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ALL ABOUT THE MUSIC

Ben Folds Revels in the Legacy of RCA Studio A

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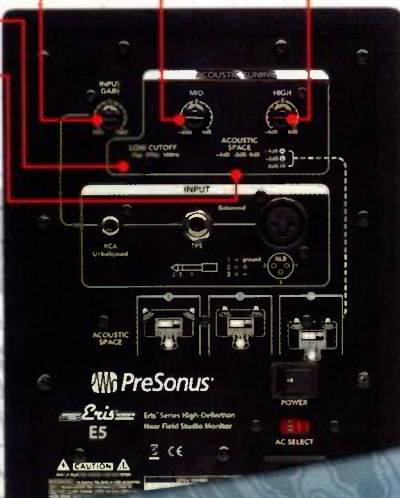
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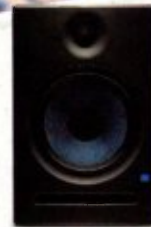
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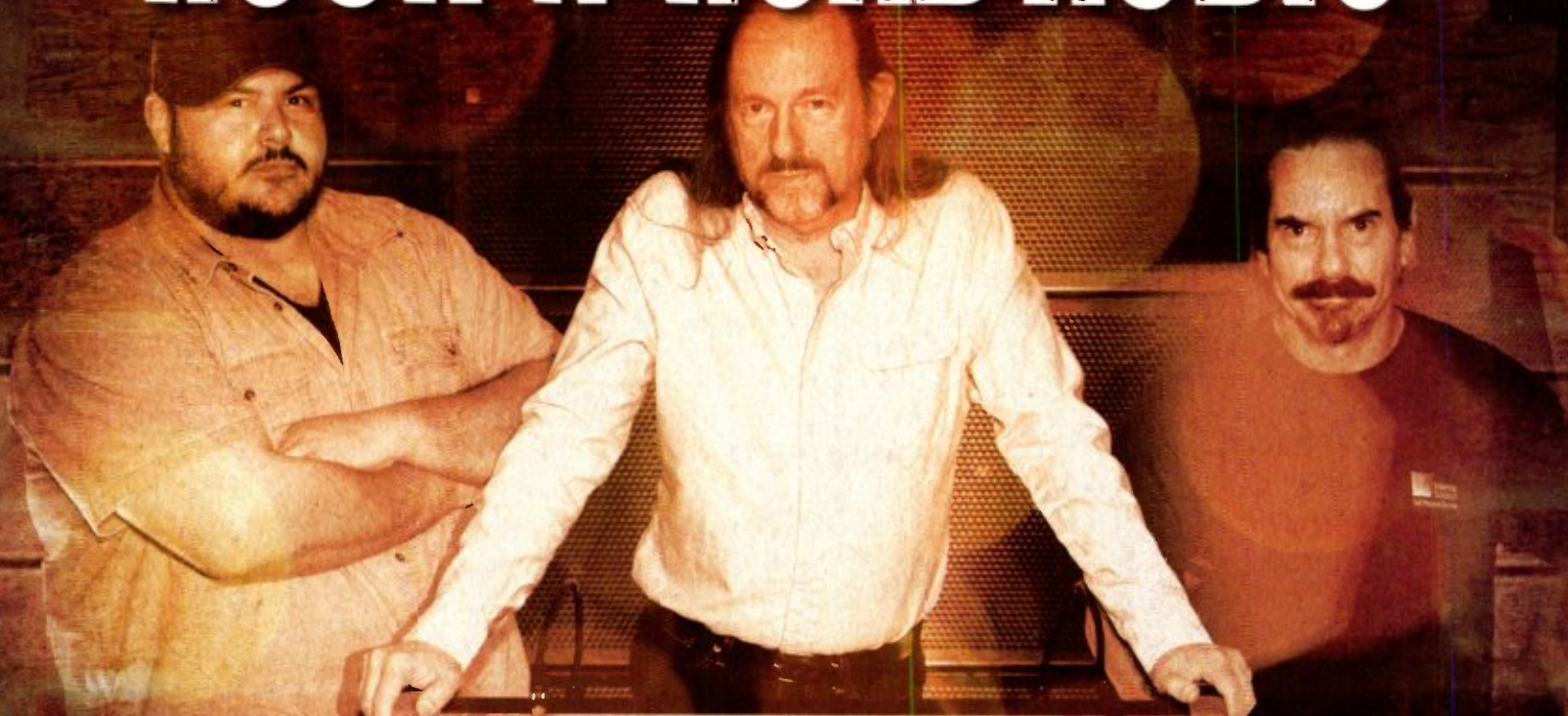
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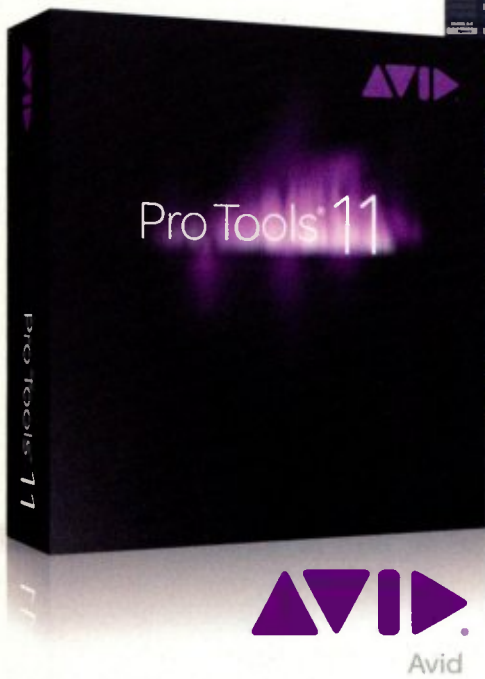
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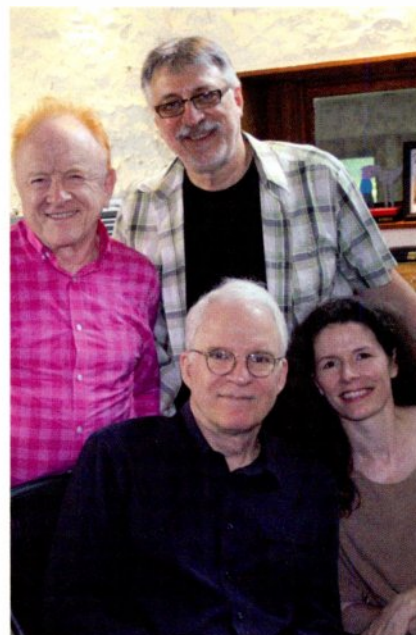
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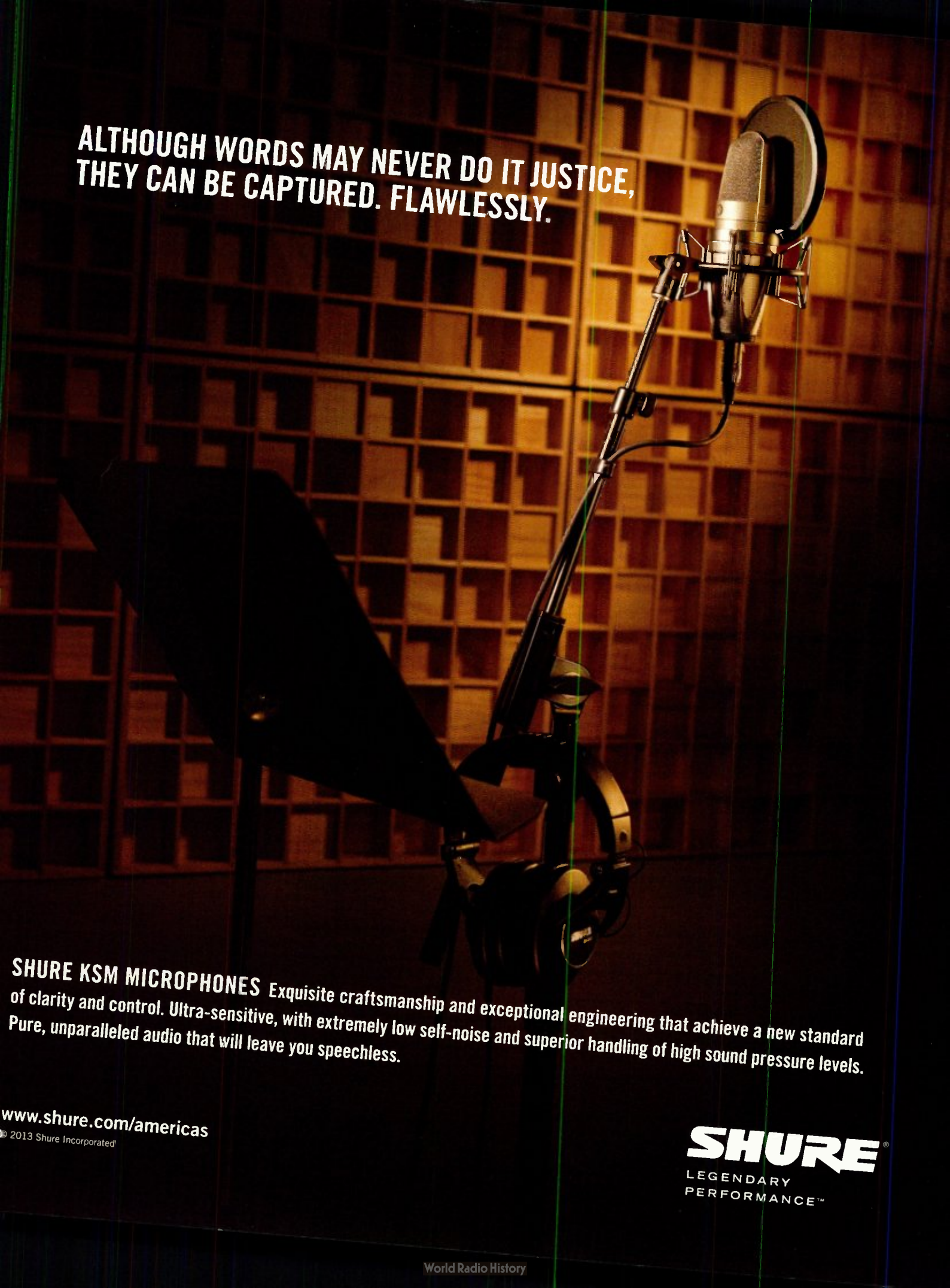
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BY KEVIN BECKA

On the Cover: Ben Fold's in a comfortable spot at his home base, Ben's Studio, the legendary RCA Studio A built in 1964 by Chet Atkins and Owen Bradley. Photo: John Partipilo.

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TO PHIL RAMONE, A TOAST!

Phil Ramone was special in so many ways. In the days and weeks following his passing on March 30, as the stories and remembrances made their way across our industry and out into the world, it became clear that the tales of his vast accomplishments both technically and creatively, of Phil the Musical Genius, were balanced part and parcel by warm recollections of Phil the Kind and Generous Human Being. They were in fact two sides of the same man; you didn't have one without the other.

Why was he special? It seems so obvious. He's Phil Ramone! He recorded Marilyn singing "Happy Birthday" at Madison Square Garden and produced Barbra in *A Star Is Born*. He swung with Count Basie and he sat at the piano with Billy Joel. "The Girl From Ipanema." "It's My Party." He was a confidante to Aretha, Sinatra, Dylan, Paul Simon, Carly Simon, Burt Bacharach, Quincy Jones, Bono, Sinéad O'Connor and countless others. He worked with Coltrane! He won his first Grammy in 1965 for engineering on Getz/Gilberto, and he had hits in six different decades! He went beyond music; he helped shape culture!

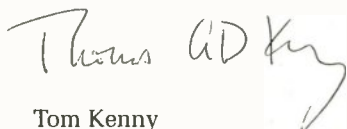
He also opened an independent studio, A&R Recording on West 48th Street, in 1958, produced the music for the first commercial CD release and pioneered the concept of distance recording with EDNet on Gloria Estefan's *Duets* record. He worked on the first Dolby Surround release in film, and he sat in the broadcast truck for the first all-5.1 transmission of a live event over the air. And he was the king of live events—from Concerts in the Park to Kennedy Center Honors to Grammy telecasts—bringing a sense of calm amid even the most daunting challenges.

It's that sense of calm reassurance, a rare quality he wore like a warm black turtleneck, that brought the two sides of Phil together, according to those who knew him best. He had an inviting yet sneakily conspiratorial smile that simply made artists, musicians, engineers, producers, stage hands, broadcast executives—even Presidents—feel that everything would be okay. The arrangement would come together. The song would be a hit. The show would be fantastic.

As we were putting together this issue of *Mix*, collecting stories from his friends and family, we were also arranging a cover shoot with Ben Folds in his Nashville studio, the historic RCA Studio A. Phil, it turns out, had worked there a few times, including on Tony Bennett's *Duets II*. Folds gracefully proffers that while his relationship with Ramone was nowhere near the depth of so many others, he treasured it, their paths crossing a few times.

"He was in Studio A with Tony Bennett, and at the same time talking freely about music and recording, very generous," Folds recalls. "I wanted to hear about Lesley Gore—he invented an Ampex 3-track machine so she could overdub off the erase head! Amazing. But I found that for Phil, the fact that he was there for it was always enough. He seemed so excited to be there in that moment. In real time."

That's what music is, really. Moments in time, sometimes captured, sometimes not. True greatness comes around rarely, but we got to see it. And hear it. Phil Ramone can now join Les Paul, Bill Putnam and Tommy Dowd on the Mount Rushmore of Modern Recording.* I'm sure they will all have a few stories to tell. Phil likes stories.



Tom Kenny
Editor

* Special acknowledgment to Jim Cogan, who first proposed the concept in a *Mix* series on Bill Putnam. We have taken the liberty of filling out the faces.

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Current

COMPILED BY THE MIX EDITORS

My Friend Andy Johns

By Pat Thrall

By 1981 I had acquired pretty good street cred as a guitarist, playing with the likes of Automatic Man, Narada Michael Walden, Pat Travers and even a “supergroup” that featured Steve Winwood, Michael Shrieve, Al DiMeola, Junior Marvin, and Phil Manzanera. I was feeling pretty good about myself, but all I really wanted was to meet and work with Andy Johns. I wanted to find out how we could get the famous “When the Levee Breaks” drum sound on the upcoming Hughes/Thrall album. What I got instead was a 30-year friendship with someone who became a mentor, father figure, coach, big brother, little brother and, most important, a lifelong best friend.

Andy was absolutely passionate about music, and he was brilliant at getting a band to play in the pocket. There was a song on the Hughes/Thrall album titled “I Got Your Number.” Glenn (Hughes) and I weren’t that solid playing the eighth notes on the basic track, so he set us both up in the control room and had us re-track it at the same time while he conducted. He got us in his eighth-note dance and put us in sync, punching us both in and out together until he got the completed track; that’s what you hear on the record.

Remember, he was from a time before Pro Tools, so if the drummer sucked, he wasn’t going to be playing on the album. I have been in the room when a player that wasn’t concentrating or following instructions would frustrate Andy. In his best Winston Churchill voice, he would say over the talkback in no uncertain terms, “Play as told!” We would always laugh about it later, of course.

If he loved and respected your playing or singing, he made you feel like the best musician in the world. I often thought I was his favorite guitar player, but I’ll bet all the guitar players that he loved working with would say the same thing. He made me better. He would sing me ideas and literally stand in front of me and conduct using arm gestures to express the flow of the parts. To this day, I still picture him in my mind, waving his arms, whenever I track.

I remember one particular session after Hughes/Thrall broke up, when I hadn’t played for a couple of months and was feeling dejected and vulnerable. Andy tapped into that, having me play on a slow song. So I played a very sad-sounding solo. I walked back into the control room after the take and saw tears streaming down his face. He gave me a big hug and told me the solo was incredible. He felt music. Deeply. And he was such an inspiration. He lifted me out of my funk because of that session and inspired me to get back in the game. I was touring again in a few weeks.

The last full project I did with Andy was in 1985 for the artist (and attorney) Al Staehely. We worked on the album for six or seven months living together on a 2,500-acre ranch an hour and a half north of Houston. We used studio owner John Moran’s mobile truck that had one of the first Sony 3324 tape machines in the country. We are in the middle of this massive ranch owned by Houston real estate mogul and rancher Bunker White, living in a beautiful octagon-shaped four-story house doing the cowboy



Photo: Cindy Thrall

version of what Andy did with The Rolling Stones in the south of France recording *Goat's Head Soup*.

All we did every day, all day, was record music and entertain ourselves. When we weren’t recording we would be taking moonlit midnight walks in the fields with the dogs and talking about the meaning of life and music, aided by a few chemical enhancements. (C’mon! It was the ‘80s!) Andy was a great cook, and on occasional Sundays he would make Shepherd’s Pie or a roast beef, and we would all eat like a good rock ‘n’ roll family should. Then back out to the truck.

Andy was fearless and would try anything in the studio, adapting to whatever recording environment he was working in. That’s how he came up with the John Bonham drum sound—who at that time would record drums in a stairwell? At one point during the mix stage at the ranch, Andy got so frustrated with the sonics of the truck that he decided to set the JBL speakers up outside on Anvil cases to get a different perspective. The photo of Andy and the Brahman bull is from the first day of that setup. That shot was not posed, and as you can see he is totally indifferent to the fact that there is a massive animal standing right next to him that could kill him in a New York second. All he cared about was getting the mix right. The way that Andy looks in that shot is how I will always envision him: Strong, defiant, focused and, of course, fearless.

I moved to New York, and in the years following my transition from a full-time guitar player to a full-time engineer/producer, Andy and I would talk on the phone every so often like no time had passed at all. I would pick his brain for engineering tips or just have him tell stories of the true glory days of recording. I will miss him till the day I die, and the void will never be filled. Rest well, my dear friend.

Gear Up for GearFest 2013



Sweetwater's annual two-day music and music technology showcase, GearFest, is already billed as the largest end-user festival of its kind in the country, and it just keeps getting bigger. Taking place this year on June 21 and June 22 at the company's Fort Wayne, Ind., headquarters, GearFest 2013 will feature more than 240 audio and music exhibitors, host a range of musical performances, and attract an expected attendance of more than 6,000.

The event has become something of an underground favorite for gear junkies, with its slew of gear giveaways and rock-bottom prices, not to mention the intensive product workshops and tutorials, but it has also amped up the live performance and workshop programs in recent years. Noted audio journalist Craig Anderton returns for his popular presentation, Electronic Music Production for Musicians. Sweetwater's own Mitch Gallagher will speak on Tones of the Pros. And Billy Sheehan will offer tips and techniques for bass players.

Of particular interest to *Mix* readers is a series of workshops for the pro engineer, including an opening session with legendary producer Jack Douglas, a Live Mix-Off between Fab Dupont and John Paterno, tips and techniques from engineer Frank Filipetti, a mixing workshop with Chris Lord-Alge and a closing session with Fountains of Wayne.

For more information, and to register (it's free!), visit sweetwater.com/feature/gearfest2013.



Buzz Goodwin

Pro audio veteran Earl "Buzz" Goodwin Jr. passed away peacefully in his sleep on March 26, 2013, at age 62, following a two-and-a-half-year battle with cancer. Goodwin was well-known in the pro audio industry, having been with a number of manufacturers including Audio-Technica, where he served as Vice President of Sales from 1989 to 1998, and Harman Professional, where he worked as Vice President of Sales and later Executive Vice President for brands including Lexicon, dbx, BSS Audio, DigiTech and JBL Professional. In 2008, Goodwin resigned from his position with JBL and spent two years as president at FDW Corp—which distributes pro audio, video, lighting and A/V equipment to dealers and systems contractors.

Goodwin was also a talented guitarist and songwriter, and played in several bands, including the country/pop band Silverado. He is survived by his wife, Suzanne Goodwin; his parents, Earl and Dorothy Jean; his brothers, Kenneth and Paul; his sister Cindy; and his son, Jesse.

Corrections: DPA, DAP and the Saltmine

In our March issue we mistakenly referred to DPA's "purchase of B&K and the assets of the popular reference mic, the 4006." B&K has not been purchased by DPA; rather, DPA was founded by two former B&K employees in the early 1990s to handle studio (and now live) microphones for the parent company. *Mix* regrets the error.

In our April cover story we referred to Dallas Audio Post as the only Dolby-approved stage in the region. It is the only such stage in Dallas, though Austin boasts two, designed by Acoustic Spaces: Robert Rodriguez's Troublemaker Studios and Keyland Sound.

In our April issue *Mix* Regional section focusing on the Southwest U.S., the story about The Saltmine in Mesa, Ariz., states that owner Don Salter upgraded his facility with Avid Pro Tools | HDX on brand-new 12-core MacBook Pros. They are 12-core Mac Pro towers.

SPARS Sound Bite

Choosing A Studio

By Pat McMakin



What do an iPad, a spare bedroom, a converted garage and Abbey Road Studios have in common? They are all recording studios (of sorts). When to use which version of a studio

is a frequent topic of discussion among producers and artists. It's obviously impossible to record a 100-piece orchestral project in a garage, and it makes little economic sense to cut vocal overdubs in a large scoring stage. With decreased budgets, producers are trying to stretch their funds as far as possible while finding a balance between creative and technical considerations.

OCEAN WAY NASHVILLE RECORDING STUDIOS

The trend we are seeing at Ocean Way Nashville is that experienced producers like having all options available, utilizing each for its strengths. We are seeing an increase in the amount of tracking and large section overdubs such as strings. Stacking a violin 40 times does not sound the same as using a 40-piece string section. Our clients really like to record rhythm tracks with the whole band in the same room at the same time. If the keyboard part changes, the bass part can change in real time and not require bringing the bassist back in. This approach takes advantage of all that a commercial facility offers, such as great acoustics, an extensive mic/gear collection, and a great headphone system, to name but a few. It also invites creative collaboration in ways that many private studios cannot offer because of space and equipment limitations. With thorough pre-production, and efficient use of time and expertise in the studio, it can actually be more cost-effective to record in this traditional fashion.

There are other considerations that make recording at home or in a private studio appealing—privacy, more time to experiment, lower costs in some cases—and this is a great alternative for some. But one thing is the same in both environments: the people involved. Talent is the single most important element in any musical creation. From artist to engineer, that's the one thing that should never be compromised.

Pat McMakin is director of operations at Ocean Way Nashville.

On the Cover

By Tom Kenny

BEN'S STUDIO, NASHVILLE



Studio manager and Ben Folds co-manager Sharon Corbitt-House seated at the API 3232, surrounded by the audio crew of, standing l to r, engineer Joe Costa, house assistant engineer Sorrel Brigman, and engineer Leslie Richter.

Photos: John Partipilo

Its official name back when Chet Atkins built it in 1965, in a building owned by Atkins and Owen Bradley, was RCA Victor Nashville Sound Studios, but around town it has always been simply RCA Studio A. Elvis, Waylon, Willie, Roy Orbison, George Jones, Tammy Wynette...Dolly recorded "Jolene" and "I Will Always Love You" in the big room on the same day in 1973! There is a whole lot of history hiding in these nooks and crannies, a whole lotta dirt in the walls, as a friend used to say.

Ben Folds first walked into the room back in 1992 when it was run by producer Warren Peterson under the name Javelina. A North Carolina native, Folds attended University of Miami and had come north to make a go as a session drummer, backed by a publishing deal facilitated by Paul Worley at Sony/ATV. As part of that deal, Peterson opened up the room for

free at night so that Folds could work on his own material, which would the following year become the Ben Folds Five. A little more than 20 years later, he sits for a *Mix* cover, back in his home away from home.

"This space has always been real special to me," Folds says. "I was 22 years old, and they let me go in there late at night to record. To me, it was just the best room in the world; it feels like being outside. Writing in there at 2 in the morning, I know it's a luxury. You don't have to be spiritual to feel the history."

Jump forward 10 years, and Folds, having achieved some success, is living in Adelaide, Australia, and starting a family. He decides to move back to Nashville, and while driving around town on one of his first days back, sees a sign outside the 30 Music Square West advertising Studio Available. The doors were wide open, he recalls, so he pulled in and was met by the Bradley's origi-

nal building manager, a woman named Michael. "I'll take it!" Folds said, on the spot. "Don't you want to think about it?" Michael replied, skeptically, looking him up and down. "Then she Googled me, I think," Folds says with a laugh. They soon came to terms; he's now been there for 10 years. At this point, it is truly Ben's Studio.

