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# 12.16 Contents

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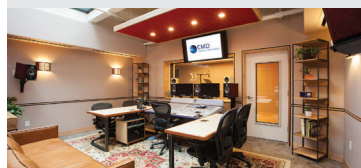


## FEATURES

24 On the Cover:  
The Bakery  
BY ROBYN FLANS

30 Proper Credits for  
Artists, Producers  
and Engineers  
BY MIKE LEVINE

36 Creative Media  
Design, NYC  
BY JENNIFER WALDEN



40 The New Airshow  
Mastering, Boulder,  
Colorado  
BY BARBARA SCHULTZ

44 Technology: Hardware  
Effects Go AoIP  
BY STROTHER BULLINS

## MUSIC

12 Empire of the Sun  
BY LILY MOAYERI



16 News & Notes

20 Classic Tracks:  
"Teacher, Teacher,"  
Rockpile  
BY BARBARA SCHULTZ

22 Taleb Kweli and the  
Soul Rebels Live  
BY BARBARA SCHULTZ

## MIX REGIONAL: SOUTHEAST U.S.

48 Studio News & Sessions

52 Ashville Symphony at  
Echo Mountain  
BY BARBARA SCHULTZ



## DEPARTMENTS

- 8 from the editor
- 10 current
- 68 marketplace
- 69 classifieds

## TECH

54 New Products

58 Review: Avid Pro Tools 12.6

62 Review: Genelec 8350A,  
7360A Smart Active Monitors



64 Review: Grace Design  
M108 Remote Control  
Preamp


66 Review: McDSP ML8000  
Advanced Limiter

72 Tech Talk:  
The Year in Gear  
BY KEVIN BECKA

**On the Cover:** Eric Boulanger, mastering engineer and owner of The Bakery, on the Sony Pictures Studios lot, with artist Colbie Caillat. **Photo:** Chris Schmitt.

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## From the Editor

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### **BOUNCING OFF THE MASTERS**

There are any number of reasons that an established artist, producer or engineer might leave the friendly confines of a commercial recording facility and move back home. It's been happening for decades now, driven by the reduced cost of technology, avoidance of horrendous commutes, or simply a change of pace and a different way of life. But there are an equal number of reasons that many stay put, or even return to the fold of a recording community after years alone in the wild, with the most oft-cited reason being the need to bounce off of other creative people and interact with the world of ideas.

Mastering engineers are no different. In fact, of all the audio disciplines, mastering engineers would seem the most suited for a professional life in isolation. The majority of the work is detailed and precise, requiring intense, non-interrupted listening. And in recent years, according to my own non-scientific sampling of contacts on the high end, up to 90 percent of the work across the board is unsupervised. Mastering engineers receive files, work on them, and then send them out for approval. Changes are made from notes sent in text messages, over Facetime or in a late-night email. A few days later the track is off to iTunes, a replication facility and/or a pressing plant.

Bob Ludwig saw the writing on the wall years ago and moved from New York City to Portland, Maine. Doug Sax moved The Mastering Lab from Los Angeles to Ojai. Airshow Mastering long ago expanded from the D.C. area and added a facility in the recording hotspot of Boulder, Colo. The point was, and is, that the process of mastering simply requires the golden ears of a mastering engineer and a room that was true.

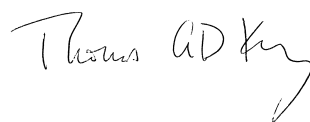
But mastering is much, much more than a mad scientist twiddling knobs in a dark room with big speakers and fine-grain EQ. And the desire of mastering engineers to interact with clients is no different than in any other part of the chain. Yes, when a file comes in from Europe and simply needs a turnaround, send it off. But when Colbie Caillat brings in stripped-down acoustic versions of *The Malibu Sessions*, to be released on her own new label, it sure is nice to have her in the room (and on the Mix cover).

Two conversations this month with A-list mastering engineers brought this point home to me. Eric Boulanger had been working with Sax up in Ojai for about seven years, and when the facility closed, he took the opportunity to move to L.A., where he moonlights as a session violinist. His one caveat: He needed to be around creative people. It didn't matter what the art form, he says, and he didn't need to be in the heart of rock 'n' roll land. He just wanted to spend a part of each day interacting with creative types. The work would get done.

Likewise, Vlado Meller left New York City a couple of years ago and set up shop in Charleston, S.C. At this point in his career, following 35-plus years in and around the major label scene, most of them at Sony, Meller could have hung out a shingle most anywhere and his clients would have followed. He found a spot in the Wes Lachot-designed Truphonic and has continued with his major label work and picked up a slew of independents. The attraction to Meller, he says, is that it's how he's used to working, with tracking, mixing, mastering and live production all under one roof. It's the way he feels most comfortable, like his days at Sony. When he was finishing up Andrea Bocelli's *Cinema* recently, engineer Humberto Gatica flew in from Tuscany for the sessions. Kicking it old-school.

There's a balance, to be sure, in knowing when to dig in and work in isolation, dialing in your focus and your skills. But there's also a time to bounce ideas off a client in the same room, or a colleague down the hall, or an artist as they grab a water and sit down for playback.

Bouncing off of other creative people isn't always possible, but it is necessary, if even for a long lunch and a break from yourself.

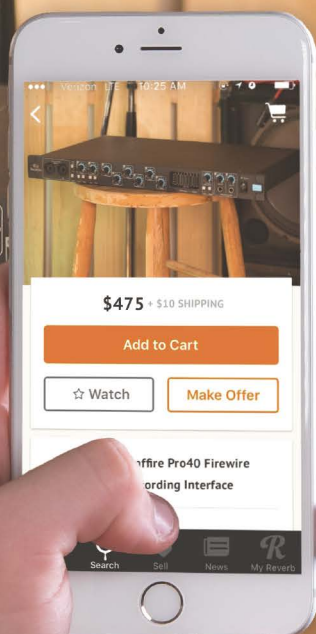


Tom Kenny  
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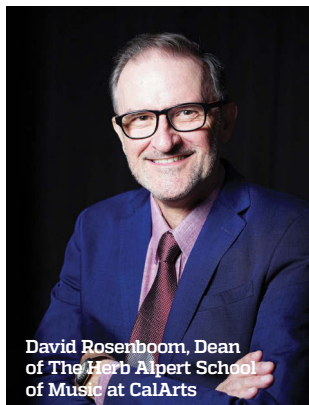
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# Jory Prum Scholarship for Sounds That Redefine Normal



Jory Prum



David Rosenboom, Dean  
of The Herb Alpert School  
of Music at CalArts



Ralph Eggleston

Last April, Jory Prum, one of the most talented members of the videogame and sound-for-picture sound design community, passed away from complications as a result of a motorcycle accident. He was 41, a Fairfax, Calif., resident, and the story might have stopped there except for the efforts of his family and alma mater to carry on his legacy in a very personal way, by creating the Jory Prum Scholarship for Sounds That Redefine Normal.

Prum was a 1997 graduate of California Institute of the Arts (CalArts) Schools of Music and Film/Video, with a BFA emphasis on Music Technology and Experimental Sound. After a stint at Jim Henson's Creature Shop, then a brief time at Disney, he moved north to the Bay Area and took a job at LucasArts in the videogame division, working on sound design for a range of projects, including Star Wars and Jurassic Park titles. From there, he opened his own studio in Marin County, studio.jory, and focused on interactive media, eventually contributing to more than 130 video game soundtracks, including the award-winning 2012 *The Walking Dead Game*. At the time of his passing, he was considered one of the industry's finest in working with dialog in character animation.

Prum also found time to work in traditional film, developing sounds and editing on *Lost in Translation* and, most famously, the Oscar-winning short film *For the Birds*, directed by Ralph Eggleston at Pixar. "Jory was an exceptional talent," Eggleston says. "He thought of sounds musically, and he had a real ability to bring life to character animation, which isn't easy to do. We actually met at a live gig up in Marin County, and we bonded right away over his sense of musical timing and pace."

"Jory was so full of energy and enthusiasm, and he developed the technical skills to make a creative career in interactive

audio, regardless of the medium," adds David Rosenboom, who became Dean of The Herb Alpert School of Music at CalArts in 1990 following an active (and still very active) career in electronic music composition, research and interactive instrument development. "When he passed away, the family approached us about offering an endowed scholarship in his memory. It would be our first in the program. So we went back and forth on the name with them, and I think it was the family that came up with 'Sounds That Redefine Normal,' which is a perfect tribute to Jory."

The scholarship will be made available beginning in 2017 to students pursuing a BFA or MFA in the Music Technology and Experimental Sound programs. CalArts, a unique school north of Los Angeles that is dedicated to "all arts," from dance to film to the coming virtual reality, will distribute the monies based on a student's written application, pursuits and career goals.

Prum is survived by his parents, Sam and Leslye Prum. The family, school and friends have made significant contributions to launch the scholarship. To offer additional support, please contact CalArts.

## Harman International *Samsung Buys Harman*

On Monday, November 14, South Korea manufacturer Samsung announced its biggest acquisition to date with the \$8 billion cash purchase of Harman International, referred to by the financial markets as an "auto parts supplier." Samsung said it would pay \$112 a share in cash, a 28% premium over Harman's Friday closing price. The company's shares surged 25% Monday but closed at \$109.72, under Samsung's offer price.

Commentary centered around the fact that roughly 65% to 70% of Harman's revenue come from technologies related to auto manufacturing, including speakers, but also technologies and patents related to the connected automobile. While the move seems to focus

on consumer initiatives, there has been no comment on how the deal might affect Harman's professional audio properties, including JBL, AKG, Studer/Soundcraft, dbx, BSS, Lexicon and Crown.

At the same time, IBM announced a technology partnership with IBM relating to voice-enabled cognitive health care products.

## Error Log

In *Mix's* Live Sound feature on Outside Lands in the October 2016 issue, the author of the text was identified incorrectly. Her name is Amanda Morrison. *Mix* regrets the error.

In the November 2016 technology feature on digital audio workstations, we implied that Digital Performer was a Mac-only program. Of course it is both Mac and Windows, and has been for years. *Mix* regrets the error.





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# Music



**EMPIRE OF THE SUN**  
By Lily Moayeri **12**

**NEWS AND NOTES**  
By the Mix Editors **16**

**CLASSIC TRACK:**  
**ROCKPILE**  
By Barbara Schultz **18**



From left: Peter Mayes and Luke Steele with Lindsey Buckingham in Henson Studios.

## EMPIRE OF THE SUN

Song Creation, Vocal Dancing—an L.A. Story

Story by Lily Moayeri // Photos by The1point8

**E**mpire of the Sun reigns across the city of Los Angeles. The group's various studios do, anyway, stretching from downtown to Santa Monica. Each of the group's central figures, Luke Steele and Nick Littlemore, plus its core creators, Peter Mayes and Jonathan (sometimes known as Donnie) Sloan, has his individual setup. Each member sketches in Ableton Live and records to Pro Tools, but all of them also have an affinity for boxes: tangible analog hardware in wood casing that looks dusty whether it actually is or not. This equipment is seemingly at odds with Empire of the Sun's sound, which is

super-shiny and fits very much into the current pop musical climate.

