. I don't know why we hadn't thought of that, but it wasn't the sort of thing you did as much then. With Pro Tools, everyone approaches a song like this thing with little modular pieces, but back then we didn't think of it that way; it was a performance."

Cook says that the mood in the studio was professional and generally

pretty upbeat, except for Cindy Wilson. "I remember her being pretty down for a lot of the process," Cook says. "I would look at her, thinking, 'Wow, this must be really tough on her.'"

"You can hear it in that 'Tin roof—rusted' thing," Was says. "Cindy got very emotional. It was like in 12 seconds she went from extreme glee to really depressed about that roof rusting. The intensity of what she did was startling."

That show of feeling may have been difficult for the band to follow, but it ended up being one of the most memorable bits of the song, and that line seems to have its own little spotlight in the final track, which was mixed by Rodgers' engineer, Tom Durack.

Durack mixed the Rodgers-produced tracks on the SSL 4000E at Skyline Studios (New York City), where he and Rodgers worked regularly, but when he began working on Was' tracks, that room wasn't available, so he took a couple of songs to Electric Lady. The first song he mixed there was "Love Shack."

"I remember finding [Dave Cook's recordings] easier to mix than the tracks I had recorded," Durack says, "probably mostly because I came to them with fresh ears. But Dave Cook's tracks were really well-recorded, and when the arrangement and performances are really right as well, a song can sometimes almost mix itself. I also remember being very happy with the sound of the room tracks from Dreamland, and making a lot of use of them in the drum sound."

"I'm always struck when I hear it, how dry a mix for its time 'Love Shack' is," Durack continues. "The drum ambience is just the Dreamland room, compressed. There may be a little EMT 140, too, elsewhere in the mix, but the ambience you hear on Kate's, Cindy's and Fred's vocals—as well as Keith's guitar solo—are mostly just short delays, which I probably worked up with Lexicon PCM 42s and/or 41s, perhaps an AMS DMX15-80 as well."

Durack listened mainly on Auratones and Yamaha NS-10s. He worked in Studio B—also fitted with an SSL console—but he says that his strongest memory of that session has nothing to do with technology. "I've never forgotten this. I got to the studio early and set up the mix, and Kate Pierson was the first member of the band to arrive. She comes into the control room just beaming, and asks me, 'Do you realize where we are?' And I said, 'Yeah, this is Electric Lady.' And she said, 'Yeah, but do you realize where we are? We are in Studio B at 52 West 8th Street.' We took that to be an excellent omen."

Omen or not, *Cosmic Thing* brought The B-52s back to the top of the charts; the album reached Number 4 on the U.S. album chart in 1989, partly on the strength of the Number 2 single "Love Shack." "It's the biggest single I've ever been involved with," Was says. "It was a life changer for everybody involved."

Was went straight from *Cosmic Thing* to producing Bonnie Raitt's Grammy-winning *Nick of Time*; those two releases combined made him one of the most in-demand producers in the business. Cook and Durack both launched freelance engineering careers. Durack does a lot of mixing and mastering in his personal studio, and Cook owns and operates AREA 52 Studios in Saugerties, N.Y.; he combines his recording work there with touring as FOH engineer with Laurie Anderson, Medeski Martin & Wood, Natalie Merchant and others.

Meanwhile, The B-52s continue to be part of everyone's party soundtrack. They're on tour this summer, co-headlining many dates with Squeeze, and PBS has been airing a concert special celebrating the band's 35th anniversary. ■





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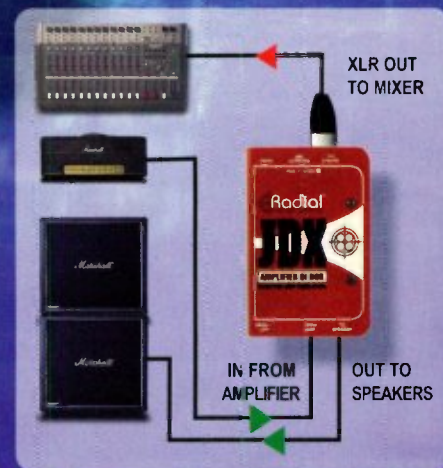
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World Radio History



# Live



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Photos: Dave Vann

## RUFUS WAINWRIGHT

Warm, Complex Sound Showcases New Songs By Barbara Schultz

**R**ufus Wainwright begins his set in near darkness at Oakland's Fox Theater. Only the lowering of the house lights and the glimmer of a handful of flickering candles tell the audience that the artist is about to begin. Next it's a soaring, a cappella performance of "Candles," a song from Wainwright's latest album *Out of the Game*: "I tried to do all that I can," Wainwright sings, "But the churches have run out of candles."

The solemn spell is soon broken. After "Candles," the color lights flash on, and there's Wainwright, decked out in glam shades, a tuxedo jacket

and gold lamé trousers, swaying and singing "Rashida," one of the great pop songs on *Game*.

It's a perfect start for a Wainwright concert; the son of singer/songwriters Loudon Wainwright III and Kate McGarrigle has a rich musical heritage, and a repertoire that ranges from opera and traditional pop to rock 'n' roll and beyond. Onstage, he weaves easily from his own lush, thoughtful originals to his parents' folk songs and back.

Wainwright shares the stage with an eight-piece band: outstanding backing vocalists Charysse Blackman, Krystle Warren and Teddy Thompson (who also plays acoustic guitar); key-

boardist Andy Burton; saxophonist Tim Ries; drummer Ben Perowsky; bassist/musical director Brad Albetta; and electric guitarist Sharief Hobbey. There's a boatload of talent on that stage, and Wainwright is a generous performer, even giving up the spotlight to Warren and then Thompson at one point, for each of them to sing a cover of a Kate McGarrigle song.

But a lot of the focus in Wainwright's current tour is on the new record. "The new album has a lovely, old-school '70s feel to it," says Wainwright's front-of-house engineer Suneil Pusari. "My aim is to keep that warmth, space and groove to it."



Photos: Dave Vann



Suneil Pusari is Rufus Wainwright's front-of-house engineer.



Monitor engineer Magali Couturier

Pusari, who has been on Wainwright's tours for five years, has also worked with a range of artists including Snow Patrol, DJ Shadow, Gomez and Rufus' sister Martha. He's currently mixing Wainwright's shows on an Avid VENUE Profile. "At the moment, we're doing one-off and promo shows before the proper run of shows begins. We're also doing quite a few fly shows and picking up boards locally, so the Profile is ideal, as it is so easily available, and I'll always have a show on a USB stick with me.

"I do tend to use quite a bit of outboard also, to warm things up," Pusari continues. "On this show I like to use [Empirical Labs] EL-8 Distressors on drums, mainly kick and snare. They have so much control over attack and thickness of sound that you can tonally control drum sounds so easily."

Other key pieces in Pusari's arsenal include Tube-Tech LCAs for bass and acoustics, and a Summit DCL-200 on the grand piano that Burton and Wainwright each play at different times in the show. "This softens the transients that you get from harmonics within an acoustic grand that microphones tend to exaggerate, and to have some nice valves in your chain doesn't hurt," Pusari says.

Pusari has to be flexible, however, because it's not always practical to carry all of the rack pieces he would choose. "I also have my show file set up to do everything onboard the Profile, for countries where finding high-end outboard just isn't an option," he says. "So, when this happens, there are a few plug-ins I like to use to help achieve a similar sound. I like the Phoenix Crane plug-in, especially on acoustics. Most of all, I love Massey plug-ins, especially the TapeHead tape-saturation simulation; that brings a warmth to the instruments and a certain soft space that I think is missing on most digital desks."

Pusari also carries an Apogee Big Ben word clock and a Dolby Lake tablet for system tuning. The tour is using house P.A. systems, but they are carrying all of their own mics and monitors.

On that grand piano, Pusari uses the Earthworks PM40T piano mic system, which comprises two mics and an adjustable bar, plus a Neumann TLM 103 in the middle and an SM91 at the low end: "I use the Earthworks for the main sound and continually change the blend of the TLM 103 for warmth and the 91 for attack," he says. "This gives me greater control over tone, phase and how the piano sits in the mix."

That warm, elegant piano sound is one of the most important elements onstage, as Wainwright will perform solo at the piano at different points, playing intimate songs of his own such as "The Art Teacher," as well as songs borrowed from his folks, like McGarrigle's "On My Way to Town."

For Wainwright's vocal, Pusari likes the openness and detail of the Shure KSM9. "Rufus' range is quite large, not only dynamically but also tonally," he says. "He will sing from his chest, his throat, his nose—the KSM9 manages to replicate this quite accurately without being too clinical. His voice can also be quite sibilant, so I like to compress his vocal in two stages: I sidechain an EQ to a Focusrite ISA 430 to act as a de-esser, ducking the whole signal level very fast—as compared with just the top end—then overall compression is through an EL-8 Distressor.

"We have so many great singers on this stage, the balance of the vocals is key to the whole personal nature of the show," Pusari continues. "I've also been working closely with Brad Albetta on highlighting each song's musical strengths, be-

that a certain harmony or keyboard line. There's a lot of pushing faders and a lot of textural and special changes."

Mixing monitors for this complex production is Magali Couturier, an eight-year veteran of Wainwright tours. She's currently using a Midas Heritage 3000 board (though she says she prefers a Midas XL model when she can get one). She says she uses very little outboard: "Just some 31-band EQ, a few channels of compression, and [Lexicon] PCM81 reverb."

The band is on L-Acoustics 115XT HiQ wedges. "With a 10-piece band onstage, quite tight together, I wanted a coaxial box with a narrow dispersion, and there's no better box than these L-Acoustics, especially for this dynamic music," Couturier says. "It's a musical box for a very musical band."

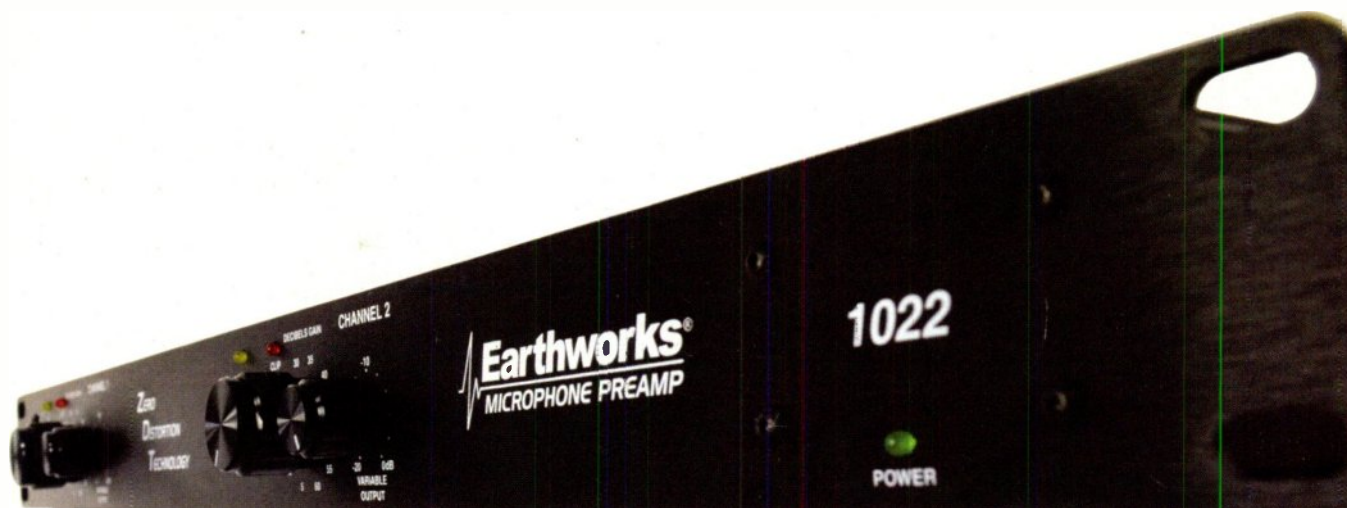
Couturier says she gets few specific demands from Wainwright. "He just wants to hear music," she says. "The challenge for me is the ability to multitask—taking care of nine humans while never taking my eyes off of Rufus, as well as dealing with musicians swapping instruments or places. The key is to keep an open mind and not be too set in any way. Be the brain. You can't just rely on a digital desk's 'brain.'" ■

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## FIXIT | MONGOLIAN MUSIC FROM ANDA UNION

Anda Union Engineer Tim Pearce on miking the horse-head fiddle: "The horse-head fiddle is like a smaller, two-stringed version of the cello. One of the main problems I had using a mic on a stand [on this instrument] is that they are so energetic—it was impossible to keep them close to the mic. With up to eight of these playing at any one time, that is a lot of open condenser mics picking up a lot of ambient sound. The perfect solution was the DPA 4099C instrument clip mic, which I attach using the cello mount on the strings below the bridge. The mics sound excellent live, and by keeping them away from the openings to the sound box and close to the strings, I avoid feedback problems and get an excellent level, as well as sound. I use the same setup on an ancient instrument called the *lkil*—a forerunner of the modern horse-head fiddle—with excellent results."



## CLUB TOUR: THE BODEANS

As The BoDeans' longtime live mixer, John Michaels, points out, not every band has the luxury of carrying full production: "We would like to be carrying more audio gear, but with 11 guys on a tour bus and the industry where it is right now, there's just no money. For now I use a few of my own mics, including a Heil PR30 in combination with an SM57 on Kurt [Neumann's] guitar amp. I use a Sennheiser 935 on Kurt's vocal, but I recently tried out the Earthworks SR40V, which was amazing. We also carry an API Lunchbox with two Shadow Hills Mono Gama mic pre's for Kurt's guitar, an API 512 and a Shadow Hills Optograph compressor for his vocal and an Inward Connections Magnum mic pre. We bring the different mic pre's that can be used for different rooms and consoles. You never know if you'll want brighter or darker pre's, and the Shadow Hills have the three different transformers, so they are very versatile."

"Some of our gear is custom-made. Dave Rapp of Raptor Chops in Denver designed a custom Leslie chop for this tour, and the guitar amps are all Fulton Webb customs made by Jesse



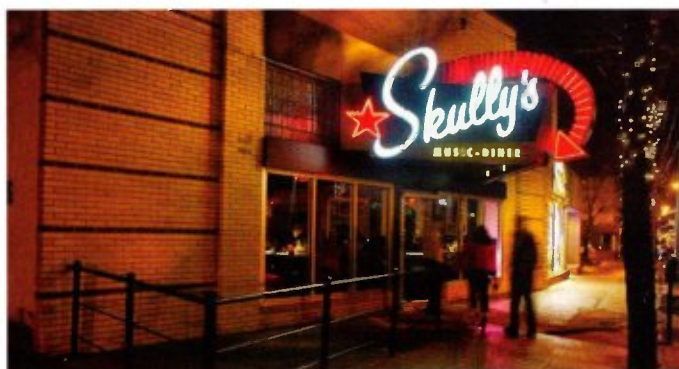
Photo: Nate Iverson

Duke—Eric Johnson's guy—in Austin. The way I approach our live mix is to use eight VCAs to control kick and snare, toms and overheads, bass mic and DI, all the keyboards and accordion, as well as Jake Owen's electric and acoustic, the two mics on Kurt's amp, the vocals, and a DDL fed through a 'verb. This gives me easy control for any surprise leads, breakdowns or big vocal endings."

## QSC P.A. FOR SKULLY'S

Skully's Music-Diner (Columbus, Ohio), a hip-hop and rock venue, has purchased a new QSC KLA Series active line array loudspeaker system. Four flown KLA12 12-inch, two-way loudspeakers per side, purchased from local retailer Sound Ideas, Inc., were installed to improve coverage to Skully's upstairs balcony area. "Coverage was really an issue," says house engineer Luke Wells. "Adding a line array really made sense to reach all the areas and the balcony. I've had compliments from guest engineers since we installed the KLA system."

Skully's features DJ and dance nights every week and promotes local bands, in addition to hosting national touring acts such as The Black Keys, Zola Jesus, Heartless Bastards, Talib Kweli and Gogol Bordello.





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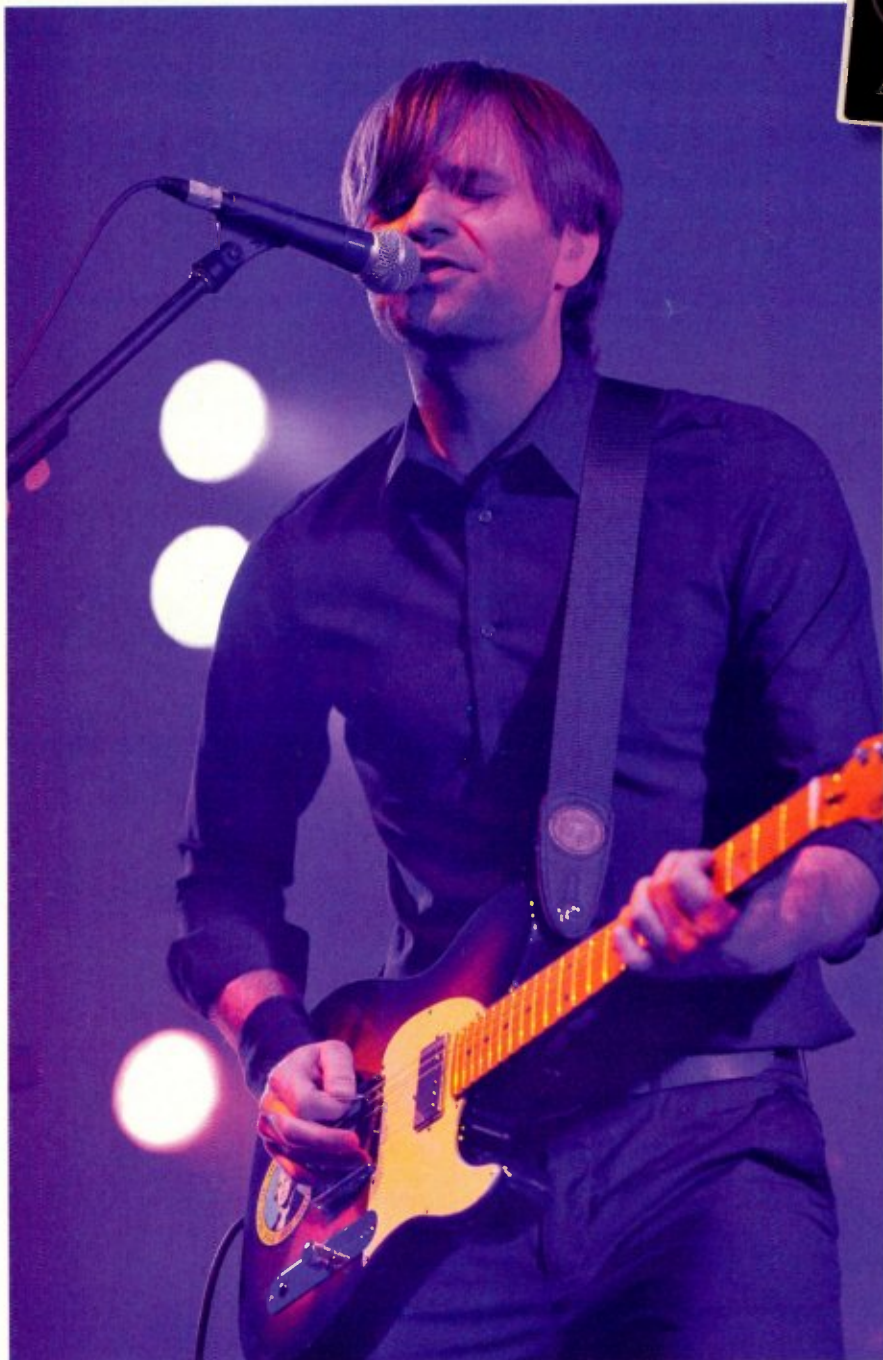
World Radio History



# All Access

Photos and Text  
by Steve Jennings

## DEATH CAB FOR CUTIE



Death Cab for Cutie, fronted by Ben Gibbard (above) and backed by the Magik\*Magik Orchestra, played three nights recently at the Fox Theater in Oakland, Calif. Eighth Day Sound supplied the package: consoles, wedges, front fills, cabling and any extras that came up. P.A. was house provided. The Fox Oakland has a house Meyer Sound system.