The first five years or so, until late 2008, it literally was Ben's studio, as he was the only one to really use it. It was a giant man cave for a quirky, somewhat geeky mad genius musician-type, with instruments and gear piling up in the studio, a single long snake for inputs, and a loose order-within-chaos vibe. There was a classic Neotek console, a Studer A800 24-track, and a growing collection of esoteric mics and outboard gear. *Songs for Silverman* was recorded around this time, in a style perfectly suited to the way Folds works. But once he decided that he would open the room up to outside clients,

it was apparent that changes had to be made.

"It was this big, great-sounding historical room filled with this incredible collection of gear, instruments, you name it that Ben had collected!" says Sharon Corbitt-House, who teamed up with Folds in early 2009 to help make the studio commercially viable; today she co-manages Folds with Mike Kopp and also runs the studio. "It was so densely packed. We started with inventory assessment and found there were no wiring blueprints. So we started by rewiring the entire studio to bring it up to date, putting in mic panels and things like that. Then we started to look for a console."

Before that, however, Corbitt-House hired Leslie Richter, whom she had worked with at Ocean Way Nashville, to come onboard and help with technical housecleaning. While the infrastructure was coming together, Folds would often pepper his conversation with the line, "When we grow up, we're going to get an API console." It was what the studio had once been known for, and in October 2010, Corbitt-House, recalls, Folds phoned her and said, "It's time to grow up."

"Ben had found a classic 1976 API 3232 owned by Rich Costey out in L.A. and brokered by Jeff Leibowitz at Vintage King," she says. "It had a pedigree and had been well-loved. The ¼-inch patchbay was still installed! But we took that out and installed phantom power. Then we had Mike Rhodes of Skinnyfish Studio Services here in Nashville build a sidecar with patchbay, and he matched it down to the Formica top." Richter helped commission the board.

Over the ensuing years, there have been countless other additions added to the recording chain. A late-'70s MCI JH-16, with transformers, was reconditioned and brought in; countless tube mics were added to the closet; ADAM S3A monitors replaced the B&Ws; and recently, producer Scott Litt left behind a 10-channel 1954 Collins 212-A tube broadcast mixer that Folds subsequently bought—he and his main engineer, Joe Costa, are just starting to experiment with it.

THE BIG ROOM

While the backbone of the facility entered the modern age, albeit with an analog bent, the walls were never touched. Though two iso booths had been added by Peterson in the early '90s, the signature RCA walls, with their rolling-humps rising to the 30-foot ceilings, remained intact. In a very real sense, along with the original parquet floor, they are the sound of the room.

"We worked hard to keep the space itself true to form, true to the original intent of the studio when it was built," says Richter, something of a house engineer and fix-it tech who has had recent success engineering an Elizabeth Cook EP, a Malcolm Burn-produced Alyssa Graham project now in mastering, and the last two John Hiatt records. "It is the largest unbroken floor space in Nashville, and it has always been a place where people want to play together, in the same room, where leakage is your friend. This feels like a place where people want to make records, and not just have sessions. We didn't want to mess with that."

That penchant for live tracking, band on the floor, was the norm back when the studio was built, and it's been a main selling point for the studio lately, with projects by Steve Earle (his first Nashville record in nearly 10 years), Justin Townes Earle, John Hiatt and Kacey Musgraves all taking advantage of dynamic, in-studio interplay. It wasn't that long ago that Tony Bennett stopped in for a couple of tracks on *Duets II*, singing live in the main room, with band and a monitor setup. Old-school.

"I've been using more omni mics than I've ever used in my life because



Five on the floor: Ben Folds at one of his grand pianos, with room for many more.

of this room," says Costa, who besides being Folds' engineer has had recent success with Brendan Benson, Cory Chisel, The Greenhornes and others. "Even omnis for overheads. On Ben's most recent record, I put up a couple of these Neumann M582, the pencil tube mic. This room is so good with leakage, and the players discover that. The drums bleeding into the piano mics can become a big part of the sound. Ninety percent of the time I mike drums pretty standard, but I have put up a pair of spaced omnis and gotten great 'drums in the room.'

"And piano can sound amazing from a lot of different spots in the room, depending on the song," he continues. "Ben has five grand pianos right here, all voiced differently, and he uses them all. But his favorite lately has been a Steinway B that came from a Frank Lloyd Wright house in Ann Arbor. [It was one of two purchased by Wright himself, Corbitt-House discovered when tracing its lineage.] It didn't need to be voiced; it just has this beautiful midrange. I just stick my head in and do a low-high spacing with a pair of Neumann CMV 563 tubes with M7 capsules, and he can hit it hard or light. It just pops in the track."

RCA Studio A is truly a one-of-a-kind room. It's not for everybody, and Folds and his team know that. But it sure is right for others, and it is proving to be a most versatile piece of history, having hosted everything from full-blown orchestral sessions to video shoots to live in-studio performances, not to mention the recent string of fully-booked album projects. For Corbitt-House, it has been a real treat to watch the vision come together, and it's been fulfilling in ways that are hard to measure.

"I can remember getting a phone call from Kris Wilkinson near the end of 2008, saying that Ben was thinking of opening up RCA Studio A," she recalls. "She knew I was freelance and set up a meeting between Ben and I. I was at a time in my career when I really needed to reconnect with why I got involved in this industry. I hadn't been in the room in probably 12 years, and when I walked in I got chills. I recorded my first album at 18, I have 30 years of managing studios, and here I was in the room where Elvis recorded. Waylon's first recordings. Willie, the Outlaws, the whole Monument Records era. Dolly doing 'Jolene.' Those records were such a part of the fabric of my life, and I could feel it in the room. Needless to say, I was re-inspired!" ■

PHIL RAMONE

AS REMEMBERED BY FAMILY AND FRIENDS

Last month we lost a true musical genius and a genuinely good man, Phil Ramone. The unmatched accomplishments, both technical and creative, have been listed over the past few weeks, though they only touch the surface in describing a man who helped to shape popular culture over the course of six decades, remaining current and vital to the end. *Mix* asked some of his friends in the industry to share a story about Phil, something that they will always carry with them. The response was overwhelming, and personal. We print a few here, and we have many, many more at mixonline.com. Please send us yours, and we will keep it going, a living autograph book in tribute to the Musical Genius and Human Goodness that we remember as Phil Ramone.

Special thanks to Lisa Roy and Robbie Clyne for their assistance.



BJ Ramone

I do not believe there is a sufficient language, including music, that could truly express the amount of love, respect and honor I have for my father, Phil Ramone. It strikes me how lucky I was to have known him not just as my dad outside of the studio, but also to have spent so much time working with him inside the studio as my mentor. And the lines did blur more often than not. There was one such moment during the recording of the Miggs album *15th & Hope* that I will always hold close. While tracking the title song, a nod to Billy Joel's "For the Longest Time," we all had just managed to convince my father to get behind the mic. Although Dad and I had worked on many projects before, there was something about this moment—with me in the control room and my father in the booth—where a part of me just felt complete. And as we started up, I wondered about the length of time before he would say, "I need more me!" It didn't take too long.

The significance of that moment has really stuck with me—connecting with my father on the other side of the glass, sharing in laughter, love and music. What could be better? From growing up watching my dad, to assisting him, to engineering and finally recording my dad singing and having fun—everything seemed to have come full circle. Life seems similar to working on an album; throughout the process everything begins to fall into place, and the bigger picture takes shape. Thanks to my dad having provided me with a solid foundation and teaching me a structure to guide my life, everything is beginning to take shape. I owe Dad so much, and I am looking forward to making the rest of the album that is my life.

Thank you again for all your love and support. My dad loved you so much and enjoyed every moment he got to spend with you.



Al Schmitt

I was doing an interview for an industry magazine when the interviewer asked me if I had any regrets in my career, and I said I had one, that I never got to work with Frank Sinatra, who was my idol. Three weeks later I get a call from Phil Ramone asking about my schedule. We figured out a time and he asked my fee. When I told him he grumbled and said okay. Just before hanging up, I asked who the artist was, and he said Frank

Sinatra. Later on when we were recording Frank, I told Phil that if he had told me up front who the artist was I would have done it for nothing. His answer was, "If you asked me for more I would have given it to you." Some of my all-time favorite times in the studio were with Phil. He was one of a kind and I miss him every day.



Jill Dell'Abate

Phil had a beautiful country estate on 10 acres, complete with horses, sheep, chickens, five very large dogs and cats. It was a veritable menagerie, and Phil loved it that way. Whenever possible, we'd have meetings at the house or record at his home studio. His office staff was also on-site, so we'd all end up sitting around the kitchen table yacking and pushing the slobbering Newfoundland dogs off our laps. Karen would often join us, and occasionally one or more of their boys as well. We were all part of Phil's extended family, and when I was there I was home.



Frank Filipetti

How can I talk about Phil Ramone in the past? He still lives with me. My left brain says he's gone, but my right brain hears him whispering in my ear: "That note needs to be tuned...that vocal isn't good enough...we've got to find a new ending here...it just doesn't crescendo enough."

My first meeting with Phil was on Carly Simon's *Spoiled Girl* album. Phil came in and recorded two songs with us. One song, "The Wives Are in Connecticut," just wasn't working as a traditional track. So Phil asked for a percussion kit. He rummaged through it and found what he was looking for. He asked Liberty DeVitto to play four on the floor, and instead of the playing the kit, he should play wood block, vibra slap and the toms with his hands. We added a delay and the song came alive. To this day, it's one of my favorites.

Then four years later I mixed the Sondheim musical *Passion* because the master, Al Schmitt, had a scheduling conflict, and Jill Dell'Abate suggested I step in. That started a 25-year journey that took us to Paris, Modena, London, Buenos Aires and Montreal, as well as L.A., Miami, Nashville, Chicago and more. Far too often, I took for granted the honor that was bestowed upon me. I look upon our

years together with such great joy and such profound sadness. Joy, because they happened. And sadness, because they will never happen again.



Elliot Scheiner

Phil was my mentor and friend. He gave me my first job at A&R Recording back on October 10, 1967, and I was his assistant engineer during a good part of 1968. That whole time I never really knew if I would be good enough to be an engineer. In the spring of 1968, I was assisting Phil on a Jimmy Smith session. It was booked for three nights in Studio A, 7 p.m. downbeat. On the third day Phil was nowhere to be found. He finally called down to the studio and said he was going to be late. He said go ahead and start without me. That was Phil's way. Throw you from the frying pan into the fire. He thought I was ready, and I've thanked him every day for giving me the opportunity and trust to start a career. I will miss you dearly.



Hank Neuberger

Friends of Phil, it was 10 years ago. February 2003, Manhattan. Just 15 months after 9-11. New York City is still grieving, but healing. The Grammys came back to New York that week. The MusiCares Tribute Dinner was Friday night. At the top of the Marriott Marquis in Times Square. We were honoring Bono.

There really hadn't been any charity dinners like this in New York for the past 15 months. At that moment in time, we couldn't have pulled it off with anyone other than Bono. Phil was producing the Tribute program, of course. Friday afternoon, Bono arrived to rehearse. I was the MC Chairman at the time, and I walked over to thank him. As I started to tell him that we couldn't have done this without his support, he held up his hand and stopped me. I remember it like it was yesterday; here is what he said:

"I'm totally down with MusiCares. I'd do anything for MusiCares." And then his tone got more serious. "But you have to understand...for control freaks like me, evenings like this are excruciating. And the only way I can get through this is because I know *he is here*." He pointed across the empty ballroom, at Phil, onstage talking to the rhythm section.

I've often thought that about that in the past 10 years, because Bono certainly wasn't the only one. So many of the greatest artists of our lifetime, the ones who made music that lifted the whole world, must've found themselves in a dark studio staring at a blank page, or on a stage not sure how to make it through tonight's show. And then, like Bono, they saw Phil across the room and thought, "The only way I can get through this, is because I know *he is here*."

And today, at this excruciating time, the only way I get through this, that we get through this, is because we can look in our hearts, and know that "he is here."



George Massenburg

While living in France in 1973-74, I was invited back to the U.S. to record Little Feat, and after that was successful, to return to record Earth, Wind & Fire. By then I was already a huge fan of Phil Ramone's work—that ridiculous Lorraine Ellison single, Ernie Wilkins Big Band, all of the stuff he did for Creed Taylor, and the work he did with Patrick Williams. Achieving recordings that measured up to Phil's standards of clarity, musicality, consistency, balance and dynamics was a mission and a struggle. Now at Caribou Ranch, this was overwhelmingly important to me, as I had been informed early on that Phil Ramone would be mixing the Earth, Wind & Fire record that I was then recording. That was some pressure on a 26 year old.

He showed that what we do as music producers and engineers is an improvable, if not a perfectible, process, where one would strive to craft sound recordings with imagination and strength of vision, which would be shepherded by record men and women to a market. Phil taking his leave gives us no choice but to pick up the gauntlet—to pick up where Phil left off—to aspire to make really great recordings.



Gary Chester

I met Phil when I was maybe 15 years old at A&R when my father would bring me along for a session, throw me in the control room with Phil, and say, "Just be quiet!" Years later when I was a budding engineer I went to a Dionne Warwick session, and Phil said, "Grab a chair and come sit next to me." During the break my father came in and told Phil, "Hey, my son is now an engineer over at Mayfair." Phil responded, "That's great... Gary maybe you should sit over there on the couch." Always loved his first reaction.

Yes, I loved Phil, and through the next 40 years we had some special moments. To Phil nothing was impossible. We did a Peter Noone album in two days. Everyone played and sang live with a live mix. I still love that album. For the Barry Manilow *Singin' with the Big Bands* album, Phil wanted the authentic sound, so he found a mic geek and set up some of the oldest mics I had ever seen. I asked him, "Are we really going to do this session with these old mics?" And Phil responded, "Yes, but I want you to get a second 24-track and use the mics you want, but I don't want to see them or hear them." I complained, "Phil, how can I do that?" And his so-typical Phil answer was, "You'll make it work." You just had to love a man like that. RIP, Phil.



John Harris

Some years ago, Phil asked me to engineer a tribute to Brian Wilson at Radio City Music Hall with many high-powered artists performing Brian's songs, all there because Phil asked them to be. During Paul Simon's song, there was a musical confusion, not by Paul but by the band, one that really made the song fall down, Paul vocally trying to steer the band back where they should be, but at the end it was a mess. Paul came off stage, calling for Phil, asking if the song could be repaired, edited in the remix with what we had. Otherwise, he would have to go out and perform it again, something he very much did not want to do. Phil came to my truck and asked me to play it—keep in mind this is in the middle of a performance and a packed house at RCMH. He listened to the troubled part, and at the same time I said, "No, no way," he said, "Yes it can be done, tell Paul it will be fine."

The next month, while we were remixing the project in the studio, the Paul song came up. I had forgotten all about it, and when I listened even then I could not hear how we could fix it. Phil quickly pointed to a note here, a half-phrase there, a seemingly disconnected string, rearranged them into a complete and faultless musical take. The thing is that he heard it that night, under the gun—he heard the music rearranged in his head and knew it could be done. Engineer, producer, Musical Genius was Phil Ramone. I am honored to have been his friend.



Monica Mancini

Phil was a dear friend, and I was recording covers of my early musical heroes and influences of the '60s and '70s, many whom he originally recorded back in the day. I knew Phil would bring an "old soul" essence to the project, and it was an absolute joy to record. Early on, when listening to vocal playbacks, he just wasn't getting what he wanted from me. He said, "Monica...stop 'singing' the song and start 'telling the story.'" I was a different singer after that. Just one of the many gifts that Phil gave me.



Eric Schilling

I have always thought of myself as an early adopter of technology. But compared to Phil, I was always one step behind. In 1992, Phil and I were starting a Gloria Estefan Christmas album at her studio. The album had a lot of live playing on it, recorded in L.A., so it would require Gloria to do a lot of traveling. We had just finished her *Mi Tierra* album, and Phil realized that she might just want to be home for awhile. So about a month before we started, he calls me and asked me if I had ever heard of EDNet. Of course, I had not. He went on to explain that this system was a way of connecting 4 channels of audio

bi-directionally over specialized phone lines between two points. It had been in use by Skywalker Ranch between their Northern California facility and stages in L.A., where film producers could sit in and listen live to a mix session and do remote dialog looping. Phil wanted to adopt this technology for music projects.

So he convinced Capitol Studios, Hit Factory New York and Gloria's Crescent Moon to install the technology. The net result was we ended up doing a lot of string and background sessions for Gloria's record with Phil in L.A. and Gloria and I in Miami listening in and making comments and suggestions by remote. Gloria's Christmas album was the first commercial music project to be done this way. And of course, not long after Phil dove into the Frank Sinatra *Duets* project with the use of EDNet.

I will be eternally grateful to Phil for what I learned from him and getting me to push the envelope to do things I did not know I could do.



Bob Ludwig

"I was assisting Phil on a Count Basie big-band record he engineered. Back then, with limited input microphone channels, Phil used to record the four trumpets sitting in a circle around a single U 47 set to omni so they would self-balance the section. The producer loved it, raving that Phil used the best EQ on trumpets of any engineer he had ever worked with. I asked Phil what he actually used. He said, "Nothing. All flat!"

From the day I met Phil to the day I last spoke to him, I always loved the sound of his voice. Phil could talk to me about anything, and I would just love hearing him speak. I've been playing podcasts of interviews with him lately just to hear his voice again.

Leslie Ann Jones

My first recollection of Phil Ramone was working with him on Gloria Este-



fan's Christmas release in 1993, but unique to my relationship with Phil was our Recording Academy service together. I served as Vice Chair when Phil was elected Chairman of the Board of Trustees in 1997. Actually I think Phil thought then he could just be "Phil Ramone," not having to do much other than chair the Board meetings. But in truth, Phil took that job as seriously as he did making records. He served during some challenging times for the Academy. It was not a walk in the park. But thank goodness The Recording Academy had Phil at that time. His even temperament, a skill honed from working with great artists as an engineer and a producer, served him and us well. His counsel to me was personally invaluable. I cherish my memories of Phil and the time we spent together. I will miss him more than I can say.



Ron Reaves


I was mixing the Gershwin Prize show at the Library of Congress, and Phil was the executive producer. At a certain point during the show, I had that feeling that we were really nailing it, and Phil reached over, put his hand on my arm, and held it there for a moment. It was probably the single most gratifying thing that's happened in my career, knowing that I was moving someone who's heard "everything."

I will truly miss his company and spirit. There isn't another one like him.




Barry Bongiovi

One time Dave Smith, Gus Skinus and I walked a Sony 3324 down 7th Avenue to A&R Studios, where we had to sneak it into a Frank Sinatra session while Sinatra was in the studio recording. See, Sinatra didn't want anything to do with the new digital technology, but Phil had to have it. ■




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Left to right: Peter Asher, Frank Filipetti,
Steve Martin, Edie Brickell

Photo: Frank Filipetti

STEVE MARTIN AND EDIE BRICKELL: ROOTS MUSIC'S ODD COUPLE

By Blair Jackson

Comedian, actor and author Steve Martin has been a dedicated banjo picker as long as he's been in show business, but he has only occasionally elevated that interest to the top of his priority list. Perhaps you heard the Grammy-winning album he made in 2009 called *The Crow: New Songs for the 5-String Banjo*, or the exceptional bluegrass CD he made two years ago with the Steep Canyon Rangers, called *Rare Bird Alert*. The guy is serious about his music, and it turns out he's also really good.

Since her days as a sprite fronting a loose-

limbed group called New Bohemians ("What I Am" was ubiquitous in 1988 and beyond), Edie Brickell has had a fairly low-key career as a solo artist (her 2003 album *Volcano* is my favorite) and collaborator with various interesting folks, and also raised three children with husband Paul Simon. She has always been a terrifically appealing and engaging singer and songwriter, mixing plainspoken observations and wisdom with more abstract poetic insights.

Martin and Brickell's brilliant and affecting new album, *Love Has Come for You*, plays to the

strengths of both while forging a sound that is completely original and unexpected. With its vivid characters, concise storytelling and mostly acoustic instrumentation (dominated by Martin's banjo), it certainly steps into old-time folk and bluegrass territory, yet it is not so easily pigeonholed—what do we make of the elegant strings and piano, subtle electric guitar and percussion touches, the drums and dynamic jazz bass that dapple the always tasteful and imaginative musical landscape created by producer Peter Asher? In the end it feels sort of roots-moderne.

Photo: Frank Filipetti



The album started on a whim—Martin approached Brickell about writing some lyrics for a banjo piece he'd written. She loved what she heard and responded by sending him not just lyrics, but a rough performance of her singing a melody inspired by the banjo part. Martin was similarly jazzed by Brickell's work, and they fell into a routine in which he would send her banjo melodies via email and she would quickly write lyrics and a melody, record it on an iPhone or iPad, and send it back. As she noted in a promo interview, "The opening lines came out of the banjo. The mood that Steve sets is so powerful that all I had to do was trust what I heard and how it made me feel and then just start singing, and there it was. The songs were gifts from the banjo melody."

Asher and Martin have been friends for many years, and shared their excitement about the home-brewed recordings that Martin and Brickell were passing back and forth. "I immediately started thinking of arrangement ideas for these songs," Asher says, "and Steve and I talked in general terms about what kind of record it could be." After Martin formally asked Asher to produce the album, they decided to start where the rough demo explorations left off—recording just banjo and voice, but together in a great studio.

These foundational sessions took place over the course of about a week at veteran engineer Frank Filipetti's studio, The Living Room, in his house in the scenic Hudson River town of Nyack, about an hour north of Manhattan. As an early advocate of digital consoles, Filipetti had variously championed the Neve Capricorn and Euphonix System 5 boards through the years, and favored the Nuendo recording platform, but his new studio boasts an Avid ICON D-Command console and Pro Tools 10 with HDX cards. Much of the other equipment in the studio came from Filipetti's previous recording "home"—Studio B at Legacy (formerly Right Track) in New York City.

"I think Peter was a little surprised when he got here, because he assumed I had a separate control room and studio," Filipetti says, "but it's all in one

large area, with a two-story wood-beam A-frame ceiling, stone walls, a fireplace and some furniture. It was built in 1890, and it's really one of the best-sounding rooms I've ever been in. The house is on a couple of acres, with lots of trees, a reservoir—we're out in the country and it's a wonderful place to record.

"Steve was in here in the control room area with Peter and me, playing banjo, and in the study right off this room, we had Edie singing to the track live. I had three mics on Steve—two on his banjo and one in the room." Filipetti used an Audio-Technica AT4080 ribbon "slightly above the banjo, picking up the resonance of the head, and a B&K 4006—which are now called DPAs—nearer to the strings." The room mic was a Sanken CO-100K. For a banjo mic pre he used a Neve 1064.

Brickell's vocal chain mostly consisted of a new Telefunken 251 into a Neve 1064 or 1084 pre, "probably going through an LA-2A or a Summit compressor, very, very lightly touched," Filipetti says.

As for the flow of the sessions, Filipetti says, "We did multiple performances of the songs. There was no click—Steve would provide a tempo and then we'd do a few takes—two or three tracks a day; just run through them and do them until Steve was happy with what we got. Then in the evening, Peter and I would sit here and edit the takes together. But Edie's vocals were so spectacular you just didn't want to lose certain lines, and usually we didn't do more than two or three takes on her."

Armed with what he calls "perfect vocal and banjo takes," Asher then went to L.A. for the overdub sessions, which were mostly engineered by Nathaniel Kunkel at Village Recorder and East West. Asher "cast" each song and brought in the players as needed. "I'd say, 'Okay, we need a keyboard player for one day, I need a straightforward bass player for one day, I need Esperanza Spalding for one evening.' I had very specific ideas for the role each overdub was supposed to play." Other notable musicians included guitarist Waddy Wachtel, keyboardist Matt Rollings, bassist Ian Walker and the singing Webb Sisters. Asher also played many different parts.

A couple of tracks featuring the Steep Canyon Rangers were cut at Kung Fu Bakery in Portland, Ore. with Bob Stark engineering, and Andrew Dudman handled some string recording at Abbey Road. Kunkel mixed the album in the Village's

Studio F "entirely in the box on their ICON," he says. "I relied heavily on my UAD-2 cards—all the reverbs and effects were from that. I also used the Massenburg Design Works equalizer pretty heavily, and I've been using a dynamic parametric equalizer made by Wholegrain Digital; that one's a game-changer.