The group released their third album this year, the sophisticated *Two Vines*, which follows 2013's glamorous *Ice on the Dune* and 2008's pretty *Walking on a Dream*. *Two Vines* got its start while Empire of the Sun were working on the soundtrack to *Dumb and Dumber To*; the album was recorded in parts at Henson Recording Studios and at Island Sound Studios in Honolulu, Hawaii.

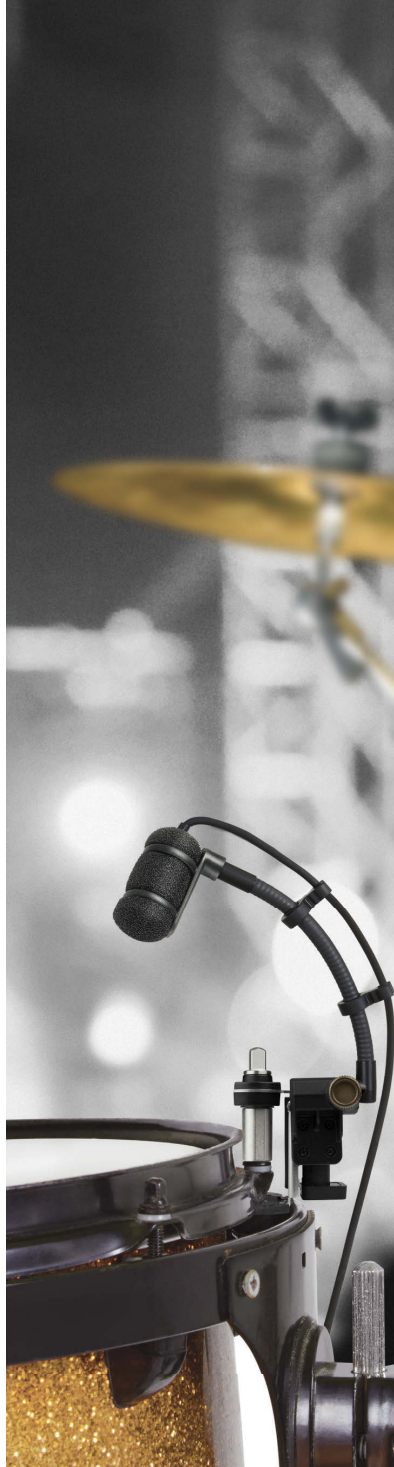
"Having done the film work, giving different elements to make it complete and needing to

turn things around quickly, put us in a much more match-fit place," says Littlemore, sitting with his longtime cohort Mayes in the latter's spacious DTLA studio, where giant windows overlook the area's historic Santee Alley.

"On *Two Vines*, any idea could be flipped or switched into something useful," he continues. "We made a concerted effort on this album to bring it back to a warmer sound. It's a bit more fragile and gentle, similar to the first album."

Steele and Littlemore spent hours improvising vocal jams in Mayes' studio, a practice that has become a blueprint of sorts for Empire of the





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Lindsey Buckingham (center) shares ideas with Luke Steele, Peter Mayes, Jonathan Sloan, and Nick Littlemore.

Sun. It is a holdover from Littlemore's and Mayes' teenage years when they would play an incessant loop for hours on end, record it on cassette, listen back and cut out the best parts as a way of sampling themselves. Two microphones are set up with Steele and Littlemore flowing simultaneously, trying to find the ultimate melody and the right hook.

"It's like tricking your brain to see in different patterns," Steele explains from his cozy, gothic-themed, incense-scented studio just blocks from the beach. "We'll record in different speeds through the song, or in a different key to what it will be laid down in. We'll do four chords for like an hour and then replace the chords, and switch the melody to the new chords. You get into musical habits, but with this one, we went deeper."



There is a simple backing track over which Steele and Littlemore are vocal jamming, some of which is provided by Sloan, says he does his best work when he's on his own. "My best ideas happen when I'm not trying to write," he says in the temporary studio space of his scenic bird's nest home in the Hollywood Hills. "You get two or three hours of creativity a day. I was trying to replicate a process that was true to our best work. I wanted to save my core great ideas, so it was exciting, hopefully, for everyone. When I first started making music, my idea was to combine my two favorite things: Fleetwood Mac and Daft Punk. I try to surprise myself and trick myself into new ideas, similar to what they do with lyrics."

A practice that has been carrying over is using giant collections of vinyl, which are culled for their sounds to come up with ingredients for songs. Two boxes will be pored over to maybe find one loop of a vocal chant, which is then reversed, from which two bars are used to create a melody, and from that, a hook, about which Steele says, shaking his head, "We need to be excessive to be simple."

Most members have a Yamaha CS-80—none of them in the best condition—but as Littlemore says, "That's the keyboard sound of Empire of the Sun." Drums come from both a live drummer, and from programming. Sloan has been using the same two snares and two kicks from the Oberheim DMX since he was 13. They live on his computer and, over the years, have been treated with various EQs and exciters; he also combines them with sounds from a Roland TR-808 and/or R-8.

"I think about emulating a live drummer rather than approaching it





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as a programmer,” says Sloan. “I recorded the bell of a ride cymbal into a Yamaha SV-12 on ‘Walking on a Dream,’ which I thought would be funny and kind of lame. The \$300 guitar I played on it, I didn’t have a pick so I used my credit card. My CS-80 was badly out of tune for the whole first album. I just added more chorus. There are so many mistakes, but I love that about it.”

“It sounds pretty messy at times,” says Mayes. “If we have eight tracks to get some separation, we will mark bits and remake anything that sounds good from the jams. But sometimes, in those original recordings, when an idea comes through, it’s perfect in the moment and you can’t quite re-create it. Once you have all the bits, you try and arrange it to see if the sections flow. When you’re recording for an hour, you have so many different ideas at the same time, but they have to flow into a song.”

Stellar musicians such as keyboardist Henry Hey (“the human arpeggio,” says Mayes), bassist Tim Lefebvre, and Fleetwood Mac’s Lindsey Buckingham also helped select sounds for *Two Vines*. It’s the instantly identifiable vocal, however, that cements an Empire of the Sun song.

“[Steele] is singing his face off on this album,” says Mayes, who uses



a Telefunken 250 microphone into Inward Connections Vac Rac 4000 mic pre, 4000 EQ and 4000 limiter for the vocal chain. “He has that midrange that is not easy to capture, and a lot of microphones can’t take it. It’s about finding a microphone that won’t distort, and a compressor and preamp that have the headroom to deal with the dynamics of his voice.”

“We do a lot of layering and doubling, and sometimes the vocals are very ambitious,” Mayes continues. “We do a hard voice, soft voice, whisper, harmony. It could be 16 tracks from hundreds of tracks of vocals in the initial tracking.”

“I’m not a proper singer, I’m a character singer,” says Steele. “The way I translate a song is by tapping into that perfect character and feel

for that song. [Mayes] understands that, which is crucial. If I’ve been surfing on the North Shore all day, coming into the studio off a bottle of rum, and being so relaxed with a summer breeze coming in, it’s a character. If that’s not the final vocal, trying to re-create that sucks because it’s so specific to my mood. It might take two weeks to find that again. There will be 30 tracks of vocals and we re-track it all again, maybe four times, until I’m in that character. It’s like panning for gold with my voice. But when it’s right, it’s amazing.” ■

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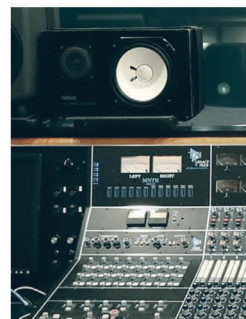
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## SAINT MOTEL: EXPERT REINTRODUCTIONS

When he was living on one of the city's busiest downtown intersections, A/J Jackson managed to capture all the noise of the area onto Saint Motel's major-label debut, *saintmotelevision*, which adds to the bright, modern rock character of the album

The songs went through a number of iterations before reaching what's heard on *saintmotelevision*. This is partially due to the producers with whom Saint Motel worked. "Move," for example, started with a chopped-up guitar, in the box, on headphones, on tour. Upon returning to the studio, Jackson swapped the bridge for the intro and adjusted the chord structure to match, with the chopped guitar played again in a slightly more minor version. After all that, producer Lars Stalfors tackled "Move."

"[Stalfors] took that guitar part and ran it through a Looperator, which is like a meat grinder, spitting out artifacts and glitches, but it sounds great, almost like how Fatboy Slim would mangle things," says Jackson, whose recording platform is Logic.

By contrast, "Destroyer," which was produced by Tim Pagnotta, went through his signature process of making things sound massive. This involves spatial EQ, as well as overdriving and use of an Empirical Labs Distressor on vocals; the song went through 20 different versions.

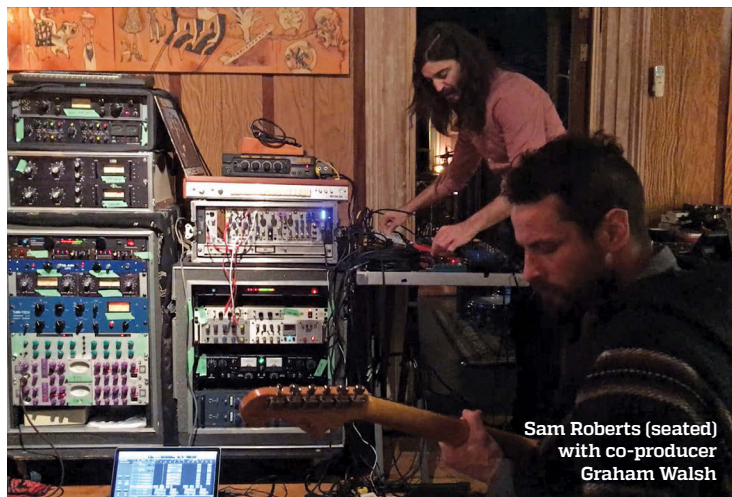
"We took out layers of overdrive and distortion and gave it a nice subtlety and funky bounce," says Jackson. "We put the bass as the main riff and up an octave to give it a double sound, so it has a thump to it."

"I'm a sucker for re-intros, coming back to something very minimal,"



he continues. "You have all these elements that on their own are really fun to listen to. Throwing them all in there and having a giant mess, you miss a lot. With a re-intro, you introduce this mini-riff and by the time you hit the last chorus, it's the last thing you care about." —*Lily Moayeri*

## SAM ROBERTS BAND ON A TONE QUEST



Sam Roberts (seated)  
with co-producer  
Graham Walsh

"They're so good, it would be a tragedy not to track them all at the same time," says H\*ly F\*ck's Graham Walsh, speaking of his fellow Canadian musicians Sam Roberts Band. Walsh co-produced the group's sixth album, *TerraForm*, with songwriter/frontman Roberts. The lead singer had written the songs in his rudimentary basement home studio and then recorded at The Bathhouse, The Tragically Hip's live/work studio.

Sam Roberts Band is known for their commanding performances,

recording live off the floor, straight to mixing, with minimal experimentation. For *TerraForm* and its predecessor, *Lo-Fantasy*, produced by Youth, the group has pushed its sound with its choice of producer. "There is always going to be the essence of spontaneity that comes from playing with five guys and recording the heart of the record that way," Roberts says. "But then you can work around that."