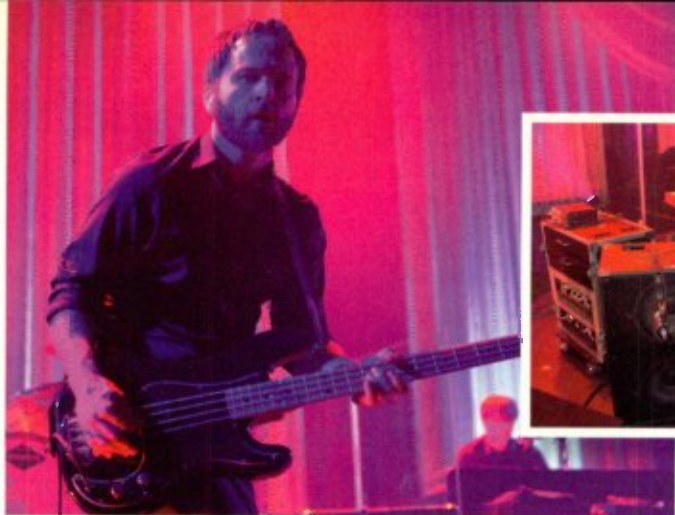
"I'm mixing on a Midas PRO6," says **front-of-house engineer Will Markwell**. "I love the pop groups and the B area to the right. I keep my vocals over there, and I can move between all 56 inputs pretty quickly. The preamps sound great and you can really change the character of the input by how you drive it. This desk doesn't have plug-ins like the [Avid VENUE] Profile. There is an internal rack with graphic EQs, reverbs, multiband compressors and delays. Rack gear consists of a Midas XL42, Distressor and SPL de-esser."

As for mixing the added orchestra, Markwell says, "The conductor/arranger wrote parts that really filled in the gaps and didn't conflict with the guitar parts. I would just try to get them as loud as I could and then bring up the band around it. Some days were a lot easier than others. It really depended on the room design and where the P.A. was flown or stacked."



**Ben Gibbard (vocals/guitar/keyboards)** uses a Z.Vex Box of Rock, Boss reverb, Line 6 delay and micro POG in his footpedal arsenal. He's using Dr. Z 2x10 cabinets running offstage and two onstage as back-ups. The Acme Silverstone was made by Chris Walla's previous guitar tech as an update on the Silverstone 1484; a Heil PR 30 mic is placed on his guitar amp. Gibbard's amps are made by Jesse Quitslund.





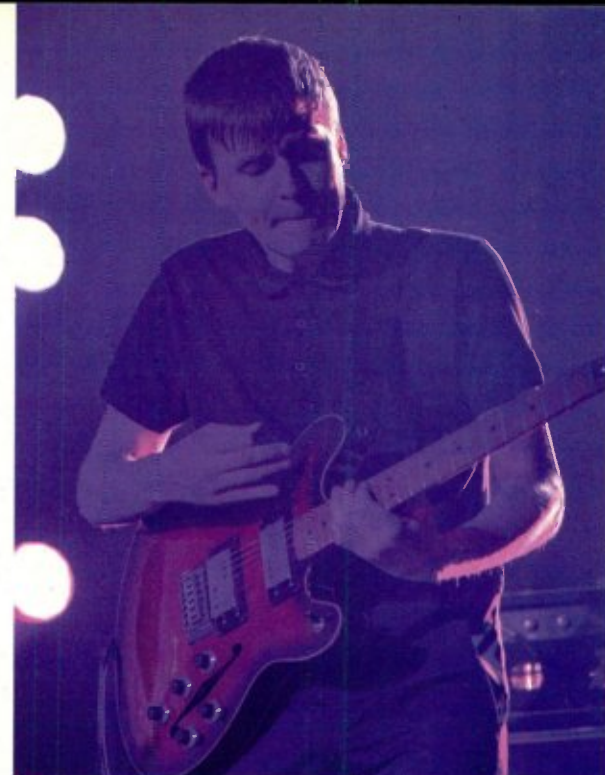
**Bassist Nick Harmer** plays an Ashdown ABM EVO II 500 through a 2x15 cabinet, with a Heil PR40 mic on his amp (pictured at left).



"I'm using an Avid Profile with an Apogee Big Ben external word clock," says **band monitor engineer Christina Moon**, pictured at left. "I love the functionality of the snapshots. As for plug-ins I use the Focusrite parametric EQ and compressors, also the Crane Song

Phoenix. And for outboard rack gear I use the RNC compressors. The band's vocal microphones are Shure SM58s. Their in-ear monitors are Sensaphonic 2MAX, Sensaphonic 3MAX and Ultimate Ears 11 Pros with Sennheiser G3 wireless units. We also use some d&b M2 wedges."

"I'm mixing on a Venue SC 48, which works great for the orchestra," adds **Eric McCallister, monitor engineer for the nine-piece Magik\*Magik**. "Each player has their own in-ear mix, using the Shure P6HW hardwired belt packs. The overhead microphones are AT4051b, which I don't use for their in-ear mix. On every instrument we have a DPA 4099 microphone."



"On this tour I'm working as stage manager, **SL guitar tech for Chris Walla and keyboard tech for Walla and Ben**

**Gibbard**," says Trevor Sellers. "We use two keyboards, a Nord Electro 3 73-key on top and a Nord Stage 3 88-key on the bottom. Both are run into Radial direct boxes. Chris also plays a Korg MS-20 synthesizer with a Boss tuner on top."

"Chris Walla's setup consists of older Fender Bassman amps run into a Dr. Z 2x12 cab with the original speakers replaced with a Celestion Governor and a Celestion Legend. The second amp he uses is an Audio Kitchen; they're a UK company, a really interesting amp. That is run into a Dr. Z 2x12 cabinet, as well. We have also use an Ampeg 6x10 powered with an Ampeg Portaflex head for our Korg MS-20. The top cab is miked with an SM57, an AKG 414 and a Beyer 160; for the bottom cab we use a Heil [mic]."



According to **drum tech Jackson Long**, "Jason McGerr's drum kit microphones are a Shure SM91 and Electro-Voice 868 on the kick, Shure SM57 on snare top and bottom, Audio-Technica 450 on hi-hat, Sennheiser 604s on toms, older AKG 414s on overheads, KM-69 on ride and an Altec 633 on the whole kit."





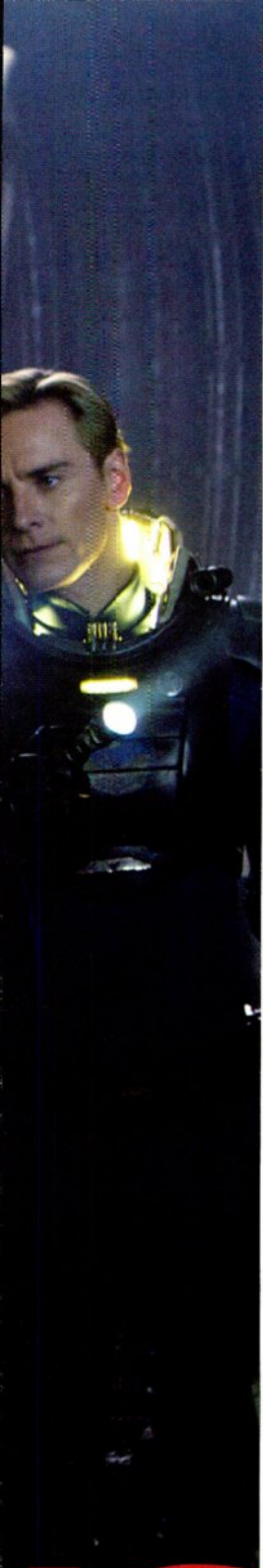
# PROMETHEUS

*Sound Design for Ridley Scott's Frightening Return to Space*

BY BLAIR JACKSON

World Radio History





JS

**R**idley Scott has already directed two iconic and highly influential sci-fi classics: *Alien* (1979) and *Blade Runner* (1982). Three decades down the line, he has returned to the genre with *Prometheus*, an ambitious 3-D space epic that combines the gory horror and gripping dread of *Alien* with a high-minded story involving the very creation of life on Earth and our possible extraterrestrial origins. Though conceived many years ago as a prequel to *Alien*, what he eventually put on the screen is a standalone original saga set to a time a little before *Alien*, but which still “shares some the DNA” of its famous predecessor, Scott has said. (When you see it, you’ll know what he means.)

Always a great storyteller and a visual poet, Scott also cares deeply about sound, and his team on *Prometheus* certainly had their work cut out for them, between dealing with various unusual exterior and interior environments, late 21st-century space ships—the “*Prometheus*” is one—and land vehicles, particle storms, indescribable alien creatures and beings large and small, futuristic gizmos of every variety (lasers, holograms, tracking devices), assorted com voices and warnings, and mayhem always lurking close by.

Co-supervising sound editor Mark Stoeckinger—an Oscar nominee in 2010 for his work on the runaway train film *Unstoppable*—did some minor sound editing work on Scott’s *Gladiator*, but he got his first intensive exposure to the director when he supervised the dark, grim 2010 take on *Robin Hood* with Wylie Stateman. That project couldn’t have been more different—it was set in the Middle Ages, shot almost entirely outdoors and required an extensive palette of organic, mostly realistic sounds. Nevertheless, Stoeckinger says, Scott’s approach to working with the sound crew on each was similar.

“He really likes sound that helps tell the story or set the mood,” he explains. “He’s such a big-picture story person, he’s always cognizant of when the sound is supporting what he’s trying to do. At least from my experience, he never seems to get bogged down in the nuances of what might contribute to the big picture. Instead, he gives you a lot of freedom, which is refreshing and rewarding. He expects you to bring it, figure it out and present him with interesting ideas.”

Is he a director who will want to hear multiple versions of something or choose between several different approaches? “No,” says Stoeckinger. “Interestingly, I think we were in the ballpark more with *Prometheus* than *Robin Hood* as far as the way his notes were. I don’t exactly know why that was. Maybe one of the reasons is because *Prometheus* is far more abstract, so there was more latitude in a sense.”

Stoekinger’s co-supervisor on the film, dealing largely with dialog issues, was Victor Ennis, an Oscar nominee last year for *Drive* (and Stoekinger’s assistant supervisor on *Unstoppable*). Much of the post work on *Prometheus* took place in Hollywood at Soundelux (where both Stoekinger and En-

nis work), though Foley and the mix by Doug Hemphill (FX) and Ron Bartlett (dialog and music) were done over at 20th Century Fox in West L.A.; the final was at the Neve DFC-equipped John Ford Theatre.

Hemphill—a seven-time sound Oscar nominee; he won for *The Last of the Mohicans* in 1992—and Bartlett have a long history mixing films together: In just the past few years, their slate of big-budget action pictures has included *Terminator Salvation*, *Sherlock Holmes*, *X-Men: First Class*, *Rise of the Planet of the Apes* and the 2007 “Final Cut” version of *Blade Runner* which, Hemphill says, “we spruced up more than we changed it. Some of the sounds are not as sophisticated as what you would hear today, or the recordings weren’t quite as good, but that’s part of the alchemy that makes the original tracks interesting.”

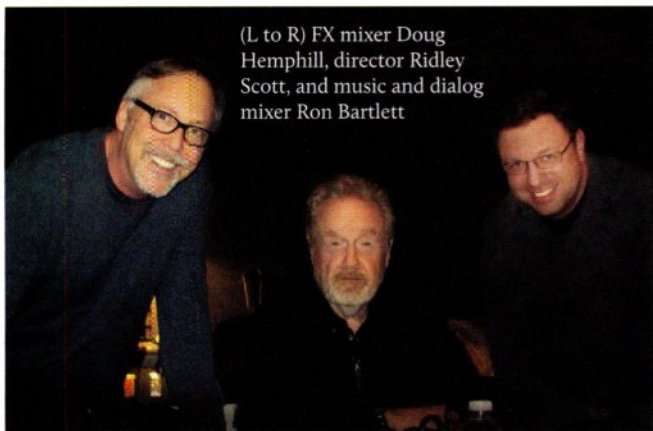
The same could be said of the original *Alien*, yet Stoekinger, Hemphill and Bartlett all spoke admiringly of that film’s sound design, and kept it in mind as they created the new sonic worlds of *Prometheus*.

“When I went to England [while the movie was still being shot],” Stoekinger says, “I met Ray Merrin, who mixed on the original *Alien*, and Terry Rawlings, who was the picture editor, and that was as helpful as anything just because they’re great guys—now retired—with a lot of interesting memories about the making of *Alien*. The inspiration I got out of that was, ‘Yes, we’re doing this film that’s based in part on another classic, but it doesn’t have to be this more modern, polished version of it. It’s still a meeting of the real world and the sci-fi world.’ There are a lot of aspects of the sound [of *Prometheus*] that are old and clunky and metallic, like they had in the original film to a certain degree.”

“Also, even though we can obviously do more with electronics now than they could then, if you listen closely to the original film, they used things like fax modems connecting and various phone sounds and alarms very effectively, so a lot of the sounds started off that way for us as well. The end result would be something that was a little granular-gritty and not overly clean; like some of the sheen had been taken off it.”

“We spoke with Ridley a lot about *Alien*—what he liked about it, what the cool elements were,” Bartlett says. “We





(L to R) FX mixer Doug Hemphill, director Ridley Scott, and music and dialog mixer Ron Bartlett

tried to take some of those concepts into the new one, and there were some specific things: like David, the android character, has a certain moment in the film where his voice is altered, so he's talking in that same altered way as a character in the first *Alien*. He's got that same kind of gargly voice. We analyzed that and tried to come up with our version that would be slightly different, because it's a different kind of android, but hearkening back to the first *Alien*."

Stoeckinger adds, "I called [Soundelux editor/sound designer] Charlie Campagna and asked, 'What would they have done in 1979 to create that

some weird, wet, sticky voice sounds and that got processed a little bit. So we took inspiration from what they'd done and put our own spin on it."

Hemphill also suggested using an Electro-Harmonix Ring Thing, a single sideband ring modulator. That came in handy for the android character at one point and, Bartlett says, "I also used it in a weird way, where I was trying to age this character who's supposed to be very old. Ridley had commented that he sounded too young, so I used that [Ring Thing] and it gave him the sense of a little phlegm in his throat; it roughed up his voice a bit, so it wasn't such clean ADR."

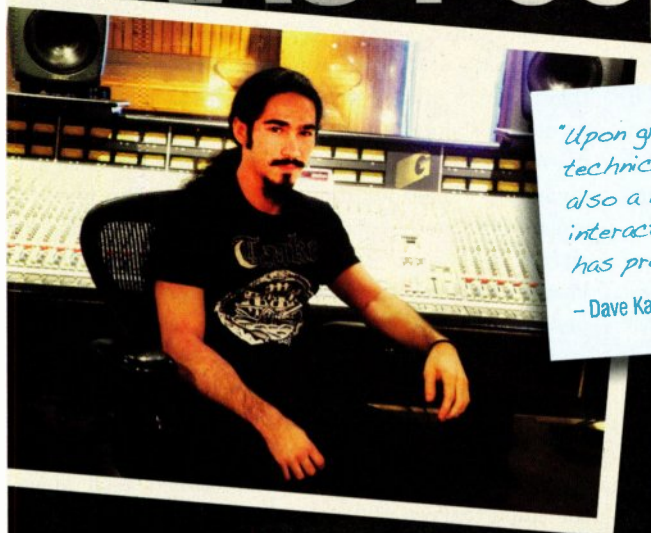
warbling effect in his voice? I know how we could do it now, but how would they have done it then? Let's reverse engineer this a bit. So we broke out a bunch of guitar pedals and used things like an MXR flanger and found ways to do something similar. And what can we do for the gurgling and gaking? I had a bottle of water and a microphone on my desk and made

Hemphill also employed some "old school" Fulltone ETC-1 tape delay/echo. "I have a quad delay built into the board [DFC], but it doesn't give quite the same feedback characteristics as 15 ips [tape]. So if I wanted a certain sproing-y sound for caverns, I would use that." Hemphill used an Eventide Space delay judiciously, as well as more conventional reverb tools, such as Lexicon 480 and 960 and an Altiverb Pro Tools plug-in.

Another challenging aspect of the sound was the large amount of dialog that is spoken inside bubble space helmets. Production Recordist Simon Hayes placed radio mics in the space suits and captured what he could that way, but the combination of fans inside the suits to keep the actors cool and changes in the sound as they moved and turned their heads led to a fair amount of that dialog having to be replaced. Having lead actress Noomi Rapace hold one of the fishbowl-like helmets in front of and slightly above her during ADR "sounded pretty good, but it wasn't controllable," Stoeckinger says.

Bartlett interjects and further explains: "So Charlie [Campagna] took a helmet from produc-

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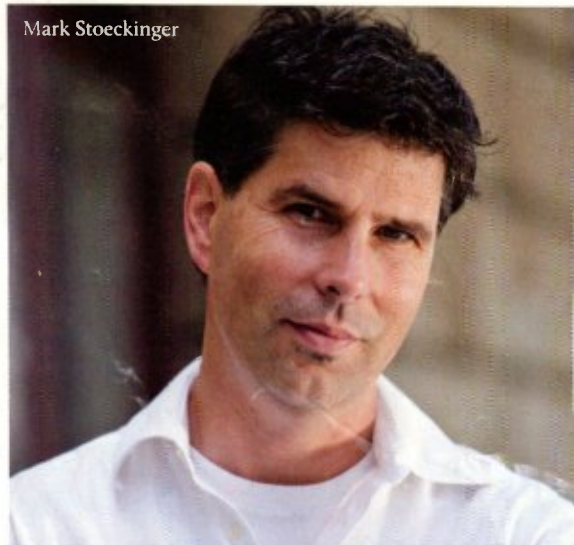
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Mark Stoeckinger



tion, placed it over a speaker and miked the inside of it, sending a sine wave through it and recording it. Then it was processed through Altiverb, and it makes it, in essence, a reverb chamber. I took that and sent a dry recording of the ADR through that reverb and it re-created the helmet. It worked great."

Ann Scibelli designed the creature sounds in the film, as well as many of the interior cave spaces, and creatively employed electronic blips, bleeps and zaps, along with Alan Rankin, who created all the vehicles. "Alan made a lot of interesting sounds for the Prometheus based on real-world sounds—rocket-type sounds and metal sounds and also organic vocal elements, but the vocal elements are very covert; they're just helping to give some shape and movement, rather than creating a sound," Stoeckinger notes. (Stoeckinger, Scibelli and Rankin all worked on *Unstoppable* and *Star Trek* together; they're quite the team.)

Stoeckinger notes that "the flamethrowers and most anything that blows up always has a vocal element of sorts to give the sound either pitch and tonality, or just something to color the sound and make it more intense or evil-sounding." Scibelli's sonic legerdemain included recording her parrot, Skippy, and tweaking the sound electronically, as well as using altered dog recordings for part of the sound of the high-tech tracking/sensing devices (called "pups" by one character) used to explore mysterious caverns.

Remember Pop Rocks—that candy that exploded on your tongue? "We put them on different surfaces and recorded it," Stoeckinger says. That was Foley artist Dan O'Connell's idea.

"Also, Charlie and I roamed around the Fox lot where they had these huge old blowers and water cooling systems from the old studio days that are still in use, and used that as one of the elements of the interior of the ships," Stoeckinger says. "It was this big, bulbous sound of water bubbling or gurgling. It's very unsettling, and it doesn't

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matter that you don't see water."

"The way we worked," Hemphill notes, "we weren't trying to literally create sound for what we see; we were trying to do a feel thing. If it's cool or interesting or what we were trying to say story-wise, it doesn't matter if it's what we were actually seeing."

"Do we want people to feel claustrophobia in this part? Or do we want to impart the vastness of something? The original *Alien* had oodles of that claustrophobia, and we definitely brought that out of the toolbox a few times. So much of it is about creating a mood and a feeling, so whatever it takes to communicate that."

#### THE FINAL MIX: LIVE!

After two temp dubs, when it came time to start the final mix, Bartlett relates, "Ridley walked in the first day and said, 'Here's what I want to do: I want to go through the whole movie in, like, three days, so I can really get a look at it.' So it was all predubs up—hundreds of tracks—and go! It was big moves and a flow. 'Play a scene, don't stop. Give me a flow of what you're feeling!'"