"It was surprisingly easy when it came time to mix it. Frank's recordings were stellar, and because Peter's arrangements were correctly done, there weren't a lot of extra parts to deal with in the mix. It was very straightforward.

"We sent the mixes to Steve and Edie. I would do live streams for her, and there were some mix-approval sessions where Steve came to the studio and I would stream to Edie, and we'd be on a conference call and we would work through issues they had, and they would talk together about where the mix was going. So they were very involved all the way through, as was Peter. It was a real collaboration at every stage." ■



more online



Check out the extended interview at mixonline.com/052013/.

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GOO GOO DOLLS

The Goo Goo Dolls' latest, *Magnetic*, has already yielded Top 40 single "Rebel Beat," and the production's blend of bright, pop band arrangements with anthemic rock vocals is bound to make the album a hit, as well. The first three tracks (including "Rebel Beat") were recorded at Rewind, the former Quad studio that serves as the home base of producer Gregg Wattenberg. Engineering the sessions were John Alicastro and Chris Shaw, who sheds some light on the process:

"The songs were extensively demoed in Pro Tools by Gregg Wattenberg and [guitarist/vocalist] John Rzeznik," Shaw says. "The arrangements were pretty complete by the time I was brought in to engineer. So, my focus was to re-record the parts that were demoed, and we would often use the demos as the starting point of the new master sessions. Mike Malinin, for example, was able to record his drum parts to an almost fully realized track, so we were able to tell what parts would work and which ones wouldn't," Shaw continues. "Over the course of the sessions, we would replace a majority of the demo tracks with live performances, and we would alter the arrangements if we had happy accidents along the way. A lot of the original demo parts also made it to the final master."

Tracking to Pro Tools, Shaw made use of Rewind's API 1608 board and a broad selection of mics and outboard. "Drums and [electric] guitars were recorded through a combination of Neve 3102s and API 512s and 550As," Shaw says. "A key part of the drum sounds were a pair of PZM mics placed on the the far wall opposite of the drum kit and processed with an SPL Transient Designer to shape the decay of the room to fit the song. There were also quite a few guitars recorded direct using various amp simulators [Amp Farm, Guitar Rig] and processed heavily with the Roger Linn AdrenaLinn plug-in."

Shaw took acoustic guitars via an AKG C 414 placed about 10 inches from the bridge and angled toward the high E string, and a Neumann KM 184 near the 12th fret and angled toward the sound hole. These went to two Summit TPA-200B pre's, API 550B EQs and Neve 33609 compression. And the vocal chain was a Shure SM7 or Neumann U67 coupled with a Neve 3102 through a vintage Urei 1176 Bluestripe compressor.—Barbara Schultz



SEVENDUST @ ARCHITEKT



Photo: Davo

Hardcore/progressive metal band Sevendust—Lajon Witherspoon (vocals), Morgan Rose (drums/vocals), Clint Lowery (guitar/vocals), Vince Hornsby (bass/vocals) and John Connolly (guitar/vocals)—followed up a rare hiatus from touring in 2012 by reconvening in the studio to self-produce *Black Out the Sun*, the band's ninth studio album. During the break, Lowery and Rose had discovered Architekt Studios (architektmusic.com) in Butler, N.J., where they

recorded the debut album for their new band project, Call Me No One, with Architekt's chief engineer, Mike Ferretti.

"The way that we work as a studio fit into what they wanted to do, too," Ferretti says, describing Architekt as a versatile creative hub, with a live venue and an educational component to go with the studio. Band members established "writing stations" with Pro Tools-equipped laptops for sketching ideas. Ferretti set up a drum kit in a smaller room, where the band rehearsed its new songs, tracked Rose's drums in Architekt's live venue, set up iso booths for guitars and bass, and used the control room for overdubbing parts and recording vocals.

"We had all their guitar [amp] heads and everything on a dolly so we could push into that live room and switch a couple of cables, and have essentially the same setup and headphone mix," Ferretti says. "They would track [a song] within a half hour or so of writing the majority of it." Ferretti recorded to Pro Tools through his trusted Vintech Audio mic pre's; vocals went through an AKG C 414 B into a Vintech X8r Class A. He mixed on Architekt's SSL 9080 J console. "I love the way SSL's EQs sound for aggressive guitars," Ferretti says. "I went in knowing this needed to sound heavy, brutal."—Matt Gallagher

WILLIAM TYLER'S 'IMPOSSIBLE TRUTH'



William Tyler's breathtaking instrumental album *Impossible Truth* takes inspiration from the American landscape. But it's how the landscape sounds in Tyler's mind: darkly shimmering in layers of intricate acoustic and electric guitars, delicate pedal steel parts, and soft echoing brass notes. This thing of beauty was created in the Beech House, personal studio of engineer/producer Mark Nevers (Laura Cantrell, Jason Isbell, Mount Moriah).

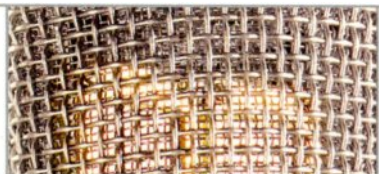
At the center of Nevers' facility are a 1970s Sphere Eclipse analog console and an MCI JH16 2-inch tape machine. "Back in the days of all-analog, you would run into problems or mistakes, and you might have to scrap the song, or you would let the mistakes kind of guide you, and that's what we did on a couple of songs when his guitar playing went a little out of the pocket. On one of the longer songs, William said, 'Is there anything we can do?' And so we faded in other guitars and drums over one spot and faded it back out. It makes you do something you didn't plan on."

Nevers says he and Tyler paid special attention to creating sonic differences between these guitar-based tracks; Nevers switched up mic placement (often using a close SM57, Royer ribbon farther back and a U 87 room mic) and moved musicians to different positions and amps. In the end, though, it's the tone of the players: "The console has its own color, but I try to mix my stuff to where you don't notice what I'm doing," Nevers says. "I like it to sound like the band's in the room when you listen back to it."—Barbara Schultz



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Classic Tracks

By Blair Jackson



"KING OF THE ROAD"

Roger Miller's Smash Breakthrough

It's hard to remember back to a time when Nashville's vaunted Music Row was really just a couple of studios and music publishing houses dotting tree-shaded 16th Avenue. This month's Classic Track, Roger Miller's "King of the Road," takes us back to the fall of 1964, an era when the top dog on the Row, studio-wise, was CBS's Quonset Hut, a utilitarian structure that had been one of many thousands of identical small, prefabricated corrugated galvanized steel buildings with semicircular roofs made during World War II.

"I'm pretty sure it wasn't even called 'Music Row' back then," says the song's producer, now retired, Jerry Kennedy. "In the late '50s and early '60s, some of the houses on 16th Avenue were being invaded by people who were opening up publishing companies and throwing up a funky little studio here and there. It was a neat time. Everybody was amazed at what was happening with the influx of pop artists coming to record and the country artists becoming huge. And it was mostly being done by a small group of musicians and a small group of writers and publishers, working in a small number of studios. It was giving birth in the early '60s to what became an explosion later."

When the 19-year-old Kennedy traveled from his native Louisiana to

Music City in 1960 to work on sessions for Mercury Records' Nashville A&R head, Shelby Singleton, he was already a seasoned music industry veteran. He'd signed his first record deal with RCA at the age of 11, cut a couple of singles, and later worked as a background singer, guitarist and songwriter on numerous sessions during his high school years. In March '61, Kennedy moved to Nashville, and immediately became one of Mercury's in-house producers, and a bit later, following the label's acquisition by the European music giant Philips, for the offshoot label Smash. "Shelby Singleton had a lot of faith in me," Kennedy says modestly. "He turned things over to me he probably shouldn't have, but we were fortunate that some good things began to happen."

"We did most of the Mercury/Smash/Philips stuff at the Quonset Hut because it was a magic place," he continues. "It had a great sound I thought we could not get at RCA [Studio B, the other leading studio of the day] or at Monument, which was Fred Foster's studio downtown in the Cumberland Lodge building—Sam Phillips [of Sun Records] had built that one originally, and it was a good place to make records, but not for the country thing as much."

The Quonset Hut, as a recording studio, dated back to the mid-'50s, when brothers Owen and Harold Bradley—Owen had worked at radio station WSM as music director of the Grand Ole Opry broadcasts; Harold was an in-demand guitarist—bought a duplex on 16th Avenue South, knocked out the ground floor, and built a basement studio there. They also put an Army surplus Quonset hut behind the main studio to accommodate film work they hoped to attract (from the Grand Ole Opry and others) and called the entire complex the Bradley Film and Recording Studio. As it turned out, the studio in the house (Studio A) proved to be too small for some types of sessions, but the Quonset Hut (Studio B) was just right, so that became their main recording room.

It was undeniably a humble atmosphere. To get some reflective surfaces into the curved structure and to deal with other sound issues, the Bradleys "built walls that went up maybe 10 feet," recalls engineer Lou Bradley (no relation), who worked as an engineer at the Quonset Hut beginning in 1969, but had been a regular presence there for much of the previous decade. "Then they built this frame that went up to a smaller rectangle at the top, and they had banks of louvers running up the side of this frame—each bank was maybe three or four feet long. They weren't adjustable, but the opposing ones were pointed differently to diffuse that sound going up. They also put these old theater curtains up there so the sound wouldn't come back down. That solved the problem of that dome." Acoustical tile, burlap hangings and baffles also helped control the sound.

The Quonset Hut's control room was equipped with a custom 12-input, 3-track-capable tube console that had Langevin rotary fad-

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ers, mic pre's and EQs. Owen Bradley favored Ampex recorders, Neumann microphones, LA-2A and GE BA-9 "uni-level" compressors, and German EMT reverbs. The studio also had a live chamber and what was called the "drum hut," which was essentially a drum booth with an open front.

The Bradleys sold the Quonset Hut and much of the equipment—including the console, which is now in the Country Music Hall of Fame—to CBS Records in 1962, opting to build a new studio: the equally legendary Bradley's Barn, in nearby Mt. Juliet, east of Nashville. The Quonset Hut barely missed a beat in the transition and remained a popular recording destination for CBS and other acts up until it closed in 1982.

Roger Miller grew up poor in Oklahoma, and his love of the country music he heard on the radio led him to take up the guitar and fiddle when he was a teenager. During a stint in the Army in the early '50s, he briefly joined a group led by budding honky-tonk music star (and fellow serviceman) Faron Young, and once Miller was discharged, he migrated to Nashville to be part of the burgeoning country music scene. Over the next several years, he had periods where he worked in bands with the likes of Minnie Pearl and George Jones, and also times when he had to work jobs outside of music—and even outside of Tennessee; he was a fireman in Texas for a while.

Eventually, he caught on as a songwriter in Nashville, landing hits with such artists as Ray Price, Jim Reeves, Ernest Tubb and Faron

Young. Beginning in 1958, Miller started cutting singles under his own name—first for Decca, then for RCA, with Owen Bradley, then Tommy Hill, producing at the Quonset Hut. But it wasn't until 1960 that he enjoyed his first minor hit, "You Don't Want My Love," produced by Chet Atkins. His success was short-lived, however, and he struggled for the next couple of years, even leaving the business briefly, before returning out of sheer financial desperation. He signed a low-advance deal to cut 16 sides for Smash Records, and his initial sessions for the label, with producer Jerry Kennedy and recorded at the Quonset Hut, produced two Top 10 pop hits (and Top 5 country hits) in the summer of '64: "Dang Me" (his first Number One) and "Chug-a-Lug," both light, humorous, down-home numbers that showcased Miller's breezy charm.

"I actually met Roger the first week I moved to Nashville [in March 1961], at the offices of Tree Publishing," Kennedy remembers. "Roger and Joe Tex and Bill Anderson—three of the big artist/writers—were there, and Roger came up and introduced himself. I thought, 'That's cool he was nice enough to do that.' Of course, he probably knew I was scouting material for Shelby Singleton. A little later I was a guitar player on a few RCA dates that Chet Atkins produced for him.

"Roger was a genuinely funny guy; one of the wittiest people I've ever been around," Kennedy continues. "Very bright, and he was always cracking everybody up. I always thought he was a free bird. He just needed some room to spread his wings. And when I had a chance to produce him, I kept that thought in mind: 'We've gotta find a way

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to stay out of the way of these songs and not let the music overwhelm them.' So we tried to keep it simple, like on 'King of the Road.' There's not very much on there at all."

Indeed, the November 3, 1964, session at the Quonset Hut that produced "King of the Road," engineered by the late Mort Thomasson—widely regarded as one of the best of the era—is spare as can be, hardly emblematic of the still-developing "Nashville sound." Though it is Nashville A-listers: Bob Moore on standup bass (most likely miked with an RCA 44 or Altec 639, Lou Bradley suggests); Harold Bradley and Ray Edenton on guitars (perhaps Neumann U 67s "or either a Beyer or Telefunken"); the great Hargus "Pig" Robbins on piano ("an Altec 21-B condenser?"); Buddy Harman on brushed drums and tambourine on a low sock cymbal (two unknown mics covered the whole drum kit); and guitarist "Thumbs" Carllile and Tree Music's Buddy Killen providing the song's ultra-cool finger snaps (captured by a U 47 generally used for background singers). Miller sang live with the band, probably through a U 67, and added his backing harmony later that evening. Reverb was likely from EMT plates. And though it was recorded to an Ampex 300 3-track (by Charlie Bradley, brother of Owen and Harold), Kennedy monitored in mono, and of course in that era singles were always still mono. "I'm going to guess we did four or five takes of 'King of the Road' and went back and grabbed the second or third," Kennedy says.

"A lot of people don't know that we had actually recorded 'King

of the Road' *before* that session, for a live album," Kennedy continues. "We went into a club here in Nashville called the Carousel Club, and the place was packed. But the stage was up over the bar, and when we listened back the next day, we had glasses clinking, forks being thrown into dishpans; it was horrible. So we canned it, and it's probably off in a vault, never to be heard, I hope! But we selected about five or six of the songs off of there to do on his next album, and thankfully 'King of the Road' was one of them. To be honest, when we recorded it for that live album, we had not noticed that song as something extra-special."

But it *was*. Kennedy says, "Charlie Fach, the head of Smash, called me one day after the acetates went out and he said, 'Kids, we've got a hit!' I said, 'Which one?' He said, 'That hobo song.' He couldn't remember the title but he remembered it was a hobo song. I couldn't remember what song he was talking about, either. On the drive on the way downtown it hit me that it was 'King of the Road.'"

In February of 1965, "King of the Road" surged to Number One on the country charts (where it stayed for five weeks), Number 4 on the pop charts, and Roger Miller was transformed into a superstar. He scored several more hits in the next few years, including "Engine, Engine #9," "England Swings" and "You Can't Roller Skate in a Buffalo Herd," and even had an eponymous NBC TV show for a season. His late-career highlight was writing and performing in the 1985 Broadway hit *Big River*. He died in 1992.

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Imagine Dragons at The Warfield Theater in San Francisco.

Photo: Steve Jennings

IMAGINE DRAGONS

Taming Big, Thunderous Percussion and Dynamic Vocals

By Matt Gallagher

The year 2013 will be remembered as the breakout point in the four-year career of Las Vegas-based indie rock/pop quartet Imagine Dragons—Dan Reynolds (lead vocals), D. Wayne Sermon (guitar), Daniel “Z” Platzman (drums), and Ben McKee (bass), with Ryan Walker on keyboards and second guitar. The band launched into its current Night Visions tour of mid-size venues and amphitheaters in support of its 2012 major label debut album of the same name, produced by Alex Da Kid for Interscope. *Mix* caught up with the band at The Warfield Theater in San Francisco in March.

An expanding fan base has caught onto Imagine Dragons’ tightly arranged vocals and rhyth-

mically driven songs. They augment traditional rock rhythm section instruments with a battery of drums that includes an extra floor tom, a high-pitched Japanese drum, quad toms, a 36-inch concert bass drum and a Japanese Taiko drum.

Front-of-house mixer Scott Eisenberg and monitor engineer Jared Swetnam are tasked with accurately balancing and controlling each of these elements within a variety of rooms and settings. As an added variable, the band is traveling light on production, carrying only an Avid Venue SC48 console for monitors; three Shure PSM 1000 dual-channel wireless transmitters and Shure mics provided by Clair Brothers; additional Blue and Sennheiser mics; ACS Custom USA in-ear monitors; Radial DI boxes; and

backline instruments and amps.

“If I can get control of the low end in the room [during soundcheck], that seems to be my biggest friend,” Eisenberg notes. “I might have 10 or 15 minutes [to make] the system sound good before doing a line check with all the instruments, getting the low end so I could control the drums—and then in the vocal range, just making sure that it didn’t sound nasal-y or boxy, but that it brought out the nicer frequencies of the vocals so I could make them sit on top.”

Eisenberg’s vocal mix begins with Reynolds, who sings into a Shure U4D wireless mic system with an SM58 capsule. “Because we’re not carrying our own [FOH] console, I’m trying to use more of the standard, onboard effects that I can



Photo: Steve Jennings

Front-of-house engineer Scott Eisenberg mixes on house-provided consoles. At The Warfield in San Francisco, he worked on a Yamaha PM5D.

find anywhere so that no matter what club or festival that I come into, hopefully I won't run into, 'Oh, half my plug-ins don't work!'"

When he's on a Venue Profile, Eisenberg turns to the Bomb Factory BF76 compressor/limiter. "Dan has a really strong voice, so it's easy to let it stand out by itself with a bit of compression and a little chorusing," he says. "They're not afraid of reverb! [Laughs.] I usually go for a decent-size Hall. There are a few songs where I'll use more of a slapback to make it more personal. And I'll generally use a tap delay on Dan's vocal—usually somewhere around 450 ms—that I'll bring in and out as it applies to each song."

Background vocals by Sermon and McKee are into Blue Microphone en•CORE 100 mics; drummer Platzman uses an en•CORE 100i because it has a tighter polar pattern for improved off-axis rejection to compensate for bleed from his drum kit. "They have a good sense of each other, balance-wise," Eisenberg says. "They don't get as much of that when they're on in-ears, but they're easy to mix. I use the same Hall reverb for the center as well as the background vocals."

Sermon and Walker's guitar cabinets are each miked with SM57s. Sermon plays a Bilt electric with built-in effects through a Line 6 M9 Stompbox Modeler into two cabinets to create stereo guitar parts, which Eisenberg says helps open up space in the FOH mix and allows him to fit Walker's guitar by panning it a small amount to one side. McKee's bass cabinet takes a 421 and a DI. Platzman's four-piece drum set receives standard miking with a combination of Shure and Sennheiser mics.

"The biggest challenge was trying to figure out how to place that extra percussion," Eisen-



Photo: Steve Jennings

Monitor engineer Jared Swetnam travels with an Avid Venue SC48.

berg says. He uses 604s on the extra drums, save the Taiko drum, which takes a Beta 52. "With the concert drum you take out some lower midrange, somewhere between 200 and 400. With this Taiko drum, we were trying to figure out how to get the best low end out of it while also hearing a good attack. But that drum puts out such a wide frequency array [laughs], and it's got an enormous sustain, so gating it was really difficult. There were nights I just had to gate it manually—literally turning the fader up and down—because the sustain would hold the gate open for 30 seconds."

In monitor world, Swetnam says he appreciates the SC48 because it offers "sends on faders, quick on-the-fly soft patching—which is convenient when having to swap out wireless packs during a performance, eight built-in stereo FX returns, and its local I/O made it a very portable all-in-one system. For Imagine Dragons, I mix with a cue list of changes for each song. Luckily we have a consistent setlist each night. I haven't had the need to use snapshot mixing, though with the increase in our production and inputs for the U.S. tour in May, it might become an necessity." The three Shure transmitters give Swetnam five stereo stage mixes plus his cue mix.

"Finding the right balance of vocal EQ and compression, reverb and delay is crucial, especially when the artist moves with his microphone and the stage sizes vary from show to show," Swetnam says. "On smaller stages it's important to monitor these levels to avoid washing out the vocalist mix with bleed from other instruments. Mixing with in-ears, carrying a console, and using the same mic package every night can give you a level of consistency and freedom to fine-tune your monitor mix over the course of a tour."

UMPHREY'S MCGEE SHARES MIX WITH FANS

Six-piece progressive/improvisational rock band Umphrey's McGee is in the middle of a nationwide tour supported by ECTO Productions of Elmhurst, Ill. *Mix* caught up with front-of-house mixer Chris Mitchell and Kevin Browning, who is in charge of the band's Creative & Business Development, at the Fox Theater in Oakland, Calif., where Umphrey's played to a packed house on March 16.



Photo: Dave Vann

At FOH, Mitchell mixes on a Midas PRO9 digital console, while monitor engineer Bob Ston works with an Avid Venue Profile. "I mix on the PRO9 as if it's an analog console," Mitchell notes. "With a 400-song catalog and improv every night, scenes just aren't possible. I use the PRO9's internal effects rack for a pair of 'verbs, a pair of multiband compressors and the dynamic EQ, which acts as a de-esser. My outboard rack includes a vintage Lexicon 480L, and a TC Electronic D2 and Fireworx for effects. I try to create a mix that allows the P.A. to disappear. Perfectly tuned drums and great-sounding guitar and keyboard rigs require only accurate translation, not tonal repair."

At selected venues, the band introduced "Headphones & Snowcones," coordinated by Browning and Micah Gordon, whereby—for a fee of \$40 plus a deposit—16 to 18 fans could listen to Mitchell's FOH mix in an area near the console, as well as receive a download of the performance in MP3 or FLAC format. Browning explains: "Essentially we're providing an in-ear monitor mix for fans wearing Audio-Technica AT-50 headphones instead of custom molds, broadcasting the live 2-track recording via a Sennheiser 2000 Series transmitter and belt-packs. We are looking to make this a regular feature at all UM shows and spread it to venues and artists around the globe."—Matt Gallagher



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Photo by Todd Berkowitz

COHEED AND CAMBRIA

Hard rocking band Coheed and Cambria—Claudio Sanchez (vocals, guitar), Travis Stever (guitar), Zach Cooper (bass), and Josh Eppard (drums)—spent early 2013 touring the U.S. in support of their 2013 release, *The Afterman: Descension*, with gear supplied by Clair Brothers. *Mix* caught the band's appearance in Philadelphia in mid-March at The Electric Factory.

Front-of-house engineer Mike Babcock mixes on a DiGiCo SD9, and uses its internal effects and processing. "Vocals are first and foremost," Babcock says, noting that the band continues to rely on Sennheiser e 945 dynamic vocal mics. "The crowd comes to sing along, and if they can't hear Claudio Sanchez, then they will not be happy. I keep his vocals fairly simple: I use a pitch shifter as a doubler, just to thicken it up a little, and add reverb to taste."

The entire band is on in-ears, with Sanchez on Sensaphonics 2MAX earphones and everyone else on Ultimate Ears UE7s; guitars and bass run direct. Babcock says this allows him "to build a nice punchy mix where every instrument and voice can be heard."



Monitor engineer Rob Gil (left) and FOH engineer Mike Babcock

According to monitor engineer Rob Gil, the band owns an Avid Venue SC48 and uses a rack of six Sennheiser G3 transmitters, two G2 combiners, an AC3200 II combiner, and a UPS to keep it all up and running. A playback rig comprises two MacBook Pro computers running Digital Performer Version 6, with two MOTU UltraLite-mk3 Hybrid interfaces. "The set is predominantly run off of this rig, with songs and segues tied together, a talking set piece that has to sync to the audio during each segue, and audio for a cinematic piece in the encore," Gil explains.

AES SEEKS NEW AUDIO STANDARDS



Bruce Olson, chair of the AES Standards Committee, announced the creation of standards working group SC-04-08, which will address measurement and equalization of sound systems in rooms. The working group's chairman is Ben Kok, an experienced acoustic consultant from The

Netherlands. The group will draw from existing expertise and invite participation from other interested experts, and its first face-to-face meeting will be held May 4 to 7, 2013, at the 134th AES Convention in Rome.