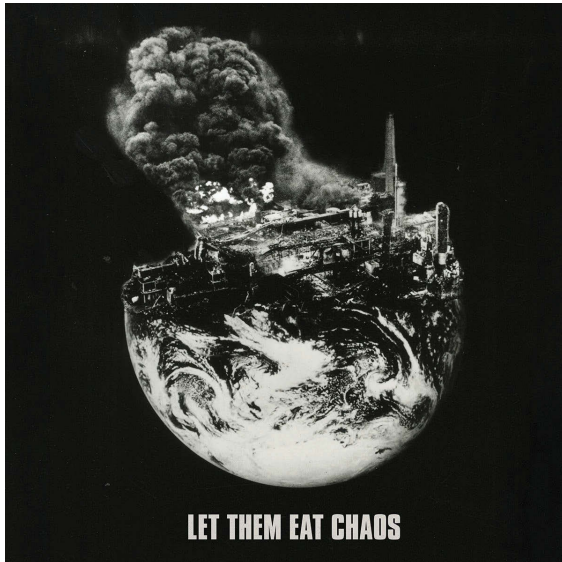
"[Walsh] introduced the concept of tone questing: never settling on the choice of sound that comes along, recognizing the nature of the sounds influenced by the role any given part plays in the song. An innocuous keyboard line can become the main component of the song if you treat it the right way."

Walsh explains using Eric Fares' synth arpeggio on the song "Fiend" as an example: "We record the synths in stereo through DI and pan them left and right. Took that line and ran it mono through a tap echo set to one repeat full well and recorded it through a gnarly, almost distorted chorus tape sound. That mostly gets blended in; taking on a whole new character by pitch warbles a little bit and fits perfectly in the midrange of the mix, evoking emotion rather than just being a really nice synth sound."

"I also like taking drums from a Pro Tools session and running them through a cable that's got 10 guitar pedals plugged in," he continues. "You can make a performance on the pedals by dubbing out snares with delay or reverb or maxing out the mixer and getting cool distortion effects from there. Sam Roberts Band is a wicked band for doing that."

— *Lily Moayeri*





## COOL SPIN: KATE TEMPEST, 'LET THEM EAT CHAOS'

Poet, rapper, spoken-word artist, playwright, novelist—the award-winning Kate Tempest is all of these things. An amalgam of her skills contribute to her second album, *Let Them Eat Chaos*, the follow-up to 2014's Mercury Prize-nominated *Everybody Down*. Not miles away from that attention-grabbing debut, *Let Them Eat Chaos* has Tempest teaming up with producer Dan Carey once again. Carey wholly takes the reins on the music, which is as stellar and noticeable as Tempest's storytelling.

*Let Them Eat Chaos* is hip hop through a British filter. This means it has more in common with the left-field, underground sounds of that genre, is a bit stripped and more interesting. It also borrows generously from dancefloor sounds, particularly the sub of the bass music that permeates the streets of its creators' native London. This is the perfect backdrop to Tempest's observational rhymes on the concept album, which focuses on seven individuals living on the same street. In her pronounced accent and childlike tones, Tempest is as political as always, focusing on both micro and macro issues. Her phrasing and pregnant pauses help take the sting out of her stridency and her criticism, which can, at times, become wearing and biting.

Tempest's and Carey's marks are hit head-on with the swinging "Lionmouth Door Knocker," the shivering "Ketamine for Breakfast," and the robust "Whoops," where the sum of her flow and his beats are significantly stronger than their parts.

Produced and mixed by Dan Carey in his studio. Mastering: Christian Wright and Alexis Smith/Abbey Road Studios. — *Lily Moayeri*

# Neve



**...No Question**



# Classic Tracks

By Barbara Schultz



## "TEACHER, TEACHER"

### Rockpile

**A**s Andy Schwartz aptly points out in his liner notes for the twentieth-anniversary reissue of their only album, *Seconds of Pleasure*, Rockpile did things backwards: Most signed 1970s and '80s bands would have gone into the studio, recorded an album, then toured, hoping to build a career that would lead to further albums and tours. But the four members of Rockpile—Nick Lowe (lead vocals, bass), Dave Edmunds (lead vocals, guitar), Billy Bremner (backing vocals, guitar), and Terry Williams (drums)—had been writing, recording and playing live together for years before they released just one album. And then they “broke up.”

Before the band that recorded *Seconds of Pleasure* existed, the name “Rockpile” had already been employed as the title of an album that old-school/rockabilly artist Edmunds had released in 1970. Edmunds subsequently toured as “Dave Edmunds and Rockpile,” with a band that included Williams on drums. But the group that became known as Rockpile didn’t form until Lowe and Edmunds began recording together in the mid-1970s.

Just prior to the Rockpile years, Lowe had been fronting his group Brinsley Schwarz, named after his guitarist, the famed pub rock musician who also played in The Rumour with Graham Parker. Brinsley Schwarz the band split up in 1974, just after making their album *The New Favourites of... Brinsley Schwarz*, which is notable for including Lowe’s version of his composi-

tion “(What’s So Funny ‘Bout) Peace, Love, and Understanding.”

After the Brinsleys disbanded, Lowe (then signed to Stiff Records) and Edmunds (Swan Song label) began appearing on each other’s records, such as Lowe’s *Jesus of Cool* (1978; titled *Pure Pop for Now People* in the U.S.) and Edmunds’ *Tracks on Wax 4* (1978), which was the first album to feature all of the Rockpile members on every track.

In 1979, the two lead singers simultaneously reached new heights of popularity with the release of Lowe’s *Labour of Lust*, including his signature hit “Cruel to Be Kind,” and Edmunds’ *Repeat When Necessary*, including his popular versions of “Queen of Hearts” and Elvis Costello’s “Girls Talk.” Both of those records were recorded by the members of Rockpile, but with the headliner singing all of the lead vocals on his album.

There was just a lot of writing and recording happening between Lowe and Edmunds on various projects, and all of it was taking place in Eden Studios, also the site of the sessions for *Seconds of Pleasure*. This album, which contains this month’s Classic Track, “Teacher Teacher,” was recorded and mixed by engineer Aldo Bocca, who had come up in London studios the way engineers did back then—by starting at the bottom and learning on the job.

“I started when I was 17 at a studio that isn’t there anymore, Command Studios in Piccadilly,” Bocca recalls. “It went broke about a year after I joined it. I was very lucky to get the job. I was a guitar player and a keyboard player, but technically I had no knowledge whatsoever. I was making tea and coffee and running for people. There wasn’t a university to go to in those days.”

At Command, Bocca met U.S. engineer/producer Marty Lewis (Jimmy Buffett, Ozark Mountain Daredevils, Rita Coolidge). “He spotted something in me which he liked, and said, ‘I’m doing this session in Nova Sound,’ and he got me a job in there. Nova Sound [formerly Recorded Sound Studios] was one of the oldest studios in London, in Bryanston Street. Because I had half-lied myself in there, I did a lot of learning very quickly.”

Bocca worked his way into a staff engineer position at Nova, and later left to join the one-room Eden Studios, where he became chief engineer, sharing technical duties with Roger Bechirian. “That’s where I met Nick Lowe, Dave Edmunds, Elvis Costello—all the Stiff Records people that I worked with,” Bocca says.

Eden had been founded in 1967 in the Kingston upon Thames neighborhood, but moved to Chiswick, West London, in 1972. Many of the sessions that Bocca engineered there were done on the studio’s custom console, which Bechirian had helped to build around the time the studio moved. By the time Rockpile recorded *Seconds of Pleasure*, the studio had acquired one of the first SSL 4000E consoles in England.

“We had one of the first Studer A800 machines, as well,” Bocca says. “Eden was the first studio in the world to have those two top-notch machines working together, which everybody followed suit and did afterwards. Those were the two machines everybody wanted to use then.”



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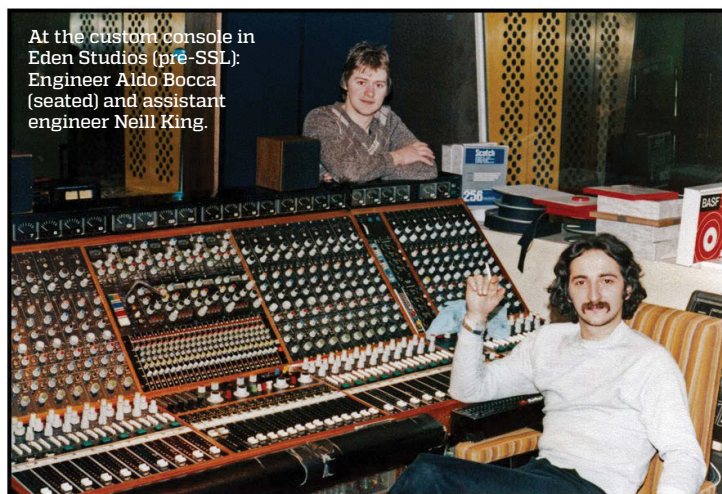
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At the custom console in Eden Studios (pre-SSL): Engineer Aldo Bocca (seated) and assistant engineer Neill King.

Sessions for Rockpile's "Teacher Teacher" (written by Kenny Pickett and Eddie Phillips), like almost all of Rockpile's songs, began with the musicians bouncing around arrangement ideas in the studio.

"Nick might have an idea, so Billy would pick his guitar up and Dave would join in, and they'd all huddle around the drum kit and see what would we do with the drum part," Bocca says. "They'd flesh out the parts of the song and try it. We'd put it on tape so everyone could come into the control room and listen. Then it would be, 'That's not bad. Let's just change this bit or that bit.' And they might go back out to try again, or maybe take a pub break, then come back and see if it's working."

The arrangement that Rockpile developed for "Teacher Teacher, with Lowe singing lead, is highly rhythm-driven, the way many Lowe songs are, with layers of acoustic and electric guitars driving alongside Lowe's bass, while occasional electric guitar trills and register changes keep things moving. Lowe's voice seems to be doubled, or maybe tripled, and Edmunds and Bremner add harmonies in the choruses ("Teacher teacher teach me love/I can't learn fast enough/Teacher teacher teach me more/I got to learn to love for sure").

Bocca says that Lowe sat in the control room with the engineer and his assistant, Neill King, when they got to tracking; his bass parts were taken direct. "We knew that if we wanted to, we could always throw an amp out into the studio and re-amp his bass part later, but I don't think we ever bothered with that on this record," Bocca says.

"Terry would be in the main studio, which wasn't huge," he continues. "It was mainly paneled in wood and had a thin carpet. But down the far end, there was a hard floor, and that's where we put drums. It wouldn't exactly be an explosive John Bonham room sound, but it gave just a bit of space."

Bocca says that drum miking was always a process of trial and error, but since he knew Williams and his kit well, he would usually start with the same scheme: an AKG D12 or Neumann U87 on kick, Shure SM57s or AKG C414s on snare and toms, and more 414s as overheads.

"And then in a tiny little vocal booth, Dave or Billy would be playing an acoustic guitar and singing a guide vocal, so the drums wouldn't bleed onto that mic," Bocca adds. "And if the performance of the acoustic guitar

or the vocal was really good, you could keep it. There were always at least three people playing at that stage."

Final guitar parts and vocals were overdubbed, and Edmunds or Bremner, like Lowe, would sit in the control room. Bocca recalls that on the Rockpile sessions, Edmunds actually sent his guitar direct, through the SSL console. This may have been in part because of the strong faith and appreciation they all had for the new board. Bocca also used the on-board preamplifiers on every input, including vocals, which he says he always miked up with a Neumann U47 or U87.