Hemphill adds, "When Ron says Ridley said 'Just play the scene,' what he meant and expected was for us to respond to the movie with our hands on those faders. You're working on instincts in the mix, so you work very quickly and work on the concepts, rough 'em out—what the sound of a particular environment is, the creatures, what the flow is, the pacing. Because he was very into creating mood. It was a barrel of fun."

Bartlett continues, "It's a real performance-based way of looking at it. We would latch onto something and he'd say, 'Yes, yes, more of that! Get rid of that other stuff. That's what I want!' It was a real good way to sit back and watch the flow of the film. It's so easy to get caught up in the minutiae that you lose sight of the film as a whole."

"And of course that's not how the audience sees it," Hemphill says. "Sometimes a scene becomes not about the details of what you see but of the flow of energy that's building toward something. And that is more important than any details in any film, but especially a film like this."

Of course, following this fast-paced three-

day exercise in big-picture flow came weeks of more traditional final mix work—fine-tuning the dialog and effects tracks (some because of late-arriving visual FX) and balancing those with Mark Streitenfeld's haunting and evocative score, which combines traditional orchestrations with processed instruments and tones. "There may be times you'll be hard-pressed to tell when music starts and sound design ends," Stoeckinger comments. "Ridley responds really well to musical sounds, no matter where they're coming from."

"Ridley is one of the most creative inspirational people I've ever worked with," Hemphill says. "When I start a mix, the first thing I think of is mood and story and character; that's what drives me. Ridley is one of the masters of that, so working with him was a real pleasure every day. Part of mixing a Ridley Scott film is working directly with him. Some directors will come in and hear final playback or whatever, but it's sitting there with Ridley and getting his ideas and having a group of people work with him that really makes it spark. ■




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# KENNY CHESNEY AND TIM MCGRAW

**BROTHERS OF THE SUN 2012**

BY STEVE LA CERRA

Photo: AP/Mark J. Terrill

**K**icking off on June 2 at the Raymond James Stadium in Tampa, Fla., Kenny Chesney and Tim McGraw's Brothers of the Sun tour will play to more than a million and a half fans in 22 stadium shows over the course of this summer.

In addition to music from his extensive catalog, Chesney and his band are debuting their newest release *Welcome to the Fishbowl* (BNA Records), including the hits "Come Over" and "Feel Like a Rock Star," the duet with McGraw. It's a huge undertaking, boasting state-of-the-art P.A. and video, special guests Grace Potter & The Nocturnals and Jake Owen, and an encore that promises to rock the house.

A tour of this magnitude has serious audio responsibilities, being expertly handled by Bryan Vasquez

(front of house), Phill "SidePhill" Robinson (monitors for Chesney and guests) and Bryan "Opie" Baxley (monitors for Chesney's band). Lights, staging and P.A. are provided by Morris Light and Sound (Murfreesboro, Tenn.), and each of the three engineers is using a Midas PRO9 digital desk to handle approximately 60 inputs from the stage. Front-of-house P.A. is an Electro-Voice X-Line with XLC boxes for the delay system.

Vasquez—Chesney's FOH engineer for the past 12 years—explains the nature of this particular tour: "We've

done stadiums in the past, but these are back-to-back Saturdays and Sundays. We'll roll in Friday morning for a normal stadium load-in, giving us the option of a soundcheck on Friday night. But after the show on Saturday we head for the next city, and that puts a squeeze on us. We won't have time for soundchecks before the Sunday shows. It's going to be run-and-gun. In order to make this work, we have two separate rigging packages out, plus some redundant peripheral gear like snakes to front of house. So we can roll in the second day with the P.A. and the lighting rig, fly it, set up the consoles and band gear and do the show."

Chesney and his entire band are using in-ears. Drummer Sean Paddock and keyboardist Wyatt Beard have their own mixers onstage, while the rest of the band use Sennheiser 2000 Series wireless systems, with JH Audio JH16 Pro earpieces. Chesney is using the Shure PSM 1000 ear system, also with JH Audio JH16 Pros.



Supplementing the ear mixes are wedges (Nexo 45 N-12 arrayable line monitors) and fill speakers. Baxley creates "seven stereo ear mixes for Kenny's band, but each one of those mixes also has a wedge for low end and fill, and we have sidefills for the guys downstage. We started rehearsals with just the ears, and once we got the mixes comfortable for each musician, we added what they felt was missing in the wedges and fill speakers. The ears do reproduce those frequencies, down to around 50 Hz, but you miss the feel factor, that air movement that you get in a live setting where there are a lot of wedges or where it's a smaller stage. There's a lot of separation between each guy on such a big stage."

Robinson concurs, saying, "The fills and wedges help keep up the energy onstage. When we started doing bigger shows three or four years ago, we built a 'T' out to the audience, and it was simply not possible to carefully watch both the band and Kenny while Kenny was out on the T. That's why we split up the monitor mixes. When Kenny's in front of the proscenium in the sound field of a 60-cabinet P.A. system we have to make sure that the energy stays the same and that there's no feedback. The start of the show is a little nerve-wracking because Kenny flies in from front of house on a rig that puts him 12 feet above the crowd, directly in front of the P.A. With a giant P.A. that can fill a stadium, it gets interesting some days to make it loud enough without feedback."

"As Kenny flies around," Vasquez adds, "I'll pan his vocal very slightly to the left as he is in front of the right side of the P.A. and vice versa. After working with Kenny for 12 years, I'm able to kind of anticipate problems before they happen."

Chesney's vocal microphone is a Shure Axient AXT200 wireless transmitter with a KSM9HS capsule, set to hyper-cardioid. According to Vasquez, "Kenny likes to cup his hand around the capsule of his vocal microphone. The amazing thing about this Shure is you don't get that change in tonality, or the feedback, that you get with other microphones when cupped. There's no outboard processing whatsoever—I just use the preamp in the Pro9, and I try to use as little compression as possible so I can let it breathe."

It may come as a bit of a surprise that all three engineers use minimal processing, almost all of which is on-board the Pro9s. Baxley says that he uses one of the Pro9's onboard Klark Teknik reverbs in an unconventional manner for the top snare drum microphone: "You know how you can dial in the LF or HF on the reverb? We're actually using that on the snare top mic to get a little bit more 250 Hz out of the snare—we're doing it with the reverb, not the EQ. I have the reverb inserted on that channel and I use the dry/wet mix to make sure that the level of the snare is the same whether the insert is in or out. It sounds crazy that I am using a time-based processor on an insert, but it works."

Baxley also notes that he does not use gates on the drum mics because Paddock plays brushes in one or two spots and likes to be able to back his dynamics way down without worry that he'll hear gates popping in and out. Mics for the drum kit include Audio-Technica AE5100 for hat and ride, ATM650 for snare bottom, AT4081 ribbons for overheads ("They sound like you're standing next to the kit," states Baxley), Heil PR28 for toms, Shure SM57 for snare top, and Shure Beta 52 and Yamaha SubKick on the kick drum.

Vasquez notes that some of the guitar amps are "placed offstage and some of the guys have cabinets behind them. The offstage cabinets are placed inside big foam-lined boxes with Shure SM57s—30 years and still working! Bassist Steve Marshall has an 8x10 cab onstage, but I take my signal from the balanced line output of an Avalon Vt-737, and he uses the other output for his rig. I don't mike the cabinet, it's just the Avalon."

#### YOU CAN LEAVE YER' HAT ON

According to Robinson, Chesney's main requirements for his ear mix are "clarity, a lot of vocal and some reverb. I have a [Yamaha] REV5 stuck at the bottom of the rack as a comfort from the 'old world' for Kenny's vocal. It's a 'verb I can adjust on the fly without need for a menu." (In Robinson's absence, Baxley quips, "I think that Phill has been using that thing for almost 14, 15 years now. He is married to that reverb. If it goes down, he's screwed!")

"During soundcheck," continues Robinson, "I'll wear my baseball hat because the timbre of the mic can change depending on the type of hat Kenny wears. His



From left: Phill Robinson, Bryan Vasquez and Bryan Baxley

Photo: Jill Trunnell



main hats are a straw cowboy hat that doesn't give me any problems, but he also has a black cowboy hat that is stiffer and more reflective. When you have 75,000 people screaming at your head, all that sound is coming up, hitting that hat and bouncing back into the mic."

#### PUT ME ON THE GUEST LIST, PLUS 8

Although Chesney and McGraw have toured together previously, this one is unique due to the encore. All members of both bands take the stage. Luckily for the three engineers, that doesn't mean the number of inputs from the stage is doubled. As Vasquez explains, "In Kenny's band we have three main guitar players: Clayton Mitchell [lead], Kenny Greenberg [rhythm] and Jon Conley, who doubles on guitar and fiddle. Jim Bob Gairrett is our steel guitar player who also plays acoustic guitar on some songs. Some of the guys have more than one guitar rig. For example, Clayton plays a stereo rig, and a mono dry rig, all miked with SM57s, but I leave the channels up all the time. He has the ability to go back and forth as he chooses and they'll always be there. This means that some of the inputs for the guests are already in place from Kenny's band, which makes things a bit more manageable."

"Tim's band is sharing much of our instrumentation," Baxley elaborates, "because most of our guys have separate rigs coming through two channels—for example, one for a Strat and another for a Les Paul. So if my guy is playing the Strat for a song, then the guest will take up his Les Paul rig. The monitor mixes for the

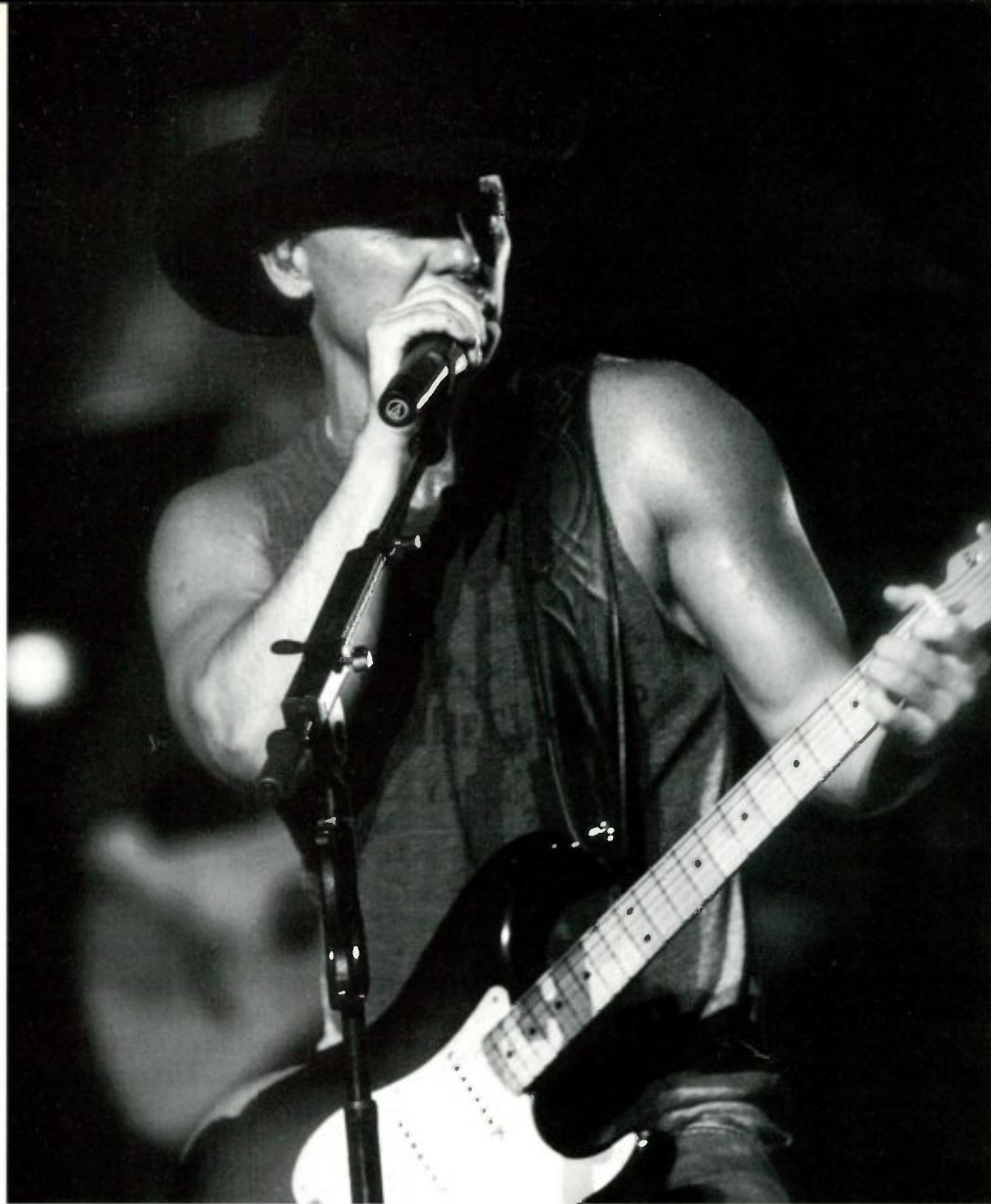


Photo: Jill Trunnell

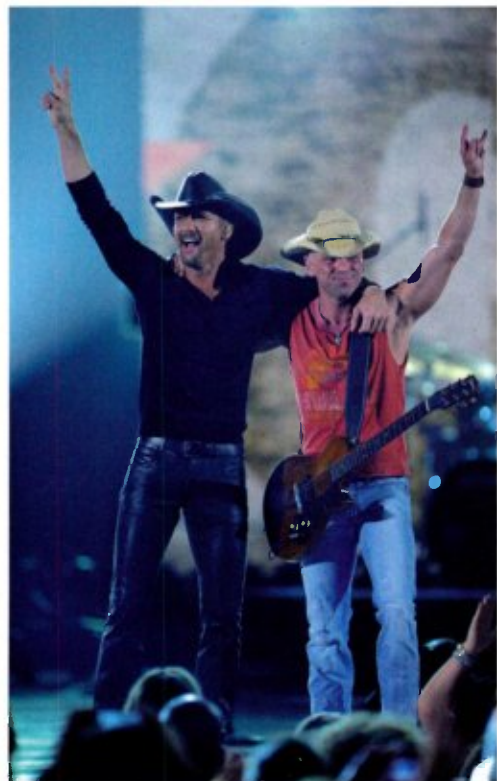


Photo: AP/Mark J. Terrill

guest players are run from Phill's desk because he has open mixes. It's just a few more channels."

At this point in the show, Robinson and McGraw's monitor engineer, Jonny B, are tag-teaming, working together to create 11 more wireless ear mixes from the same Prog. All those ear mixes—combined with wireless vocal mics for Chesney and McGraw and the wireless instrument systems—yield a significant amount of RF activity. Since the DTV reorganization, Baxley has noticed "smaller and smaller gaps for us to fit in our wireless channels, especially when we get to bigger cities. For example, out in the Meadowlands [New Jersey], there are a lot of TV and cell towers. You fire it up and it's a bit of a headache. Stadiums like that where there's a lot of TV coverage sometimes have a wireless coordinator who might come in on our first day and help us find some holes for our systems, but we're usually self-sufficient."

"Terry Fox is our keyboard tech and general fix-it guy," Robinson adds. "He has a wireless workbench in his world and I have a wireless scanner in my world, so together we figure out what everybody needs and set

up frequencies."

Vasquez, Baxley and Robinson all agree that one of the big challenges of this tour is maintaining consistency night to night. The tour carries a mic package, but Baxley says they "take it a step further and use the same microphone on the same instrument every night. For example, we have four identical Heil PR28 mics for the toms, but we'll make sure that the same mic is used for the same drum each night. It sounds a little crazy, but we want it consistent throughout the whole tour."

"On the days we don't get a soundcheck, the band is really relying on us to get it right during line check. They'll only have about five minutes to tinker between Tim tearing down and our video rolling to start our portion of the show. They'll never play as a band until the first song starts on Sunday."

Nerve-wracking indeed! ■

*Steve Lu Cerra is Mix magazine's Sound Reinforcement Editor and mixes front of house for Blue Öyster Cult.*





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# RED HOT CHILI PEPPERS

## CONSISTENT APPROACH CONNECTS BAND AND AUDIENCE

BY BARBARA SCHULTZ /// PHOTOS BY DAVE VANN

**R**ed Hot Chili Peppers are into the third leg of an ongoing tour supporting their most recent album, *I'm With You*, and the live record *Factory of Faith*. Despite occasional personnel changes over the years, the Peppers deliver consistently powerful, detailed sound, in part thanks to front-of-house engineer Dave Rat, who's coming up on 22 years with the band. Rat's long tenure has allowed him to develop streamlined—albeit somewhat idiosyncratic—techniques that help him stay on top of a very rhythmic, dynamic show.

"The Peppers, for the most part, do not soundcheck," Rat says. "They'll soundcheck at the beginning of a tour, and then go for 10, 20, 30 shows without a soundcheck unless they make a major change in the setlist. Because of that, we need a high level of consistency from the techs. My FOH tech, Jim Lockyer, will get the system set up as close to the same

every day as possible. I trust him.

"During line check," Rat continues, "I just have crews checking; I don't have the actual band, so I'm not getting really accurate information from the stage volumes or the way they play. But I don't change very much from day to day on the console side; I just listen to the room, then wander around a little during the support act until our set change. The only thing that really changes for me is the house EQ, and it'll take me less than five minutes to figure out any house issues and be ready to go."

The Peppers' current tour started with dates in South America and Asia, during which Rat used a few different P.A.s. By the time the production reached Europe, they had locked into carrying an L-Acoustics rig comprising K1, KARA, ARC and SB28 boxes, powered by LA8 amps. Rat mixes with an all-analog setup, built around a Midas Heritage 3000.





FOH engineer Dave Rat at the Midas Heritage 3000

"I want to see everything all at once," he says. "For me, [working analog] is about ergonomics and visuals. I want to know everything that's going on instantly without touching a single button. I also set up my board sideways so I can look along the length of it and see all the meters. If you have a board in front of you sideways—normal-ways—you have to scan across it to find something."

Working by feel is also essential to Rat. He uses no external board illumination—just the onboard meters and LEDs; also, no tape, and no labels. He likens his methods to the guitarist who can play while maintaining eye contact with the audience, as opposed to one who has to look at his fingers.

"This way, I'm standing more as an audience member and focusing on the show, rather than focusing on turning knobs," Rat says. "It's important because the Chili Peppers are about community energy and experience. All live sound is, really."

To maximize that connection between band and audience, there are certain rack pieces that Rat has come to rely on. "I don't use more than two effects," he says. "One of them is an old Lexicon PCM 60, which I use for all of my reverbs—vocals and drums. The other is an Eventide H3500, which serves as a vocal flanger reverb on some of the slow songs. I reprogram it and it does the delays for the vocals on other songs, and I reset it again and reassign it as a phaser effect for 'Dani California.' All my key effects are done off that 3500. I really want to minimize the things that I'm altering."

Other go-to gear on this tour includes Brooke-Siren DPR 404 compressors and Empirical Labs' EL-8 Distressors. "I've been adding more and more of those," Rat says. "I have five or six right now. I like that their metering is in 1dB increments so I can really see what's going on. They're extremely flexible in the amount of range I have to control the attack time."

As for microphones, the Peppers continue to employ a handful of tried-and-true models: Audix OM7s on all vocals; Shure Beta 98s on many of the pieces in Chad Smith's kit, some percussion, and bass guitar; Royer R-122s on crash cymbal and other percussion pieces; and SM57s on guitars.

One new development onstage is the addition of a piano. Some of the songs on *I'm With You* have essential piano parts, which were apparently inspired by bassist Flea's recent work with Radiohead's Thom Yorke.