Of particular interest in the field of Live Sound is project AES-X219, which aims to specify a method of measurement for frequency and impulse response of sound systems in auditoria. The project is intended to produce a Standard, and the development discussions are expected to draw on modern measurement techniques. For more information about these projects, visit aes.org/standards/meetings/new-projects.cfm, and for more about AES Standards, go to aes.org/standards.

JBL LOUDSPEAKERS ON NEW 'AMERICAN IDOL' SET



ATK Audiotek of Valencia, Calif. (atkaudiotek.com), recently revamped the *American Idol* set at CBS Television City in Hollywood with JBL Professional loudspeakers. "We had to accommodate a number of needs for the new set," explains Pat Baltzell, sound designer for *American Idol*. "The main

P.A. needs to be heard loud and clear by the performers and audience. However, we need a separate audio system for when host Ryan Seacrest and the contestants are speaking, because they're on lavalier mics, and the judges are situated right in the middle of the main P.A. system."

Left-right arrays of 10 JBL VerTec VT4889 full-size line array elements on each side comprise the main P.A. system. The main hangs are complemented by a front fill system of six VRX932LAP Constant Curvature loudspeakers installed into the set. Two VRX928LA compact Constant Curvature loudspeakers are also installed into the contestant couch set to provide a mix minus foldback of the judges and Seacrest. Four JBL Control 8SR speakers are installed in two additional mix minus zones under metal gratings in the stage serving as foldback speakers for Seacrest and the contestants during periods of dialog.

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GREEN DAY AT THE GREEK



Green Day is back! And Billie Joe Armstrong, Mike Dirnt and Tré Cool put on a stellar show at the Greek Theater in their hometown of Berkeley, Calif., which is located not more than two miles from their storied roots at punk rock club 924 Gilman.



Front-of-house engineer Kevin Lemoine (pictured at right, with Clair system tech Brett Stec) is mixing on a 32-channel Midas XL200 that he found in France and had reconditioned by Jim Sawyer in Minnesota. "Great desk with awesome EQ," Lemoine says. "We do lots of fly dates and festivals where a desk of this size makes a lot more sense. I have around 46 inputs, so I had to use a couple of smaller 8-channel rackmount mixers ahead of the Midas to get everything to fit on there—the BAE 8CM, loaded with BAE 1028s, sees the seven electric guitar mics first and a JDK Audio 8MX2 handles the four crashes, ride and overheads—again, busing back in to two XL200 channels.

"Even though the Midas mic preamps are awesome, Billie's vocal is a Telefunken M80 wireless on a Shure transmitter, into a John Hardy 990 preamp, then a Maselec MPL2, a Lake EQ and then a Distressor before hitting the Midas," Lemoine continues. "The backing vocals all sing through Telefunken M 80 microphones. They all have API 3124 preamps on them, as well as the phenomenal Chandler Limited LTD-2 limiters. For Green Day, audience interaction is essential, to be able to feel like Billie is speaking directly to them. They're a very dynamic band."

The main P.A. hang comprises 20x Clair I3 per side, 12x Clair I3 per side for side hang, 9x BT-218 HP subs per side, and 2x I3s for front fill.



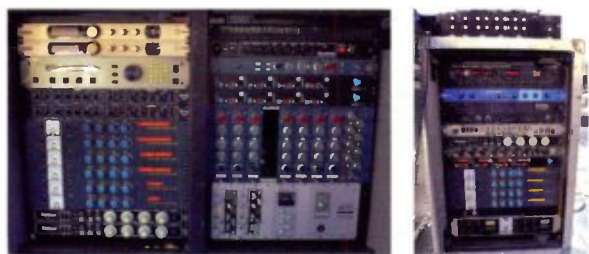
Monitor engineer Kevin Dennis is mixing on an Avid Profile. "I have always liked the ease of use and workflow of the console," he says. "The only plug-in I am using is a Waves C6 on all the vocals. The band is all in-ears with a thumper for Tré. Billie Joe, Tré and Jason White are on UE-18s, while Mike, Jason Freese and Jeff Matika are on UE-11s. We are using Shure PSM 1000 transmitters. All of the guys except Billie Joe are on hardwired Telefunken M80s. Billie Joe is using Shure UHF-R transmitters with Telefunken M80 capsules."

"Billie plays through two modded 100-watt Marshall JMP heads," says **guitar tech Hans Buscher**. "There's a switching system based on a RJM RG-16 Audio Looper and a CAE 3+ preamp for the clean and midrange tones. The main tone is both Marshalls. Billie's lead tone comes from the addition of a Boss Blues Driver. He uses Shure UR4D+ wireless receivers and an RJM IS-8 input switcher to select which guitar is going into the rig. One of these 4x12 cabinets gets a Neumann TLM 103 and a Shure 313, and the other cabinet gets a Neumann TLM 103 and a super old and minty RCA BK5 with factory windscreen and shock-mount."



"For the drums, I mike the kick with a Shure Beta 91 and an old AKG D-12," says Lemoine, who is assisted by **drum tech Kenny Butler** (pictured inset).

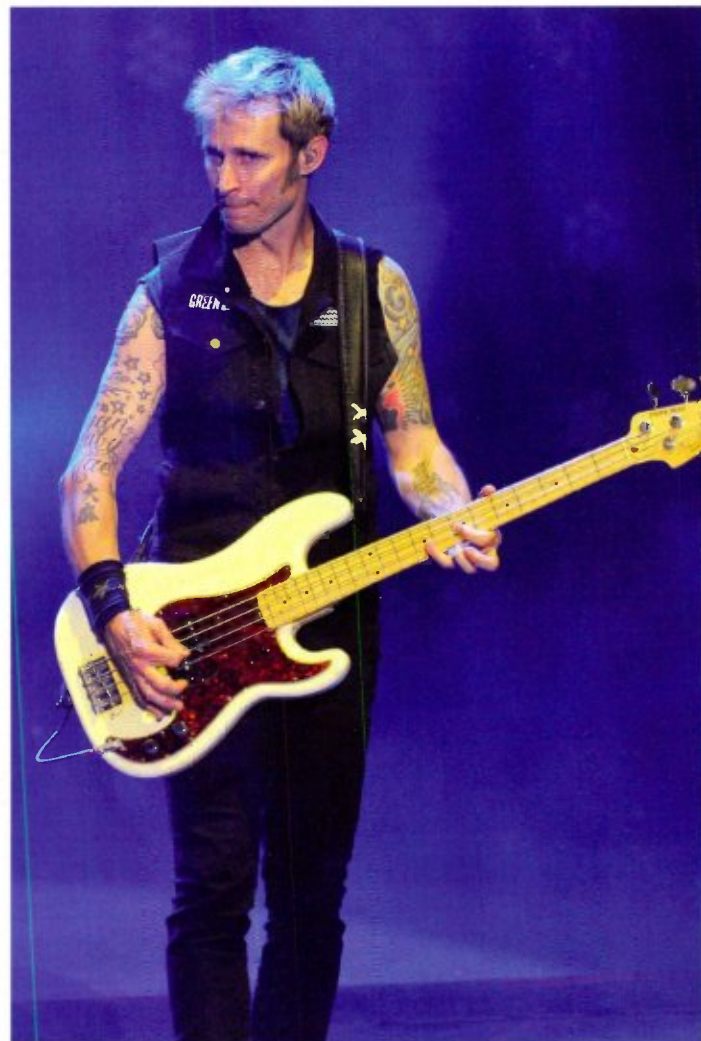
"Snare top is a Telefunken M80 and snare bottom is an AKG 451. All of these see API 3124 mic preamps and also SSL XR618 gate/comp modules from the SSL X-Logic. Hi-hat is a Neumann 185. Rack tom gets a Shure Beta 98, and floor toms each get a Josephson E22S. Again, these toms see the API/SSL combo. Cymbals are individually miked with DPA 4062s and Telefunken ELA M 260s for side heads."



"Jason White has a two-amp, two-cabinet setup," says FOH engineer Lemoine, with a nod to **guitar tech Chris Schleyer** and **keys/accordion/sax tech Hugo Marcotte** (FOH effects racks are pic-

tured). "His first cabinet gets a Shure 313, second cabinet gets a Neumann TLM 103 and another old and minty RCA BK5. All of these guitar mics go to the BAE 8CM out front and get preamped and EQ'd by the 1028s before returning in to two channels of the XL200 that have the Chandler Limited LTD-2s inserted in the channel strip. Jeff Matikka's 4x12 gets an old Shure SM 56 that sounds killer.

"Jason Freese's keyboard gets a stereo Radial DI, and the Leslie cabinet for the Hammond B3 is miked up with a Shure Beta 91 on top and an old AKG D-12 on the low," he continues. "Leslie cabinet insert is a UA 1176x2. The sax mic is a sweet-sounding DPA 4099 with another Chandler Limited LTD-2 on it. Acoustic guitars are all direct inputs on Radial DIs and have the LTD-2s on them."



"Mike uses the Fender Mike Dirnt Precision bass for most of the set," says **bass tech Eden Galindo**. "Then for the older songs in E-flat he uses a '58 Fender Precision called Ruby Mae. His amp is a Super Bassman 300-watt tube head. Bass DI is a Radial and miked with a Neumann TLM 103. These both get compressed with Distressors."

Left to right: Steve Genewick, Al Schmitt, Niko Bolas, LeAnn Rimes, Darrell Brown, Ian Sefchick, Vance Powell

REALITY BITES

THE MAKING OF LEANN RIMES' SPITFIRE

BY BUD SCOPPA

During the past few years, LeAnn Rimes' private life has become tabloid fodder, the result of the public's insatiable appetite for titillation. Being the constant subject of gossip, rumor and innuendo was understandably horrific for Rimes. So, in a sustained act of self-therapy, the 31-year-old artist, who's been making records since the age of 13, set about working through the intense emotions she was feeling in the songs she was writing, while also seizing on a handful of outside songs—notably including Missy Higgins' powerful "Where I Stood"—that perfectly expressed her tormented state of mind.

Songwriter/producer/arranger Darrell Brown, who has been Rimes' writing partner and friend for more than a decade, was a willing facilitator in this outpouring, serving at once as co-writer, exorcist, cheerleader and shoulder to cry on. He was acutely aware of Rimes' need to fearlessly let it all hang out. "Borrowed" is about an affair, and how pathetic she felt finding herself in the middle of something," Brown says of one of the album's cornerstones. "She didn't know she could be that honest." Dan Wilson, who co-wrote "Borrowed" and "I Do Now" with them in a "fruitful" two-day session, describes the results of their collaboration as "very revealing, exposed and raw."

"A lot of crappy things made for some great songs—thank God I have that outlet," says Rimes. "But I hadn't used it to its fullest before. Everything that was true was out there, and those things that weren't true people believed anyway. So I felt like I had nothing to hide anymore. A humanity started coming out through the writing—a lot of tears were shed. And the songs I didn't write I felt were incredible; I couldn't write them any better."

When the songs had all been written and selected, Rimes and Brown faced the challenge of how to bring this thematically taut material to life in the studio. The recording approach they chose hewed just as closely to "keeping it real" as did the songs they'd be cutting. "I wanted to be authentic and honest on this record," says Rimes.

Says associate producer and engineer Niko Bolas, who's been working with Brown for nearly 30 years: "Most of what I do is based on the way I was brought up, which was making Ronstadt and Henley records back in the day, when everybody went for performance around the vocal.

LeAnn has been through a tumultuous couple of years, and she collected a group of songs that lyrically carries everyone who wants to know the truth from beginning to end, how it tore her up and how she found peace and resolve. So the idea was to deliver her believing the words. If you can get somebody who can sing like LeAnn can sing believing what she's singing, then whatever emotion she's feeling, you get it. And that's what Darrell wanted to get."

Brown puts their shared intent more succinctly: "It's like the old days—let's freaking capture it.

"Because I'm a songwriter first, I'm primarily song-driven as a producer," Brown continues. "I want to know what the narrative is and what the singer's singing, and then I start casting accordingly from that." For this project, he says, "I thought about what characters would be interesting to put into the room to challenge her." He also wanted the range of players to represent the various aspects of Rimes' sensibility—"the Texas and Appalachian strains in her voice, the R&B/soul/blues thing she got from being born in Mississippi and raised in Texas. So we got Steve Jordan [drums] and Willie Weeks [bass] to play on the bottom end, and then Dan Tyminski [mandolin, acoustic guitar], Paul Franklin [pedal steel], Waddy Wachtel and Dean Parks [acoustic guitars] on top, with everybody playing off each other."

The rest of Brown's A-team consisted of engineers Bolas and Steve Genevick, who'd be on the other side of the glass while Brown conducted, danced and kept the players psyched up in the tracking room. Al Schmitt and Vance Powell would do the mixing.

They tracked the album in Capitol Studio A. "We set up the room so that people didn't really have to wear headphones, especially LeAnn," Bolas explains. "She stood in the middle of this bed of music and just held the microphone and sang. That was one of

her dreams—she's always wanted to make a record where she's singing for people. Traditionally, recording a vocalist is a very isolated affair. They put on headphones, they go into this world of echo that no one ever hears, they're in a small box that gets a little stuffy, they've got this big, expensive microphone hanging in front of them, nothing to do with their hands, glass and a wall between them and the musicians, and the intimacy is fabricated. Most great singers can do that. But if you're standing in front of drums, you're singing with different phrasing than if you're listening to drums on headphones. There's just no way around it.



Niko Bolas

Photo by Sara Hertel

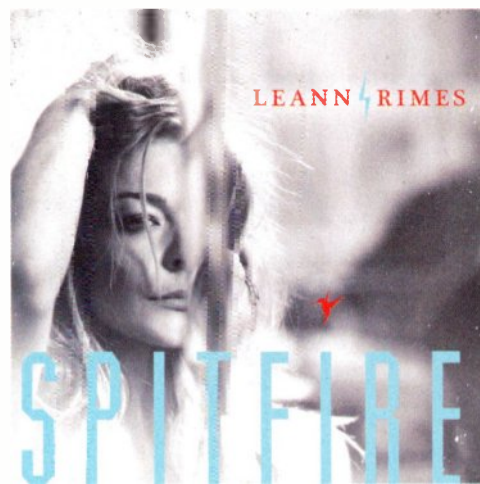


Photo by Sara Hertel

“So, with LeAnn, we wanted her in front of people,” Bolas continues. “The genius of what Darrell was doing was to break down all the isolation so that she had to bring the lyric, just like these guys were bringing the musician-ship. And he did it. There were vocals where she wound up in tears over the mic and we couldn’t do another take because she had to go fix her makeup.”

“I always wanted to hold the microphone in the studio, because I can’t stand being confined in an iso booth and singing with this piece of pantyhose material in my face—it drives me absolutely nuts,” Rimes laughs. “It feels so confining, because I can’t put my body into it. So that was the first thing I asked Darrell and Niko when I got in the studio, and Niko was like, ‘Yeah, sure, why not?’ What I love about Niko is, if he can make it happen, he’s going to. So I ended up holding the microphone the whole time; I was lying on the floor half the time, dancing around, wherever I felt comfortable, whatever I wanted to do. It was great to have that open space, to be able to see everyone’s faces and for them to read my body language, to see where I’m going.”

Rimes has a history of blowing out micro-



phones, and these sessions were no different. “LeAnn moves so much air when she’s on the mic and she’s not wearing headphones,” Bolas marvels. “She’s not working the mic, she’s just singing her lungs out, and diaphragms start flapping.” The solution came from Schmitt, who suggested she go with a Neumann 104, the same mic Diana Krall uses in live performance.

They tracked the album in six days, and on the seventh day they recut 10 of the tracks, Rimes and the studio band sharing the track-

ing room of Capitol A with about 50 invited guests who were asked to be completely silent, forming what Brown describes as “a human heartbeat orchestra.” Three or four of these takes made the album, including the no-brainer single candidate “Gasoline and Matches,” written by Buddy and Julie Miller, which Rimes heard as a surefire rocker that also furthered the album’s thematic thrust. Bolas and Brown then added a pair of crucial overdubs: a vocal by Matchbox Twenty’s Rob Thomas and a solo by Jeff Beck—one of just two electric guitar parts on the album, which Rimes calls “the best solo ever.” Transmitted via Skype, it was the first thing Beck recorded in his new London home studio.

“The way I interpret my job is you shouldn’t know I was there,” Bolas explains. “So in playback, you should be able to frame, out of the left and right, what happened on the important side of the glass. Data is cheap, so you record at the highest sample rate you can effectively afford—if you have a big rig and you can run 192, do it—get the mics set up, and get out of the way. Just always be in record, so that when everyone forgets they’re in a studio and follows LeAnn as she dumps her guts, you’ve got something that will always measure—always—because it’s real. And when it’s done, all the sounds that LeAnn, Darrell, Jordan, Waddy and all those guys were hearing out on the floor play back sounding like what they were hearing. In other words, if you’re standing in front of the guitar, that’s the sound you want coming out of the speaker. You don’t want some fabricated interpretation of that sound, you want that guitar with that touch, with that feel; all the accents and dynamics are in the hands of the musicians.”

When it came to the mix, Brown and Bolas turned to Schmitt and Powell, who split up the tracks, working separately. “Al and Vance immediately got what this record was supposed to be,” says Brown. “They were gonna keep it full-bodied and make it shine as organically as possible.”

“The recording was nice and clear, it had a lot of depth,” says Schmitt. “But that’s Niko. Let’s face it, people will buy this record because of the vocal performance and where it sits in the record, so you don’t want to bury it. If you listen to any of my records, the vocals are always right in your face. On this record, I was able to use the live chamber at Capitol, No. 4, which is my favorite of all the live chambers.”

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I set that on her voice, and it lifted it right up. LeAnn blew me away; she really is an amazing singer. And most of the songs are great.”

Brown and Bolas’ integration of old-school values into this state-of-the-art modern recording project extended to the mastering. “I recorded everything at 192k and then I cut it to lacquer,” says Bolas. “Vinyl adds a tool—it’s both an equalizer and a compressor—in a way that has not been reproduced digitally yet. When it comes off the needle, it’s like an old

friend that you’d forgotten about. It started as an experiment. We took a mix that Al had just finished and took it to Ron McMaster, who cut it to vinyl and sampled that to CD, so that you get all the mono compression that happens on the bottom and all of the smooth, warm analog texture that’s kinda like a baby’s cradle around the vocal. I played it for Schmitt and Darrell and they both went nuts. So that was it—we had to do it for the whole album. And that was the last step of congealing Al, Vance and my-

self, because it unified everybody’s interpretations on what’s really an album and not just 12 cuts. It’s a body of work that, if you listen to it from start to finish, it’s a range of emotions during a period of her life. When we got done and we played it, LeAnn was in tears and everybody went, ‘Wow—what did we just do?’”

“The songs stand on their own, but the album as a whole really does tell a story,” says Rimes with understandable pride. “The title track anchors the record and tells you exactly where it’s going. I do feel like I’m spitting fire on this record, because they’re things I’ve held in for a long time, and they’re coming out through my music, which is the best way they could. It truly was cathartic to make this record. I’m not holding anything back, and I feel like I’m more than just a voice now.

“Life happened, and I got to make an album of honest music,” she continues. “None of us wanted it to end, we had such a great time. I feel like we went back in time, almost, making this album, and I can’t make an album any other way from here on out.” ■

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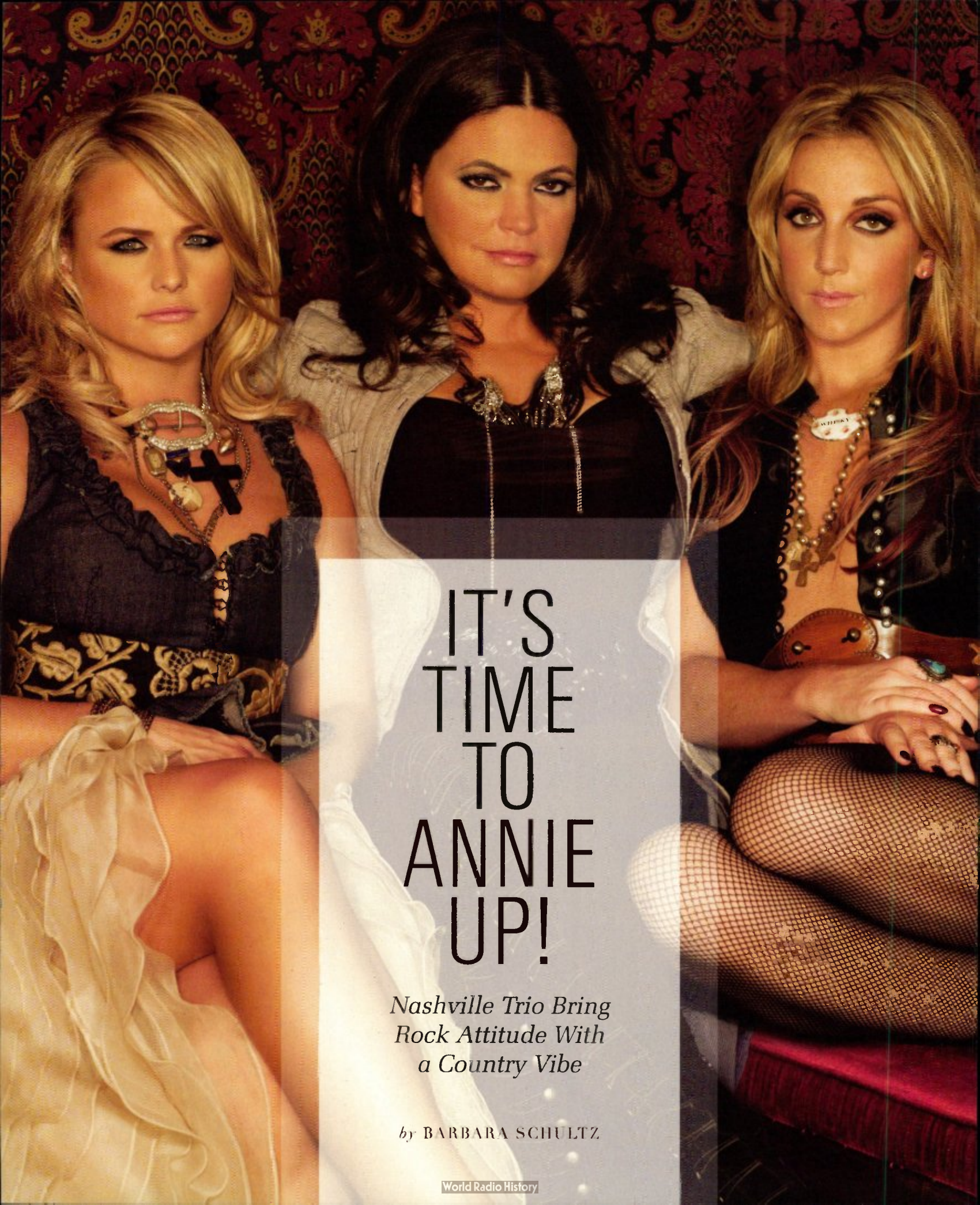
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IT'S TIME TO ANNIE UP!

*Nashville Trio Bring
Rock Attitude With
a Country Vibe*

by BARBARA SCHULTZ

MIRANDA LAMBERT STRODE ONSTAGE
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 SIC'S "GIRLS NIGHT OUT" CONCERT
 IN 2011 AND TOLD THE CROWD SHE'D
 BROUGHT THEM "A SURPRISE." THAT
 WAS THE NIGHT THE MEGASTAR
 (ALSO HONORED THAT NIGHT AS THE
 ONLY FEMALE ARTIST IN THE ACADE-
 MY'S HISTORY TO WIN ALBUM OF THE
 YEAR TWICE) INTRODUCED HER NEW
 GROUP, THE PISTOL ANNIES.

Performing the title track of their debut, *Hell on Heels*, for the first time, Lambert and collaborators Angaleena Presley and Ashley Monroe had the A-listers clapping along. Standing side by side, they traded vocal leads on the verses, and flashed their gorgeous harmonies on the chorus of a bad-ass song about unrepentant gold-diggers: "I'm hell on heels/Say what you will/I done made the devil a deal/He made me pretty/He made me smart/And I'm gonna break me a million hearts."