"I used the onboard SSL compression on nearly everything," Bocca recalls. "It was built into the mixer, and it was very good. I had some LA3As and other Universal Audio compressors. I used those on vocals where it mattered the most, where you want something smooth."

During the mix, Bocca would add a fair amount of outboard reverb, which has become a trademark ingredient of Edmunds' vocal sound in particular. The engineer doesn't recall exactly what he used on "Teacher Teacher," but the studio offered an EMT 150 plate, which he would often combine with tape delay and delays created on an Eventide Harmonizer to assemble the various rich, vintage vocal sounds on the album. Overall, *Seconds of Pleasure's* arrangements and sonics walk a line between retro 1950s rock 'n' roll and early new wave.

The SSL's automation was also a great boon to the mixing process, because, unlike the studio's previous custom console, the E Series board didn't require three pairs of hands just to move the faders. But that doesn't mean the musicians didn't stick around for the mix sessions.

"We used to get to the studio at midday and we'd still be there at five in the morning," Bocca says. "We put in a lot of hours. A lot of it was gassing and laughing, obviously, but we got a lot done, as well. [After hours], we were always at each other's houses. We had a five-year party, basically."

*Seconds of Pleasure* was a Top 40 album in the U.S., Canada and the UK, while "Teacher Teacher," the only charting single from the record, went to U.S. Number 51. (On a perhaps unrelated note: Another song about illicit feelings between teacher and student also released in 1980, The Police's "Don't Stand So Close to Me," did slightly better, rising to U.S. Number 46.)

"On reflection, I'd say my [feelings] are that Rockpile was a posh bar band," Nick Lowe said in the few lines he wrote for the *Seconds of Pleasure* reissue liner notes. "We specialized in playing Chuck Berry music four times faster than anyone else. We got together for fun and when the fun had all been had we packed it in."

Even five-year parties must end eventually, apparently, and Lowe and Edmunds have rarely worked together in the 36 years since Rockpile disbanded, though Bremner and Williams have appeared with each of the lead artists more frequently.

Bocca went independent a few years later, traveling to Japan, L.A.—wherever the work took him. Today, he's living in Hastings, and though he has been out of the recording industry for a while, he's currently building his first personal studio. ■



Rockpile: Terry Williams, Nick Lowe, Dave Edmunds, and Billy Bremner.





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# THE SOUL REBELS WITH TALIB KWELI

## Balancing Brass and Vocals

BY BARBARA SCHULTZ



Hip-hop meets brass band on tour with Talib Kweli and the Soul Rebels.

Engineer Andrew “Goat” Gilchrist has toured with the Soul Rebels on and off for nearly ten years, balancing their dates with regular work for sax great Maceo Parker, UK reggae group Steel Pulse and others. He says that, on their own, this powerhouse brass ensemble—two trumpets, two trombones, a sax, sousaphone, and two drummers—“barely require sound reinforcement.” But at the moment, the Soul Rebels are touring clubs and theaters with hip-hop vocalist Talib Kweli. So the job for Gilchrist is to make sure the words rise above the brass.

There’s a lot of spontaneity to these shows as well; any of the horn players might take a vocal line, so Gilchrist sets up six Shure SM58s. “Clarity, simplicity, and directness are pretty much my bottom line,” he says. “The real trick with the Soul Rebels is keeping my eyes glued to the stage, to see who is going to jump on a vocal mic and make sure they are being heard, because six wide-open vocal mics next to all those horn and percussion mics can get real messy real fast.

“As an experienced MC, Talib is very much in control and on top of his mic, and once he is set up, very little messing with his channel that needs to happen during the show. The other important thing with this band, is understanding that even though it might appear to be a ‘hip hop’ show, that the basis of the Soul Rebels sound comes from a very honest, acoustic place.

In keeping with that “honest” foundation, Gilchrist keeps things simple, technically and sonically: “Their whole setup is the most dependable, most easily available, and most foolproof touring rig imaginable: the six vocal mics, an SM57 on whichever horns are using wired mics, a 57 for the

snare and timbale, and a Beta 52 for the bass drum,” Gilchrist says.

“On this run of shows, Talib is also using a Shure wireless setup, to give him real freedom of movement onstage. With the Soul Rebels, so much of the character, and spirit of their music is coming from that acoustic, brass and drums sound, that, as a sound engineer, the best tactic is to put up those mics, get the balance right, and stay the hell out of the way!

“With this band, there is no need for extra effects in the mix,” Gilchrist continues. “A lot of the time, in a fairly dead club packed to the walls with people, I will add a little bit of tight slap delay to Talib’s vocal, just to liven it up a bit. But really, the sound and the dynamics of Soul Rebels really comes straight from the stage.

“The only little trick piece of gear that I carry with me is a Radial Engineering SB-48UB, which is a little box that splits the signal of the mic that is dropped into the bell of the sousaphone into an XLR balanced out for me at FOH, and a 1/4-inch amp level-unbalanced out that goes to a bass amp onstage; that is pretty much the sousaphone player’s monitor. If I want to, I can mike the bass amp and blend a little crunch into the clean sousaphone sound that is coming off that mic, but most of the time, with this band, especially in a club, there is enough crunch to go around, without me adding any more.”





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# On the Cover

By Robyn Flans

## THE BAKERY, LOS ANGELES

### Mastering on the Sony Lot, From Vinyl to Hi-Res



The key individuals in bringing The Bakery onto the Sony Pictures Studios lot. Front row, from left, Mastering engineers Jett Galindo and Eric Boulanger. Standing, from left: Adam Michalak, Staff Mixer, Sony, Barbra Streisand Scoring Stage; Erik Jepsen, Client Services Coordinator, Sony Pictures Entertainment; Tom McCarthy Jr., Executive Vice President, Post Production Facilities, Sony Pictures Studios; and Nathan Oishi, Director of Engineers, Sony Pictures Post Services.

Photo: Chris Schmitt

**T**he expression “location, location, location” definitely hit me as I walked under the *Wizard of Oz* rainbow and onto the Sony Pictures Studios lot, in a rather unique trek to The Bakery mastering studio.

I won’t lie; I kept glancing around for stars. Eric Boulanger, owner/operator of The Bakery, says it’s commonplace to run into the megas like Seth Rogen and Kate Beckinsale. No one really reacts to them. But, he laughs, when anyone on the lot sees someone coming to

work with him, like, say, Green Day, “People are passing out!”

It’s not unusual for a mastering engineer to build out a room within a larger recording facility; that happens all the time, all over the world. But a mastering studio on a major film studio lot?

“I could never do the ‘buy a house and build a studio in your garage’ thing,” Boulanger says. “I would have to hang myself. It sets you off from the world. That’s not music, locking yourself in a room and working on people’s pride and joy. It’s antithetical to what you’re doing. My mind

was thinking that I had to be in a place that’s a center of art—any type of art. It didn’t have to be the middle of rock ‘n’ roll land. It just had to be creative people going to work.”

The opening of The Bakery in August 2015 followed the closing of the world-renowned The Mastering Lab, Doug Sax’s facility in Ojai, about 90 miles north of Los Angeles, where Boulanger had worked since moving west in 2007.

A classically trained violinist, Boulanger had studied at Juilliard School, Manhattan School of Music and Tanglewood, at various times,





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## TIPS & TECHNIQUES

### From the Pros

#### 1 It's a balancing act

On your initial pass of a mix, try limiting all your decisions to level and panning. You'll find that your mix will come together much faster if you balance all the sounds before you reach for any plug-in or outboard gear. Also, where you put a sound in your stereo field will generally influence how you want to EQ or compress it—so definitely make that panning decision beforehand.

#### 2 Try bussing - it'll get you around

Send related groups of audio to auxiliary tracks (commonly called busses, in this case). For instance, make busses for your drums, musical information, vocals, and effects. That way you can make subtle macro tweaks across a range of instruments, thereby getting the most out of EQ, dynamic, or harmonic-distortion decisions. If it's good enough for top mixers like Michael Brauer and Dave Pensado mix, then it's worth a try.

#### 3 Working in a new space?

Listen to some of your favorite tracks in the room before you start working, to know how frequencies translate in that space, so you can adjust your workflow when you start tracking. This will help you create tracks and mixes that translate well when delivering to your client.

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Eric Boulanger and Jett Galindo at their stations in The Bakery. Note the dual monitoring setups, front and back.



Photo: Chris Schmitt

and was finishing up an electrical engineering degree at Carnegie Mellon University in Pittsburgh when he took an unpaid internship at Capitol Records in 2006, under the tutelage of Al Schmitt, an experience he calls “second to none.”

“I was always a bit of a techie and a little bit into recording, and honestly I went to Carnegie Mellon because, as a violinist, it was the best university I got into,” Boulanger says, noting that while he didn’t love the routine and daily grind of academia, the minute he walked into the university’s recording studio, he felt at home.

While at Capitol, Schmitt introduced Boulanger to Doug Sax, who granted him his first real exposure to the mastering process and ended up hiring him the following year. Sax recognized the talent, even with no mastering experience, and served as his mentor. In early 2009, when Sax decided to resurrect The Mastering Lab’s vinyl operation and build out a space for the lathe, he called on Boulanger to assist, from reconditioning the machine to solidifying the platform.

The process was not without its irony, however; Boulanger had never owned a record album.

“One of my favorite moments was when we were about 85 percent through the build,” Boulanger recalls. “No sleep, working through the night. Doug lived real close in Ojai and it was about 11:45 at night and

he stumbled in, ‘What the f— are you doing here?’ And I said, ‘Putting together your room.’ He’s pouring the whiskey, wanting to hang and I forgot how we got into the conversation but he was talking about buying records as a kid. I cut him off, saying, ‘You have to realize something here...you know how when you’re in sixth grade and you have a little money in your pocket and you go with your friends to the record store and you buy an album? You know what I bought?’ He starts rattling off bands. I said, ‘You’re missing the point, I bought a CD.’”

The years went by in Ojai. Boulanger learned mastering from a master. He learned vinyl cutting from its foundation. He began getting his own clients. And like a lot of young engineers, he began looking outside, thinking of setting up his own shop.

As a violinist, Boulanger had played many sessions on Sony’s Barbra Streisand Scoring Stage, and he became friends with staff mixer Adam Michalak. In early 2014, over dinner, Boulanger confided to Michalak that he had begun looking for a place to land. Michalak suggested Sony, and during a scoring session soon after, they took a tour. The audio post editing suites proved too small, but at an impromptu meeting with Tom McCarthy, executive vice president of post production, talk turned to a couple of screening rooms that were not in use.

All systems were go, Boulanger was about to break the news, and



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then Sax got sick. What he thought was food poisoning turned out to be stage four cancer. “He was in surgery the next week and that totally distracted me to everything,” Boulanger says. “We wanted to keep that business going.”

Sax passed away in April 2015; The Mastering Lab closed in May 2015. The end of one era, and for Boulanger, the start of another.

## THE MOVE TO SONY

The Thalberg Building’s 25-seat 35mm film projection Screening Room E hadn’t been used in about 10 years and proved perfect for Boulanger’s proposed setup. He even retained a few of the theater seats and pillars on the wall to preserve the old Hollywood ambience. He moved into the space in July and was up and running by August. “I didn’t sleep much,” he recalls.