"I contacted Thom Yorke's people and found out that the piano they

used is a Kemble U1 Silent Series K121C," Rat says. "It's an upright, acoustic piano that has a pickup system in it for every string. I'd heard Thom Yorke play live at Coachella, and I know that piano sounds phenomenal, and I knew that was the sound Flea was after, but we were about to go into full production rehearsals and we didn't know where to find the piano. So our production people talked to Thom Yorke's production manager, somebody talked to Thom Yorke, and the next thing we knew, Thom Yorke's piano was shipped to our rehearsals in a Radiohead road case! The piano has several pickups, and there's a footswitch—the middle foot pedal—that stops the hammers from hitting the strings; they only hit these three regenerating pickup transducers. The electronic out is pristine; it doesn't feed back, and it sounds great—like a real piano. Eventually we bought a couple for the band: one for Europe, and one for Stateside. It's the perfect solution to getting a great piano sound in an arena." ■

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# ZAC BROWN BAND



## ALL ABOUT THE VOCAL

BY BARBARA SCHULTZ

**E**ric Roderick has been mixing live sound for Zac Brown since the artist was performing as a solo singer/songwriter in clubs around his home state of Georgia. Since the Zac Brown Band was formed eight years ago, Roderick—who has also worked with R&B group Jagged Edge—has grown with the production, adjusting to mixing in larger and larger venues.

"It's definitely been a learning curve," Roderick says. "When I did bigger shows with Jagged Edge, I was a monitor engineer. Then I moved over to doing front of house, and then went from small rooms to larger rooms. It's been a good three or four years now that we've been in pretty big arenas and stadiums."

This summer, the roots superstars are playing a variety of arenas and amphitheaters, performing for fans and festival crowds around the country; in July, for example, they'll hit Milwaukee's massive Summerfest, as well as individual headlining shows and a few state fairs. Their P.A., provided by Special Event Services (with offices in Winston-Salem, N.C., and Nashville), is a Martin MLA system. Roderick helms a DiGiCo SD7—a recent addition at FOH.

"It's still fairly new to me," he says of the console. "We just got them in February. I like its clarity. It's so crispy, and the high end is smooth. The navigation on it is great, too; it just feels real natural. I was on an Avid

be kind of thin and plinky. The EQ really warms it up and gives it a nice tone, and the compression keeps it in line."

Brown's vocal is captured mainly with a Sennheiser e 865. The tour has an endorsement deal with Sennheiser, and monitor engineer Jake Bartol—who mixes on a DiGiCo SD10 console—provides his mix via in-ears and 2000 Series transmitters.

The engineers also use Sennheiser mics in a number of applications: e 906s and e 609s on electric guitars, an e 902 as well as a DI on bass, and a 908D on rack toms. "We also use a lot of Shure stuff," Roderick says. "The Beta 52 is my favorite kick drum mic. On Zac's guitar, we use a couple of Heils, PR 30 Bs, and also PR 22s on the snare."

"Square One for me is the vocals, though," Roderick continues. "Over the years, Zac has given me tips as to how he wants it to sound, and he always would say, 'Just picture the Eagles' vocals on their records.' The vocal harmony is such a big part of what these guys do. The other thing that Zac always wants to emulate is James Taylor's acoustic guitar playing, his finger picking, so that's the second thing I look for. He's so good at playing a melody and a rhythm part at the same time, and bringing that out is really important. Then I just push everything else up under it."

"There is a lot going on musically onstage," Roderick concludes. "It's definitely challenging finding a place in the mix for everything, but we have the tools to do it. The MLA sound system has such a wide stereo field that we tend to have a little more space than most people to tuck things away—to keep the vocals and any other really important parts out front." ■

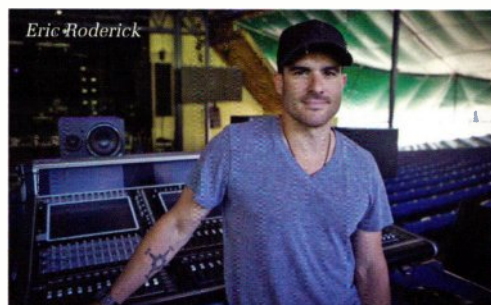


Photo: Kyle Rippey for Southern Reel

VENUE for four years, but the switchover to the DiGiCo was seamless, and it's a great-sounding board. We're mixing our shows at 96k, which a lot of people don't have the opportunity to do, and with the Martin MLA, it's a very smooth, responsive sound system."

Roderick is using all onboard effects and processing, including Waves Renaissance plug-ins and SSL EQs and compressors. "On Zac's acoustic, I use the SSLs," Roderick says. "He plays a nylon acoustic most of the time, and it can





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# KEN SCOTT

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By Blair Jackson

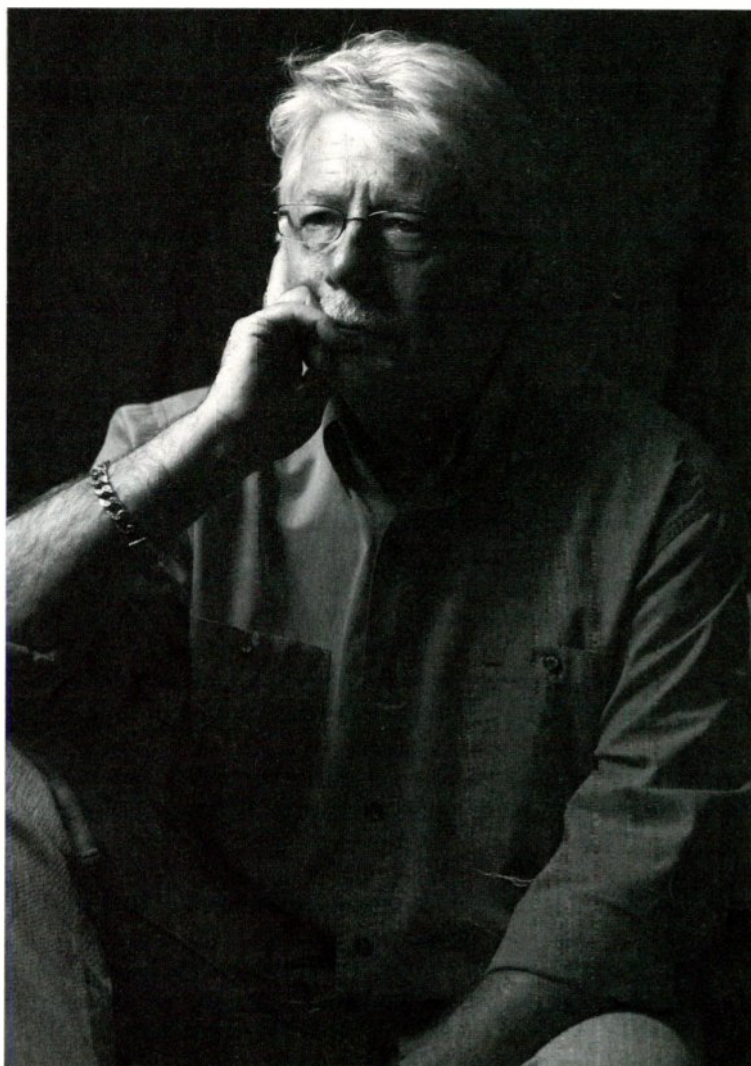
**T**he great British engineer/producer Ken Scott has had one of the most remarkable careers of anyone in the record business. He worked with The Beatles on *Magical Mystery Tour* and *The White Album*, with Bowie on a handful of classics including *Hunky Dory* and *Ziggy Stardust*, with Elton on *Honky Château*, Lou Reed on *Transformer*, Mahavishnu Orchestra on *Birds of Fire*, Supertramp on *Crime of the Century* and dozens of others with the likes of John Lennon, George Harrison, Devo, Jeff Beck, Pink Floyd, Kansas, Billy Cobham, Duran Duran, Missing Persons, Dixie Dregs, The Tubes and so many more.

But even with all those notches in his belt, there was no guarantee that he could put together a book as richly detailed, fascinating and funny as his extraordinary new memoir, *Abbey Road to Ziggy Stardust: Off the Record with The Beatles, Bowie, Elton & So Much More*, co-written with Bobby Owsinski (Alfred Music Publishing; [alfred.com/abbeytoziggy](http://alfred.com/abbeytoziggy)).

This is easily the best book of its sort I've ever read, and it works on so many levels—it's got great stories that give us insights into some of the biggest names in music; it offers a history of recording technology and techniques from the late '60s to the present; and coursing through it all is an unflinching and often self-deprecating biography of our hero as he negotiates the perils, pitfalls and triumphs of a life in the music business. It's a testament to his and Owsinski's skills as storytellers that I was as interested in sections dealing with bands I either didn't know (Happy the Man, Level 42) or have actively disliked (Kansas, Supertramp), as I was in the sections dealing with some of my favorites. His hair-raising account of managing Missing Persons is a detour that says much about the '80s, and his adventures creating the EpiK DrumS library of drum sounds bring his career and the book very much into the present day. I learned a ton, and so will you.

Rather than have Scott recount episodes from the book (we don't want to spoil it for you), we asked him about some issues prompted by some of the anecdotes and from his more general discussions about engineering and production.

**You took a certain route coming up, which was typical of the English system of the day—teaboy, then assistant and working up through the ranks, and then the great break comes along. I wonder what you think the**



**current landscape is like, now that there are so many recording school graduates and more technically experienced young people coming into the job market.**

To a point, even with the engineering schools and everything, nothing has changed. Because what generally tends to happen is people come out of engineering school, they'll go and start at a studio, and guess what they're doing for the first few months—they're picking up Chinese food and cleaning toilets. And they better get damn used to it, but also use their time there to the best of their abilities—listening to what's going on in the studio—more what's being said and how things are being done, rather than listening to the music. The music is important, of course, but one of the major parts of all of this is learning how to deal with people, and that's not something that's taught much in engineering schools.

**You talk in the book about the importance for engineers and producers to try to make decisions quickly, and live and die by them, rather than what has become the norm in studios—putting everything to the end: "Let's have 450 versions of this part to choose from!"**

The whole thing of people not making decisions is not just in recording studios. That's something I see in life every day. You're walking through



a supermarket and you'll hear a guy on his cell phone asking, "Which can of beans should I buy, honey? There are 20 different varieties." They're bloody baked beans. Just pick one! [Laughs.] We have bred a bunch of people that don't like to make decisions.

**That's true, but in the recording industry it's been driven partly by the changes in technology...**

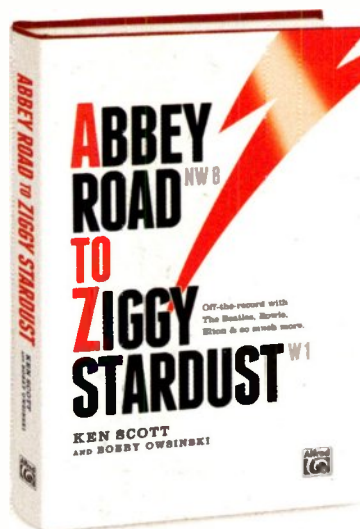
Technology has absolutely made it possible to put off making decision. But I can't say it's the driving force. It's a mental thing of not wanting to make a decision. The technology just happens to have given that part of the mentality the way of putting those decisions off.

**How do you deal with that as a producer or engineer: when the perfectionist artist wants to go for that 75th take of something?**

Well, I probably wouldn't be working on that session. [Laughs.]

I can't say I get bored in the studio—I love being in the studio. But I can get bored doing the same thing day-in and day-out. I come from

the time when an album would be recorded in two weeks. We just kept moving: "We've got to do this." And we got it done. I don't like getting bogged down on a particular part. If it seems like it's not happening, to hell with it. Move on to another song and we'll come back to it later when we're all fresh.



**What would you say was the most radical adjustment you had to make technologically in your career? Going from 4- to 8-track? Pro Tools?**

Actually, I think the hardest one for me was something like Level 42: suddenly going from an American studio that I did a lot of work in, and which really had everything I needed, and then going to England and everyone was sampling and all that. That was a lot to get used to: the original AMS, and we were suddenly throwing in all these little parts. That was a big learning curve.

**In the '90s, we had the great democratization of recording with ADATs and DA-88s and the lower-priced Mackie boards. Do you think that was basically a positive development for recording?**

Wow, that's a tough question. Probably. I think too much importance is put on gear, basically. What sells a record is what happens in the studio. It's the performance and it's the song. I don't think a record is ever sold or not sold because a hi-hat was slightly harsher because it was recorded on one console vs. another, or because it's 2 dB higher or lower. It has to happen in the

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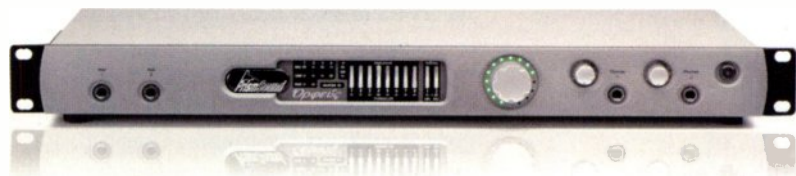
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studio. Obviously, we all want to get something to sound as close and as good as to how we imagine it. But the bottom line is the performance. My problem is that with technology too many people have veered away from the performance: "Okay, that will do. We can put that in tune with AutoTune. We can move it around so that it's more on time. We can cut out that bad note." It needs to emanate from the person in the studio.

***You've seen the evolution of studios. What was the worst period for recording studio design from your perspective? We had the "dead sound" in the '70s for a while...***

I must say, I sometimes think it's been a devolution, rather than an evolution. Most of the time, though, I've been very lucky with the studios I've worked in. There was one occasion—and I talk about this in the book—my first trip over to the States, with Mahavishnu Orchestra, at Criteria [in Miami], and it was terrible. Not just for me as the engineer, but for the band, too, because they couldn't get the sounds they were used to, because the studio was so dead. But that studio was great for other things in that era. For disco stuff—the Bee Gees and all that—it worked perfectly. In England, we had changed and moved away from the really dead sound—which really started with the Beatles, I think. Most studios, as long as I can get the monitors to sound the way I like monitors to sound, I can generally work in them.

***You've worked with a lot of bands where all the players were essentially virtuosos and that obviously brings up its own problems, because everybody wants to be heard and has an ego invested in it—even more so than a band with a leader and sidemen. Can you talk a bit about the psychology aspects of the job dealing with groups like that?***

It's so dependent on who it is and what you're trying to do. For me, I'm always thinking about the end-product. If I feel someone is over-playing, I let them know and I try to point out why it isn't working. Quite often, when you have the virtuosos and they hear back what they're doing, they say, "Oh, yeah, I'm over-playing." But then they go back out [into the studio] and they start the competitive thing again. Sometimes it takes time for them to calm it down in the studio, because they're used to playing that way [live]. But once they get it, they really get it and it can affect the rest of their career, as with Dixie Dregs' [drummer Rod Morgenstein]. You hope you don't have to fight the entire time.

***You've also dealt with every kind of artistic temperament there is, and each is special in his own way—John Lennon, David Bowie, whoever. Is there something you can say about dealing with the artistic temperament in the studio?***

You deal with it moment by moment. I think I learned that from being with John, because you never knew how he was going to be, really, from second to second. You learn



to stay on your toes and deal with it. It's no different, in some respects, to working in a store and you've got different kinds of customers and they're all going to go through their moods. You might have a regular who comes every morning and he's friendly and he talks to you for ages, and this one morning he got up out of the wrong side of bed and he's really pissy, so you suddenly have to deal with him differently. It's the same with artists. They're human. They may have more extreme tendencies than most people, but they're still more similar to us than they are different. They have moods and good days and less good days.

I'm a firm believer in teamwork. I think that the team when we were doing *Ziggy and Hunky Dory* and *Aladdin Sane* worked extremely well together. We almost knew what each other was thinking. We knew our strengths and weaknesses. It's been like that through so many of the things I've done. The Beatles were a great team. They did so much better, in my estimation, together than they have apart. Though they've done great things apart, too, of course. But there was this really special thing when they were all together.

With George Martin, I don't think I appreciated him for what he was while I was actually working with him.

#### Why do you think that is?

It may be that he made it look too easy. It almost looked like he wasn't doing anything at times. But I have come to realize, walking in his shoes, exactly the same thing: There are times I'm sitting there and it looks like I'm doing absolutely nothing. That's the way to work it at that given point. It's knowing when to leave the talent to create, because that's what they're in the studio to do.

#### What are the advantages and disadvantages of working on multiple projects with the same artist? You worked with Bowie a lot, and Elton. At some point does familiarity breed contempt?

It certainly can, yes. My maximum with any act has been four albums, and that's enough. At that point, I think everyone needs a change, because each of you starts to come up with the same ideas, so it becomes a little repetitious. It's almost like the difference between having one songwriter in a band and having two songwriters in a band. The two play off of each other so

they can constantly change what's going on. When it's one writer, eventually everything starts to sound the same. I think it's the same in the relationship between producer and act. Eventually, everything starts to sound the same.

I love the way Devo did it. They were very much into learning. Each album was with a different producer. The first one with Eno, then me, then Bob Margouleff, then Roy Thomas Baker. It would have been interesting to see what might have happened if they'd made two albums with each of us.

#### Is there an artist with whom you did only one album that you really would've liked to make another?

I guess I would have to say Missing Persons, because I had so much invested in that band. The second album could've been so good and they could have had a much bigger career. It's disappointing when you put so much into something and it never reaches what you think it could reach.

#### Your career managing Missing Persons is such an interesting part of the book because it's such a left turn that takes you out of your comfort zone and throws you into this horrendous world of record biz stuff I wouldn't envy anyone go through. Yet your basic attitude about it seemed so positive and it sounds like you'd do it again.

Absolutely. Not the break-up part of it, of course. But the managing part I loved because it was taking me out of my norm. It was a learning experience. And that goes back to the number of albums an artist and producer should work on together. As long as you're learning from each other, it's a good relationship. Once you stop learning, it then becomes repetitious and you're not moving anywhere, so for me, it's time for a change. ■

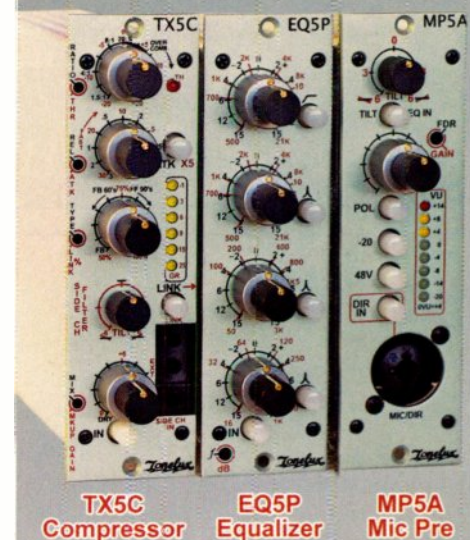
Blair Jackson is the senior editor of Mix.

#### more online



For other Ken Scott interviews, go to [mixonline.com](http://mixonline.com) and check out Rick Clark's October 2004 sit-down and Barbara Schultz's discussion about some of his "Classic Tracks" from February 2010.

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# PORTABLE P.A. SYSTEMS

## Simple and Convenient

**I**t used to be that you needed a degree in rocket science to set up a P.A. system. Mixers, compressors, reverbs, delays, crossovers, power amps and loudspeakers all required careful matching and a fair amount of technical background to ensure proper operation. As technology has progressed, becoming more efficient and miniaturized, many of these components have been simplified and/or integrated.

The portable-P.A. market has certainly grown since the mid-1990s, when the first powered loudspeaker intended for sound reinforcement was introduced, and today it is experiencing something of a boom, with a plethora of products ranging from powered speakers with onboard mixers to compact line arrays that can be set up easily by a single (non-bodybuilder) person.

Hartley Peavey, founder and CEO of Peavey Electronics Corp., has seen his share of changes. "Back in the 1960s when I entered the sound reinforcement market," he says, "you had a choice of the Shure Vocal Master or Kustom K200 [which was basically a warmed-over guitar amplifier]. At the time the Vocal Master retailed for \$1,000, and if you scaled that amount to today it would be about \$10,000. With the first Peavey 100-watt 'packaged' P.A. selling for around \$600, we were trying to bring the price down to a point where musicians could afford it. We really have come a long way in terms of the value we can offer our customers for their dollars, and packaged P.A. is still a very large part of our business."

Richard Ruse, senior director of global sales for JBL Professional, sees "an incredible surge in portable P.A. sales in the price range be-

tween \$600 and \$1,000.

That is the 'meat and potatoes' of portable P.A.