Hell on Heels had plenty of attitude and a bit more of a traditional country feel than Lambert's terrific solo albums. Arrangements were tailor-made to showcase the three women's powerful voices, as singers and songwriters. The album went to Number One on the country chart and 5 on the Billboard 200, so it's no surprise that a lot of buzz is already building around the trio's follow-up, *Annie Up*.

Annie Up was made after the artists had toured a good deal, performing together and separately, coalescing more and more as a group, and writing a whole new batch of songs that explore themes from temptation to marital strife to staying sober to the futility of a "beauty" regime (the tongue-in-cheek tender ballad "Being Pretty Ain't Pretty").

Producing this record were Frank Liddell, Glenn Worf and Chuck Ainlay, who were also part of the production team (with Mike Wrucke) behind *Hell on Heels*. Ainlay also engineered.

"Knowing them and how much fun they have, we chose a studio to work in that had a traditional vibe about it and was just a nice space to be in," he says. "With these girls, the lounge is a very important thing."

Ainlay tracked the project to Nuendo at Ronnie's Place, Ronnie Milsap's old studio (now owned by Black River Entertainment), which offers a comfy lounge, a bar, and a nice division of space that let most of the group hang together in the tracking room.

"The owners had actually redone the studio, sort of at the request of myself and Frank, for another project that didn't materialize, but it turned out to be the perfect place to do the Annies," Ainlay says. "I really wanted to make it comfortable for them as a group singing live. I wanted to have them out on the main floor where they could see each other and feed off of each other, and the rest of the bandmembers could feed off of that energy, as opposed to putting everyone in booths.

"The thing that helped was, above the control room is this room

where they used to cut strings on Ronnie Milsap records," Ainlay continues. "It's all wood and it had risers and a balcony looking down into the studio—so a conductor could feed off the band and see the string players. I had them tear out the risers but leave the wood floor, and I put the drums up there. So, [drummer] Fred Eltringham was the only one who wasn't right in the midst of the girls, but I put a video camera and a flat screen TV up there so he could see what was going on."

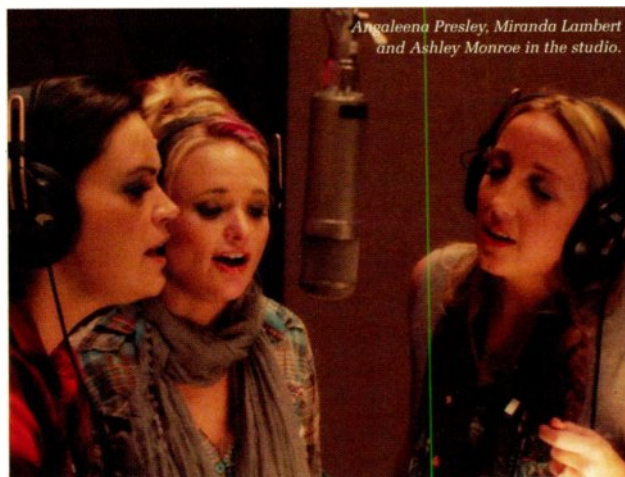
As a co-producer and the bassist on the floor, Worf also appreciated the studio layout: "I did many sessions in this studio before it was refurbished, and I have fond memories attached to it," Worf says. "And with the updates, Ronnie's can compete with anything on the market, in my book anyway. I particularly liked the fact that we were able to put my two bass amps—a 1964 Fender Bassman and '64 Ampeg B-15—side by side in what is usually the piano booth. Many studios simply don't have the isolation for that to happen anymore."

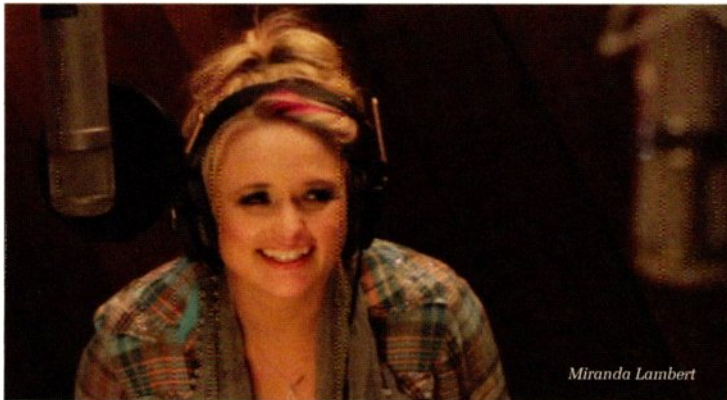
Ainlay was given guitar-and-vocal demos of most of the songs in advance, but band arrangements developed in the studio. "We didn't want any preconceived ideas going in," Ainlay says. "So for the most part, we'd get Angaleena or Ashley to play guitar, and the girls would sing as a trio live to the musicians, and then we'd write a chart and talk, and we'd build the song from there."

Another task during pre-production was choosing the right vocal chains for the Annies: Lambert's edgy but agile voice; Monroe's sweet, high-lonesome sound; and Presley's soft, throaty one.

"We spent a day with each one of the girls, trying a bunch of choice mics that we had brought over from Blackbird Rentals," Ainlay recalls. "We ended up using [Neumann] U 47s on Ashley and Miranda, and a 149 on Angaleena. She's got a thicker voice, and the 149 maintains the warmth but gives it more presence to punch the top out. The vocal chain was a Neve 1073 pre through a Fredenstein 660 tube compressor on Miranda and Ashley, and the Fredenstein 676 mic pre through a Tube-Tech CL1A on Angaleena."

The three singers were situated in a triangle, several feet apart out in the middle of the room so they could see each other at all times. "We got a nice oriental carpet and some couches around and table lamps. It was a great vibe just for running a song down," Ainlay says. "A lot of the vocals that ended up on the album were tracked with the band, but we'd





Miranda Lambert



Ashley Monroe

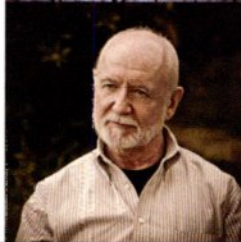
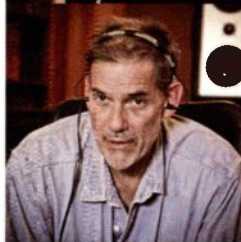
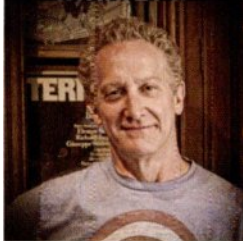
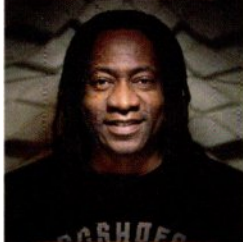
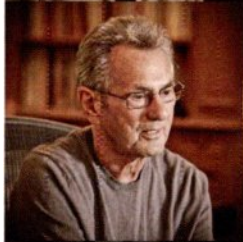
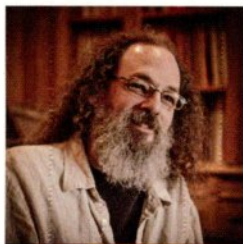
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"THERE WAS DEFINITELY AN ENERGY WHEN THEY WERE ALL SINGING TOGETHER THAT I DON'T THINK WE COULD HAVE GOTTEN IF WE'D JUST RECORDED EACH VOCAL BY ITSELF, OR WITH THE GIRLS ISOLATED FROM EACH OTHER."

— CHUCK AINLAY

also take two or three more passes of them singing together after we'd get a take, and then I'd have each of them sing individually to get some clean passes. There was definitely an energy when they were all singing together that I don't think we could have gotten if we'd just recorded each vocal by itself, or with the girls isolated from each other."

Guitar work on the album was handled by Guthrie Trapp, the electric guitarist in Monroe's touring band, and acoustic/bluegrass master Randy Scruggs, whom Ainlay calls "one of the greatest acoustic guitar players on the planet." However, Scruggs also showed he can shred with the best of them.

"Whenever Frank, Chuck and I do a record together, I'll usually bring along a handful of extra guitars and amplifiers," Worf says. "On some impulse, I had thrown my old Telecaster in the car this time. We knew that Randy used to play quite a bit of electric guitar in years gone by; maybe that seed was planted somewhere in my mind when I brought that guitar along. In any case, when we took our first look at recording [the first single] 'Hush Hush,' it occurred to me to ask Randy if he'd mind playing electric instead of acoustic. He plugged into my Bassman, and it was a true revelation! His part really became the bedrock that 'Hush Hush' was built upon.

"I figure Randy is one of those guys that only ever says maybe 200 words per year," Worf continues.



Ainlay recalls. "Drums weren't given the space they're given these days, and I think that kind of confined sound is interesting; it has a bit of a throwback quality to it."

Ainlay mixed *Annie Up* on the SSL 9000 J in Backstage Studio, just across the alley—a room he's no longer financially invested in, but still feels like home. "We mixed down to my ATR-100 1-inch machine that I run at 15 ips, and I just love that machine," he says. "It so big and fat and warm-sounding. Fifteen ips retains the bottom end, but you get a bit of saturation. I mix almost everything to that, as well as back to Nu-

endo, but I'd say that 95 percent of the time, analog ends up winning at mastering."

Like the technical approach Ainlay used in Ronnie's Place, the Pistol Annies' sound walks a line between throwback and modern. *Annie Up* has some real old-school twang and picking on tracks like "Damn Thing," and vocal harmonies always take you back. But the album rocks, too, and has that awareness of decades of music that only comes with critical distance.

"But he showed his alter-ego when he picked up that Tele!"

"Randy just eagerly jumped at that guitar," Ainlay recalls. "Suddenly, he turned into Keith Richards!"

During the main tracking sessions, Trapp's various amps (Vox, Fender, other custom models) were miked with an SM57 and a Royer R-121 up close, and an ADK Custom Shop CS-47] out in the room.

On Scruggs' acoustic guitars, Ainlay set up a several different options: a pair of DPA 4011s in an x-y, an Audio-Technica 4050ST mic, an AKG C12, and an AEA R88 stereo mic. "On different songs, I chose different things," Ainlay explains. "Some were different combinations, like the DPAs with the AEA backed off a bit to give some room ambience. But I don't think you can get a bad guitar sound out of Randy Scruggs."

Ainlay is also a fan of co-producer Worf's bass playing: "He's one of the greatest bass players we have in the studio business," he says. "On him we were using a Millennia TD-1 as the direct path, and I had a Teletronix LA-2A on that. Then we had an ADK Custom Shop CS-49] on the Ampeg, and an [EV] RE20 on the Bassman."

Drum sounds on the record probably came less from any miking scheme than from that live loft space they used. "That room lent itself to a sound that I remember from when I first started in Nashville, when the drums were generally in a booth or a small room,"

endo, but I'd say that 95 percent of the time, analog ends up winning at mastering."

"There's a traditional element to the group, but there's no point in remaking a record that purely sounds dated," Ainlay says. "We definitely were trying to represent the past, but make it as forward- and energetic-sounding as a modern record. We used a lot of compression that wouldn't have been used back in the day. There's a modern, expressive quality about their songwriting, and that has to be there sonically as well."

"These young women share a wicked sense of humor, and there are some real tongue-in-cheek songs on both this album and their first one," Worf says. "Some songs are quite irreverent, but some are heartbreakingly simple and beautiful. My hope is that our production, along with this sparse-yet-brilliant band, helped them capture their passion as well as their keen wit. We knew that these guys would play with a great knowledge of traditional country, but just like the girls, wouldn't hesitate to dig for something new." ■



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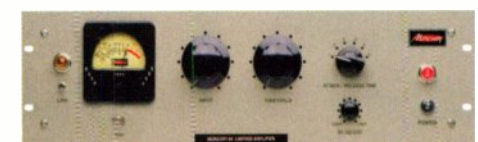
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Members of Vampire Weekend in the studio.

VAMPIRE WEEKEND ADVENTURES IN MODERN SONICS

by BLAIR JACKSON



Left to right: Ezra Koenig, Rostam Batmanglij, Chris Stills, Chris Tomson



Photos: Alex Julia Beck

Just three albums into what is already a hugely successful career, the New York indie band Vampire Weekend continue to surprise and confound expectations. Their latest album, 'Modern Vampires of the City' (XL Recordings), is their most sonically adventurous work so far, at the same time it contains all the hallmarks of the band's instantly recognizable sound—Ezra Koenig's dynamic high lead vocals (and intelligent, quirky and sometimes opaque lyrics), the clever blending of lo-fi and hi-fi elements, and a sharp rhythmic attack that often combines unconventional textures in unusual ways. One never senses that they're pandering to commercial tastes, yet their following has grown with each increasingly idiosyncratic album. They're making up their own rules as they go along, and thriving.

According to Rostam Batmanglij, the group's musical guiding light, producer and engineer, making the new album "came about somewhat differently than the first two. With *Contra* [the band's 2010 sophomore opus], we had about half the songs that we could perform in some way, shape or form before we set out to record them. Then the other half of the songs was more constructed. With this record, there was a long, extended period of songwriting and trying different ways of writing. Ezra and I got together three or four times a week for about a year, and we also interspersed working in different configurations—such as getting together as a band, though we didn't find that was very fruitful. The result was we used the recording process as a writing and arranging tool to a greater extent than we ever did before."

Much of the early work on *Modern Vampires of the City* took place in multi-instrumentalist Batmanglij's home studio, which has been evolving steadily through the years as he's moved up the musical ladder. "The first multitrack recording system I had was a MiniDisc 4-track," he says. "Then I graduated to a Boss 8-track that recorded onto zip disks. When I was 18, I bought an M-

box, and those were great. I recorded a ton of stuff with that M-box that made it onto records." These days he works in a Pro Tools environment and has amassed an impressive collection of both high-end outboard gear and the latest plug-ins.

Some songs on the new album emerged from trial-and-error experimentation with beats, melodies and bass lines created on a broad array of synths and boxes. Others were more traditional: "Ezra and I took a writing trip to Martha's Vineyard [in coastal Massachusetts] and worked together in a friend's guest house there; really just a cottage. We'd never really done that before. We packed up our van, and I basically brought a guitar, a bass, a MIDI keyboard, and at the time I had a desktop computer that was devoted to recording, and I brought a microphone, and we spent four days with

nothing but songwriting as a goal. Out of that came 'Don't Lie,' 'Everlasting Arms' and we started 'Hudson.' The acoustic guitar in 'Don't Lie' was recorded in that room, and we never changed it. And that was true of a lot of stuff we recorded in my apartment in New York, too—there's a bunch of piano and other parts we recorded in my apartment that's on the album."

For the first time, though, Batmanglij and Koenig also brought in a co-producer as a third set of ears and creative partner—L.A.-based Ariel Rechtshaid, whose diverse list of credits include Major Lazer, Usher, Plain White T's (the smash "Hey Delilah") and We Are Scientists. Rechtshaid says he and Batmanglij have been friends for a few years, "and when I had my band, Foreign Born, we had the same booking agent as Vampire Weekend, and Rostam and I met and slowly became friends. He was kind of the in-house producer in his band, and I played a similar role in my band, and somehow that came together. It was all just timing—this is the third [Vampire Weekend] record and I think maybe he just thought the time was right to get some help. The band was spending some time out in L.A. and Rostam had worked with me at my studio a couple of times, and he asked if he and Ezra could come over and work on some stuff."

Batmanglij adds, "When Ezra and I got to L.A., we weren't totally sure if we'd written all the songs for the record, but it became apparent that we hadn't. So we started opening up the sessions with Ariel, and then the process of continuing work on the sessions was totally seamless because Ariel and I had the same Pro Tools setup, and over the course of working on the record, we made our setups identical so we could open up any session on each other's computers—that was crucial to the process."

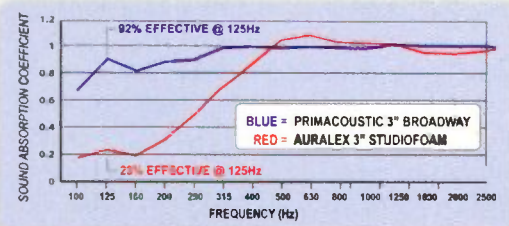
Rechtshaid actually has two studios—the Echo Park Back House (as it's called in the VW album credits) and Slow Death in Burbank. "We kind of bounced around between the two places," Rechtshaid says, "and I heard songs and listened to stuff, gave some opinions, tried some things. By the end of the week, it was evident we had a good chemistry. In fact, we managed to break through a couple of hurdles they'd come upon. They're very capable of writing songs and recording themselves, but there are sometimes points where you lose perspective and just don't know what direction to take it. That was my initial involvement, and on certain songs that's all it was. But on other songs it was more instrumental."

"We did a lot of experimenting and trying things different ways," Rechtshaid continues. "All three of us had a strong hand in the final product. Ezra had a lot to say about how his vocals sounded, and other ideas, too. There isn't really a demo process in this band, because if you're recording something at any stage in any place, it could be part of the final product. Fly it around, time-stretch it, pitch it up, slow it down, chop it up. It used to be that recording audio into a computer was to be able to manipulate it to fix performances, but in this case it's more to create a new sonic thing with loads of different sources, rather than making up for some lack of ability."

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"With the song 'Step,' for example, we recorded it in a few different keys in the so-called 'demo' process," Rechtshain says. "We finally agreed on a key, and the way we agreed on it was by pitch-shifting the original demo a few different times, trying to sing different parts, and then when we went to do final vocals, we didn't like it as much. It turns out we liked the vocal recorded a half-step lower and pitched up, so that's what we did. We took parts of it from the original demo and also went back and recorded it in a different key and pitched it back up—not because Ezra couldn't hit the high notes, but because it sounded more interesting and weird. Still, it's not pitched up so you'd notice."

In the demented rockabilly-surf-punk tune "Diane Young," the pitch-shifting on parts of Koenig's heavily reverb'd lead vocal is almost cartoonishly radical. "That's something we did in L.A.," Batmanglij says. "Me and Ezra and Ariel were sitting in a room together and talking about that section of the song, and we thought it was too plain. At one point we pitched down the whole vocal in that section an octave, and there was something we liked about that—it sounded fresh in a way, but it also maybe sounded a little too extreme. But ultimately we found a middle ground using a formant shifting. A few months ago, I discovered the formant shift in Antares Auto-Tune and I showed it to Ariel, and it was one of those things where you learn about something for the first time and you get excited and you want to use it. It was his idea to automate it so it was moving in a smooth way up and down. It was definitely the product of the three of us sitting in a room and banging our heads together, trying to come up with an original way to present that part of the song."

Most of the vocals on the album were recorded with a Soundelux U99 microphone going into a Neve



The band in the studio.

Photo by Lauren Dukoff

preamp and a vintage 1176. Still, Batmanglij notes, “there’s UAD [plug-ins] all over this record. If you’re running the vocals through a real 1176 once and then you do it again with emulation, it just sounds better.”

Rechtshaid is also a fan of plug-ins: “I’ve pretty much bought everything UAD has built. I have an EMT 140 tube stereo plate, but I find myself often going to the plug-in because I like the way it sounds.” Other reverb and ambience tools used on *Modern Vampires of the City* included “a lot of AMS RMX-16—we used the real one as well as the Altiverb emulation, and matched up with the Eventide 910 and 949 [Harmonizers] we were using on the record for other pitch-shifted things.”

Throughout the album, there are passages that combine distorted/muffled instrumental parts with pristine ones, “which has always been part of our aesthetic as a band, and that was something Ariel got right away,” Batmanglij comments. “It’s been an aspect of the band to use recordings that are made in different places and have different fidelity and to bring all those together. I’ve always thought that was a more interesting aesthetic than something that sounds like everything was recorded with the exact same microphone in the exact same room.”

The other two members of Vampire Weekend—bassist Chris Baio and drummer Chris Tomson—got more involved once the songs became more solidified. “On this record,” Batmanglij notes, “it was like there was a sketch of almost every element inside of the session before we recorded the real version for the drum and bass. Still, there was definitely a freedom for improvising and for Chris and Chris to contribute to the arrangements of the songs. We had decided we wanted to record the drums to tape, so that was a big goal—to get the songs to a place where we could record all the drums.”

Most of Tomson’s and Baio’s parts were cut at L.A.’s Vox Studios, which Batmanglij describes as “one of the oldest studios in L.A., built in the 1930s. It’s kind of a secret spot tucked away behind a liquor store. We tracked drums for most of the songs [with engineer Dave Schiffman] in about two days. It’s a great-sounding old room with linoleum floors, and they had a wonderful collection of microphones. They also have a great old tape machine [a one-inch Ampex 300 8-track], and we really pushed the sound of the tape to the max.”

Rechtshaid adds, “[Baio and Tomson] are incredible musicians, and they took the template of what we had done and the structure and arrangement ideas we had and turned it into something that was more Vampire

Weekend. A lot of the stuff we had was very programmed-sounding, and then when we went into a studio and tracked it for performance, it loosened up.” The drum miking setup was stripped down, with sometimes just three mics going straight to tape: “The fewer mics, the fatter the sound,” he says.

Rather than having a dedicated mixing period, Rechtshaid says, “we were mixing as we went along. The lovely folks at Avid supplied Rostam and me with their new HD Native Thunderbolt box. Rostam and I are on the left side of Pro Tools users—a lot of what we’re doing is in the box, and it’s not just a computer-based tape machine. It’s a complete production station where we’re really shaping sounds and using plug-ins to create the atmosphere and the vibe of the record. We’re always building as we go along, and eventually our rough mixes were our mixes. We took them over to Emily Lazar’s place [The Lodge] with the HD Thunderbolt and hooked up to her interfaces, and we were mastering and making adjustments to the mix as we were mastering.”

Lazar and Scott Jacoby mixed one song at Eusonia Studios in NYC, and super-mixer Rich Costey (Muse, The Shins, Foster the People, TV on the Radio, among others) mixed three tunes at Eldorado Studios in L.A. on an SSL 4000E. Batmanglij and Rechtshaid also did some of their work at Downtown Studios in New York, spreading out tracks from his laptop across their API console via the Thunderbolt box and an Avid DigiLink cable.

“The objective of this record was ‘fresh and new, or die!’” Rechtshaid laughs. “They’re not a band that has ever worried about the conventional single or radio, yet everything they’ve done has instinctually worked.” ■

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USB Mics Move Beyond Podcasting

By the Mix Editors

In 2005, when Blue Microphones introduced the Snowball and billed it the world's first USB mic, podcasts were all the rage and many pro audio manufacturers were looking to expand their product lines down-market, to the entry level, and start selling to the Best Buy and Apple Store consumer.

The move made perfect sense: Web-based media distribution was booming, and there was a market out there that had no need for high-resolution or sound cards but wanted to get their voice, or their guitar, into their laptop. More audio is being produced today than at any point in industry, and not all of it needs to be at 24 /96, through a high-end preamp, processors and converter.

Over the ensuing years, other major mic manufacturers entered the market, and features were added, power consumption improved, the quality of the parts stepped up. Now, in 2013, we have USB mics touting "24-bit/192kHz capability" and promising "pro results."

People who coach vocalists and track guitar and drums for a living will not be abandoning their ribbons and condensers any time soon, but for what they do, the current generation of USB mics does very well. Scratch vocal ideas in a hotel room. A melody worked out on guitar. Or even a Webcast produced by a pro audio media company.

Here, then, are some recent offerings from manufacturers that offer USB-powered mics:

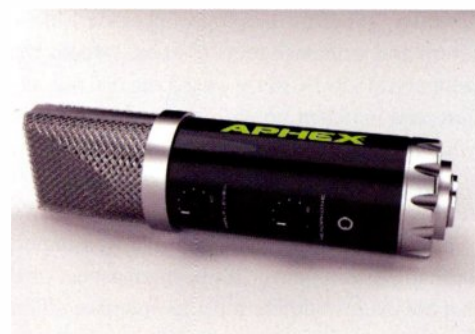
AKG Perception 120 USB

AKG's (akg.com) first USB mic product, the Perception 120 USB (\$219), promises studio-quality performance and easy plug-and-go setup. The large diaphragm mic features a switchable high-pass filter, switchable pad, confidence LED, and integrated pop filter. The microphone comes with a tripod table

stand, swivel mount, USB cable and support for Windows 7, Windows XP, Windows Vista and Mac OS.