“It was already treated because it was a screening room,” he explains. “The acoustic aspect of getting it right was in the placement of everything. I played around with that and got everything to my liking, built stands and platforms.”

He wasn’t entirely alone during the move-in. Jett Galindo had been Doug Sax’s right hand during the final two years at The Mastering Lab, as an assistant and as an engineer. Born in the Philippines, where she earned a degree in psychology at Ateneo de Manila University, she’s also a performing soprano and Berklee College of Music graduate in Music Production and Engineering. She interned at Avatar in New York City before moving west and joining the Ojai team. She was privy to Boulanger’s intended move, and following the closure, she came down and started helping out. In one of those situations where it’s going so smoothly that a job was never really offered or accepted, at least officially, Galindo joined The Bakery as a mastering engineer—a colleague.

The dimensions of the main mastering room, roughly 34 by 20 feet with 16-foot ceilings, were perfect for Boulanger’s ATC 150 speakers, with stands that are filled with 650 pounds of sand. They are set behind his main mix position, a trick he learned from Sax, who began orienting his speakers that way after the move to the Ojai studio, following some 40 years of mastering.

“He always wanted to try it that way,” Boulanger says. “It also came from building the room from scratch. What’s the biggest acoustical obstacle to room tuning? It’s always the console. You’ve got this hunk of metal between you and the speakers. Well, why don’t we put it behind us? Genius.”

Actually, Boulanger says he learned his entire approach from Sax. Most importantly, he says, he learned how to listen in the sense of being analytical and taking a step back to understand that everything is in play and that “what you hear is king.” Sax’s favorite expression, Boulanger says, was, “If it ain’t broke, don’t fix it,” something he took to heart when building the room.

“When not touching a perfect mix, Doug’s philosophy isn’t to stroke a mixer’s ego,” he says. “You’ve already done the work. That work is the studio. I know what I’m listening to. The only way to do that is to have the proper setup, the proper methodology and constant attention and maintenance to the room.”

Boulanger has a Manley Massive Passive EQ, but the majority of his equipment is highly modified. He has clone LA-2As with his circuit in them and a slower light cell. A lot of the equipment is, as he says, “akin

to what we had at The Mastering Lab, so it’s more of a flat response. It’s meant to only tickle things as opposed to be an aggressive vocal compressor which the LA-2A was meant for.”

In the center, “the real magic of everything,” Boulanger says, are the tube and solid-state line amps built by himself, which work in tandem with custom D/A and A/D converters made by Josh Florian of JCF Audio to his specs.

“The beauty of this console is whether I am doing fully analog or full digital or a mixture of both, which is usually what I do, I can, with a flick of a switch go between all these parallel chains and hear exactly what I’m doing and decide what will sound better for what I’m working on,” he says. “That was all in the design of this layout. It was a function I always wanted at the Mastering Lab. We had all the same processes, but to compare things we had to print one way, plug things in differently and print it the second way and then compare it.”

The system apparently works. Boulanger’s first chart-topping project out of The Bakery was Kaleo’s “Way Down We Go,” followed by Green Day’s *Billboard* Number One album *Revolution Radio*, Rufus Wainwright’s *Take All My Loves* (“A true compositional masterpiece, which made mastering it my greatest challenge”), and the soundtrack for the Ryan Gosling/Emma Stone film *La La Land*.

## THE VINYL SIDE

Up in the projection booth, on top of an isolated slab so solid that “a herd of bison could run down the hall and you wouldn’t feel it,” says Boulanger, sits the *creme de la crème*: a digital vinyl cutting lathe previously owned by Stan Ricker and pictured on this month’s cover.

In a full-circle story, Boulanger had visited Ricker in 2009 when Sax reopened his vinyl cutting operation and Boulanger needed some tute-lage and the control panel needed repair. A few years later, Ricker needed some tech help with his system and called upon Boulanger, who then repaired the very same system that is now his.

“What powers the head is our custom design,” Boulanger says. “All the processing is being done digitally, all DSP. The beauty of that is we can instantly, depending on speed, size, whatever you’re doing, switch EQ profiles for a record. If you ever noticed on vinyl records from the outside to in, they’re bright to dark because of the geometry.”

Affectionately dubbed “RoboLathe,” it earns its name. After opening a Colbie Caillat file for a song called “Stay,” Boulanger had me push a few buttons on the machine to show me just how simple and precise it can be to cut a record on his lathe. Then we went out into the main room and listened back to the vinyl on his ATCs. It sounded amazing.

“Stay” is from Caillat’s most recent project, *The Malibu Sessions*, a selection of stripped-down acoustic songs recorded three years ago but just recently released on her own label. It is Boulanger’s seventh project with Caillat, including *All of You*, the first record to employ the Mastered for iTunes process back in 2011. Today, Boulanger and Caillat consider themselves friends. This month, they share the cover of *Mix*.

For Boulanger, it’s all about the passion of music.

“There’s no greater thrill than saying to Billie Joe (Green Day lead singer Armstrong) who I grew up on, ‘I think you need to change this,’ and then sitting next to him and saying, ‘Oh, yeah, you’re totally right,’ to being on a scoring stage playing on a *Ted 2* movie where we did a quick cue of the original Jurassic Park theme and I was dying thinking, ‘Half of these guys even played on the original,’” Boulanger recalls. “This is the closest thing to doing it.” ■



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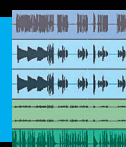
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# CREDITS WHERE CREDITS ARE DUE

## The Music Industry Moves Closer to a Metadata Standard

BY MIKE LEVINE

Imagine this scenario: A major label takes delivery of drives containing the recording data for one of its artists' new albums. On them are Pro Tools session files, but no accompanying information about which musicians played on the various songs or who the engineers were.

Prior to the album's release, someone from the label's pared down and overworked administrative staff will have to reach out to the production team to try to get the missing session information. But this might happen weeks or months after the production was completed, so the crediting information about the musicians and engineers who worked on the project could very well be incomplete. As a result, those whose credits slip through the cracks stand to lose both the intangible benefit of being publicly credited for their work on the project, and, potentially, royalties they might accrue from its digital use.

In today's recording industry, more and more of the earnings on the publishing and musician side are calculated from the digital delivery of music, including from streaming services, and satellite and Internet radio. Individual streams or plays on those media generate payouts in fractions of a penny, also known as "micropayments."

"We need to have accurate and transparent systems to account for, collect and distribute all of the fractions of cents from around the world that are due," says Maureen Droney, Managing Director of The Recording Academy Producers and Engineers Wing. "That's the kind of business we're in now. Various factions of the industry are working on this, but we don't yet have all of the infrastructure in place."

As more and more of the earnings are generated from these digital sources, it's in the interest of all the parties involved—labels, producers, engineers and musicians—to have proper crediting, and that all starts with reporting session metadata correctly.

### DIFFERENT NEEDS

It's in everyone's interest that the correct information from the session data gets accurately reported and safely stored. That said, stakeholders in the industry need it for different reasons.

The monies earned for performances on non-interactive digital radio services such as Pandora, Internet radio, satellite radio and Spotify mobile webcasting are not administered by conventional performing rights organizations like ASCAP and BMI, which represent songwriters.



Instead, they are the province of SoundExchange. It collects the royalties and is required by law to pay the featured artist 45 percent, rights owners (which are often the record labels) 50 percent, and non-featured artists (other musicians and singers on the recording) 5 percent. Producers are also paid, via a letter of direction with the artist, that designates their share and that SoundExchange administers.

Featured artists and rights owners are more likely to have sufficient administrative support to get their due from SoundExchange. But background musicians and singers are less likely to, in part because of incomplete crediting. What's more, even when they have been properly credited, many don't even realize that they are due money.

In addition to Sound Exchange, there are several other funds that pay musicians for digital plays. These include the Film Musicians Secondary Markets Fund, the Sound Recording Special Payments Fund, and the AFM & SAGAFTRA Fund. These funds have money sitting in them waiting to be paid out once the musicians who are due digital royalty payments can be correctly identified.

Proper crediting also helps creatives build their reputations and expand their work opportunities. "How producers and engineers traditionally got work was from people knowing what they had done previously," says Droney. "We went from album artwork to little CD covers to flimsy digital booklets. Now, there's generally nothing. So how do people find out who worked on a song?"

For the record labels, it's essential from a business standpoint to have the session metadata correct before putting out an album or song, particularly for making correct back-end payments. Labels are also responsible for credits that may be on the CD jacket or in some digital format that accompanies downloads. As stated, labels also frequently get "rights



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owners” payments from Sound-Exchange for Internet usages.

Although digital music service providers such as Spotify and iMusic generally don’t display credits beyond the song and artist’s name for songs they’re playing, the availability of accurate metadata offers the potential for the addition of premium tiers for subscribers in which the credits for musicians, singers, producers and engineers are displayed. Many people believe that streaming services would also benefit from



John Spencer,  
President of  
VeVa Sound

the increased music discovery options for fans who get greater access to complete session metadata.

At the present time it can be very difficult to get correct album credits that include all the musicians, producers and engineers for each song. Many of the consumer-oriented online databases, such as AllMusic,

don’t necessarily have access to that kind of comprehensive and accurate information. In addition, credits transferred from CD jackets have to be manually typed in (aka “re-keyed”), so there’s always the chance of errors being introduced.

### THE BACK STORY

The need for standardization of session data (both metadata and actual audio files) was foreseen as far back as 2002. “The labels knew that something was wrong,” says John Spencer, president of VeVa Sound in Nashville, and one of the key individuals working on the development of data standards for the music industry. “They were continuing to get these cardboard boxes full of mixed media, raw hard drives, CDRs, DAT tapes, etc., and didn’t have any idea what was coming in.”

A working group was formed that included a number of record labels, Spencer, the Recording Academy and others, to try to find a way to create standards for digital delivery of session data.

In 2006, the Library of Congress got involved, offering Spencer’s company, then called BMS/Chace, grant money to help with the creation of an XML “schema,” for the collection of recording metadata. (A schema is set of instructions in the XML programming language that specify where certain types of data must be placed. In other words, it provides a group of standardized fields for the entry of specific data.)

Also in 2006, a nonprofit consortium called DDEX, which stands for Digital Data Exchange and whose mission is “standardizing the digital supply chain,” was formed. Since then, DDEX has published several standards pertinent to the record industry. Notable examples include: ERN (Electronic Release Notification), which provides commercial information for releases; and DSR (Digital Sales Report), giving digital service providers a standardized way to report sales figures to labels and PROs.

### RINIS IN

In 2010, the Library of Congress and BMS/Chace donated the intellectual property created for their



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joint project to DDEX and a studio metadata working group was formed by DDEX members to begin the work of creating a recording metadata standard.

This standard was realized when, on October 10, 2016, DDEX released RIN (Recording Industry Notification), which is specifically designed for standardizing recording metadata and contains fields for such information as where the song was recorded, who the musicians, producers and engineers were and what their ISNI (International Standard Name Identifier) numbers are.

"RIN will facilitate crediting, ensuring that performers, producers and recording engineers are properly identified and paid for their contributions," said Droney in DDEX's RIN press release.