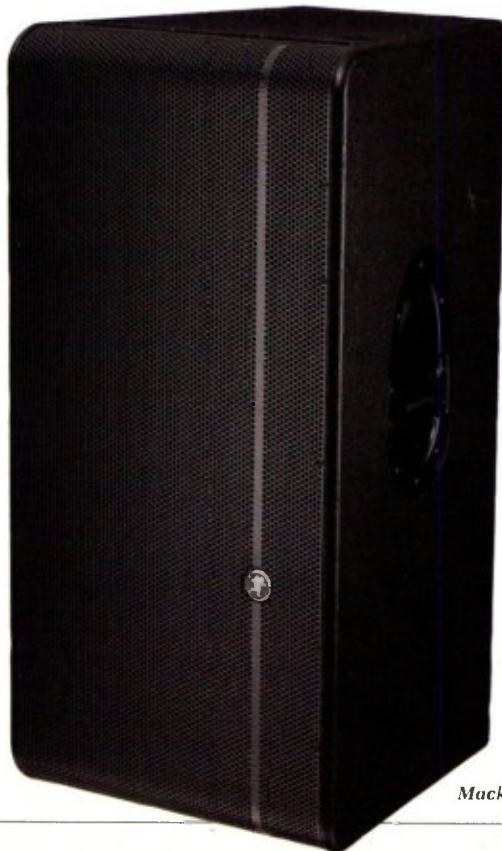
right now and it is essentially powered speakers. Until the time we introduced the original EON, you needed an external amplifier, and if you planned to use a subwoofer you'd need another amp and a crossover. If you really wanted to run the system correctly you'd also need an EQ, a compressor, and somebody who knew how to wire everything together and set them up so that the system did not sound like a telephone. The men and the boys were separated technologically by how much gear they brought to the gig.

"These days, it's all about simplicity and convenience," Ruse continues. "People want to get in and get out. Take the average customer of a mobile DJ: the wedding party. They don't care about the technical details, but in general they're exposed to better audio now than they were five or ten years ago. It's similar with the local blues band."

While the market may be booming, it's not necessarily because of any recent revolutionary breakthroughs. "Innovation in this category does not come along quite as frequently as it did before," says Ray van Straten, director of marketing communications at QSC Audio Products. "How many ways can you



*Turbosound NuQ-10*



*Mackie HD1531*



skin a P.A.? It used to be that you'd go to a trade show every year and say, 'Holy cow, did you see that?' When you don't have these frequent, gigantic leaps in technology, it allows companies to quickly catch up with the state of the art. It's great for the customer because it creates competition and keeps everyone on their toes. Because of that, high levels of product performance are now accessible to a very broad range of users."

Peavey agrees, stating, "Technologies progress fairly rapidly until they reach a certain point where the progression slows down. Right now it's like automobile racing. One race car is not three laps ahead—maybe 20 feet, but not three laps. The speaker is still a cone, a coil of wire and a magnet. With all of the problems inherent in that design, it's still the best means of moving air in a linear way.

"That being said, we're always trying to find better ways of doing things like using a ribbon for the high-frequency driver in our Impulse 12D powered speaker," Peavey adds. "The ribbon generates a planar wavefront for increased intelligibility without need for a phase plug, which creates distortion and increases listening fatigue. Once you hear that com-



**JBL PRX425**

pared to a conventional HF compression driver, you'll never go back." Advances in technology do drive product quality up while keeping prices competitive. Recently, Mackie introduced its HD Series of powered loudspeakers. According to Greg Young, Mackie's director of product management, "The demands of our customers for a powered loudspeaker were simple—in theory. They want huge power, amazing sound quality, a high portability factor, installability and, of course, a good price. In short, the market wanted an affordable, truly pro option. Our HD Series delivers this for users who need more output than our SRM or Thump Series to fill larger venues, achieve wider coverage and create higher output. This leads to a wide variety of customers including DJs, sound reinforcement companies, rental houses and festivals. The HD Series is also great for our install customers who need a variety of rigging options."

#### All Aboard

Onboard processing has become the de-facto standard for portable P.A., including crossover, compression, system EQ and feedback correction. At the same time, certain traditional audio specs, or measures, are used less and less for comparison.

"When dealing with a powered speaker you have a closed system architecture, Ruse says. "Wattage ratings become irrelevant because you are tying amps, input modules and onboard



**DAS Aero 38**

## Portable P.A. Products

**Adamson Metrix**  
adamsonsystems.com

**Alto Professional TS112**  
altoproaudio.com

**Behringer Eurolive B212XL**  
behringer.com

**Bose L1**  
bose.com

**Carvin TRX210N**  
carvinguitars.com

**DAS Aero 38**  
dasaudio.com

**EAW JF60z**  
eaw.com

**Electro-Voice ELX215**  
electro-voice.com

**Fishman SA220**  
fishman.com

**JBL PRX425**  
jblpro.com

**L-Acoustics 12XT**  
l-acoustics.com

**Line 6 StageSource L3t**  
line6.com

**Mackie HD153II**  
mackie.com

**Martin Audio Blackline F15**  
martin-audio.com

**McCauley SA122-2**  
mccauleysound.com

**Meyer Sound UM-1P**  
meyersound.com

**NEXO GEO S12**  
nexo-sa.com

**Peavey SP 4BX**  
peavey.com

**QSC KW153**  
qscaudio.com

**Renkus-Heinz PNX121**  
renkus-heinz.com

**Turbosound NuQ-10**  
turbosound.com

**WorxAudio 15A/Ai**  
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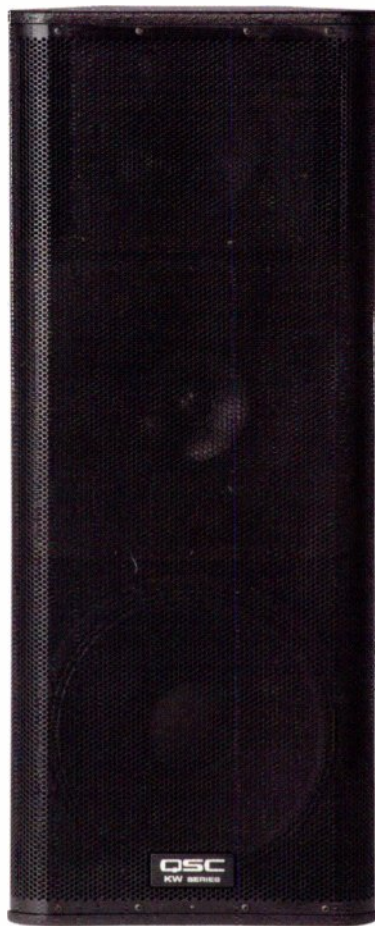
**Yamaha S215V**  
yamahaproaudio.com

**Yorkville U215**  
yorkville.com

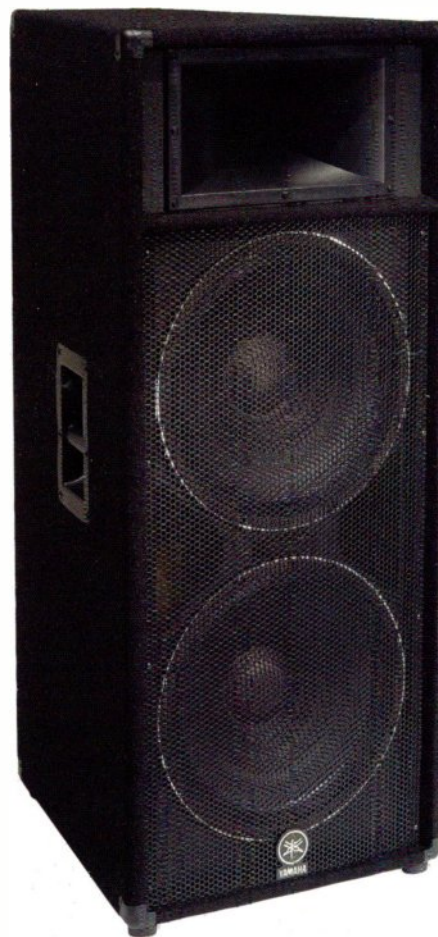




Peavey SP 4BX



QSC KW153



Yamaha S215V

DSP to the sensitivity of the drivers you're using. Power rating is only one feature of a system where the whole becomes greater than the sum of the parts."

According to van Straten, "The questions asked by today's customers are no longer, 'How much power does this thing deliver?' but simply, 'Does it do what I need it to do?' and, 'Is it reliable?' Looking at it from a performance standpoint, we are experiencing a sort of polarization in the market, where there is a lot of price-driven product at the bottom, and pro-level, performance-driven gear at the top. The gear that is price-driven typically offers one or two measures of performance that the manufacturer can hang their hat on from a marketing perspective, like total SPL. We don't have a purely entry-point product in any of the categories that we serve because that's not who we are as a company. Our goal is to provide high performance and overall value to the professional customer at a small premium.

"For example, when QSC brought the K Series to market against the existing competitors in the space, we were \$100 to \$200 more expensive per cabinet," he explains. "Why would you do that? Because the professional customer who values the inherent advantages in

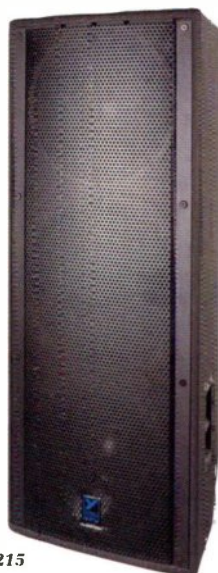
our products recognizes what they are getting for their money and is willing to pay for it."

#### Batteries Not Included

In spite of the popularity of powered speakers, demand for passive models is alive and well. Peavey cites the PR Series of loudspeakers as one of its most popular product lines. Mackie recently introduced its S500 Series, and JBL has rolled out its PRX400 Series. But aren't passive speakers dead?

"There are still large markets around the world where passive speakers and dedicated amplifiers are the preferred system topology," Young says. "Our customers in these markets have consistently requested these solutions, so we are very pleased to offer the new S500 Series speakers and FRS Series power amplifiers to fill this demand."

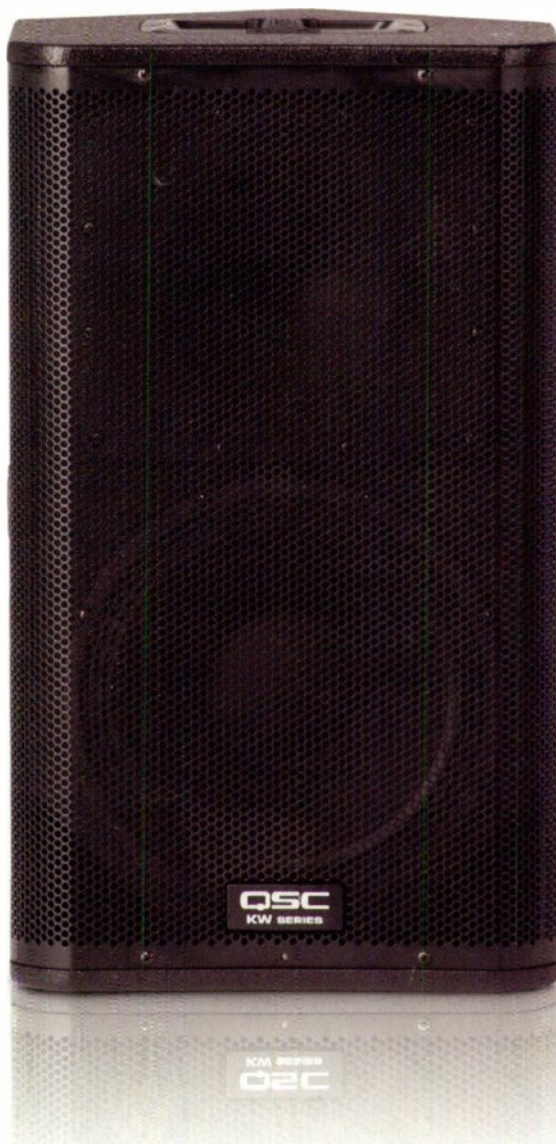
Ruse sees "a huge worldwide market for passive speakers due to the proliferation of legacy amplifiers out there, plus the fact that there needs to be a low-cost installation solution for small bars, VFW halls, civic buildings and churches. One of the reasons we've put M10 suspension points on all of our new speakers is to ensure safety and consistency in those applications. Another concern is this: If I have a church, where do I plug in pow-



Yorkville U215



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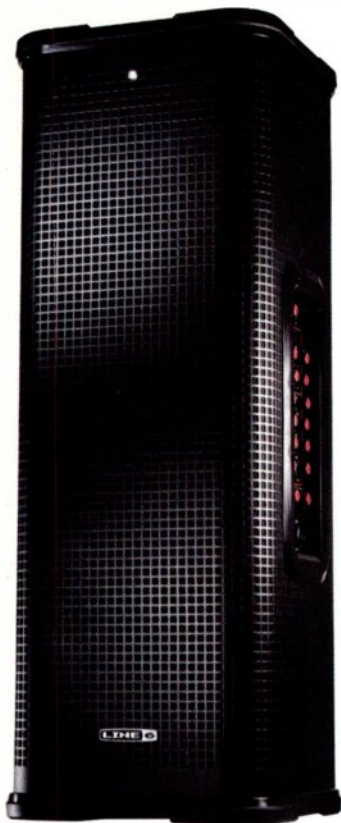


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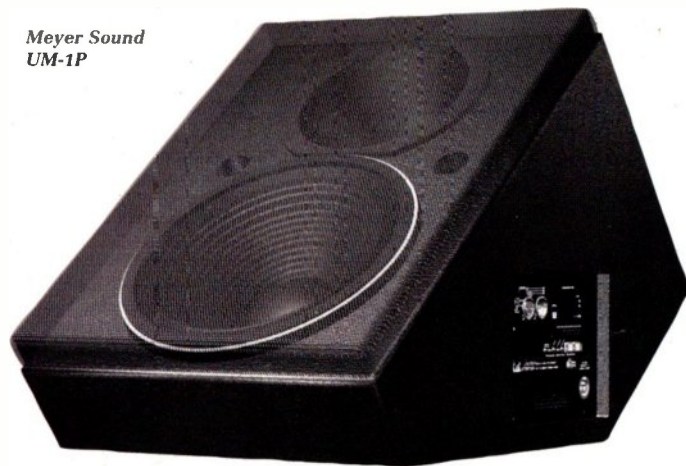
Line 6 StageSource L3t

ered speakers? I need an electrician to install outlets near the speakers, at a cost close to that of the amplifier I already own."

All of the manufacturers we spoke with agreed that the house-of-worship market is strong. "Frankly, there's not many new clubs being built," Peavey quips, "but there are incredible numbers of churches being built. What's unfortunate is that sometimes they'll build a glorious-looking building without thinking about acoustics. You'll find hard walls and floors, and it echoes like a chamber. The intelligibility goes out the window so they come to us for help. In fact, I believe that our Sanctuary Series is the only line of products specifically designed for churches.

"The thing that keeps us alive in the sound reinforcement field is the ever-growing level of expectation,"

Meyer Sound  
UM-1P



Peavey concludes. "Back when I was a young guy, I had a '57 Chevy with an AM radio. I was perfectly content with that AM radio because I didn't know any better. Then FM or tape or a CD player comes along, and we expect that higher level as the norm. It is the job of engineering and manufacturing to design better and better loudspeaker systems to meet that expectation. That's why we exist." ■

Steve La Cerra is Mix's sound-reinforcement editor.

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# ALL GAIN, NO PAIN

## New Mic Preamps Look to Stand Out From the Crowd

By Mike Levine

The mic preamp market has become quite crowded as of late, with—by our count—more than 50 manufacturers making and selling them. With so much competition and variety, it is a buyer's market, including everything from super-high-end, boutique models to inexpensive budget boxes—and a lot in between. Do you want the pristine, solid-state, transformerless sound, or do you want a more colored, warm-tube feel? Do you require remote-control capabilities for location work, or do you require something small for your traveling rack? Do you need multiple channels, or do you need just one or two?

There are rackmount pre's, tabletop pre's and, more recently, pre's designed for the API 500 Series format. In this article, we'll look at the current state of this busy segment of the audio marketplace and take a gander at some of the newer units released since AES 2011. No audio interfaces with built-in mic pre's are included; we covered them in the May 2012 issue.

### Hardware Plug-Ins

In looking over this latest crop of preamps and talking with both manufacturers and retailers, the most consistent trend is the continued growth in sales of 500 Series units, more companies and more models. The 500 Series (or Lunchbox) format has been around since 1984, but only over the past few years has it really taken off.

"You can get a cool piece of outboard gear for well under \$1,000, and that's really appealing," says Eben Grace of Grace Design, whose company jumped into the 500 Series fray last year with the M-501. "Most people who are populating 500 Series racks are doing so with things like APIs and transformer-coupled, vibey-squishy, rock 'n' roll kind of stuff."

"I think it's here to stay," agrees Joel Silverman of Millennia Media, which also released a Lunchbox-size preamp last year, the HV-35. "People are under the impression that it's convenient to be able to have a bunch of toys and

swap them out when they need them. If they're traveling around and want to go to different facilities, it's easy to bring their tools or expect the facility to have a rack. It's just like with plug-ins, where you expect them to have a computer, and you bring in your USB stick. I think the analogy is that it's like a hardware plug-in."

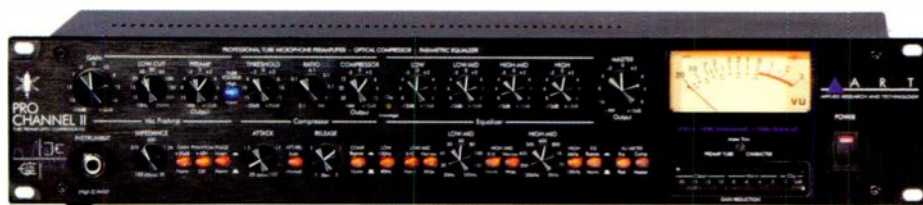


AEA RPQ500



Golden Age Project PRE-73 DLX





ART Pro Channel II

Ryan McGuire of the retailer Vintage King said that over the past three-to-five years, 500 Series units have been the company's best-selling category of preamps. Sweetwater Sound, a retailer that deals in both the pro audio and the home-studio market, has also noticed the trend. "We are seeing substantial growth in 500 Series sales," Senior Director of Merchandising John Grabowski says. "This growth has come from increasing sales of existing 500 Series products, as well as from interest in the constant stream of new-product introductions."

### Watching the Tube

Due to the never-ending quest to warm up digital recordings, tube preamp designs remain popular in all segments of the market, though they tend to be more expensive.

"As a general rule, whether it's a 500 Series unit in your rack, or whatever, a good, discrete solid-state preamp is about \$1,000 per channel," McGuire says, "whereas a tube design is going to be a lot more than that. You've got to figure on an average of about \$1,500 per channel and up. That's the case with vintage gear, too. A vintage Telefunken V76 is \$3,000 per channel now. There are really no solid-state preamps that bring that kind of money."

There are also a lot of preamps under \$500 that incorporate tubes into their signal path, and they have proven to be very popular among home-studio owners. Although many simply use the preamps that are in their audio interfaces, others spring for dedicated units, often models that include tubes and have EQ and compression built-in.

Considering that preamps are available in a variety of styles and formats, we asked some manufacturers which types are their best sellers. "Channel strips and 8-channel preamps with A/D converters continue to be the most popular," PreSonus Public Relations Manager Steve Oppenheimer says. "This isn't new. The original DigiMax was one of the first 8-channel mic preamps with ADAT output, and when it was released, it cost more than \$1,000. However, the cost of converters has gone down steadily, so these types of preamps are more affordable and, hence, more accessible. Channel strips that contain mic preamps and signal processing, like our Eureka and Studio Channel, are still very popular."

Apex also finds its multichannel units to be its most popular. "We

currently sell more 8-channel mic pre's than 2-channel," CEO David Wiener says. "Our current 207D doesn't get the attention that our Channel and 8-channel pre's get."

But a lot depends on the company and the price range of its products. In the more boutique end of the market, single- and dual-channel units rule. "We have single-channel, 2-channel, 4-channel and 8-channel units," Phil Wagner,

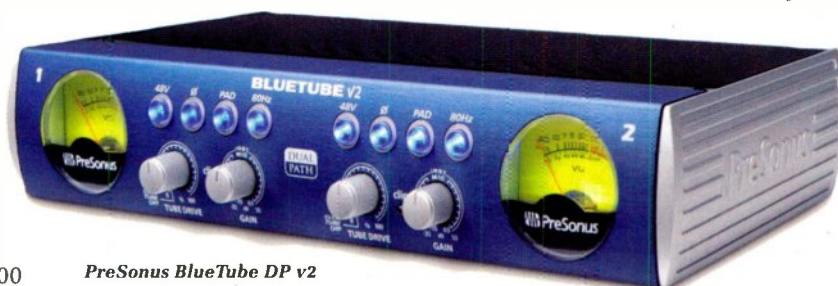
### Odds and Trends

president of Focusrite USA, says. "And we've found that we've had the greatest success with our single-channel units."