Aphex Microphone X

The Microphone X (\$370) from Aphex (aphex.com) takes the category up a notch by including all that you'd expect from a USB mic and much more. Features include a cardioid pickup pattern, 24-bit/96kHz conversion, Mac/PC compatibility, and a high-output headphone amp based on the Aphex HeadPod 4. Extras include an individually switchable optical compressor, Aural Exciter and Big Bottom processors. The optical compressor provides a consistent output level, while the Aural Exciter and Big Bottom processors add presence and air to the high frequencies and depth to the low frequencies.



Apogee MiC

Offering Apogee quality at a comfortable price, the Apogee MiC (apogeedigital.com; \$200; Mac only) offers compatibility with the iPhone 4S, iPhone 4, iPad 3rd generation, iPad 2, and iPad (requires iOS 4.3 or later). It features gain control, a multi-color level/clipping LED and ships complete with a desktop tripod stand and a USB cable. Optional extras include a mic stand adapter, case and cables for iPad, Mac and iPhone.



ART M-One USB Cardioid Condenser USB Microphone

Based on the ART M-One Studio Condenser, the M-One/USB (artproaudio.com; \$129) uses the same low-mass diaphragm and upgraded capsule as the studio version while adding Mac and PC compatibility via the 24-bit/48kHz USB 2 output. Features include a 32mm gold-sputtered capsule, integrated headphone output with level and mix controls, zinc/aluminum chassis and stainless steel wire mesh windscreen. It is compatible with Windows 2000, Windows XP, Vista, Linux or Mac OS X operating systems.



Audio-Technica AT-2020USB+

The AT-2020USB+ (\$279) side address, condenser microphone from Audio-Technica (audio-technica.com) features a medium size capsule, high-output headphone amp with volume and mix control, tripod desk stand with folding legs and compatibility with Windows 7, Vista, XP, 2000 and Mac OS X.



Behringer C-1U Condenser Mic

The C-1U cardioid, condenser USB mic (\$119) from Behringer (behringer.com) features a die-cast metal body, recording at 48 kHz, confidence LED, and a maximum SPL rating of 136 dB. The C-1U mic ships with Audacity audio editing software, a Kristal audio engine, Podifier uploading software, Juice and Podnova downloading software, a USB cable and swivel stand mount.



Blue Spark Digital

Blue Microphones (bluemic.com) makes no less than five USB mics. The company's latest model is the Blue Spark Digital (\$199), a studio-quality condenser microphone with a USB port, a 30-pin output for Apple's iPad, and a Focus switch that lets the user choose between two different mic voicings. Other features include built-in headphone monitoring, Mac/PC compatibility and Blue's Cloud Production Bundle for audio backup and online sharing. If you're looking for a higher-end solution, the Blue Yeti Pro (\$249.99) features four polar patterns, 24-bit/192kHz recording and USB plus XLR outputs. Other features include a built-in headphone amplifier with volume control, microphone gain control, an integrated stand, 12-inch Y-Cable and 3-meter USB cable.



CAD U37 USB Studio Condenser

Boasting plug-and-go operation, the Mac/PC-compatible, CAD U37 USB condenser microphone (cadaudio.com; \$79) features a switchable pad, rumble filter, 10-foot USB cable and desktop mic stand.



M-Audio Vocal Studio

Sold as a package with a USB mic and Pro Tools SE, the M-Audio Vocal Studio (m-audio.com; \$99) features the Producer USB cardioid microphone with a 16mm capsule, recording at 44.1 or 48 kHz, 1/8-inch stereo headphone jack, an LED power indicator, desktop mic stand and soft carrying case. It ships with Pro Tools SE for recording up to 24 tracks (16 audio tracks and eight virtual instrument tracks), more than 100 virtual instruments, reverb, EQ, and guitar amp/distortion effects, and more than 3 GB of audio loops.



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MXL Studio 24 USB

The MXL Studio 24 USB mic (mxlmics.com; \$170) offers a 22mm condenser capsule, headphone output, recording at 44.1 or 48kHz (24-bit), Mac/PC compatibility and a silver/nickel finish. It ships with the Studio Control software interface giving the user control over gain, a three-position highpass filter, mic monitor level, playback level, headphone volume plus a software compressor and noise gate. The software allows the user to save presets for later recall. If 2-channel recording is your goal, MXL also offers the USB007 stereo USB mic (\$249.95), which features two 22mm capsules, three-position gain control, 90-degree X/Y pickup pattern, and the same recording and compatibility as the Studio 24, although the USB007 records at only 16-bit quality.



Nady USB-2S Stereo Microphone

The Nady USB-2S (nady.com; \$199.99) features dual, gold-sputtered diaphragms, stereo X/Y pickup pattern, a maximum SPL rating of 130 dB, recording at 44.1 or 48 kHz, and Mac/PC compatibility.



RØDE Podcaster

The RØDE Podcaster (rode.com; \$369) is a dynamic, cardioid, end-address USB mic offering 18-bit/48kHz recording, headphone output and maximum SPL of 115 dB. Other features include an internal pop filter, confidence LED and a sturdy RM2 microphone ring mount. For the Podcaster, RØDE also offers the optional PSM1 shock-mount and PSA1 boom arm. The Podcaster comes with a 10-year warranty.



**Samson C01U USB
Recording/Podcasting Pak**

This large-diaphragm condenser mic from Samson (samsontech.com; \$218) comes bundled with Cakewalk SONAR LE, a shock-mount and a desk stand. Other features include a 19mm shock-mounted diaphragm, cardioid pickup pattern, recording up to 16-bit/48kHz, mic clip, USB cable and carrying pouch. Samson's more affordable yet feature-rich G-Track USB condenser features a built-in audio interface and mixer allowing for simultaneous stereo input and gain control, while also

providing switchable stereo, mono, and computer monitoring through an onboard headphone output. It features a 19mm diaphragm, supercardioid pickup pattern and, like its sister mic, comes bundled with SONAR LE.

**sE Electronics
USB2200a**

Rising from the bones of the discontinued sE2200a, the USB2200a (seelectronics.com; \$499) features a shock-mounted, large diaphragm capsule, headphone output, mix control, switchable -10dB pad, highpass filter, and simultaneous XLR and USB outputs.

The mic also offers a proprietary chip and software that removes noise from the current traveling to the DAW, keeping it from being amplified later in the chain.



USB2200A



Shure PG42 USB

Targeted for lead vocal use, the PG42 USB side-address condenser microphone (shure.com; \$311) features a large cardioid diaphragm, plug-and-go operation, and compatibility across Mac/PC platforms. The mic also features an integrated preamp with gain control, headphone output, monitor mix control and recording up

to 16-bit/48kHz. The mic ships with a 9.8-foot (3-meter) USB cable, stand adapter, and carrying case.

Studio Projects LSM

The Studio Projects LSM USB mic (studioprojectsusa.com; \$180) features a mini-XLR output connector and a mini-USB output, and comes in black, red, pink or white. The mic offers a fixed cardioid pattern and 27mm diaphragm made of gold-sputtered 6-micron Mylar. ■



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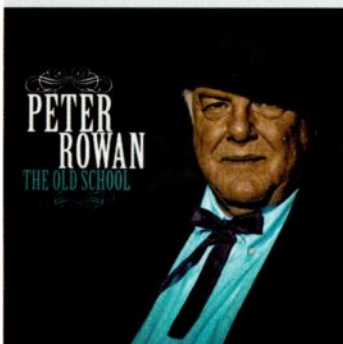
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MIX REGIONAL: NASHVILLE

PETER ROWAN AND FRIENDS PICK IT 'OLD SCHOOL'



For *The Old School*, bluegrass great Peter Rowan assembled an incredible cast to interpret 10 of his engaging original tunes and a traditional spiritual. Though certainly bluegrass-flavored throughout, there are also nods to blues (“Ragged Old Dream”), old-time folk (“Doc Watson Morning”) and more contemporary shadings (“A Mountain Man’s Dream”). Among the stellar array joining Rowan

were several bluegrass/country legends—fellow Bill Monroe alumnus Del McCoury, Bobby Osborne, Jesse McReynolds, Buddy Spicher and J.D. Crowe—and such top-flight players (and singers) as Stuart Duncan, Robbie and Ronnie McCoury (Del’s sons), Don Rigby, Bryan Sutton, Dennis Crouch and the other three members of the Peter Rowan Bluegrass Band: Keith Little, Mike Witcher and Paul Knight. These boys can play!

The sessions were recorded at Compass Sound Studio in Nashville, with ace banjoist Alison Brown producing and Jim Cooley engineering (except on one song) and mixing. The approach to the sessions was, indeed, “old school”—the players sat in a tight circle facing each other, headphone- and baffle-free, almost as if they were on someone’s front porch. Cooley single-miked the instruments, opting for a Neumann KM 84 on Rowan’s guitar (and a Korby Audio 251 for his lead vocals), a Gefell M-300 on mandolin and the neck of the upright bass, Gefell UM70 on banjo, Neumann KM 86 on dobro and AKG C 414 on fiddle. He recorded through Compass’ Control 24, using a Millennia HV-3D 8-channel and API 3124 4-channel preamps, a Tube-Tech CL 1B compressor and a Distressor, among other tools.

“We did a lot of takes, and we comped takes together,” Cooley says, “but we were somewhat limited editing-wise because of the leakage—moving things around was a little tricky.” Cooley mixed the Compass Records album in the box on the same Avid Control 24 used for the tracking to Pro Tools.—Blair Jackson



Easy Eye Makeover

Easy Sound, the production base of Black Keys singer/guitarist Dan Auerbach, saw a lot of action last year, including Auerbach’s Grammy-winning productions of Dr. John’s *Locked Down* and the Keys’ massive, soulful album *El Camino*. In the midst of all the music making, the studio also received an acoustical revamp from veteran designer Steve Durr.

Auerbach and his engineer, Collin DuPuis, wanted more natural-sounding acoustics that fit with their live performance-centered approach. Durr’s firm built custom treatments to provide a combination of bass trapping and reflections that work in the space.

“What these guys wanted was a place where they felt very comfortable, and performances can be captured with little or no baffling,” Durr says. “Leakage between instruments is wonderful if it sounds good, if the tonality of the leakage is warm and touchable and not boxy or bright or edgy. They had a nicely built room, but they wanted a different texture to the acoustics.

“What I care about is building studios where people are excited to invite their friends to come down and play music and hang out, and they never want to leave, and that’s what we tried to do for Dan.”—Barbara Schultz

Welcome to 1979 Goes Vinyl



Welcome to 1979, the decidedly analog Nashville facility owned and operated by Chris Mara, recently acquired a restored Neumann VMS 70 disk-cutting system and this month will start offering lacquer-cutting services in-house. Artists, engineers, producers and mas-

tering engineers are encouraged to attend as their lacquers are cut.

“We will be able to cut from both analog and digital sources, as well as take digital sources to tape prior to the lacquer being cut,” Mara says. “We are striving to keep this affordable for the independent artists who already call Welcome to 1979 home, and we also plan on doing a lot of educational workshops—in conjunction with our existing Tape Camps—featuring the lathe and the record-making process.”

You can learn more about the studio at welcometo1979.com or [facebook.com/welcometo1979](https://www.facebook.com/welcometo1979).

SESSIONS: NASHVILLE



Tom Bukacinski, Blackbird Studio Manager, Scott Phillips, John Oates, Justin Niebank

BLACKBIRD STUDIOS

Gavin DeGraw and Tove Lo worked on an upcoming release (DeGraw also produced) with engineer David Hall at the SSL 9080 XL-K in Blackbird's Studio C...Over in the API Legacy Plus-based Studio D, John Oates was fleshing out a solo project with producer Tom Bukovac and engineer Justin Niebank.



Photo: Trevor Pickard Photography

SOUND KITCHEN

Meanwhile, out in Franklin at the Sound Kitchen, Amber Nolan (pictured) laid down lead vocals in The Big Boy Studio with producer David Dinsmore, first engineer Patrick Murphy and second engineer Ethan Nichols. Background vocals by Lona Heins were also tracked, and overdubs and mixing were done in Studio C.



Fred Vail (left) and Donovan at Treasure Isle

TREASURE ISLE

At Treasure Isle, which is celebrating its 33rd anniversary, Rock and Roll Hall of Fame member Donovan self-produced a solo project with fellow Hall of Famer John Sebastian (The Lovin' Spoonful), who was featured on guitar, autoharp and harmonica, with engineering by Peter Coleman, assisted by Sam Martin...Multi-platinum singer Jason Aldean recorded two Merle

Haggard songs for a tribute album due out later this year, with Michael Knox producing and Pete Coleman engineering, again with assistance by Sam Martin...Knox was also in the studio tracking new RCA group Bush Hawg, and an "event" track featuring Jason Aldean and Country Music Hall of Famer Alabama, for Show Dog/Universal. Both were tracked by Coleman, assisted by Martin.



Producer Louis Newman (left) and mastering engineer Joe Palmaccio

THE PLACE...FOR MASTERING

At The Place...for Mastering, always-busy owner/engineer Joe Palmaccio mastered a variety of projects, ranging from modern country artist Gwen Sebastian's self-titled release (produced by Louis Newman) and hybrid punk band Blood-drunk Shenanigans' album *R2B* (produced by Pepper Denny and mixed by Vance Powell), to roots-rocker Sean McConnell's *Midland* (produced by Brian Pruitt and co-produced by McConnell) and pop artist Kjetil Linnes' self-produced single "Sunshine."



Starstruck engineer Todd Tidwell tracking Kelly Clarkson in The Gallery

STARSTRUCK STUDIOS

Producer Mark Bright mixed live tracks for Carrie Underwood's forthcoming release at Starstruck's Pond studio, which also was the setting for some filming for ABC's hit TV show *Nashville*...Meanwhile, in the 1,077-square-foot main room of The Gallery studio (which also saw a bit of filming for *Nashville*), producer Harold Shedd tracked Alabama's

latest. producer Tony Brown recorded strings for George Strait, and engineer Todd Tidwell did some tracking for Kelly Clarkson.

Michael Lattanzi Trio



Producer/songwriter/musician/engineer Michael Lattanzi has built a new ground-up facility in Leipers Fork, and from the first glance inside the

rather spacious 34x36-foot control room, it certainly is unique: Three consoles—a vintage API 1604, Neve 8078 and SSL 4000 E/G+—wrap around a central mix position.

Lattanzi, who is currently producing and mixing the band Hellbound Glory, came to Nashville in 2011 by way of New York, L.A. and Sedona, Ariz. He was signed by MCA in the 1980s and over the ensuing years worked with artists such as the Fugees and Jewel, and international artists Tina Arena and Amanda Marshall. Six years ago in L.A., he was paralyzed from the waist down in a mountain-biking accident.

After a few years recuperating and making music in Sedona, building his own production studio, he and his wife chose Nashville for their next chapter. Soon after arriving, they started construction on a separate 3,000-square-foot structure adjacent to their home.

"This is the most unique studio in the world, both with how it sounds and with the available equipment," says engineer Toby Wright (Alice in Chains, Metallica, Kiss). "In this day and age, you are lucky to find a good room with one good working console, never mind three amazing consoles. This is my Disneyland of studios!"

Vintage King Audio Back in Nashville



Pro audio industry veterans Kurt Howell and Chad Evans (pictured) are heading Vintage King Audio's new Nashville sales office. Howell studied

voice, composition and arranging at Nashville's Belmont University and began his career more than 30 years ago in A&R at CBS Records in Nashville. Howell has also worked in studios as an artist, engineer, producer, arranger, session player, and manager.

Evans enjoyed a 10-year tenure with GC Pro in Nashville, where he forged relationships with hundreds of clients and oversaw the generation and development of new studios.

For more information, visit vintageking.com/about-us.

ANDRIJA TOKIC AT THE BOMB SHELTER

Andrija Tokic has had a pretty good year, but then you get the sense that he considers every year a pretty good year. The East Nashville engineer, owner of the Bomb Shelter, has been getting a lot of attention for his work on The Alabama Shakes' *Boys & Girls*, but these kind of "breakthroughs" don't generally come out of nowhere. Tokic is a quintessential analog studio rat, and he has paid his dues, amassing a houseful of vintage instruments and gear and a track record of quality recordings from the likes of Clairly Browne and The Banging Racketts, Hurray for the Riff Raff, Majestico, and Clear Plastic Masks. He works fast, and he makes use of every available space in his new standalone home-based studio. He has Pro Tools, but prefers tape; he likes his music live.

You recently moved the Bomb Shelter from your own house in East Nashville to another house. How did it go? What did you gain?

It's always a bitch building a new facility! First off, I gained five gray hairs. Second, I guess I gained a little square footage. Third, in theory I gained a home. In reality, it's become infested with garage-rock refugees. It's officially been dubbed by Riley Downing as the GR Refugee Camp. Also, the windows, which are still installed between all the bedrooms, have really become a nuisance. On the studio end, I gained a more focused work environment. Building a facility, more or less from the ground up, has really shown me the importance of controlled acoustics. Though I came up in great, pre-designed rooms, I've yet to work in such a well-designed control room that feels this comfortable. Though I love my last control room dearly, which was a standard plaster living room, I find it way easier to get to the root of a mix issue in an accurate control room. When you're 1 degree away from a perfect mix, a gnarly standing wave can keep you from total zen. And, of course, how can I forget, my new space came with a mangy rottweiler, who quickly cleaned up and has become the greatest guard dog East Nashville has ever seen. Ms. Lady Killer truly is a band's best friend.

Your production approach seems to lean heavily toward working fast and getting the right sound in tracking.

I'm just trying to record things well. Why would anyone record something that doesn't sound right? One of my late mentors, Paul Minor, taught me to record everything with my monitor faders flat and panned center. It ain't easy but in the long run, it pays off more than any other technique that I'm aware of. If I'm not mistaken, this was standard practice once upon a time. I guess people who learned on DAWs may record things that are snapshots of sounds that have to be altered heavily in mixing. I'm a firm believer in trying to get as close to the target in the first pass as possible. I think the more processing that takes place in post, the worse off your mix is, regardless of format.



Photo: Joshua Shoemaker

When did you discover that "bleed" is your friend? How do you apply that today?

Well, engineers figured that out generations ago. I remember the first time I felt partial to recording with mics placed near the sound I wanted to capture, rather than moving away from the sounds I didn't want to capture. It was with a stellar big band, which had full tonal and dynamic control. They performed the songs as they were meant to be captured in one large room. I was probably 17, in D.C. at Avalon Studios. I was recording King James & the Serfs of Swing, directed by James Levy (American University music professor), who incidentally convinced me to move to Nashville on a whim. I thank my lucky stars he did, because I wound up bringing all their MCI gear with me. Shortly after arriving, I met the MCI guru and dear friend, Steve Sadler, who's kept me and my machines running smoothly ever since.

What do you look for in a recording space?

Apparently termites...A clean kitchen and a space that fits the feel of the moment we are trying to capture.

What is your go-to vocal chain? From mic to pre to tape/DAW to effects to mix technique?

I don't use any DAW, and I'm no creature of habit. A "go-to" is a lazy approach. I can't assume what mic or pre or effects to use on anything. All singers are different, all songs are different. I'd say the most important thing about vocals is getting to know the singer and knowing every piece of gear you have. My only constant I've noticed is that all time-based effects sound better when created naturally. For example, tape delay, spring reverb, plate reverb and natural chorusing all sound better to my ear than any plug-in or digital effect. However, while recording vocals for Fly Golden Eagle's *Swagger*, we wanted the cheesiest chorusing and delays that digital technology had to offer. At the end of the day, it's about serving the song.

How would you describe your mix philosophy? Example?

Hmmmmm, philosophy...I hardly made it through highschool.TM I certainly never learned any philosophy. My approach is always to make things sound like they existed *sans* the help of recording tools and engineers. Whether a mix is heavily effected or completely natural, I never want to hear a studio when listening to a song. Whoa, is that philosophizing? ■

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World Radio History

JASON ISBELL

Vocals Come First on 'Southeastern'

By Barbara Schultz

Jason Isbell broke away from Drive-by Truckers several years ago to focus on his own records and his own songwriting, and his latest album, *Southeastern*, is his most personal-sounding effort to date. Raw and introspective, these songs are all about the singer—his voice and the brilliant stories he tells.

To shine the brightest light on Isbell's songs, producer Dave Cobb (Shooter Jennings, Secret Sisters, Rival Sons) and engineer Mark Petaccia (Sara Evans, The Band Perry, John Carter Cash) took a personalized approach to making *Southeastern*, by always making vocals the top priority.

"A conventional approach is to get a great, big band sound and then try to squeeze the vocal in," Petaccia says. "Often people start with the kick drum, or the overall drum sounds, when they go to record or mix. But we started with vocals and guitar and manipulated everything else around it."

Many of the tracks were recorded live with Isbell's band in the main tracking room at Cobb's personal studio, Falling Rock, and Isbell in a booth singing into an RCA BK-5A mic, with an RCA 77 and a Neumann U 47 capturing his acoustic guitar.

"I think Jason probably thought they were scratch tracks, but we kept them all," Cobb says. "When he's going for it and it feels good, it changes everybody else's dynamic, as well. As a musician, if you know those are keeper vocals coming in your headphones, then everybody's working off of that vocal. It makes you go for a certain part or stay out at a certain part. On these songs, the whole band is feeling his vocal and reacting to it, not the other way around."

On a couple of songs, including opening track "Cover Me Up" and the intense ballad "Elephant," Cobb and Petaccia moved Isbell to a balcony area in the great room/kitchen of Cobb's home (which is attached to the studio), to give the singer more room.

"We walked around the house for an hour, strumming a guitar and listening to Jason sing until we found the spot we thought sounded good," says Petaccia, who captured the guitar and vocal tracks to Pro Tools via Cobb's custom Inward Connections tube console and the preamps from a couple of Ampex tape machines. "We ran a couple of cables from the studio, put up a pair of Coles ribbon microphones—one on vocal, one for



guitar—and it was a done deal."

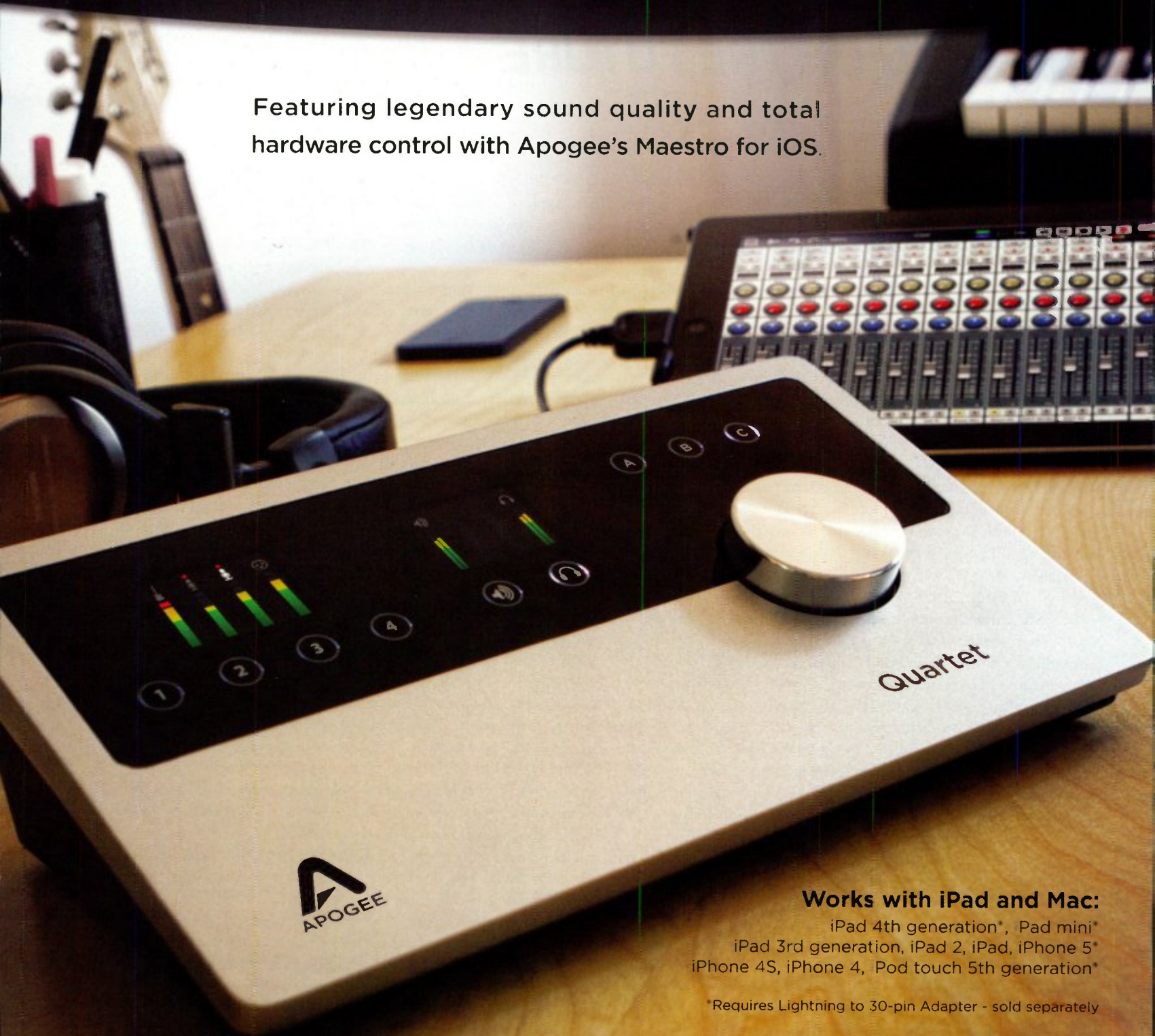
"That kitchen area worked out great," Cobb adds. "He had plenty of room to stretch out, and there's a natural reverberation there that you can hear on the track. I think I supplemented it with a little bit of plate, but mostly it's the reverb of the house."