"It is the underpinning for collecting that studio data through a digital audio workstation," Spencer says about RIN. "You can collect studio metadata to a Web browser or a standalone app, and you could then export an XML doc that's structured, standardized and ready to go."

The RIN standard can be licensed from DDEX at no cost, and could easily be incorporated into DAWs. That would give engineers and producers the ability to open a dialog box within a Pro Tools session and enter in all session information—including who the musicians and engineers were—in a RIN-compliant format that could easily be read by others.

While it might seem desirable to be able to write metadata directly into audio files, the current limitations of the header in a Broadcast Wave file make that impractical, and the data is easily corrupted as it travels between DAWs. So, the RIN information is designed to be saved separately from the audio files, and exported as XML data.

Using the RIN XML code, it's also possible to set up a browser-based collection tool, which can take the information at the session and send it directly to a database. Spencer mentioned one such app that VeVa Sound is developing called Studio Collect. "I can enter my performer and the related pertinent information," he says, "and once I do, I don't have to enter it again. What instrument he played, what his role was, what part it was on each song."

## THE ISSUES

Even with industry-wide adoption of the RIN standard, there are other roadblocks to overcome in terms of universal sharing of the data.

First, producers and engineers need to get on-board with the idea of scrupulously entering the session data. This shouldn't be too hard to achieve, considering that virtually all parties involved stand to gain from it, but it might take some time for it to become an accepted part of the session workflow.

Another issue is verification. "Obviously the data being input is key to success," says Spencer. "So if we had a system where there's a cloud database where

you can park your RIN metadata, who's validating that? Otherwise, couldn't I just put in that I'm the fifth Beatle? So, there are concerns about the verification of that data." Record labels have traditionally been responsible for verifying this information, and third-party companies such as VeVa Sound are also being employed by the major labels for verification purposes.

That said, the RIN standard can help to make collecting and saving recording metadata relatively simple. All of the metadata entered for the session is contained in a small, easy-to-send file. Once RIN becomes accepted throughout the industry, it should speed the process of data sharing up considerably, helping facilitate more revenue for artists and the labels. It will also eliminate the considerable expense and potential errors involved with re-keying metadata.

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According to Spencer, the ideal is to have a system that integrates session metadata with payments in an automated fashion. "At the end of the day, as an industry, we need to be looking for solutions that work in scale, because we can't have human intervention when we're talking about fractional pennies being paid on streams. The payment modality has to be essentially ecommerce to ecommerce—all machine-made."

### THIRD-PARTY SOLUTIONS

ProMusicDB, a database for musicians and other creatives that features verified session-credit information, is one of several third-party companies that offer their own solutions to the crediting issue. According to Christy Crowl, founder and CEO, "Our target customer or member of ProMusicDB is the studio musician or even producer whose credits are all over the place. IMDB says one thing, AllMusic says another, Discogs says another. They themselves start to lose track, and they don't have a place to put it all together."

ProMusicDB is based on a paid membership model (\$97 per year). Each member gets a profile page to list credits, which can be viewed, but



Maureen Droney, Managing Director of The Recording Academy Producers and Engineers Wing.

not modified, by the public. Crowl says the aim of the service is to "empower the artists into this chain of data, which they've never really been a part of, regarding either getting credit or having a verification mechanism in place that can really comprehensively tell the story of a musician."

A unique identifier is assigned to each member, and ProMusicDB uses other music industry organization memberships (such as PROs and AFM locals) help with "disambiguation," that is, finding the right musician when there are multiple ones with the same name. For example, if there are 10 guitarists named John Smith, SoundExchange likely won't have the information to know which is the right one to pay for a particular song.

That's where ProMusicDB's ability to disambiguate will help.

Crowl says that the ID system they use "can help SoundExchange more accurately identify people that need to be paid, which then can help the union, which then can possibly help the PROs later on."

Another third-party company, Jaxsta, is due to launch a database of verified music credits in 2017. The plan is to have paid clients, "Partners," that will include labels, PROs, musicians, producers and other creatives.

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Christy Crowl, founder  
and CEO, ProMusicDB

Consumers will be able to search the database for free, but, unlike the partners, will have no editing privileges.

According to founder and CEO Jacqui Louez Schoorl, credits will come “from the liner notes sent to us by our data partners. Currently, we’re working on a giant identity recognition and disambiguation engine to allow us to correctly identify who is who.”

Schoorl says that the engine will “allow us to gather a huge range of credit information and process it, so we can track down verified credits for musicians, instead of them having to make their own edits.”

According to the Jaxsta website, “By sourcing data from multiple authoritative sources, and then having real humans review anomalies, we are ensuring our data is as close to perfect as possible.”

#### GOOD CREDIT

In the uncertain and constantly changing new world of the digital music industry, the issue of studio metadata is clearly one that’s getting a lot more attention. RIN is an important addition to the toolset, but for

progress to continue, various parts of the chain—including workstation manufacturers—must start incorporating RIN-compliant data entry into their products. In addition, producers and engineers must embrace the idea of devoting some of their time to comprehensive session-level credit entry.

It will probably take a lot more time and effort to get to an automated, ecommerce-based system that integrates metadata and payments, like what John Spencer is hoping to see, but reaching that point is a worthwhile goal for the industry. ■



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# CREATIVE MEDIA DESIGN, NYC

## Voiceover Recording Through Final Mix

BY JENNIFER WALDEN

As a company started by a voiceover artist, it makes sense that New York City's Creative Media Design would grow from that root. Owner/president Mike Zirinsky, who bought the company from voice actor Michael George back in 2013, recently expanded CMD with two new ventures: a voiceover coaching school called The Voice Shop, and CB Radio Tours, which offers clients the opportunity to promote their brand via interviews on national radio.

"I'm always open to exploring new business opportunities," Zirinsky says, "whether it's specific to casting and recording, or whether it is another business altogether."

Keeping a studio alive in New York City isn't easy, so Zirinsky and his team try to ascertain their current clients' needs, as well as formulate ways to reach new clients. He adds, "I'm open to taking some educated risks, knowing that there is a demand out there. We have the infrastructure here to make use of our studios in different ways, other than what the traditional sense would be."

As evident from their motto: "Cast. Record. Mix." CMD is not just a casting company. It's a full-service audio post facility, offering clients everything for casting, recording, sound design, music services and 5.1 surround mixing. The company recently moved to a new facility on 37th Street in midtown Manhattan. Their new digs occupy the building's entire top floor and Studio A offers clients a rare treat in the audio post world—sunlight!

"We worked with Tim Crossley of Crossley Acoustics when designing the facility," says Bob Kirschner, chief audio engineer. "We all decided to put Studio A under the large skylight. We wanted to create a very comfortable room, and Studio A is flooded with natural light,"

The new facility houses four studios, two of which CMD operates regularly and two that are rented out. Kirschner, who engineers in Studio A, helped to guide the gear selection for the facility. In many regards, the studios are technical twins. Each has a Mac Pro running Pro Tools 10 HD with identical plug-in packages. On the vocal recording chain, both studios use a Great River ME-1NV mic preamp and a Crane Song Trakker compressor.

"I wanted to have two studios that were as mirrored as much as possible," says Kirschner.

"At our old place it was very difficult to have a session start in Studio A and then move over to Studio B to continue work on it. Now, projects can pass between the rooms with ease."

Courtesy Crossley Acoustics



But there are still differences between the rooms. Studio A is set up for 5.1 surround mixing while Studio B remains stereo for now. Also, Studio A uses an Avid Icon D-Control surface for mixing while Studio B relies on the keyboard-and-mouse. Kirschner chose the D-Control specifically because of its "dedicated EQ and compressor controls right in the center of the console. On the Avid S6 console, it's all virtual knobs and everything is touchscreen. There aren't dedicated knobs, and that's something I feel is lacking with the S6."

Another key difference is the mic choice. Studio A's VO booth houses a Neumann M 149 as its main mic while Studio B's booth is equipped with a Neumann TLM 49. When George started CMD in 1998, he chose the M 149 tube mic, but since it's quite pricey, Kirschner opted for its solid-state counterpart, the TLM 49, which produces a comparable sound for less. "The TLM 49 has a very similar tone to the M 149 but without the tube warmth. We find we can go back and forth between the two studios without too much of an issue," says Kirschner.

Before joining the CMD staff in 2013, Kirschner owned City Sound Productions in lower Manhattan, which began as a project studio geared toward musicians. [Note: City Sound Productions was designed by Francis Manzella and was featured on the cover of *Mix* in June 1993.]

Eventually, Kirschner's studio transitioned to audio post in collaboration with his wife, a filmmaker. His studio began to feed the need of a steady stream of filmmakers who rented their Avid editing suites. Working mainly on documentary films, Kirschner built up his dialog editing and mixing chops. After 13 years of studio ownership, Kirschner says inevitably "a one-room studio in Manhattan was really hard to keep afloat." So he closed up shop and went freelance as an audio post mixer, working at places such as Food Network and TruTV, then finally finding a home at CMD. With his years of editing and mix-to-picture experience, Kirschner fit perfectly with a company that had voiceover at its core and audio post as its new focus.

CMD specializes in casting a wide range of voice talent, from regional-dialect specific English to numerous foreign languages and accents, and even regional-dialect specific foreign languages. They enlist talent from across the country and the globe, but Kirschner notes most clients like having face-to-face contact with their talent. Fortunately, "New



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CMD owner Mike Zirinsky, left, and chief audio engineer Bob Kirschner.



Courtesy Crossley Acoustics

York City is the best place to be if you need a diverse talent pool,” he says. “For instance, we do a lot of Haitian Creole, and there’s a Caribbean community in Brooklyn to draw from. We’ve developed this niche where we are very strong in foreign-language projects. Ad agencies know that we can cast spots in Japanese, or Mandarin, or Thai, and accommodate the regional emphasis that they want.”

Recently, while working with ad agency Wider Lens on a campaign for CHEP, an international shipping company, CMD needed to cast talent for 19 languages because the rebranding video was being distributed to all major shipping ports around the world. “Basically any country

that has a port, CHEP has a station there. In every region there was a local person that was involved with the translation and the approval of the voiceover for the video,” says Kirschner. “At first we were recording much of the voiceover without regional input, and most of it went really well. But there were a few regions that had specific requirements, namely Belgium and France.”

Particular emphasis was placed on inflection and accent, so Kirschner waited to record the Belgium and French sessions at a time when the local CHEP rep could be on the phone to listen in and give immediate feedback. “We had someone on the phone from Belgium during the recording. We worked in-session with a language supervisor and the talent. And our clients from Wider Lens were here to give the direction. It was an interesting process,” he says.

With their new venture, The Voice Shop, CMD can grow its talent base in New York. The business is able to discover new talent and to help its existing talent base polish their skills. Kirschner explains: “Our talent pool is primarily non-union actors. We have really strong relationships not only with English voice talent but also with international/foreign language speaking talent here in the city.”

Zirinsky adds, “The Voice Shop is a standalone voice coaching school, but it’s tied into CMD. Not only can we help coach the talent but we can also give them an outlet to potentially get some work. That translates well for our clients because we are continuously able to offer them fresh voices that they probably wouldn’t have exposure to.” ■



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# AIRSHOW RELOCATES BOULDER STUDIO

NEW MASTERING HOME DESIGNED TO PROVIDE BALANCE // BY BARBARA SCHULTZ



David Glasser and Anna Frick—studio with a view.