We asked manufacturers about other trends they've noticed in the preamp market. According to Lev Perrey, director of product management at Universal Audio, remote-control preamps are becoming more popular. "For

example, our Apollo audio interface can be controlled both from the front panel of the interface or from software. This idea puts forth a scenario in which a user doesn't have to be right next to the preamp. This could make for shorter cable runs from the mics to the preamps, and it's exciting from a design perspective."

Scott LaChapell of LaChapell Audio says a lot of manufacturers are incorporating a vintage look for their preamps to help distinguish their products from others on the market. "Manufacturers are becoming more and more creative with the visual appeal of their products," he says. "It's added a new layer of demand to designing gear, which is a lot of fun!"

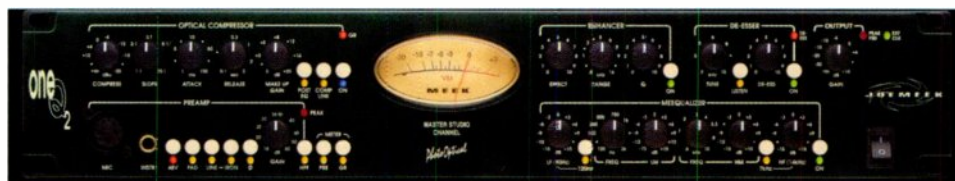


PreSonus BlueTube DP v2

### The Crop

Let's look at some of those new preamps, released at AES 2011 or later, presented here in alphabetical order by manufacturer.

First up is the **AEA RPQ500 (\$584)**. Wes Dooley's company introduced the 2-channel, rackmount RPQ in 2009, made primarily—although not exclusively—for use with ribbon mics. The RPQ500 is a single-channel version of the RPQ but designed as a 500 Series module. Like the original RPQ, the RPQ500 offers 10kΩ input impedance, JFET topology and phantom power for use with condenser mics. Like the RPQ, it



Joemeek oneQ2

includes the 2-band Curve Shaper EQ section, which gives you low-frequency roll-off to reduce rumble and proximity effect and a high band to add sparkle. Given the round-sounding nature of ribbon mics, the latter feature can be particularly helpful. New to the RPQ500 is a Line/Mic switch. Setting it to Line takes the gain stage out of the circuit, allowing for input of line-level signals. That makes it possible to use the EQ on mixdown.





Black Box Analog Design Vacuum Tube Preamp

The sophistication of affordable tube preamps is evidenced in the 2U-rackspace **ART Pro Channel II (\$299)**, a single-channel unit sporting selectable input impedance, a 20dB switchable gain boost, a 4-band EQ, an optical compressor, two different insert points (pre-compressor and pre-equalizer), and more. ART has also expanded its versatile, low-price Tube MP line with the **Tube MPC (\$99)**, a single-channel desktop unit that includes 1/4-inch and XLR I/O, an optical compressor, phantom power and a 12AX7A tube.

One of the most innovative and anticipated new preamps to come out this year is the **Black Box Analog Design Vacuum Tube Preamp (\$1,995)**. This single-channel, all-analog tube pre offers point-to-point hand-soldered circuitry on copper boards, custom-wound Cinemag input and output transformers, a 350V power supply and military-grade switches. But its most intriguing design feature is its independent triode and pentode tube stages. "The pentode, when you turn it up, sounds classically 'tubey': round, very neutral, slightly dark and very fat," McGuire says. "Then the triode stage sounds very airy, spacious and textured. You can completely shift the fre-

quency of the preamp, effectively EQ'ing the signal, without any sort of phase shift."

UK-based **Cartec Audio** recently began shipping the **Pre-Q5 (\$899)**, a green, retro-looking 500 Series unit. It combines a discrete, transformer-based mic pre with an EQ section. The company describes the unit as "just a nice, simple-featured preamp with a classic vibe." The EQ section offers a high-frequency boost at 8, 12 or 16 kHz, and a low-frequency boost at 30, 50 or 100 Hz. The unit has a stepped attenuator after the output transformer, which allows you to really hit the Pre-Q5 hard and not overload the next device in your chain. A line-level switch can be activated to allow using the Pre-Q5 during mixdown.

The **CharterOak MPA-1 (\$2,400)** is a 2-channel, 2U preamp with highpass and lowpass filters, featuring an ultra-clean, transformerless input stage, but an output stage with a Cinemag transformer. Having this dual circuitry allows the operator to dial a combination of clean and colored sound by varying the levels of input gain and output gain. The filters cover the entire frequency range of the unit, with the HPF going from 10 to 200 Hz, and the LPF from 10 to 60 kHz. The continuously variable filters feature a gentle 12dB/octave cut, allowing for subtle settings.



Radial PowerTube



Focusrite ISA Two

The **Focusrite ISA Two (\$899)** is a dual-mono, single-rackspace version of the company's signature ISA mic pre, which has a design that harkens back to the pre's used in Focusrite con-

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soles in the mid-'80s, when the company was newly founded by Rupert Neve. The design features Lundahl LL1538 transformers, and you can choose between mic-, line- and instrument-level inputs. The input impedance can be switched between low, medium, high and ISA 110, which has the same setting as on the classic 110 preamp/EQ. Having variable impedance lets you match the ISA Two's input to your particular mic, or you could take the opposite tack and purposely mismatch it to go for a different sound. Highpass and lowpass filters, and balanced insert points, are also included.

**Golden Age Project** recently started shipping the "deluxe" version of its PRE-73 mic preamp, the **PRE-73 DLX (\$499)**, a surprisingly affordable, single-channel, solid-state, transformer-based unit that contains only discrete components. According to the manufacturer, "The circuit used in the PRE-73 DLX is similar to the preamp section in the classic 1073 module, with a corresponding sound character." It also has 80 dB of gain, selectable pad and highpass filter, ¼-inch DI input (selectable between active and passive), phase reverse, output-level control and phantom power.

New from **Joemeek** are upgraded versions of its entire Q series of channel strips, now called the Q2 Series. There's the 2U single-channel **oneQ2 (\$1,199)**, the 1U single-channel **sixQ2 (\$799.99)** and the 1U dual-mono **twinQ2 (\$1,499)**. All three now have Cinemag transformers, transformer-coupled mic inputs, increased headroom and line inputs that can be optionally routed through the transformers using the IRON switch. All have features such as Meequalizer EQs: optical compressors (controls on both the EQs and compressors vary somewhat between models); a choice of analog or digital I/O (AES/EBU or S/PDIF on the oneQ2 and twinQ2, and S/PDIF on the sixQ2); and mic-, line- and instrument-level inputs. The flagship oneQ2 also adds an enhancer and de-esser to its signal chain. Because of their line inputs, the processing on all three units can be used during mixdown.

Typically, manufacturers make 500 Series versions based on their rack-mount units, but the **LaChapell Audio 983 (price TBA)**, which is due to ship this month, is a rackmount unit based on the company's 500 Series 583s. The tube-based, dual-channel 983 will have a few new wrinkles compared to the 583s, including two-position highpass and lowpass filters, upgraded metering and a redesigned output stage—described by Scott LaChapell as "a very unique, extremely balanced output stage that runs below 10Ω." It's designed to allow for very long cable runs without signal degradation. "We took measurements at 500 feet, and we experienced one percent loss in overall performance, but still maintained spec," LaChapell says.

**PreSonus**, a prolific manufacturer of preamps for the home studio and



True Systems pT2-500D



SM Pro Audio TubeBox

pro audio markets—along with mixers, interfaces, DAWs and many other products—has two new affordable tube/solid-state preamps, both of which have upgraded their solid-state stages with new the company's new XMAX technology. The result is lower noise, more clarity and a smoother tube sound than that of the original versions. The **BlueTube DP v2 (\$229)** is an upgraded version of the original BlueTube DP. The new model is a full-featured 2-channel preamp, for which each channel has both Class-A solid-state and 12AX7-tube signal paths. The tube stage can be switched in and out for each channel and when it's in can be varied using the Tube Drive knob. In addition to an XLR mic input, each channel of the BlueTube DP v2 is equipped with a high-impedance instrument input, a phase reverse switch, a highpass filter, phantom power and more. PreSonus also upgraded its TubePre unit with the **TubePre v2 (\$129.95)**, a single-channel preamp/DI with a similar feature set to that of the BlueTube DP V2.

The latest from **Radial Engineering** is the **PowerTube (\$699)**, a 500 Series pre that's equipped with a high-voltage 12AX7 tube circuit, a Jensen transformer, 100-percent discrete electronics,

fully variable trim and gain pots, a phase switch, phantom power, a 10-segment LED meter and more. According to Radial's Peter Janis, "With the PowerTube, we wanted to veer away from the more clinical sound of a mic preamp to a device that would add character and warmth."

The **SM Pro Audio TubeBox (\$199)** is a very aggressively priced 500 Series tube mic pre that should be shipping by the time you read this. It will bring Class-A tube circuitry (a miniature JAN 6418 Electron Tube), a transformerless signal path and input gain control to the party, along with features like phase reversal and a 20dB pad, as well as a low-cut filter, a VU meter, gain-reduction LEDs and a ¼-inch mic input on the front panel. It's equipped with a built-in optical compressor, with compression, attack and release controls.

**True Systems** also has a new 500 Series entrant, the **pT2-500D (\$649)**. Closely related to the company's pt2-500 preamp, the 500D is designed for mics that don't need phantom power. To that end, it has high input impedance and 76 dB of gain. It also provides a DI input and a 6-position Lo-F Adjust switch for shaping the low-frequency contour. True Systems says the ability to adjust low-end response will be particularly helpful on vocals, as well as on DI bass, for which the pT2-500D is also well suited. Like other True Systems pres, this one is designed to provide a transparent sound, rather than a colored one. ■

*Mike Levine is a musician, producer and music journalist from the New York area and is the former editor of Electronic Musician.*



# RobairReport

## ADDICTED TO EPHEMERA



By Gino Robair

"Our purchasing decisions are telling Apple that we're happy to buy computers and watch them die on schedule," Kyle Wiens notes in his June 2012 Gadgetlab blog for Wired.com, called "The New MacBook Pro: Unfixable, Unhackable, Untenable." He's making the point that by choosing non-upgradeable products such as the MacBook Air, we are voting with our dollars for disposability over longevity.

In recent decades we've seen standard communication technology, such as cell phones or data storage media, become ephemeral, and this paradigm ultimately trickles down to the music-production world. So while I'm happy to have online services that allow me to store, manage and share high-resolution media files with collaborators across the globe, I don't really trust the cloud for long-term storage. At least not a proprietary cloud, because I have no idea how long it's going to be around. In fact, the hard drive that archives this blog isn't an ideal solution, either. But at least I know where it is and it's under my control.

I'm not saying we should halt the development of new technologies. Rather, I'm advocating for some kind of standard that is a long-term, affordable solution for managing the content that we create. Take MIDI as an example of a standard that, thanks to the cooperation of an entire industry, helped move music technology into a new era. We can all see MIDI's limitations at this point, but note that as it approaches its third decade, it continues to provide a trustworthy foundation, even as the follow-up technology finally nears completion.

Meanwhile, seasoned musicians, producers and engineers are desperately nursing their data off of a wide variety of obsolete formats—SCSI drives; DAT, Beta and VHS tapes; and, now, FireWire drives—that they've used over the years before either the media begins to degenerate or the retrieval devices break down. At least I know that my MIDI files from the late '80s will still play back in today's digital-audio sequencer.

### MEDIUM AND MESSAGE

Of course, music technology in the broadest sense has been in transition throughout history, as pointed out by Allan Kozinn in his June 8, 2012, *New York Times* article "Electronic Woe: The Short Lives of Instruments." Look no further than your local "early music" ensemble to see a host of instruments that didn't survive the rise of the symphonic orchestra. Thankfully, musical notation allows scholars to piece together approximations of the original per-

formance practice (though, without recorded artifacts, it's difficult to know how accurate they are).

In modern times, we like to think we can use sampling to, say, capture the sounds of a classic instrument so that its essence survives into the future. But we're fooling ourselves. As Kozinn notes, "(s)ometimes when technology changes, you cannot replace it with a digital approximation." Anyone who has spent time playing a real Hammond B3, a Fender Rhodes or a Hohner Clavinet knows that software-based versions are not as satisfying to the player as the real thing.

What I find intriguing about the majority of tech-savvy musicians I know and work with is that they don't have proficiency on a single instrument in the same way a church organist or violinist does. Rather, they are highly proficient at surfing emerging technologies and finding musical uses for them. I'm not talking about the people who buy every new soft synth and use only its presets; I'm referring to the men and women who looked at a Wiimote for the first time, for example, and immediately grokked that it solved a number of problems for live performance, but cost much less than if they were to build the equivalent themselves.

Everyone is working under hyper-condensed time schedules. In the studio, we barely have enough time to explore the new features of our DAW before the next rev comes along and distracts us with even more features. So while it's comforting to know that important studio tools we use (mic/preamps, power amps/speaker) remain just as consistent as classic instruments and their control interfaces (violin/bow, saxophone/reed, trumpet/mouthpiece), we still haven't landed on a software equivalent. Because if you have been relying on a single application to solve your audio needs, you may just find yourself painted into a corner when either your platform (hello Amiga, Atari and Commodore 64 users) or application (farewell BIAS, Inc.) is suddenly shown the door. Those of you running Peak on a MacBook Air can now hear the clock ticking louder than before, because as the industry feeds us disposable platforms that we cannot customize or repair, we will find it more and more difficult to sustain our software tools for the long term (even with the help of eBay and Craigslist). While it's easy to say "Get over it!" because the laptop/desktop's days are numbered and we'll all be using tablets for music-making in the near future, that transition means that, once again, we have to learn a new interface, figure out the bugs and gotchas of a new platform and its applications, and waste creative time and earning power in the process. Who tricked us into thinking that this is okay? ■



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Randy Poole, Pro Audio Review

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# Tech // new products



## CRYSONIC SPECTRA C2 COMPRESSOR

### The Un-Plug-in

The SPECTRA C2 (\$159) from Crysonic ([crysonic.com](http://crysonic.com)) is a non-transparent compressor promising subtle but desirable analog characteristics to any signal being processed. The zero latency proprietary algorithm allows Spectra C2 to be used in every step of music production, from tracking to mastering and live work, for both mono and stereo signals. Features include Ratio and a Release, which can be set to automatic mode, where the Spectra C2 chooses the best value for the incoming audio material. The CPU hit is minimal, allowing multiple instances to be used in a single project. Each license holder may install Spectra C2 on up to three computers.

## HEIL PRO SET 3 HEADPHONES

### Comfortably in Your Ears

Heil Sound ([heilsound.com](http://heilsound.com)) introduces its Pro Set 3 headphones (\$109) designed for touring pros, musicians and broadcast/recording engineers. The Pro Set 3 features high-quality 40mm neodymium magnets and voice coils, a lightweight ergonomically designed cushioned headband, and a detachable cable design. The headphones ship with three cables to accommodate a wide assortment of inputs. Other features include convenient folding for compact transport, internal steel headband and soft, padded, replaceable ear cushions.



## MOOG THE LADDER

### Sound-Sculpting Filter

The Ladder (\$769) from Moog ([moogmusic.com](http://moogmusic.com)) is a Dynamic Transistor Ladder Filter based on Bob Moog's original ladder filter designs. The Ladder sports a smooth, all-analog lowpass and highpass filter section. Adjustments include a Cut-off knob to add vibe, warmth or tonal adjustment; LP to add analog vibe and warmth to a sound; HP for sweetening; and variable Attack and Release and Amount control in Positive or Negative mode for mild to extreme sound shaping and manipulation. The Resonance control used with The Ladder's other features allows for the creation of sweet, dynamic and even speech-like behavior. Use it to tune The Ladder to a sound source and excite or accentuate specific frequencies, as well as create completely unique sounds.



## ELYSIA NVELOPE 500

### Double-Wide Dynamics Processor

elysia ([elysia.com](http://elysia.com)) has released its newest product for the 500 Series, the nvelope 500 (\$1,049). This two-slot stereo dynamics processor is capable of making subtle or drastic changes to a sound by altering its impulse structure, providing direct control over the envelope of a signal by shaping the intensity of its attack and sustain. Usable for single-channel or mix applications, the nvelope 500 can shift a sound toward the front of the mix using more attack and less sustain, or blend it gently into the background by reducing its attack and increasing its sustain. The unit also features Dual Band mode, where individual frequency controls for attack and sustain yield precise results while avoiding unwanted artifacts, even when used on complex material like a summing bus.



## MXL BLACK WIDOW MICROPHONE

### Compact Condenser

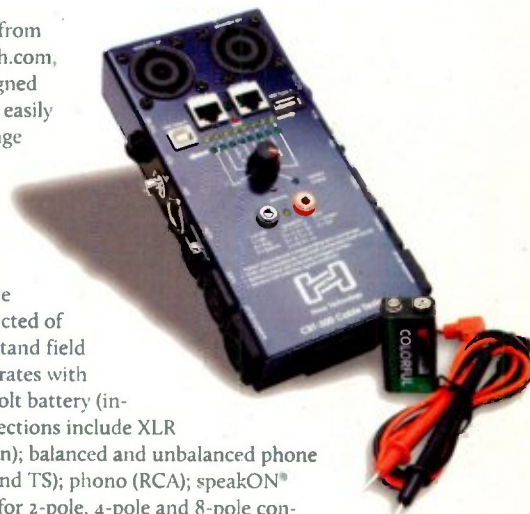
MXL ([mxlmics.com](http://mxlmics.com)) has released the Black Widow (\$299.95), a short-frame condenser microphone designed for studio and live. The mic features a sleek black chrome finish; 32mm, 6-micron gold-sputtered capsule; and a three-position attenuation switch (0dB, -10dB, -20dB). The Black Widow ships with a flight case and shock-mount.



## HOSA CBT-500 CABLE TESTER

### Line-Checking Everywhere

The CBT-500 from Hosa ([hosatech.com](http://hosatech.com), \$69.95) is designed to quickly and easily test a wide range of cables commonly used in the music/pro audio environment. The unit is constructed of metal to withstand field abuse and operates with a standard 9-volt battery (included). Connections include XLR (3-pin and 5-pin); balanced and unbalanced phone (1/4-inch TRS and TS); phono (RCA); speakON® (with support for 2-pole, 4-pole and 8-pole connectors); DIN (multipin, including 5-pin DIN commonly used for MIDI equipment); Ethernet (RJ-45); USB Type A to Type B; plus a variety of other connectors and jacks using included, removable leads.



## KANEX THUNDERBOLT CABLE

### Two Lanes, No Waiting

Kanex ([www.kanexlive.com](http://www.kanexlive.com)), a leader of innovative Apple and iOS connectivity solutions for homes, studios and businesses, has released the Kanex Thunderbolt cable (\$59.95), a super-highway with two-express lanes: PCI Express (data) and DisplayPort (video). Through a single 6-foot (2m) compact cable, you can connect high-performance data devices to high-resolution displays at a 10 Gbps data transfer rate.



## PROPELLERHEAD PULSAR RACK EXTENSION

### Effecting Your Reason

Rack Extensions is a new technology that enables third-party developers to create instruments and effects for Reason ([propellerheads.se](http://propellerheads.se)). The latest extension is Pulsar (\$49), which comprises two LFOs, cross-modulation, lag, shuffle and a flexible envelope. It allows users to create a shuffled tremolo that changes speed as different notes are triggered, or come up with ever-changing wobbles that respond to playing. To celebrate the release of the Rack Extension platform, Pulsar will be gifted to everyone who is using Rack Extension-compatible versions of Reason and Reason Essentials for the first three months after release.