"And those Coles mics ended up being pretty important on this record," Cobb continues. "There's something a little dangerous and soulful about them that even a lot of nice vintage mics don't have. You can hear it when he pushes the ribbon a little bit—you get this sort of blurred sound that reminds me of older, classic records. Had we been using tape the whole time, it might have watered down the effect a little too much, but since we were working in digital, we got that slightly blurred picture, captured in hi-fi. I guess using ribbon mics is sort of like using Instagram on a picture." ■

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RobairReport

BETTING ON THE FUTURE



By Gino Robair

It's all about incentive, right? For example, if we let companies patent genes, thus giving them a "temporary" monopoly, they are incentivized to do further research in the field.

Because why else would someone work in the medical field other than for capital gain?

Once upon a time, there was a common disease called poliomyelitis (or polio, for short). Thanks in large part to the efforts of Jonas Salk, who developed one of the safest vaccines against the disease, polio has been nearly eradicated from the earth. When he was asked about ownership of the vaccine, he reportedly replied "There is no patent. Could you patent the sun?"

Of course, Salk's altruism serves as an important lesson. While we place great importance on intellectual property rights, there are times when it is more appropriate to share a technology, especially if it leads to greater developments down the road and allows everyone to benefit in the future (and for longer than the term length of a patent).

In his April 11, 2013, CNNMoney blog titled "One of tech's most successful inventors never made a cent," writer Kurt Wagner exemplifies the poisonous short-term-gain mentality of today's business community by eagerly pointing out that synth pioneer Dave Smith "should be a billionaire," but instead he gave away a technology so important that, three decades later, we use it in everyday products. Surely this Smith character must be a rube.

The article is, of course, referring to the Musical Instrument Digital Interface (MIDI) standard, which Smith spearheaded and, ultimately, developed with the help of others. (Smith and Roland Corporation founder Ikutaro Kakehashi were awarded Technical Grammys this year to recognize their achievement.)

The assertion of Wagner's blog title is not really true: Smith has been a successful developer for decades, and he currently makes a comfortable living selling high-quality instruments under his own brand name. The title is also somewhat misleading. MIDI continues to solve an important problem—product interconnectivity—and the ubiquity of the protocol has spurred industry growth for 30 years, allowing Smith to profit from the technology a lot longer than if he had simply tied it up under a patent or made it proprietary. The history of MI is littered with proprietary formats.

"It's hard to fathom today," Wagner continues, "but when Smith collaborated with a handful of Japanese companies, he skipped the

licensing fees, instead offering up his idea for the world to steal." Of course, the world didn't have to steal MIDI; it is a standard. And skipping licensing fees is not at all hard to fathom today, because we live in a culture where freeware, open source and Creative Commons are mainstream concepts.

"Five companies were involved with developing MIDI," Smith explained to me via email after Wagner's story was published. "So any ownership would have been with the companies, not me personally, or even me and Kakehashi (for example, SCI [Sequential Circuits Inc.] and Roland). Beyond that, we all agreed that we wanted 100-percent industry implementation, so it was really a no-brainer to give it away for that reason. I don't recall any major discussions about it; it just seemed like the obvious way to go." It was also a brilliant business move.

Ultimately, Wagner's article is not about MIDI, but about ownership and valuing short-term returns over participation in an industry-wide ecosystem. The idea that every monetizable idea should be immediately locked down for the benefit of a few is an old-school model that is losing popularity with the digital natives that are infiltrating the business world. They see yesterday's way of doing business as unsustainable. To borrow a phrase from Gerd Leonhard of the Futures Agency, we are witnessing a shift from *egosystems* to ecosystems.

MIDI sets an example for an organic view of our industry where manufacturers and software developers think in terms of value for their customers rather than to their shareholders—a core business concept that seems to have been jettisoned in recent years, especially in response to software piracy. Instead of innovating and finding new market paradigms, the old guard increasingly wants to monetize as many assets as possible—and quickly—because they know the industry is not changing in their favor.

The answer is simple and time-tested: the loyalty of a developer's customers will be built on the long-term goals it sets that benefit its users. Innovation to the degree that is required from today's developers goes beyond simply releasing an updated code base. It demands a complete re-thinking of what customers want and solutions to real problems rather than incremental workflow improvements.

The incentive that MIDI has shown by example is that thinking of "us" rather than "me" not only increases our chances of surviving the technological changes that come with ever-increasing frequency, but also leads to prosperity that can be measured only in decades. ■

se·lec·tion [sə'lekSHən]

noun

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2. a number of carefully chosen things
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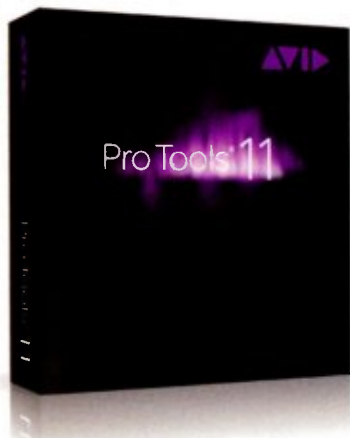
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PRO TOOLS 11

More Power, Greater Speed and 64 Bits

The much-anticipated release of Pro Tools 11 brings a bevy of upgrades, with the most striking of them under the hood. The fully redesigned audio engine brings 64-bit architecture and many times the processing power of Pro Tools 10 on the same hardware configurations. Other features include offline bouncing, a low-latency input buffer and dynamic host processing, which maximizes plug-in count by reallocating processing resources as needed. There is now support for a broad range of built-in metering standards, from peak and average to VU and PPM, a built-in Avid Video Engine and much more. The full version price is \$699. Crossgrade and upgrade pricing information is available at avid.com.

GENELEC M SERIES MONITORS

Forward-Looking Design

The Genelec (genelec.com) M Series Bi-amplified Active Monitors take a new approach to speaker design as part of Genelec's ongoing sustainable initiative known as GES (Genelec Embedded Sustainability). The first two models being introduced are the Mo30 (\$695) and the Mo40 (\$995) bi-amplified active monitors, which employ a natural composite enclosure manufactured from wood fiber and recyclable material. Features include new Class-D amplifiers, Intelligent Signal Sensing power management with auto power-off/auto power-on, and with the standby power consumption of less than 0.5W, in accordance with upcoming European Union standards, the Mo30 uses a 5-inch woofer and 0.75-inch metal dome tweeter, powered by a 50-watt and 30-watt amplifier, respectively. The Mo40 employs a 6.5-inch woofer with a 1-inch metal dome tweeter, powered by an 80-watt and 50-watt amplifier, respectively.



PEARL LAB PRIORITY MICROPHONE

Affordable, Rectangular Condenser

The Pearl Priority (independentaudio.com, \$999) is a large-membrane, handmade condenser microphone with a fixed cardioid pattern. As with other Pearl mics, the Priority has a rectangular capsule that features an unusually large surface area for a single-membrane capsule. The Priority promises a flat frequency response curve and is targeted for use in recording acoustic instruments or vocals. The capsule has been tuned for a slight increase (2 to 3 dB) around 5 kHz, which corresponds to the presence bump often sought for vocal recording.



LIGHTNING BOY AUDIO RECTIFIED LEVELER

Tube/Optical Gain Controller

The Lightning Boy Audio Rectified Leveler (lightningboyaudio.com, \$2,599.99) promises high fidelity and

tonal flexibility by using paper-in-oil capacitors, low-noise resistors, NOS tubes, and a selectable tube or solid-state rectifier stage. The unit is based on the LA-2A with all of its familiar controls, plus two new features. A Vintage/Modern toggle switch allows the user to choose between the compression characteristics of a traditional LA-2A, or a Modern setting that introduces a low-cut sidechain. The second switch, Tube/Silicon, selects either the smaller, more up-front sound of LA-2A-style silicon diodes or the bigger, more open sound of a 6X4 rectifier tube.



SPL MADISON CONVERTER

16x16 MADI I/O

The Madison Converter from SPL (spl-usa.com, \$1,899) offers 16 I/O, 36-volt audio rails, +24dBu output level, 44.1 Hz to 192 kHz, ± 10 percent vari-speed and SPL clock-shop for jitter-free operation. Other features include simple operation and setup from the front panel controls, expandability up to 64 I/O using four units, four directly selectable reference levels (15/18/22/24), and an optional redundant power supply. The Madison will be available in June 2013.



SMALL TREE TITANIUMZ-5

Five Ways to Save

Formerly known as Titanium4, Small Tree's TitaniumZ-5 (small-tree.com, starting at \$6,500) provides up to 15 TB of usable capacity while scaling to nine ProRes 422 streams. TitaniumZ-5's all-in-one portable design meets rigorous on-site editing demands at an affordable price. TitaniumZ-5 offers ZFS,

AFP, SMB (CIFS), NFS and iSCSI protocol support and works seamlessly with Adobe Creative Suite, Avid Media Composer, Avid Pro Tools, Apple Final Cut Pro 7, Apple Final Cut Pro X and Autodesk Smoke.



WAVES MANNY MARROQUIN COLLECTION

Hybrid Plug-ins With a Hip, Modern Touch

This collection of custom plug-ins from Waves was developed in collaboration with mixing engineer Manny Marroquin (Bruno Mars, Alicia Keys, Rihanna, Maroon 5, Shakira). The collection showcases his unique workflow, including personalized versions of his EQ, reverb, delay, distortion and the new Tone Shaper and Triple D plug-ins. The plug-ins are available for download at waves.com for \$500.

UNIVERSAL AUDIO APOLLO 16

Scalable I/O with DSP

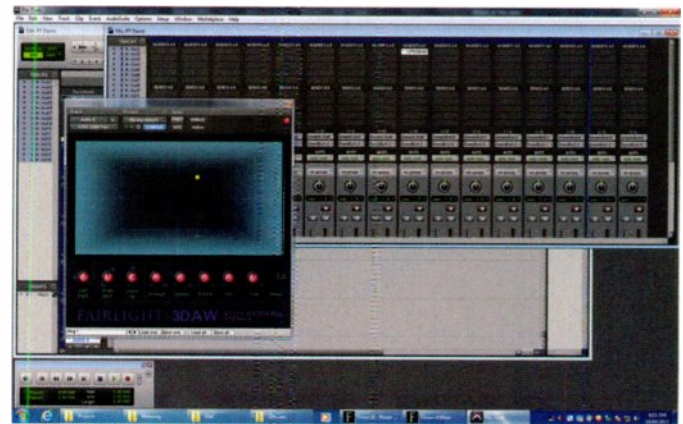
Universal Audio's Apollo 16 Audio Interface (uaudio.com, \$2,999) features 16x16 analog I/O, flexible routing and UAD-2 Quad processing onboard, providing real-time processing with UAD Powered Plug-Ins. Analog connections are via DB-25 with the ability to cascade two units via MADI for up to 32x32 analog I/O and eight processors. Other features include dedicated XLR monitor outputs, stereo AES-EBU digital I/O and compatibility with Intel's high-bandwidth Thunderbolt technology via a user-installable dual-port Thunderbolt Option Card (\$499).



FAIRLIGHT 3DAW PLUG-IN

Pro Tools Object-Based Panning

The Fairlight 3DAW plug-in for Pro Tools (fairlight.com.au, \$TBA) is the result of a collaboration between Fairlight and DTS and brings object-based panning to the DAW with DSP supplied by Fairlight's Crystal Core Media processor. The plug-in uses DTS's open-source MDA format, allowing users to truly mix object-based audio in unrestricted 3-D space, monitor on any configuration, and output in DTS's proposed future specification, MDA. Additionally, Fairlight's 3DAW will feature the ability to mix soundtracks for DTS Neo:X, a channel-based audio solution designed to support up to an 11.1 speaker system.



New Live Sound Products

ALLEN & HEATH ME PERSONAL MIXING SYSTEM

For When You Want More of You

The ME system from Allen & Heath (allen-heath.com) is universally compatible with the company's own and other pro digital mixers. The system comprises the

customizable ME-1 personal mixer (\$799), powered and connected via Cat-5 and capable of managing up to 42 sources. ME-1's layout incorporates backlit keys, soft rotary control, separate mic and mix levels, and an OLED display for custom channel naming. The accompanying ME-U hub (\$TBA) offers star connection of multiple ME-1 mixers and interconnection to other professional digital mixers via MADI, Dante or EtherSound. ME-1 receives 40 sources and has a built-in ambient mic and local stereo aux input. Up to 16 presets can be stored, recalled and transferred via USB key for quick setups or archiving.

DPA
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noun

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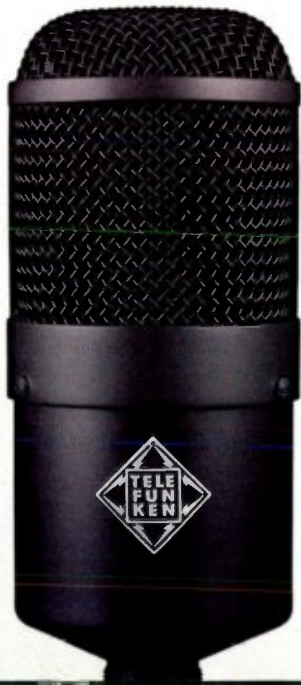
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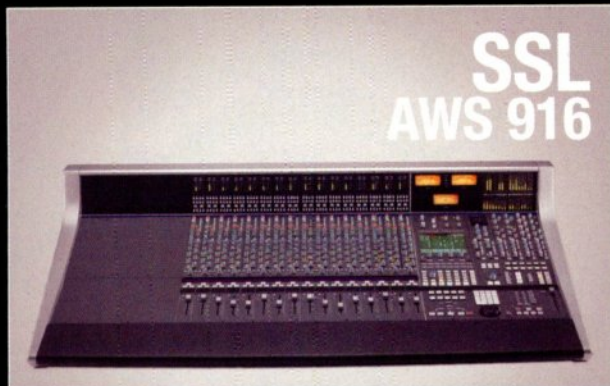
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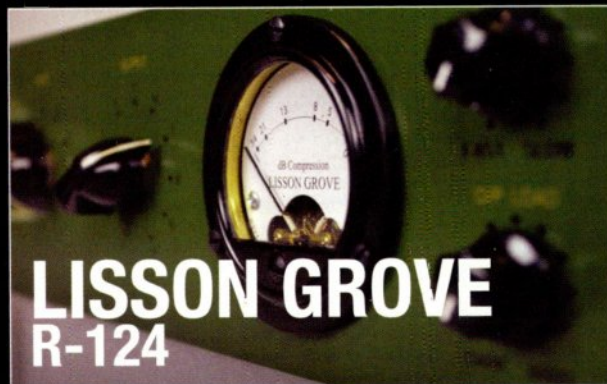
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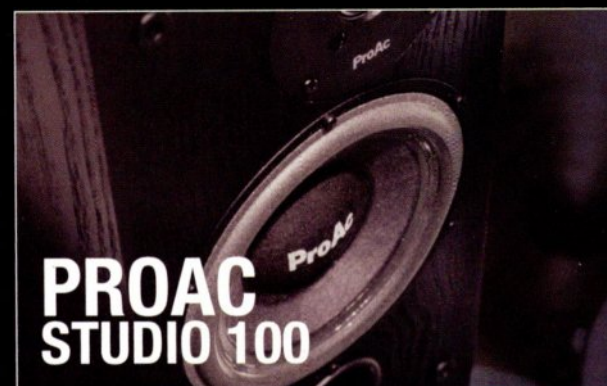
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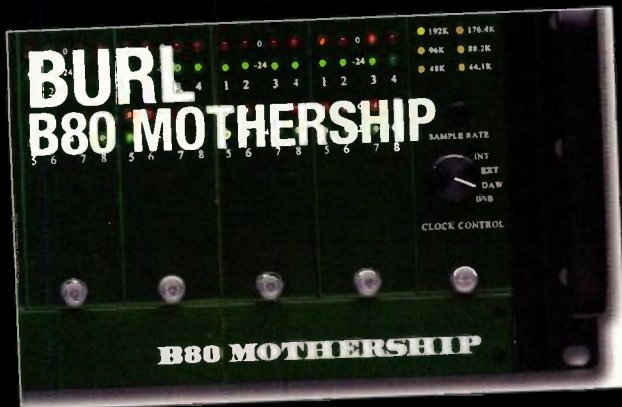
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UNIVERSAL AUDIO PLUG-INS

Models of Classic API EQs and Teletronix Leveler



Figure 1: These plug-ins accurately model API's legacy 550 and 560 EQs, including the signature API electronics.

I have been a longtime user of UA's DSP Accelerator cards, and I must say that a lot has changed since my first one in 1999. The emulations have grown beyond simply capturing the response curves to modeling the entire signal path of its hardware counterpart. I ran the review of these new plugs on Sequoia 12 running on a Windows 8 64-bit machine with all new SSD drives.

API EQ COLLECTION

The New API EQ collection (see Fig. 1) comes with two models: the 550A EQ and the 560 Graphic EQ. Download, installation and registration went smoothly. Both EQ emulations modeled the entire signal path, including the famed API 2520 op amps and transformers. The 550A starts with a straightforward 3-band EQ. Each of the three bands uses a dual-knob step switch to dial in either the center frequency or boost/cut, and the high and low bands can be independently switched from

Bell to Shelf. The 550A also includes a single switch to engage a Highpass/Lowpass filter that is preset to 50 Hz and 15 kHz. The 560 EQ is a 10-band graphic equalizer. On both units, there is an EQ bypass button, allowing users to skip the EQ filters but leave the component modeling active.

Moving the controls on the 550A can take place a few ways, either by clicking on the corresponding frequency you wish the control to point to or by moving the knobs, which felt awkward because it moves as a switch jumping to the next value. You can also use the "+" and "-" markers above the knobs for boost and cut. Below the band section of the GUI is the Filter switch—default is out, or to the left. Having the HP and LP filters on a single switch, as the hardware was originally designed,

TRY THIS

On a rock track with two guitar parts, or really any time you have two of the same elements, place a 550A on one track and a 560 on the other because each plug-in addresses different fixed frequency bands. It's easy to get a huge sound.

PRODUCT SUMMARY

COMPANY: Universal Audio

PRODUCT: API 500 Series EQ for the UAD-2 platform

WEBSITE: uaudio.com

PRICE: \$299

PROS: Excellent-sounding EQ; captures the classic perfectly.

CONS: EQ gain steps and a very stylistic workflow limits its usefulness

may have been good for use in broadcast back in the '60s, but for music production, it's a bit of a letdown that these are still tied together.

Below the Filter switch are the two shelf switches for the high and low bands, giving you the ability to change from Bell to Shelf. The bell shape on this EQ has a very useful and musical quality to its geometry. With small amounts of boost or cut, the bell is wide and smooth-sounding, broad, and musical. As you increase the boost or cut, the center frequency becomes predominant, and the bell shape narrows. With the high or low band in Shelf mode, the center frequency that you have dialed in becomes more of a suggestion, as the shelf seems to extend far beyond. For example, with the low band set to 50 Hz, boost it +12db in Shelf mode, and you will hear boosting happen up to about 200 Hz.

The 560 Graphic EQ was a pleasant sur-

prise. They left my studio when I was 17 and learned what a parametric was, but now I am in love with the shaping, the interaction between bands and the low end. Dropping this onto a kick drum track was an ear opener—so much bottom end and yet still tight. Moving the frequency sliders is simple, and Control-clicking on the slider returns it to zero. You can also reset all 10 bands by clicking on the zero at the top of the plug-in.

The API EQs are known for their punch and low-end tightness. Part of that comes from the EQ's band shaping, but also from the components inside the unit. Bypassing the EQ but leaving the plug-in on, you are able to hear the sound shaping going on. I placed a 550A or 560 on every track that didn't have EQ and instantly heard a familiar sound—a more vibrant and upfront track. But if I had a dozen of the hardware units, they would all sound slightly different, and I believe perhaps the outcome would be even more drastic.

I like to consider these types of EQs as being hard EQ. You are given strict choices, specific frequencies, and you gain boost/cut in steps, so you are forced to use either +2dB or +4dB; there is no middle ground. The 560 of course gives you a slider for boost/cut, but it is a very small window for ± 12 dB. The frequency choices are set, too. If you want to boost 150 Hz

on the 550A, the only way to do that was to add a second EQ to the mix.

We have come to expect a certain level of quality from UA, from the sound to the graphics to the company's faithfulness in re-creating digital wonders of the real thing. When opening the API 550A EQ for the first time, the size and look of the plug-in is perfect, matching the hardware version to the point of making you want to reach for the knobs. But do we need another EQ collection? I believe it comes down to taste and workflow. Being able to have an API vibe across an entire mix is fun, and the results are tight and upfront.

TELETRONIX LA-2A COLLECTION

The LA-2A plug-in (see Fig. 2) has been updated with the entire signal path of the hardware unit—that is, tubes and transformers were added. UA decided to not only add the entire signal path, but to also more accurately model the compression curves using the knowledge of modeling gained over the last decade of R&D.

The end result is an amazing re-creation of three different units spanning the different incarnations as the hardware unit evolved: the original LA-2 from the early 1960s, the LA-2A Grey from the mid-1960s, and the late '60s LA-2A Silver. (There is a complete history of the LA-2A on the UA Website.)

The units are categorized by their response and tonal characteristics. The LA-2 is the slowest of the three, giving a gentle attack and long release times, resulting in a smooth feel to the compression. The LA-2A Grey has slightly more top end than the LA-2, with more intermodulation distortion going on as a result of the quicker attack and release times. This faster time

Figure 2: These three modeled plug-ins from the 1960s hardware are completely different in attack and tone.



TRY THIS

On a vocal track, load all three LA-2A plug-ins, plus the original if you want. One at a time, using the bypass switch to bring them in and out, set each one up to average 7dB reduction on loud parts. Then start comparing until you find the one (or more) that gets you the tone and smoothness you like.

restraint brings a nice warm and fuzzy feel to the sound. The LA-2A Silver is the most modern sounding of the three, with a beautiful tonal range and just the right amount of warmth mixed with hi-fidelity to its top end. It does have the fastest response time of the three, but that's not to say it clamps down on the sound; in fact, it's the opposite. It has an amazing ability to simply control the content and at the same time add a desired tonal enhancement to any sound source you put through it.

They all give a rich, almost hi-fi characteristic to the sound. With the Peak Reduction control set to 0 (Off), you can hear the sound of the unit's modeled tubes and transformers give a light dusting of harmonic distortion to the midrange and a sheen to the highs—a perfect addition to your mix bus to breathe life and depth to your DAW.

The LA-2A is the easiest to operate with a simple "how much compression do you want" knob on the right and an output volume to the left. UA has also included the Emphasis adjust-

PRODUCT SUMMARY

COMPANY: Universal Audio
PRODUCT: Teletronix LA-2A Classic Leveler Plug-in Collection for the UAD-2 Platform.
WEBSITE: uaudio.com
PRICE: \$299
PROS: An ear candy re-creation of these classics; easy to get great results.
CONS: None.

ment, another throwback to the broadcast days that adds a HP filter to the detector's signal path.