Photo: Tim Murphy/FotoImagery

**W**e could all learn a life lesson or two from Airshow Mastering. For more than 30 years, business partners David Glasser and Charlie Pilzer have followed their instincts, and this has not only yielded accolades and Grammys for satisfying work on substantial music, but also brought them the kind of work-life balance that eludes so many of us.

Glasser took a chance when, in 1997, he moved his part of the business from Springfield, Va., to a new studio in Boulder, Colo. Pilzer then shook things up a few years later when he relocated the Springfield studio to a more urban community in Takoma Park, Md. But in both cases, moving for the right reasons became a boon for the engineers, who continued to please clients and listeners with their meticulous approach to audio restoration and mastering. Clients such as Smithsonian Folkways, the Grateful Dead, Rounder Records, and many others were pleased to follow where Glasser and Pilzer led.

Ann [Blonston], the general manager.”

Glasser said good-bye to a lot of overhead expenses, and, to a great extent, good-bye to managing a staff. The idea was not only to downsize, in response to the ever-changing music business, but also to concentrate more purely on his craft, and to enjoy the natural beauty of his adopted home.

“We didn’t want to compromise the performance of the studio at all,” Glasser says. “In fact, we wanted to improve on the sound of the studio. The new room is slightly smaller than the old one, but Sam did a lot more with bass trapping and soffits around the room, and more diffusion. It’s resulted in a sound that’s real familiar. I was able to move in and start working right away. We pretty much moved the equipment and dropped it exactly in the same place in the new studio.”

Glasser’s rig continues to include his Maselec Surround Mastering Transfer console, a soundBlade workstation, and converters from Prism, Meitner and Pacific Microsonics. He monitors via a Dunlavy 5.1

Also onboard for much of Airshow’s journey: their consultant and friend Sam Berkow of SIA Acoustics. His acoustical designs have helped turn Glasser and Pilzer’s ideas into sonically balanced, efficient studios, which the designer also helped to expand upon when the businesses grew.

Which brings us to the latest iteration of Airshow’s Boulder branch. This past summer, Glasser closed his 4,000-square-foot multiroom facility, and celebrated the grand opening of a two-room, 620-square-foot studio in the wooded Rockies foothills west of Boulder.

“We were at our previous location for 19 years,” Glasser says. “It worked great for that time, but that model wasn’t going to work in the future for us. So we constructed a new building and we decided to concentrate solely on mastering, like we had done when we first started. The staff is now just myself, [mastering and audio restoration engineer] Anna Frick, and



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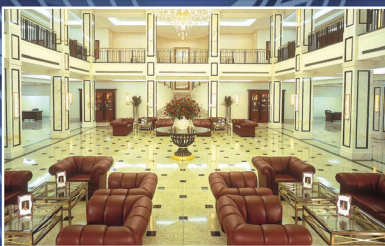
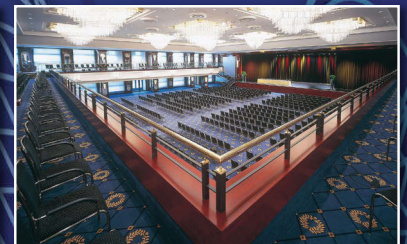
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Airshow Boulder's asymmetrical design helps control LF modes in the room. Equipment includes a Maselec console, soundBlade, and Durlavy 5.1 monitoring.

system, and he maintains an impressive, pristine collection of outboard processing from Weiss, Z Systems, Pultec, API, SSL and others.

"My gear has changed a little bit in the past couple of years, but it's been pretty stable for the most part," Glasser says. "We're also really well-equipped with analog tape playback. We have one of the few places around that's equipped with Plangent Processes for wow-and-flutter reduction from analog tapes. Jamie Howarth at Plangent is really onto something, and it's one of the most exciting developments in audio that I can think of in the past 10 years. We've used it on most of the Grateful Dead projects I've worked on, as well as things by Doc Watson and Pete Seeger; it's remarkable what it can do to bring some nice focus to an analog recording."

All of Glasser's equipment is now up and running in the new building, designed by Berkow along with architect Jim Walker. The studio was built with Structural Insulated Panel System materials. "The panels are prefabricated at the factory, and on-site they go together with camlocks. All the structural members are built into the panels. So, once the foundation was done, the whole structure went up in just about a week. It also afforded us a clear, open space to do whatever we needed to do [acoustically], without any structural members getting in the way," Glasser explains.

The building contains Glasser and Frick's mastering studio and a common room with lots of natural light and views to the surrounding landscape. With the studio situated on a hillside, utilitarian space was built into a lower floor, which houses a workshop and the studio's HVAC system.

"David basically said, 'I want something that sounds as good or better than my existing room and has almost identical workflow,'" says Berkow. "When David was building the other studio, I said to him, 'I have an idea of how to make the low end in small rooms work. Because, as rooms get smaller, the low frequencies, the modes—due to the geometry of the room—move up into the speech frequencies. These modes can either jump out or

get attenuated effectively, and these are really hard to control."

Berkow developed a mathematical model that indicated the issue could be resolved if the room had asymmetrical corners, where one corner is at a certain angle, and another's angle is different. "So, the energy from these modes would be at different frequencies, and the response at the mix position would be smoother and tighter," Berkow says.

In the new studio, Berkow expanded on this model to suit the structure: "I knew we would need to build interior walls because the SIPs panels are great construction but they're not effective at blocking sound," Berkow says. "So we did a similar thing to what we did in Airshow Mastering Takoma Park.



Studio designer Sam Berkow

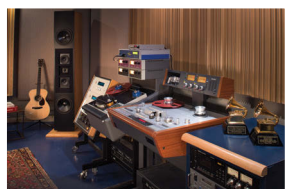
"Above the monitors in Charlie's studio, there was a beam that cut across the space, so our ceiling couldn't start low and slope up because it would hit this beam. So I brought the ceiling as high as I could, and then put a false ceiling below it; it looks like the ceiling is continuous, but the front part is just a wood and fabric grille, and behind is a ton of low-frequency absorption. We created a bass trap up there and improved the low end of that room

"In Dave's room, because of the sloped ceiling, we couldn't do exactly that, so we incorporated this idea into the back of the room. We stopped the sloped ceiling before it gets to the rear wall and left an opening

so that low-frequency sound and modes wouldn't build up at Dave's mix position. This effectively creates a bass trap above the control room. The sloped ceiling also reflects sound into an acoustical diffuser on the rear wall, and creates a reflection-free zone at the mix position. The result is an accurate mix position with a very tight and accurate bass response."

The photographs in this article show some of the other areas where acoustical treatments are employed. In addition to lighting and ductwork, the soffits conceal absorptive and diffusive materials to control room modes further. So do the custom-built fabric-covered panels





Rear diffusers and open ceiling construction help create a reflection-free zone. Inset: Behind the tape machines and racks are FlutterX panels from Real Acoustix.



behind Glasser's Dunlavy loudspeakers.

"On the right and left side, we also have a product called FlutterX from Real Acoustix," Berkow says. "They're five-inch-wide panels. We stagger them and put sound absorbing material behind them. So on each side of the mixer, David and Anna get sound scattering at high and mid frequencies, but absorbing at low frequencies.

"And if you were to turn around [from the mix position], you'll see there are two types of rear diffusers," Berkow continues. "In the middle of the rear wall there's a very large six-by-eight-foot-wide mid-and high-frequency sound-scattering device that is eight or ten inches deep, and above that are two different types of two-dimensional diffusers that scatter sound both horizontally and vertically.

"Then there's sound absorption in a cloud on the ceiling. Our goal is to keep this room tonally balanced. It is not to create a dead room, which is why we like so much diffusion."

Taming the acoustics of the new studio has made the transition to working smaller easy for Glasser. And balance seems to be a theme for this resized business. Glasser has given up space and a community of multiple engineers, but he's gained privacy and time to focus on the music.

"I think that we are actually at an advantage in that we have systems and tools for project management and customer service that we developed to support a large group of engineers," observes general manager Ann Blonston. "Now that we are fewer, the systems and the discipline are helping the engineers self-manage, and keep our level of organization and customer care consistent."

"We're certainly not the first to do this. It's a theme in the music industry," Glasser says. "But what's important is, we've moved from a commercial space into what would seem like a more casual space, but we didn't compromise on anything in the design, construction and equipping of the space. What I like most about it is, I can be working in the studio—and it's a totally comfortable but high-tech and efficient design—and walk out and I'm in the middle of the woods." ■



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# AOIP-READY HARDWARE PROCESSORS (& MORE)

BY STROTHER BULLINS



Focusrite Red4 Pre and Red8 Pre

On the heels of the AES convention, networked audio systems, and specifically ones featuring Dante—the leading audio over Internet protocol (AoIP) by Audinate—are multiplying in the marketplace. Though initially popularized in live sound, theater and A/V-based applications, music recording and production facilities are quickly realizing the bottomless cup of routing and distribution possibilities when traditional patch bays and analog routing via copper line are swapped out for AoIP technologies.

Though it is still a burgeoning category, hardware processors offering AoIP (predominately Dante) connectivity features are increasingly available in the marketplace. Boasting zero-latency round-trip I/O at high channel counts, facilities of all types may consider such Dante-enhanced gear, currently built by mainstream manufacturers and boutique builder's shops alike.

## HARDWARE, NOW NETWORKED

One of the best examples of robust Dante-enabled hardware is Focusrite's RedNet Series of Ethernet-networked audio interfaces. At the recent 141st AES Convention, Focusrite unveiled its latest high-channel count Red 4 and Red 8 "Air" enabled mic pre-I/O units. Specifically, Red 4 features four Focusrite "air enabled" mic preamps with 63 dB of gain; two 1/4-inch front panel Hi-Z inputs; three displays (Input, Level Me-

ter, Output); and dual Thunderbolt 2, Pro Tools HD and Dante network connectivity.

Key features of the I/O-packed Red 8Pre include 64 inputs, 64 outputs, eight digitally controlled mic preamps, 16 analog inputs and 18 analog outputs; it features identical network connectivity as the Red 4. Both include Focusrite Control software, allowing mic preamp control and the setup of mixes and monitors; the Red plug-in suite; and Softube's Time and Tone bundle.

In reviewing the Red 4 Pre, colleague Rich Tozzoli raved about its sound as well as its future-proofed feature set. "What I like most about Red4Pre is its power and flexibility," he explains. "In a single rackspace, you've got a full DAW front end with great-sounding preamps and the ability to hook up to most any system, including Pro Tools HDX rigs. The preamps are exactly what you would expect from the legendary Red series, and the unit overall feels, looks and sounds great. Add in software control from your desktop and this becomes ones seriously cool rig."

Millennia Media, the world-class analog preamp and signal flow hardware manufacturer, recently introduced its DA-296 G?zowta Dante to Analog Converter, connecting any two channels of Dante to analog gear up to 96 kHz with level-controlled 1/8- and 1/4-inch jacks in tow, marking Millennia's fourth Dante-oriented product.