# New Sound Reinforcement Products

## PEAVEY IPR 1600 DSP/3000 DSP POWER AMPS

### Smart Live-Production Tools

The IPR 1600 DSP (\$699.99) and IPR 3000 DSP (\$799.99) power amplifiers from Peavey (peavey.com) combine user-friendly loudspeaker manage-

ment with the lightweight power and performance of the original Peavey IPR power amplifiers. The onboard digital signal processing system includes preset banks for popular loudspeaker types and configurations, as well as Waves MaxxBass® psycho-acoustic processing for the first time in any power amplifier. Other features include a variable-speed fan housed in a lightweight aluminum chassis; ¼-inch and XLR inputs; and ¼-inch and twist-lock output connectors. Peavey IPR 3000 and IPR 1600 power amplifiers are backed by Peavey's free five-year extended warranty.



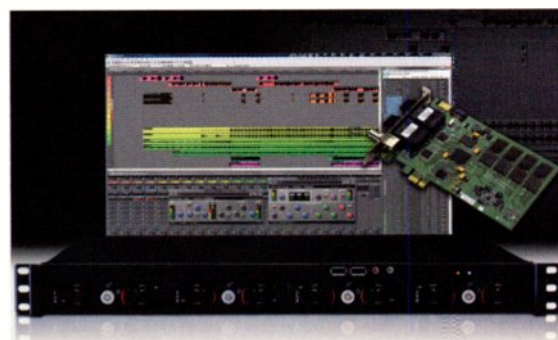
## K.M.E. SOUND VL 3 i

### Compact Live Speaker System

The VL 3 i from K.M.E. (kme-sound.com, \$TBA) is a professional-grade, compact speaker system for fixed installations that can also be used as a top unit in actively channeled P.A. systems.

Boasting minimal sound coloration and distortion in the midrange through a 2x3-inch cone speaker, the VL 3 i system features a high-grade passive crossover network. The unit features 4mm terminal clamps as well as a Neutrik Speakon® socket and the ability to externally mount a 100V transformer if needed.

Other features include a lightweight, glued framework from precise milled fibreboard, solid inner metal construction and a ball-proof front grid made from steel with acoustic foam for mechanical protection of speaker components. Special colors as well as special versions (i.e., a dedicated outdoor version) are available on request.



## SSL LIVE-RECORDER

### Robust Capture System

Live-Recorder from Solid State Logic (solidstatelogic.com, \$TBA) provides a reliable, high-quality, low-cost solution for high channel count live, location or broadcast recording. Live-Recorder combines Soundscape Version 6.2 DAW Recorder/Player software, a MadiXtreme or MX4 PCIe audio interface, and an industrial-strength, high-performance 1U rackmount PC. Live-Recorder systems can record up to 128 channels at 24-bit/48kHz or 64 channels at 24-bit/96kHz. Soundscape V.

6.2 includes SSL's Pro-Convert technology, so it can export recorded multitrack sessions in a range of formats that are native to a selection of popular DAWs. Soundscape V. 6.2 also offers session import from supported DAWs. Live-Recorder hardware configurations comprise Live-Recorder MX4, which provides up to 128 channels using an SSL MX4 2x64-channel MADI I/O interface; and Live-Recorder 128, a stripped-down system designed for environments where confidence monitoring is not required.

## XTA DS8000 MIC/LINE DISTRIBUTION

### From Here, To There

XTA Electronics (audiocore.co.uk) launched the DS8000 (\$2,895), a complete redesign of its famous DS800 mic/line distribution system for the broadcast and touring markets. DS8000 is a two-rackspace, 8-in/32-out mic/line distribution system with 16 transformer-balanced isolated outputs and 16 electronically balanced outputs fitted as standard. It has two new key features: an outside-broadcast split function tailored to the demands of the broadcast industry, featuring two rear switches making stereo 16-way splits easy; and a dual-redundant power supply system that's easy to enable when two DS8000 units are paired together. Other features



include remote-controlled 48-volt phantom power with lockout "safe" functions to prevent tampering, new premium microphone preamps, panel lighting for dark backstage environments and the option of adding an ADC card that provides AES3 outputs for integration into digital systems.



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# Tech // reviews

## MASELEC MLA-3 MULTIBAND COMPRESSOR

Dual-Channel Unit With 12 Options in One Box

**A**ll Maselec products are developed by Leif Mases, an experienced producer, recording engineer and studio owner who has worked with Jeff Beck, Led Zeppelin, Black Sabbath, ABBA and many others. This experience is reflected in the operation and performance of his analog designs. The latest addition to the Maselec line is the updated MLA-3 multiband compressor, a well built, 2-channel unit that will pleasantly surprise even the most discerning listeners.

### SOLID BUILD

In pulling the MLA-3 out of the box, I immediately noticed that this is a serious piece of gear. A heavy alloy chassis protects the hand-wired construction and hefty power supply, which is linear with a voltage switch on the back for 115 and 230 volts. There is a Mains switch on the back that disconnects the mains, and a low-voltage power switch on the front that disconnects the power to all circuits, including the regulators. In addition to the voltage switch on back, there is internal automatic range switching that kicks in if the mains voltage goes critically low. This extends the range down to 90V and 180V without the heat problem that you normally get from wide-range linear supplies. Maselec has done that on other products as well, and it's essentially there to provide a low (clean) voltage switch on the front so that you don't get mains noise into sensitive parts of the circuits.

The transformer is a custom, low-noise toroidal type that is used in other Maselec products. Inputs are electronically balanced, making them perform as if they are transformer-coupled, but without the associated coloration, low-frequency distortion and restricted bandwidth, with maximum input level of +29dBu. The outputs are also electronically balanced with a maximum output of +28dBu. All rotary controls on the front of the unit are stepped switches using discrete resistors; that signified to me that nothing was left to chance for precise control.



### MADE FOR MULTIBAND

Multiband compression is considered by many in audio circles to be the musical equivalent of a jack-alope or unicorn. It's one of those mythical ideas that are sometimes better in theory than in use. I have generally stayed clear of multiband compression in most instances and left it to mastering experts. However, once plug-in versions of multiband compressors began appearing, I started hearing more of my peers use it, so I became curious. I found some success in shaping tracks by using it like an EQ and by isolating specific frequency ranges to enhance elements of a mix. I found this widely useful for mixing electronic tracks with lots of heavy beats and bass elements, wide volume changes in recorded tracks, and also helpful with a vocalist whose dynamic range veered from section to section.

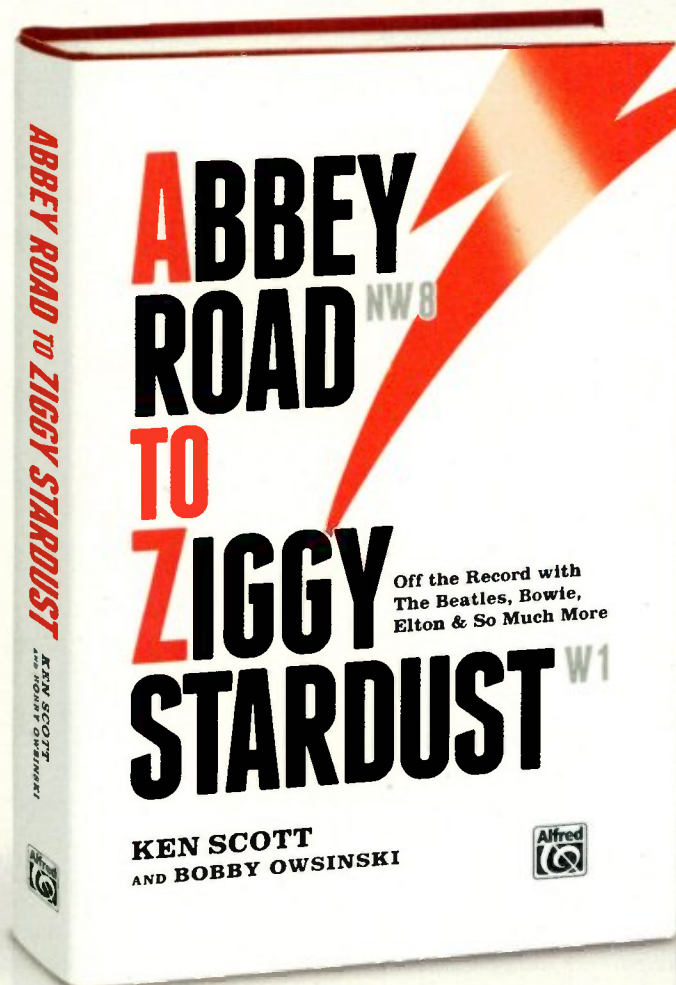
The MLA-3 is more than a one-trick pony. It can simply and effectively operate as a stand-alone stereo compressor, but it becomes another animal when moving beyond standard compression and further into multiband territory. The MLA-3 is,

### TRY THIS

I used the MLA-3 as an insert on a drum bus with great results. First, I experimented with the amount of compression, frequency threshold and master threshold settings until I liked the results. I then scrolled through the output settings and adjusted the crossovers to taste or for a radical setting. For instance, a faster release time gave me more control, and the Side-chain Boost switch offered a high-frequency bump. Varied frequency release and higher threshold times will give you even more explosive sounds. I then recorded the bus to a stereo channel and mixed it in underneath my multitracked kit—it made my drums fly out of the speakers.

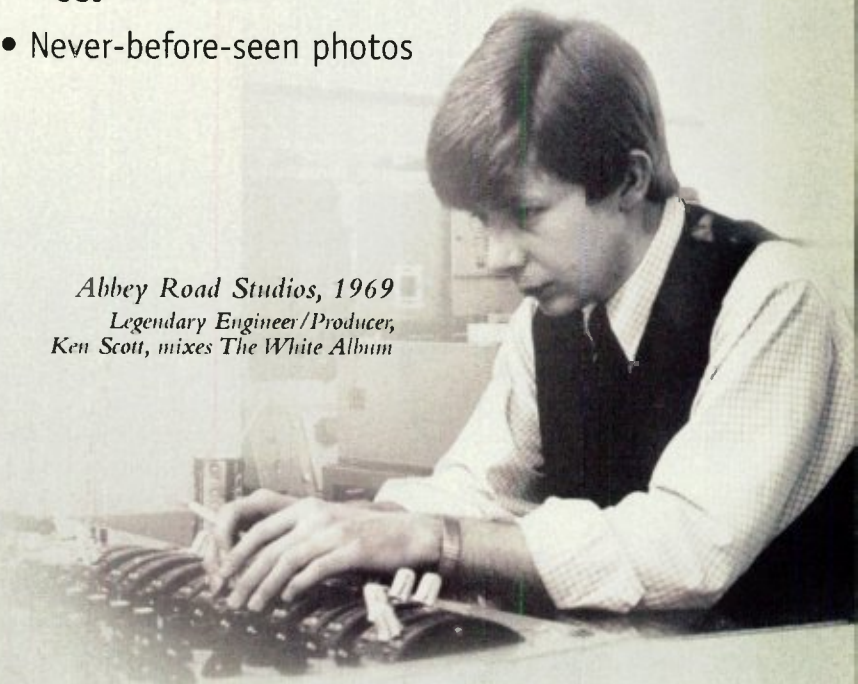


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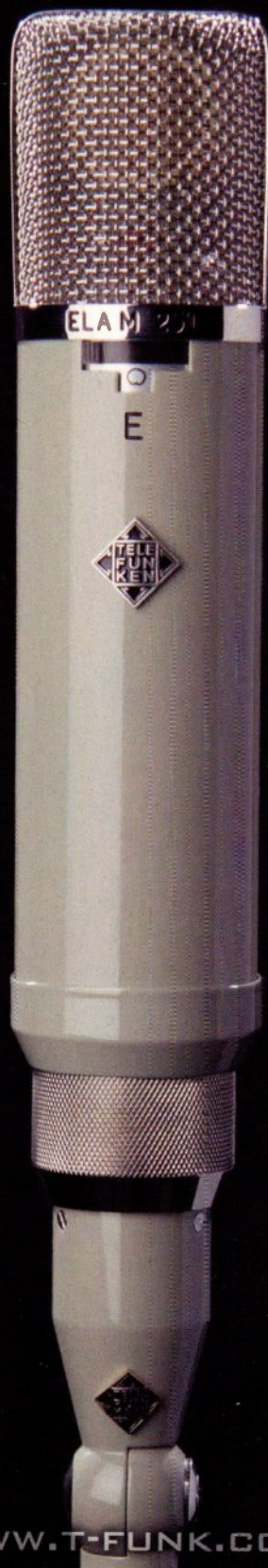
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in fact, 12 mono compressors. In speaking with Mases about the design concept, he said he paid a lot of attention to the filters so that they sum together properly. His goal was to be able to get the input signal replicated on the output exactly with the gain set the same for all filters. The filters have very good step response, and the summed output is flat within 0.04 dB.

The key is that the bandpass filters are different in the sidechain. Otherwise, you would get an increased density at the crossover frequencies, coloring the sound badly. For that reason, the MLA-3 contains not three stereo compressors but six (12 mono compressors). There is a complete duplication in the sidechain.

#### COMPRESS WITHOUT DURESS

I knew that mastering engineers often turn to multiband compression when dealing with problematic mixes, but I wanted to first check it out on tracking. I tried the MLA-3 on drums to see if I could approximate my overhead sound by replacing EQ with multiband. I sent two Shure U87s over the kit into two channels on the Neve VR console at Sony Tree in Nashville, and then to the MLA-3. I dialed the EQ in on the channels and then turned them off. I turned on the Maselec and adjusted a fair amount of input level to see signal, and set it to the "linked" setting on the sidechain to have it operate like a normal compressor. I then adjusted the crossovers to 100 Hz on the low end and 3 kHz on the top end. I set the attack and release times to be around 30 ms to catch peaks, and I didn't notice a huge difference in the sound. I then changed the release time to be much faster and engaged the Sidechain Boost switch. Wow. The entire drum kit came forward and had wonderful detail that I was missing before with only subtle compression. I began to understand the flexibility of the MLA-3. When I inquired about the Sidechain Boost switch, Mases told me that it is a combination of gain increase and high-frequency boost in the sidechain. This switch quickly became my new best friend.

Next, I got the unit back to my studio and tried it on bass guitar while recording Nashville band the Cold Stares' new record. I was having some trouble getting it to speak in the track. I engaged

#### PRODUCT SUMMARY

**COMPANY:** Maselec  
**PRODUCT:** MLA-3 Multiband Compressor  
**WEBSITE:** maselec.com  
**PRICE:** \$4,970  
**PROS:** Brilliant construction and sonic qualities  
**CONS:** Expensive (but worth it)

the sidechain link Low to Mid and tried being a little more aggressive around 400 Hz. This helped the sub-like qualities of the hollow-body bass push the midrange and balance the sound in the mix.

I also used the MLA-3 as a parallel insert on my drum bus for Nashville-based electronic project act Five Knives. I tried "pumping" the kick in tempo

with the bass synths of one track. It didn't quite work as well as I'd hoped; having something fine-tunable as opposed to fixed increments in the frequency range would have been more helpful in this instance.

I applied the multiband functionality to the final mix for both projects, knowing that I wanted the musicians to hear what their projects would sound like, as close to being mastered as possible. Initially, I listened to set the attack and release times as close as possible to my trusted API 2500 and performed an A/B comparison of the two. I noticed that I could really dig into the MLA-3 (even close to -7dB on the master threshold) and it was still very musical, without sounding too compressed. I set the threshold back to peak between -1/-2 dB, set the crossovers to 100 Hz and 1.6 kHz at -2 dB on the low and midrange frequencies, and -3 dB on the high range. The Output Selection knob really allows you to fine-tune what is happening in each area, and also bypass it completely. Once I added the Sidechain Boost switch, the final mix really started to sound like a record. I discovered equal results when applying the MLA-3 after printing mixes without bus compression, and using it in more of a traditional mastering situation. I compared my "mastered" mixes against several reference CDs and again was pleasantly surprised.

#### TRIED AND TRUE

The Maselec MLA-3 is a well-designed and well-built multiband compressor with options to please even the most discerning user. It excels as a stereo or multiband compressor—the functionality of each band makes it very easy to dial in the most pristine sounds. The price tag is sure to scare off a few, but once you hear this piece, it's worth every penny. It quickly became hard for me to work without it.

*Chris Grainger is a producer/mixer/engineer and owner of Undertow Studio (itsgrainger.com) in Nashville.*



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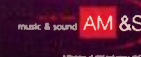


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# Tech // reviews

## EMOTIVA PRO AIRMOTIV 4

Small Monitor Offers Big Sound at a Modest Price

**E**motiva is mostly known for its high-end consumer audio products. The company's new Pro division is stepping it up with the introduction of three powered monitors—each employing two drivers—for professional use. The airmotiv 4 is the smallest of the three; with a volume of less than one-third of a cubic foot, it's a veritable midget. But if you're thinking it's a midrange-y consumer proxy à la the ubiquitous Yamaha NS-10M, think again. The airmotiv 4 has a huge sound and extended bandwidth that belies its itty-bitty footprint. Spectrally, it's the polar opposite of the NS-10M.

### I'LL TAKE A CAB

The airmotiv 4's cabinet measures 9.4x6.1x7.3 inches (HxWxD) and is constructed from 18mm-thick MDF. It's solid! The cabinet is internally damped with a layer of acoustic foam bonded to asphalt. The asphalt—along with rigorous internal bracing—damps cabinet resonances, while the foam absorbs rear-projected sound from the woofer to help prevent hyping the upper-bass and lower-midrange response. The cabinet's front baffle is finished in an attractive black lacquer, and the back and sides with a textured, water-resistant vinyl laminate that resists scuff marks and fingerprints. To combat diffusion and improve imaging, all corners and edges are conspicuously rounded laterally, and the front baffle is slightly rounded toward its front face. Each monitor weighs 10.25 pounds.

The two-way design incorporates a 4.5-inch Curv™ woofer, the hallmark of which is a woven composite-polypropylene cone that boasts high rigidity for its light weight. The woofer is magnetically shielded. It uses a synthetic butyl-rubber surround to absorb undesirable harmonic artifacts. The monitor's folded-ribbon, high-frequency transducer measures 26x32 mm. It is inherently shielded and mounted behind a slotted, radiused waveguide.

The bi-amplified design uses a discrete power amp rated at 25 watts RMS for each driver. The multi-pole, active crossover is tuned to 2.7 kHz. Each amp uses a toroidal power transformer and metalized-film and electrolytic capacitors. The built-in overload-protection cir-



cuit purportedly doesn't limit music peaks under normal listening conditions, but it prevents dangerous overdrive conditions when you're pushing the monitor too hard. The airmotiv 4's frequency response is stated at 58 Hz to 23 kHz,  $\pm 2$  dB.

A continuously variable rotary control on the front baffle adjusts the monitor's level. Pushing on the level control alternately recesses and extrudes it; a ring around the control glows a soft blue color when the monitor is powered on and red when the automatic overload protection engages.

The rear of the cabinet sports a tapered, oval bass port and separate rotary switches for equalizing with shelving filters the reproduction of bass and high frequencies (see Fig. 1). The bass control can provide either 2dB or 4dB attenuation be-

### TRY THIS

If you don't have the wherewithal to use spectral analysis to position your monitors optimally in your room, you can ballpark the best setup simply by listening. Play a professionally mastered recording that features a descending, scalar bass line. Move your monitors to alternate positions and listen at your mix position to each setup in turn. The configuration that most evenly reproduces each bass note—with the least amount of dip and boost from note to note—is the one least influenced by room modes and speaker boundary effects. All other considerations aside, it's the most accurate setup for your room.



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low its 150Hz corner frequency, while the HF control can either boost or cut 2 dB above 4 kHz. Each EQ control also provides a unity (flat) setting. The level and EQ controls are calibrated at the factory to within 1 dB of the company's reference standards.

Also on the rear: A power switch, two-prong AC receptacle, fuse holder and balanced XLR and unbalanced RCA inputs. (The AC receptacle doesn't need its omitted ground plug for safe operation because the airmotiv 4's amplifiers are double-shielded.) I was disappointed that the XLR connector did not latch. The included power cable is roughly 6 feet long and removable. You can order your airmotiv 4 to operate with 120 or 230 VAC.

Two recessed mounting points on the cabinet's bottom mate with Emotiva's optional mounting brackets. The airmotiv 4 has a fully transferable five-year warranty; you can also return the monitor for a full refund within 30 days. It's currently only available direct from Emotiva.