After spending so many hours using the original UAD LA-2A plug-in, I was eager to try the new versions on everything that I had previously used the original on to see how it compares. When the new 1176 collection came out, I had to readjust my use of the 1176LN. I knew the original plug-in so well that it has taken me a while to get used to the new version. The LA-2A Silver, which is the version closest to the original LA-2A plug-in, does

react differently, but the adjustment curve in my mind has been easier.

Comparing the new collection to the original LA-2A plug-in is like comparing my minivan to my Mustang: They both get you where you want to go with good results, but the Mustang gets you there with a big smile on your face. The LA-2 has such a slow recovery time that it really lends itself to a specific rhythmic dynamic from the sound source, while the LA-2A Silver tends to be more universal. Silver also has a sound that is more modern—nice round and woolly lows and beautiful sparkle to the top end. Loading up the original LA-2A plug-in and comparing it to these new emulations showed me just how far plug-ins have come. It's a whole new ball game.

I really enjoyed loading up the LA-2A Silver on all the tracks I have come to love using a hardware LA-2A: kick, snare, bass guitar and Rhodes. The plug-in simply does what the hardware is famous for. They are emulation perfection. ■

Tim Dolbear is a Texas-based audio engineer.

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Monocoque Shell Design Reduces Resonance

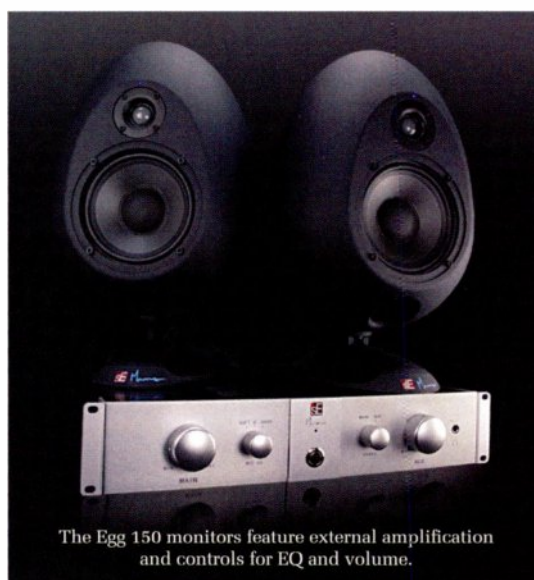
Andy Munro is known to most of us as one of the top acousticians in the field of studio design, with some seriously heavy-weight clients to his name including Air Studios, the BBC, Coldplay, Massive Attack, Metropolis Studios, Sphere Studios and U2. Studio monitors and the design of a top-flight recording facility go hand in hand, and Munro had already been involved with the main monitor design for various high-end studios with models like the M4, C4 and 3 and the THX-approved M3F. The development of a near-field speaker was bound to happen at some point.

Designed by Munro in conjunction with the sE Electronics team, the Eggs were introduced at AES nearly 18 months ago. They feature monocoque shell construction, which promises a smooth frequency response and no internal standing waves. Because of the shape, it was necessary to provide control and amplification externally (4x 50W), which is tethered to the speakers with included 9-foot matched cables. Other features include LED locator guide beams for accurate placement, trim pots for LF and HF calibration, and mid-frequency EQ.

THE SHAPES OF THINGS

In general we're all used to fairly rectangular boxes when it comes to our speakers. All of the studio standards—the classic Genelecs, NS-10s, Auratones and many others—are straight enclosures with varying degrees of clever design features to reduce the internal resonances. The Eggs are certainly unique and come with a slick, two-unit rackspace amp. You have the option to attach the rack ears to the amp or you can just free stand it somewhere nearby. Installation couldn't be simpler; roughly put the monitors in their positions, hook them up with the very chunky and high-quality Speakon cables that come with the Eggs, input your console or DAW output signal into the amp, and you're good to go.

Have a nose around the back of the amp and locate the LED switch. This will activate two bright blue LEDs above both



The Egg 150 monitors feature external amplification and controls for EQ and volume.

tweeters. Put yourself in the listening position at your desk and make sure you can see both LEDs at their brightest. If you want to tilt the Eggs forward or back a little, you can do that by loosening the swivel nut on the base. I found this cumbersome on my own, so a little help from a friend will come in handy and will save you from having to get up for every millimeter tweak.

I have noticed some engineers like the blue LEDs to be on all the time, but obviously you can disengage them at the back of the amp. Maybe it's a force of habit now to see a light on an active speaker. We had to go through this process a couple of times as we recorded in various

studios. It gets easier, I can assure you.

The amp/control unit is as straightforward as they come. The rear panel holds the inputs on balanced XLRs and the outputs on Speakon. You have an additional aux input on phono, as well. Two trim controls allow you to adjust the HF and LF to deal with room and location acoustical effects at 10 kHz and 63 Hz, respectively. The unit also gives you the option to run it on +4 or -10 dB. On the front are the power switch, the main volume, the aux volume, main and aux toggle, headphone socket and an EQ control. The EQ is a very subtle ± 1.5 dB boost centered around 2 kHz, providing you with the option to have a closer look at those frequencies when you're mixing. Obviously it is suggested to keep your speakers flat to start.

INTO THE STUDIO

Elliott Randall (of Steely Dan fame) and I were set to start working on his new album. We mix as we record, and this gave me the chance to put the Eggs though their paces on various tracking and mix sessions, as well as hear them in a handful of different studios.

TRY THIS

Originally I set the Eggs up on my desktop. After spending a little more time with them, we discovered that they sounded much better on top of my main near-fields, angled down. It's worth testing the speakers out in a couple of places in the control room to hear where they interact best with your acoustical environment.

I initially set up the Eggs in Elliott's studio where he runs a couple of baby near-fields and a sub. Upon first listen we were both less than impressed. Keeping in mind that engineers and producers are creatures of habit and tend to be highly opinionated, I was expecting something a tad more mind-blowing. The word on the street was and is that these new speakers are going to be the new standard for referencing; maybe I anticipated a little too much.

The first listen gave us a brilliant and ultra-clean high end, a well-defined bottom end—but something was off in the left-right balance. Worried that we were kidding ourselves, I took the Eggs to my studio and set them up there to double-check. Having experienced the same results, we decided to send the units back for sE to check. They sent us a new set of speakers and a new amp and we were up and running with equal level on both sides.

Set up with our fresh pair of Eggs it became immediately clear that this is not just another set of near-fields. I've already mentioned the crystal-clear top end; however, the main thing that makes these speakers very special indeed is the stereo imaging they provide. I found myself panning a lot wider without having that feeling that I had gone too far. The Eggs maintain a very solid center image and give you a detailed stereo plane that translates on domestic and car systems.

The amazing high-end clarity the Eggs deliver helped us a lot when it came time to mix the song "Later Last Night" on Elliott Randall's new *Virtual Memory* album. When you're mixing, you definitely want a set of speakers on hand that's going to be brutally honest and tell you where the problems are. The Eggs allowed us to focus on the crispness of the cymbals and dial out some of the harshness that can excite some home systems in a bad way.

They also allowed me to put the magnifying glass on the top end of the Leslie speaker, look at the bite of the guitars, and make sure the flanger on one bar across the entire mix was singing enough. They also zoomed in on some bass string noises, so I could repair those little inaccuracies.

I know I keep talking about the Eggs' brilliant HF, but it is their strong point. These monitors give you such a clear image of the drum transients—they really punch through. Even though there are no vocals on this particular record, we referenced a lot of varying material on the Eggs to familiarize ourselves with their sound. Thinking back to the NS-10 days, the vocals pop out in the mix nicely, so you can flip back and forth between your main monitors and the Eggs to keep an eye on overall vocal levels and fader moves.

On the low end, I did find myself wanting to push the bass quite a bit. Once we checked the mix on several other studio monitors and domestic systems, it became clear that the bass increase was not necessary. Once again, this is an area to keep an eye (or ear, rather) on.

We had the Eggs for a good stretch of time and like with any speaker, you need to get used to them. You learn

PRODUCT SUMMARY

COMPANY: Munro/sE Electronics
PRODUCT: Egg 150 monitor system
PRICE: \$2,499
PROS: Great stereo imaging. Light and easy to transport. Front-ported.
CONS: Setup can be done on your own but is really a two-man job. EQ is too subtle. Soft low end.

their quirks, and your ears simply need to adjust to all these new characteristics you're hearing. The Munro/sE Eggs became really valuable tools during mixing. Switching back and forth between your regular near-fields and the Eggs gives you a much clearer picture of the panning in your mix, and because the Eggs appear to be quite bright in the upper mid-range, you don't overexcite those frequencies and end up with ultra-harsh mixes. The only thing I would say about the low end is that, for me, it's a little soft. It's worth

keeping that in mind, and don't overemphasize those frequencies.

THE OUTCOME

The Eggs are a set of great speakers. They look different and quirky, and it's about time somebody had the guts to come up with a completely new speaker design and make it work. A lot of positive and constructive feedback has gone back to Munro, and I wouldn't be surprised if a few useful tweaks are on the way. Munro has also informed us that Baby Eggs and Big Daddy Eggs are in the pipeline. And for those of us who really like to get the pants flapping, there's a kick-ass sub in the making!

Time to throw some Eggs into the mix. Get in touch with sE and organize a demo pair to be sent out to your studio. ■

Wes Maebe is a UK-based recording, mixing, mastering and live-sound engineer. Check out his work at wesonator.co.uk.

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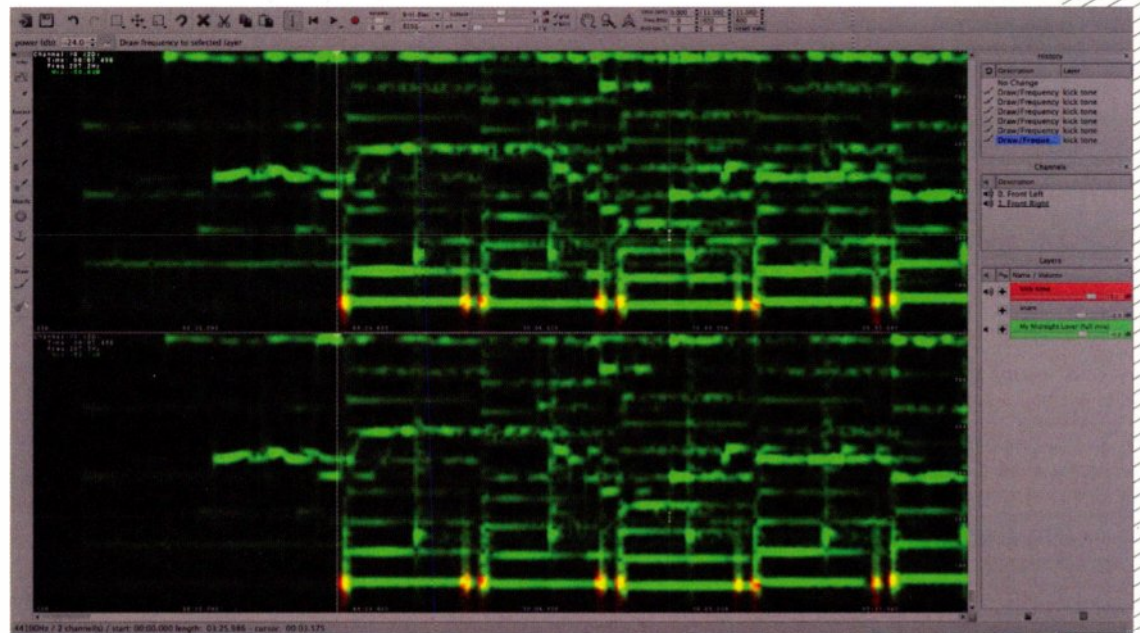
SpectraLayers Pro lets you extract in turn the various embedded elements of a mono or stereo audio file, transfer each component to a discrete layer (a track synced to the original audio) and process the layers independently to create an entirely new mix of the material. And that's just the beginning.

Using an 8-core Mac Pro running OS X 10.8.2, I tested SpectraLayers Pro Version 1.0.21 in restoration, sound design and remastering applications.

LET'S GET VISUAL

The stand-alone program (not available as a plug-in) shows your imported audio in an auto-scrolling spectrogram having time (horizontal) and frequency (vertical) axes (see figure). When you import an audio clip into SLP, it appears in a new layer. You can create another (empty) layer, make it active and use editing tools to transfer (extract, in SLP parlance) a band- and time-limited snippet of content from the full clip to it. The original clip remains intact in its layer. You can also extract a single frequency and, optionally, all of its harmonics to a discrete layer; this is how you'd extract a single bass-guitar note from a full mix. To extract noise, paint with your mouse where only noise occurs and then apply the Extract/Noise tool across the entire time and frequency ranges of the clip. After extracting a frequency band, single frequency, series of harmonics or noise to a discrete layer, you can invert the layer's phase and combine it with the layer for the original (in-phase) audio clip. The resulting phase cancellation will mute the extracted elements at SLP's output.

SpectraLayers Pro can also generate noise or a discrete frequency (which you can modulate over time by mouse-dragging up and down in the spectrogram) and add it to existing audio at a level you set in decibels; such mayhem is most useful for sound design.



SpectraLayers Pro displays and edits audio in a spectrogram. This zoomed view shows a 65Hz tone (red blotches) added to kick-drum hits in a previously archived master.

PROCESSING POST-EXTRACTION

Say you've parsed the bass guitar from a stereo mix into a discrete layer—a Herculean task, as it requires cleanly extracting each note (with its harmonics) in turn for the entire length of the mix. In SLP's Mix Channels dialog, you can adjust faders to set the amount of cross-feed the bass will have in the left and right channels of that layer. (A pan control would be more practical.) Click on the bass-guitar layer to solo it, raise the layer's fader to make it louder, or invert the phase to remove the instrument from the full mix. Use the Level Gamma Offset dialog to make the instrument's weaker frequencies stronger by increasing the layer's gamma. Raise the dialog's offset slider to completely mute the layer's low-power frequencies. A layer can also be transposed in pitch and

TRY THIS

To transpose and move a single note, make two copies of it (and its harmonics) from the layer containing your full audio clip.

Paste each copy into a new discrete layer. Cut the note and harmonics in one of the new layers, and paste them to a new frequency range later in the timeline. Invert the phase of the second (unmoved) layer to mute the original note. (Do this last step only if the original note is isolated enough that muting it won't create an audible hole in the full clip.)

moved elsewhere in the timeline.

While soloing a layer, you might hear that you extracted some chaff along with the wheat. The Modify/Eraser tool lets you remove unwanted frequencies along the spectrogram's timeline by painting them with your mouse.

Each layer can be rendered in a popular audio format to bake in its processing. The resulting file can then be either exported or dragged and dropped into your DAW for further processing and remixing. You can also mix all your layers in SLP and export the mix to a new audio file.

IN THE TRENCHES

Several tools each alternately functioned as a spectrum selector and extractor, making operation extremely confusing; each tool should have a discrete function. I couldn't create markers to facilitate navigation. Clicking with a time cursor in the spectrogram set my initial playback location and rewind-to point, but there were no auto-return or loop functions. Numerous parameter settings for the spectrogram (such as zoom, contrast and resolution levels) were not retained when saving the project file; that hindered my immediate resumption of microscopic work where I'd left off the day before. SLP ignored the default outputs in MOTU PCI Audio Setup utility (which routes audio to and from my Mac) and arbitrarily routed its outputs to other channels in another I/O box. Very high zoom levels are CPU-intensive and made my Mac Pro very sluggish.

I liked that I could use my 32- and 64-bit VST plugins to process individual layers offline, and a preview mode facilitated auditioning the effect before rendering. I used SLP's Extract/Noise tool to virtually eliminate broadband noise from a stereo music mix. I could also remove AC hum and buzz, but it took a lot longer to execute cleanly (without removing other elements of the mix) than when using iZotope RX2 Hum Remover.

Next, I imported a lead vocal track into a new SLP document, copied and pasted frequencies from roughly 500 to 4,000 Hz along the entire timeline to a new layer, and boosted the gamma slider slightly in the Level Gamma Offset dialog. This made the voice sound like it was coming out of a poorly tuned pocket radio. I then created a new layer and extracted to it a modulating, 300Hz-wide frequency band of the "radio-vocal" layer by painting up and down with the Extract/Area tool along the timeline in sine-wave fashion. Outrageous! On the down side, SLP wouldn't let me include the first 30 ms or so of audio in a subsequent time-range selection—make sure all your imported audio has pre-roll handles!

I wasn't able to extract a snare drum hit from a stereo master without also unintentionally removing other elements such as bass guitar and Mellotron that contained overlapping spectra in the same time range, thereby creating an audible hole in the mix. I wished SLP could interpolate surrounding data to fill in the gap, like iZotope RX2 Spectral Repair can seamlessly do. A mid-

PRODUCT SUMMARY

COMPANY: Sony

PRODUCT: SpectralLayers Pro

WEBSITE: sonycreativessoftware.com

PRICE: \$374.95

PROS: Edits and processes audio in unprecedented and singularly powerful ways. Allows offline processing with third-party VST plug-ins.

CONS: Stand-alone only. Very steep learning curve (extremely unintuitive GUI). Poor documentation. Can't interpolate data. Limited navigation tools. Arbitrary output routing. CPU-intensive.

side mode—with channel soloing—would've also helped immensely to winnow data for editing. A "find similar event" selection tool would've helped speed my selection of multiple snare hits.

I was much more successful adding to the same mix: I could easily draw transient 65Hz tones—matching the song's key of C minor—on top of kick-drum hits and adjust the tones' levels to seamlessly add sorely needed punch and bottom end to the master (the figure shows this).

POWERFUL BUT AWKWARD

SLP's main callings are audio forensics, restoration, post-production audio sweetening and especially sound design. The learning curve is very steep, due to a cumbersome GUI and documentation—available only online—that's excessively jargonistic in places, missing vital information and deficient in practical examples of use. Excellent Webinars at sonycreativesoftware.com/training help explain operation somewhat but make certain aspects no less convoluted.

SLP's main competitor for sound design applications is iZotope Iris, which also employs spectral editing. Iris is much easier to use and includes built-in effects processing. Still, SLP can do numerous things Iris can't (and vice versa). For anyone looking to explore the frontiers of sound, SpectralLayers Pro would make a powerful addition to their toolkit. ■

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Photo by Peter Ellertby

"Last year Tiny Telephone partnered with Minna Choi and her Magik*Magik Orchestra, a modular group of symphonic players that can be ordered up as needed, from a single bass clarinet, to a 60-piece ensemble.

The enormous amount of string and orchestral work we started doing revealed startling flaws in our vintage mic collection: between problems of self-noise, variations within pairs, and issues of fidelity, we just couldn't rely on 60 year-old microphones to get us through a live chamber ensemble.

Then I discovered Josephson Engineering. I was blown away. It was like summer love. After a decade of collecting tube mics, I quickly auctioned them off and bought everything Josephson Engineering made."

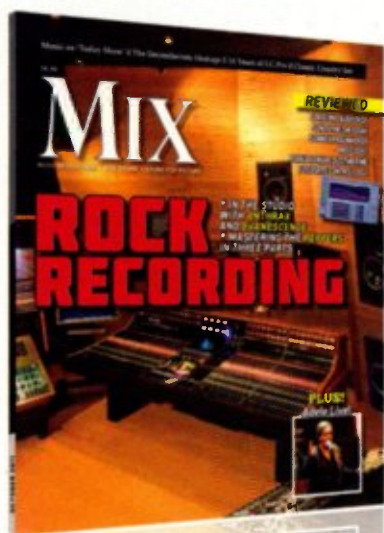
- John Vanderslice
(Owner, Tiny Telephone - recording studio)



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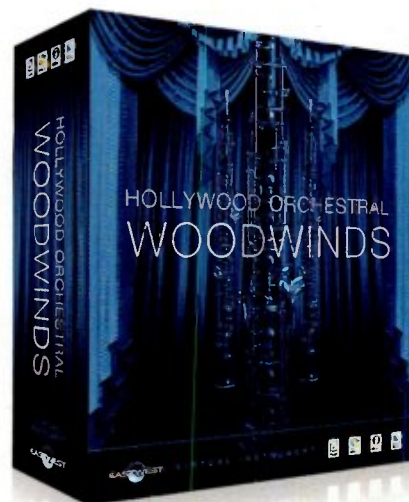
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THE TOWER IS DEAD

By Kevin Becka



Last month I wrote about the anticipation surrounding the release of Pro Tools 11 and the next Mac Pro computer Apple will release to appease the audio community—if that is still an option; maybe I'm dreaming.

Although Pro Tools 11 debuted at NAB in Las Vegas a few weeks ago, Apple is still mum on the much anticipated, and needed, tower replacement. So while we wait, I've bought another Apple computer: This time for video. Yes, I'm an audio guy through and through but I do a lot of video editing in my role at *Mix*, producing Webcasts and show reports and the like, and for that I've used iMovie. And I've gotten pretty good at it.

However, iMovie can only go so far so the logical next step was to step up to Final Cut Pro X. FCPX is one of the most hated software upgrades I can remember. You probably know the details, but for me it's just fine. It's more iMovie than FC, and I feel comfortable with the platform even without reading the manual.

The trick for me is getting footage from videographers who are never leaving FCP 7 and making it work in FCPX. There's a cool piece of translation software called X to 7 for Final Cut Pro that I bought for \$49.99, and it's given me a great way to bring FCP 7 files into FCPX. Once I started cutting video on my laptop, however, I realized that I needed more power.

Before I shopped, I talked to Nashville videographer Brian Totoro and got some great advice about features that matter. RAM is king in video, so get a lot. Next, Brian suggested a solid-state drive for my boot disc to speed up editing and maximize performance. I knew all about this because I'm using an SSD on my PC audio rig—Pro Tools and Nuendo blaze when run off an SSD. Plus with RAM caching, Pro Tools and every other DAW depend on beefy RAM for smooth operation. It seems that audio and video computers need a lot of the same horsepower.

Next I went to Apple's site and looked for the platform. A Mac Pro was out—I'm not going to opt in to three-year-old tech. So I looked at the iMac and then the Mac Mini.

The iMac is large and has older tech; the Mini sports the i7 processor while the iMac has the i5—no contest. I chose the beefiest processor they offered on a Mini, the 2.6GHz Quad-Core Intel Core i7.

The Mini only offers one drive, or so I thought. I went online and got some great advice from some pro video forums. Other World Computing will put a second drive into your Mini, in my case an SSD, and it won't nix your warranty—even though Apple

doesn't offer the service. I also opted to have OWC upgrade my RAM, which was cheaper than buying it directly from Apple. I had Apple drop ship directly to OWC, where they did the work and sent it to my home. This computer is a beast. Uploads of video are scary fast—to the point where I doubted it was really happening (it was).

"RAM is king in video, so get a lot. Next, Brian [Totoro] suggested a solid-state drive for my boot disc to speed up editing and maximize performance. I'm using an SSD on my PC audio rig—Pro Tools and Nuendo blaze when run off an SSD. Plus with RAM caching, Pro Tools and every other DAW depend on beefy RAM for smooth operation. It seems that audio and video computers need a lot of the same horsepower."

Next it was time to rethink storage. At NAB I stopped by the Small Tree Communications booth on my rounds and talked to Steve Modica. The company's latest storage solution is the TitaniumZ-5, which is a portable, 20TB, five-drive storage solution at a base price of \$7,428. For 20TB you add \$2,090, while the 15TB unit adds \$968. This thing is badass and only 21 pounds. It has a handle on top for easy transport, a fan and it can be networked over Ethernet. Networking is all-inclusive, meaning there's nothing left to buy—the server, networking and storage are all in the box.

All this new stuff got me thinking about audio production, Apple's products and what I've said here before—the tower is dead. In the new age of Thunderbolt and highly capable smaller machines, there is no need for more than one PCIe slot in the computer, if that. Once the Mini goes 12-core, it's all over, and maybe that's the next Mac Pro? Offer a Mini + which can incorporate a bigger chip without getting hot, and Bob's your uncle. Thunderbolt allows you to get out of the box to your video, drives and chassis. I can't wait to see what's next, but it sure is fun to guess. ■

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