## CRITICAL LISTENING

I reviewed a stereo pair of airmotiv 4s and placed them on Primacoustic Recoil Stabilizers that are situated on the shelves of my Omnitrix MixStation. The front of my control room also features an Acoustic Sciences Corporation Attack Wall—

Fig. 1: The airmotiv 4's rear panel houses equalization facilities, power connections and switch, and both balanced and unbalanced inputs.



## PRODUCT SUMMARY

**COMPANY:** Emotiva Pro  
**PRODUCT:** airmotiv 4  
**WEBSITE:** emotivapro.com  
**PRICE:** \$349/pair (direct price)  
**PROS:** Big sound. Excellent imaging, depth and transient response. Non-fatiguing. Built-in filters. Very inexpensive.  
**CONS:** Sonic hole in the upper midrange and lower highs (filters switched out). Muddy upper bass and lower mids (filters -2 dB). XLR connector doesn't latch.

a modular arrangement of tube traps that forms a continuous acoustic wall, tightening up the bass impulse response at the mix position.

Listening back to my own country and rock mixes, I was immediately impressed. With their built-in filters nulled, the airmotiv 4s put out a huge sound, producing a surprising amount of bass for such small boxes. The bottom end sounded surprisingly tight considering the ported cabinet; kick drum hits had none of the flabbiness I expected to hear. Electric bass guitar fundamentals were clearly reproduced down to low F# (46 Hz), tailing off quickly below that. At the same time, the airmotiv 4s lacked the upper-bass/lower-midrange veil that plagues most small two-way near-field monitors, yielding a clear and airy sound.

Transients were reproduced faithfully, lending impressive detail. Imaging and depth were likewise excellent. At low-to-moderate volumes, the sound was non-fatiguing. Cranking my control room volume, the airmotiv 4s got plenty loud.

Unfortunately, my initial enthusiasm wore off quickly as I continued to listen. I noticed the upper midrange and lower high frequencies sounded significantly understated. (This spectral balance no doubt contributed to the non-fatiguing quality.) Single high background vocals and fiddle playing in its high register consistently sounded lower than I'd heard on any other monitors I could remember testing—to the point where I was certain I would've had them too loud had I used the emotiva 4s during mixdown. Depending on which register they played in, electric and acoustic guitar tracks sometimes also suffered the same de-emphasis, leaving me wanting them to have more presence and level. Lead vocals sounded a little darker than I knew them to

actually be. Large stacks of BVs piling on during choruses tended to sound a little thin and icy.

The airmotiv 4's frequency-response plots (available online) corroborated what I was hearing. According to the plots, the airmotiv 4 produces up to a 3dB dip in response between roughly 1.5 and 5 kHz. Another 2dB dip occurs between about 125 and 800 Hz. That explains how the airmotiv 4 succeeds at sounding at once non-fatiguing (scooped upper midrange frequencies and lower highs) and clear (dipped upper bass and lower midrange). The main tradeoff is that vocals and stringed instruments sound too understated. End of story? Not quite.

## PRIME CUTS

Emotiva Pro's VP and lead engineer, Lonnie Vaughn, told me he was aware of the challenge that the airmotiv 4's dip in the upper midrange and high frequencies could pose for mixing, and that the monitor's onboard filters had been specifically designed to correct this deficit. He suggested I set both the high and low filters to their -2dB settings to bring the presence band into better balance with the bottom and top of the spectrum.

With the filters set accordingly, the upper midrange and lower high frequencies fell into much better balance, and I could now hear vocals and stringed instruments more clearly. The bottom end still sounded surprisingly extended. However, I also heard muddiness and slight boominess in the upper bass and lower midrange. The timbre sounded a little heavy in at least the 200 to 315Hz band (possibly a little wider on both ends), creating a slightly veiled and tubby sound. I wondered if Emotiva Pro had fixed the bass filter's 150Hz corner frequency too low. In any case, while the filters helped the critical midrange-high frequency balance a lot, they also re-imposed the upper-bass/lower-midrange blurriness the design engineers had so artfully dodged with filters set flat.

Depending on how its onboard filters are set, the airmotiv 4 can give you either a huge, non-fatiguing sound for casual listening enjoyment, or a flatter response for professional reference use. It's not absolutely perfect for mixing, but it offers competitive performance with leading monitors in the same (rock-bottom) price range. At only \$349 per pair, the airmotiv 4 is a great monitor for the money.

Mix contributing editor Michael Cooper is a mix and mastering engineer based in Oregon.





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# Tech // reviews

## KRK SYSTEMS 12SHO ACTIVE SUB

Ultra-Accurate Bass Extension for Medium-to-Large Rooms

**D**uring the recent move to my new production and mix facility, a spacious 20x23-foot room with a 12-foot ceiling, where bass can actually breathe, I installed a pair of gorgeous-sounding Equator Q15 main monitors to complement my trusty old Mackie HR824 near-fields. While the Q's oversized woofer and coaxial tweeter design has brought a whole new level of power, width, flat response and pinpoint imaging to my setup, there have still been times where I've yearned for "bowling ball to the chest" sub-frequency performance from the system—but without disrupting or compromising an already excellent and focused bass frequency spectrum. I believe that KRK Systems, part of the new Gibson Pro Audio division, designed the 12sHO powered subwoofer for scenarios such as this one.

### MASSIVE POWER

With the HO standing for High Output, this 110-pound behemoth features a strengthened version of the company's custom 12-inch bass driver made from woven Kevlar. Specially designed for super-high excursion, it is beautifully set in a curved-baffle front plate, intended to virtually eliminate diffraction distortion. As if KRK's trademark yellow cone wasn't already eye-catching, it's surrounded here by four rather unique front-firing concentric ports that are engineered for extreme low-frequency extension while reducing boundary coupling. These wide arc-shaped slots are also optimized to avoid the airflow turbulence that often plagues smaller circular ports. Just looking at this thing, you can tell it means business.

The enclosure measures 20x20x22.5 inches (HxWxD) and is constructed from 18mm and 36mm reinforced MDF. To say it feels a bit like a bank safe when you rap your knuckles on it would be accurate; it is solid. The integrated Class-A/B power amplifier kicks out 400 watts continuous RMS performance (1% THD+N @ 100 Hz), yielding a sound pressure level of 113dB music and 123dB peak, with a signal-to-noise ratio of 92 dB.

Located around back and next to a hefty heat sink, the left and right inputs are on balanced combi-jacks, as is the independent LFE input for integration within surround environments. The stereo outputs are balanced XLR and have a fixed 80Hz highpass

filter across them. A continuously variable Input Sensitivity knob allows a high-resolution gain range, having positions for Mute, +6dBu and -8dBu labeled along the way. Other rear-panel controls include a continuously variable lowpass filter with frequency range of 60 Hz to 160 Hz (24dB/octave), a phase adjustment knob, a polarity reverse switch, a thermal and overload/clip protection switch and a ground lift switch. There is also a Sub & HPF Bypass jack to receive the included latching footswitch with white LED indicator.



### IT'S A SETUP

I connected the sub directly in line with my Equators, their signal being derived from my PreSonus Central Station Speaker Select A at all times. To start, I set the sub's lowpass to 80 Hz and routed a 1-octave wide bandpass pink noise signal (between 500 Hz and 1 kHz) from Pro Tools

on through to the Q15s, adjusting the monitoring level to about 85 dB using a simple SPL meter. Next, I sent a 35-70 Hz band for the sub to act upon and set the input sensitivity control to match the same 85dB SPL. Turning up the lowpass to 130 Hz and allowing the 12sHO to overlap with my mains, I listened from the mix position while an assistant adjusted the phase control through a full 360 degrees, stopping at the loudest point. Returning the LP back to 80 Hz, the system was now aligned for phase, level and spectral response.

### INTO THE DEEP

The transition between the sub's extended low end and the Q15s was effortless on my ears—almost shockingly so. Whereas I've always found the Q15s to be a tad shy in the bottom-most regions when listening at very low levels, the 12sHO filled this out gracefully. Whenever I'd momentarily bypass the sub in

### TRY THIS

While the general rule of thumb is to put the subwoofer between and slightly in front of your stereo monitors, another method places it wherever speaker loading is at its greatest. Try temporarily sitting the sub in your mix chair position and then play back banded pink noise in the 30 to 80Hz range; wherever in the room it sounds loudest is a good starting point. Next, try running stepped bandpass pink noise and sine wave sweeps while using a simple SPL meter for reference. Moving the subwoofer a foot at a time, the goal is to find a spot where it interacts smoothly with room acoustics and LF response is as even as possible at the listening position. Because bass energy is largely omnidirectional, a sub that's offset from center is nothing to worry about.



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*The 12sHO's rear panel features a built-in crossover and plethora of configuration controls. This input for the included LED-illuminated remote footswitch*

order to A/B, it wasn't as if switching between two completely different systems; rather, I was toggling a hidden layer and sense of "feeling" from the music.

That consistent and natural-sounding frequency balance remained intact through more moderate levels also, which I thought boded well for the accuracy of both the sub and my mains. Pushed further, the bass extension added incredible punch and underlying vibe without ever becoming muddy or overbearing. Once playback volumes got up into what I like to call the "seismic zone," the sheer power of the 12sHO truly came to life. Around the point where the woofers in my Q15s typically fall flat and begin to overload, I finally received that bowling ball, square-on.

Pulling up some of my old mixes, I noticed that I had been overcompensating around 50 to 70 Hz with my Mackie HR824 monitors and had often been coming up short of incorporating that all-important 25 to 40Hz zone with the Equators. On raw session tracks, I could more easily identify those energy-sucking thumps, hums and rumbles that often sneak by, particularly at low listening volumes.

Inquisitive now, I patched and reconfigured the sub to the HR824s. Not only did they sound huge; I was really impressed by how seamlessly the 12sHO came together with the characteristic low-mid punch of the flat piston passive radiator on the Mackies. Nothing was lost,

only extended. As on the mains, the 12sHO sounded extremely robust yet completely natural, providing a solid and focused, cohesive center anchor.

Playing live over this system was just a blast. I could jam out on raw drum kits as though in a club setting and audition electronic sounds containing bombastic sub-frequencies without ever once worrying about chuffing out or overdriving the woofers on my monitors. Ironically, the 12sHO did send a loud zippery-fizz and thump to my monitors whenever it was powered down, so you'll either want a timed power distributor in your

racks or need to be extremely vigilant.

There were also occasions with both sets of monitors that I found myself wanting to crank up the sub just a little (or a lot), depending on the program material, application and listening level. Rather than having to walk around back to dial it in, I'd much prefer a wired controller, perhaps incorporating a lighted bypass switch all in one place.

### LOW-END THEORY

I was blown away, both literally and figuratively, by the 12sHO. Not only did it school me on the importance of producing modern music with sub frequencies present for better arrangement and voicing decisions, but it allowed me to become extremely discerning about what's happening down in the LF-energy regions of a mix.

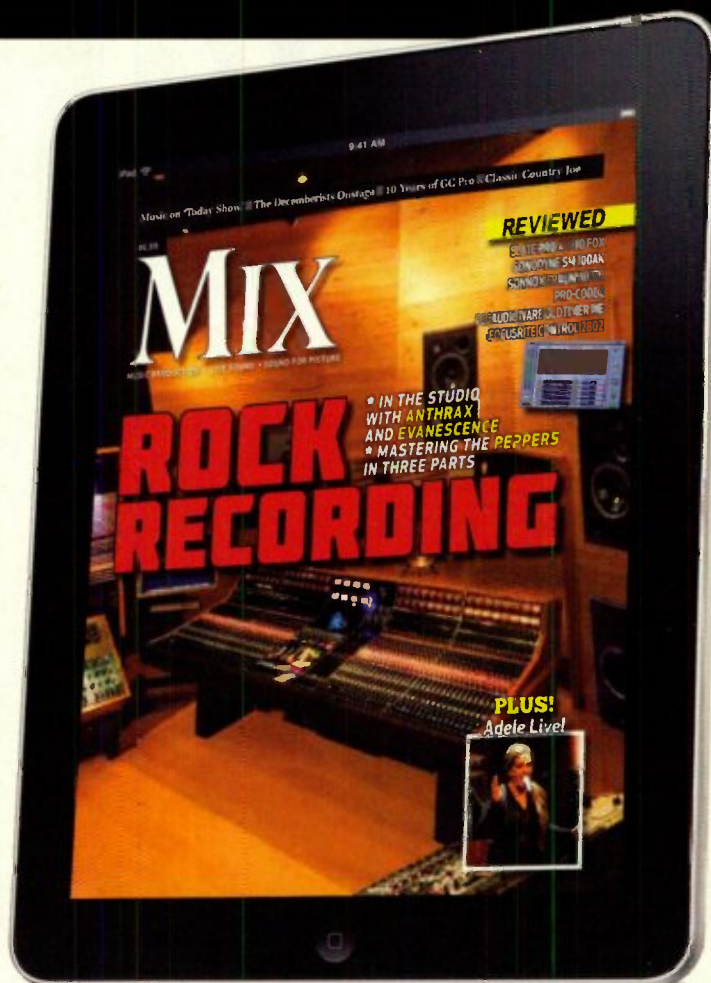
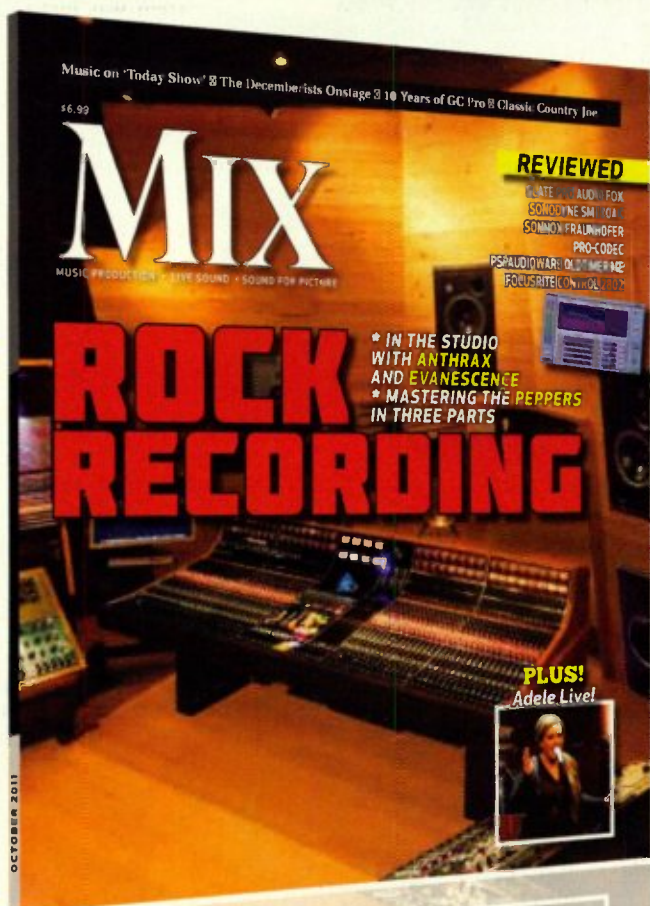
Regardless of the size of your monitors, with the 12sHO, they'll open up, gaining more power and clarity when they no longer have to struggle to produce that bottom octave-and-a-half. In a surround configuration, where there are five or more channels of bass content as well as a demanding LFE channel, you'll be thankful that the 12sHO packs so much power. That being said, I can't help but think that the 12sHO thrives on a medium-to-large room. I know it's found a home in mine.

*Jason Scott Alexander is a producer/mixer/re-mixer in Ottawa, Ontario.*



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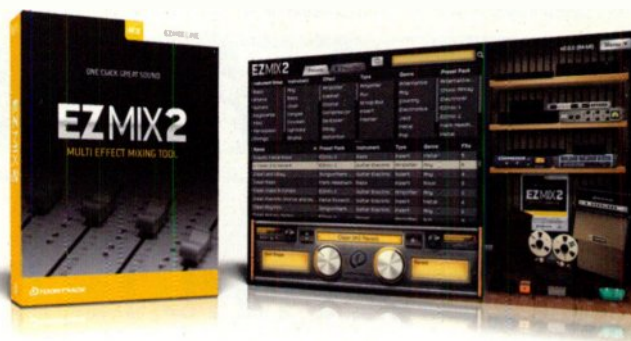
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# TechTalk

## THE FIVE-MINUTE DRILL

By Kevin Becka



**W**hen I was starting out as an engineer in L.A., one of the things that kept me awake at night was the fear that I'd get a call to do a session on a console I'd never used. My night sweats became a feedback loop that I couldn't stop. So, to keep my REM cycle uninterrupted, I developed a set of questions I could quickly ask myself (or others in the know), to get my head around a console's must-know features. I called it my five-minute drill, and I had it written down.

Thankfully, some essential functions on a console are glaringly obvious. For instance, most manufacturers make the stereo bus fader and main monitor level control easy to find—they're bigger, differently colored and most-often somewhere near the center of the desk. But other features, and design philosophies, can be less apparent. Some consoles automatically feed the stereo bus from each large fader and you have to push a button to pull it out, while others make you push the L/R button or some other designated switch to feed the master bus. Additionally, some switches and pots can be dual-duty (push/pull, plus turn), and you may even have mixed generations of modules on a desk where the company changed something from an earlier version. Then there are consoles designed with shared features—the pre/post on an aux, for instance, might effect more than one send. All this can make for a crazy time when you're under the gun at the start of a big session, tracking or mixing.

The five-minute drill is dynamic, an ever-changing list that can be applied to anything—hardware or software. I've got drills for processors, patchbays, consoles and most recently DAWs. Some of my console drill questions are: Where is the source selection for the main monitors? How do I choose mains vs. near-fields? Where is the phantom power and mic preamp pad applied? How do I engage a channel insert? Where is the button for Mix vs. Record mode? Is it global, local or both?

These questions would then influence my patchbay drill: Where is the patch for the big fader in Record mode? Mix mode? Are the OB gear patches in on top, out on bottom as I'm used to, or the opposite? Where are the patches for the in/outs of the recorders/converters? I never took anything for granted. Some consoles (Otari) had patchbays where the signal flowed horizontally. Arrrggghhh!

The goal of all this mad questioning would be for me to feel comfortable on the console and never let the client see me sweat. I just filmed a Webcast with Dave Pensado for Mix and Avid, and one of the things he said in passing was, and I paraphrase, "You have to feel you're the best at anything to make it in this business." That's not blind arrogance, but rock-certain confidence. Of course you're sweating your ass off inside, but you have to be cool as the flipside of the pillow on the outside.

Take this forward to a DAW. There is a tendency to stick with one platform for what might be the right reasons: You're working so much, you don't have time to switch; you have to provide clients with specific formats that align with their chosen platform. Or, the not-so-good reasons: You've based your opinions of another DAW on hearsay or fear of making a jump; or, everyone else is using it, so me too. Don't let a lame excuse keep you from trying new things; by trying new things, you end up stretching your chops. But first, make sure you learn how to use them.

I've lived in both camps. Pro Tools was and is a DAW I love to use. I've mixed and tracked many hours with it, I am most comfortable using it; you can't beat it for tracking with low-latency. However, I recently built a mix room and had the opportunity try new toys. I've mixed two records in the past six months in Nuendo, and I'm about to embark on a mix project in Sequoia 12.

With these DAW jumps comes a new five-minute drill. As with consoles, some things are obvious. Solo, mute and basic transport functions are the same everywhere. But then it gets more hazy. How do I set my channels to separate outs to feed my Dangerous 2-Bus/stereo bus? How do I make my own quick keys? Where are the automation mode toggles, and how do I accomplish the simplest of functions: Write, Read, Trim, Latch, Write to End/Beginning? How do I add and automate a plug-in? How do I group/ungroup faders? Create aux buses? Perform a task across a number of channels? Quickly reset a fader to unity gain? And most importantly, how do I jump sessions between other DAWs? AAF? OMF? Import/export Audio? Like the console drills, this is a dynamic list that will change almost daily, and although it's crazy at first, the payoff is big. It makes you better on every other platform and gives you a new language to speak. By making your own five-minute drill, you can be fluent in no time. ■



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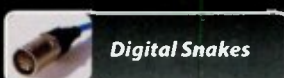


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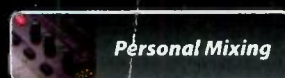
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