Priced at \$449 street, the G?zowta DA-296 can be used as part of a personal monitor system or for trouble-shooting Dante audio streams. Outputs include balanced XLR and Phoenix-style connectors. Power is supplied by the Ethernet cable from PoE (power over Ethernet) enabled switches or in-line PoE injectors. Also included is a -10dBV/+4dBu output reference level switch to accommodate most analog

equipment. The G?zowta DA-296 is the same size as Millennia's portable preamp series, housed in a road-ready 1/3-rack width chassis, and as such can be bolted to a rack tray.



Millennia Media G?zowta

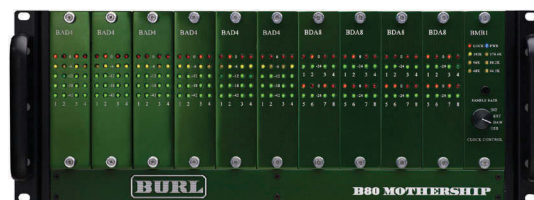


Another world-class pro audio firm, Grace Design, is shipping its latest multi-channel preamp—the m108 eight-channel mic pre/ADC/DAC/Interface, available with its optional Dante interface module. The m108 features an array of input and output options, with eight full XLR mic inputs, DB-25 balanced analog out and AES3 out, two ADAT optical outputs, a USB 2.0 jack, Word Clock I/O, RS422 and MIDI I/O for Pro Tools HD control. The unit provides a slot for the optional Dante network audio card and an Ethernet jack for IP control with upcoming software control and AC power input.

Also recently reviewed by Rich Tozoli, the m108 hits all the high points in his book. “It’s exactly what I need it to be: a high-quality, high-end pristine preamp that I can quickly navigate,” he boasts. “Taking it further, it makes a great, feature-rich DAW front end for smaller rigs, such as UA Apollo-based ones, with extensive and easy integration. Simply put, what goes into the m108 will be exactly what comes out. Grace Design nailed it here.”



Grace Design M108




Burl M80 Mothership

Meanwhile manufacturers such as Lynx Studio Technology are actively re-vamping their product lines to allow Dante connectivity. LT-DANTE, an LSlot interface for Lynx’s Aurora and Hilo converters, was recently introduced with three LT-DANTE ready converters: the Hilo-DT, Aurora 8-DT and Aurora 16-DT models. Notably, any existing Hilo or Aurora owner can add the new LSlot, so original customers can upgrade, too.

Having recently reviewed both the Aurora and Hilo converters, another colleague, Russ Long, was quick to explain why he chooses to use Lynx conversion products. Now, with the LT-DANTE LSlot interface available, investing in Lynx gear makes even more sense, he explains, when their stellar

customer service is considered.

“Lynx makes great products with no sonic compromise whatsoever,” offers Long. “Their manuals are well-written and concise, and their tech-support is among the best I’ve ever encountered. I’m constantly integrating new gear and experimenting with new technology in my stu-




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Lynx Aurora

dio and I've called or emailed tech support several times over the years and I've always received excellent support. If the technician didn't know the answer to my question, he was more than willing to research it and get back to me in an amazingly brief amount of time. In short, I can't say enough good things about Lynx."

Burl Audio is an analog processing design/builder based in Paradise Recording, a commercial studio in Santa Cruz, Calif. Burl builds some of the most impressive, proudly overbuilt and lovely sounding analog I/O- and conversion-centric gear available today, which makes its dedication to Dante compatibility even cooler.

Announced at AES, Burl's flagship offerings such as the B20 Mothership, B2 Bomber ADC and B2 Bomber DAC are now available Dante-ready. Specifically, the flagship B20 Mothership is a massive configurable AD/DA offering up to 80 channels of I/O and weighing in at 60 pounds fully loaded. Because of its fully flexible architecture, it can be loaded up in a variety of ways; Burl suggests eight BDA8 cards, comprising 64 channels, for mix engineers or six BAD4 cards for 24 B2 inputs, and four BDA8 cards for 32 channels of outputs, for live tracking purposes.



Neutrik Xifrium Pro

## BUT WAIT—THERE'S MORE

Dante is hardly the only AoIP studio network protocol on the map. At October's AES Convention, Yamaha took the opportunity to announce that its Dante-equipped products will connect with other audio networks via AES67, notably Ravenna. Yamaha's broad product range spans live sound to recording; this is a clear indication that they are committed to staying on top of AoIP possibilities.

While we're primarily looking at hardware processing here, recent product unveilings demonstrate that AoIP technology is enabling ad-

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INSIDE





Lynx Hilo

vances in other areas of the audio chain, too. Case in point: Genelec—ahead of the curve, as usual—has unveiled its 8430A AoIP SAM Studio Monitor, the first studio monitor available that supports AES67 and Ravenna standards. Key features of the 8430A AoIP SAM monitor include a 5-inch woofer and 0.75-inch metal dome tweeter with Genelec's Directivity Control Waveguide (DCW); 50 W x 50 W bi-amped power; a 58 Hz – 20 kHz (+/- 1.5 dB) frequency response; and a maximum SPL of 104 dB.

With all this new connectivity, AoIP innovation is notably underway at Neutrik, now offering an expanded etherCON line via Cat 5e and Cat 6A connectors, as well as its impressive Xifrium Pro line of wireless digital cable “replacements.” Xifrium Pro is a modular system with available I/O modules for analog, AES and Dante formats.

Low latency is a key component to Neutrik's Xifrium Pro line; it is built around Neutrik's DiWA (Digital Wireless Audio) technology, which reportedly provides compression-free, FCC license-free, wireless transmission of audio within the 5 GHz band. The 20 Hz to 20 kHz audio transmission system reportedly offers latency equal to 3 milliseconds regardless of how many Xifrium Pro devices are used. ■



Genelec 8430A

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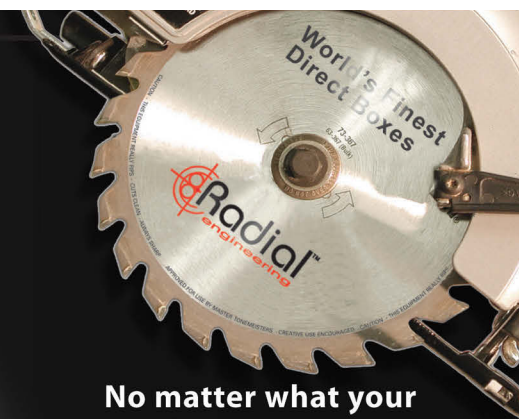
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# MIX REGIONAL: SOUTHEAST

Meller says. “They just haven’t been exposed to the process. They no longer have to go to Atlanta or New York. I’ve been cutting vinyl for 37 years, and I will go toe-to-toe with anyone in a shootout.”

Meanwhile at Truphonic, engineer Elliot Elsey has been awfully busy of late with local projects, along with the occasional live date to air with radio station The Bridge, featuring David Gray, Band of Horses and others in recent months.

Local acts, all mastered by Meller, include Sonder Blue, tracked at Truphonic by Elliott Elsey, mixed by Joey Cox; Stop Light Observations, tracked by Elsey; Magnificent Crumb; Mark Bryan; Sikheira, recorded and mixed at Truphonic by Elsey; Shoelaces (artist Casey Malanuk/producer John-Keith Culbreth from Stop Light Observations), Elsey and Joey Cox each mixed one track; Glenn Jordan, 4-song EP, Medicated Society, recorded, edited, and mixed by Elliott Elsey (also co-produced).

## MICHAEL GRAVES’ OSIRIS MASTERING, ATLANTA



Mastering engineer Michael Graves operates out of his home studio, Osiris Mastering, where he’s developed a reputation for the careful restoration of decades-old recordings, as well as mastering new recordings for regional artists.

Graves has an ongoing working relationship with Omnivore Records; this started with the Grammy Award-winning release of Hank Williams’ *The Garden Spot Programs, 1950* (2014). “Somebody found an old 16-inch transcription record at an estate sale,” Graves says. “These were unreleased recordings.”

More recently, Graves has remastered Omnivore’s reissues of Big Star’s *Third*, collections from the Buck Owens and Don Rich archives, and more. So, in any given week, Graves may be handed a challenging assortment of source material. That’s why his essential gear starts with playback.

“My turntable is the Technics SP15, which was only sold to radio stations until the late ’80s,” he says. “They’re based off of the SL1200 DJ turntables, but these also play 78s and allow for a longer tone arm, so we can play those 16-inch transcription records.”

Graves’ studio also contains Technics 1500 series tape machines, his Dangerous Music mastering console, Wavelab 9 Pro workstation, Bowers & Wilkins 805 monitors, and a variety of converter and plug-in options to facilitate mastering in the box.

“While I master in the box, I have treated my whole listening environment, because that’s what’s most important to me,” Graves says. “Early on, I decided that what is most important is starting by making sure I can hear things the way I’m supposed to hear them.”



Vlado Meller, center, with  
Jeremy Lubsey, left, and Elliot  
Elsey of Truphonic Recording.

## Vlado Meller Mastering, Charleston, S.C.

A few years back, we wrote about Vlado Meller relocating his mastering operation to Truphonic Recording in Charleston, S.C., after nearly 40 years in Manhattan, most of them with Sony. In checking in for an update, we find that he was flying out the next day for the Latin Grammys, with a nomination for Andrea Bocelli’s *Cinema*. He had finished up Lou Reed’s 15-CD remastered collection a few months back, mastered the new A Tribe Called Quest release that was up on iTunes two days later, Celine Dion, Harry Connick, Jr.... There is no shortage of label work.

But what has excited him in the intervening two years is the uptick in local Charleston independent work, much of it coming through Truphonic for tracking and mixing. “This is a complete studio, from A-to-Z,” Meller says. “Tracking, mixing, mastering, live recording for radio. It’s nice to see it come back to how we all started. I spent over 30 years at Sony, so you can see why I appreciate the setup. It’s all in one building.”

The one thing missing, however, is a cutting lathe. When he first moved to Charleston, only the major labels were asking for a vinyl master. Now, the independents are, too, and Meller is providing a vinyl master for every project, just not cutting it. And his clients are having to wait up to 120 days at the pressing plant due to high demand. That is likely to change by early 2017, as he has started eyeing prices on a Neumann VMS70. And he has a place in Florida that he trusts to press the records.

“The local bands are blown away when they first hear an EQ’d master,”





Curry Weber and Ples Hampton recording hand claps

## SUN STUDIOS, MEMPHIS

At the historic Sun Studio, engineers Ples Hampton and Curry Weber produced and recorded an EP for 10-piece rock 'n' roll band Matt Stansberry & The Romance; the performances will also appear as part of the studio's ongoing *Sun Sessions* series on PBS.

"They showed up for the [studio] tour one day," Hampton says. "We run tours from 10 to 6:30, then flip the studio for recording at night. We told them that we give free tours to bands in exchange for a piece of music or merch." Stansberry presented Hampton with his band's new vinyl release, and Hampton enjoyed it so much that he encouraged the band to come back and record.

Hampton and Curry had been sharing engineering duties at Sun, following the departure of former chief engineer Matt Ross-Spang. Their work includes continuing the mission Ross-Spang began, of restoring the studio technology to its original 1950s condition.

"We gutted Sam's RCA 76D broadcast console and outfitted it with '50s-era RCA preamps, recapped with new tubes, and built a new power supply," Hampton explains. "We built individual inputs and outputs to work with Pro Tools and are working on a variable summing mixer that will allow it to work with six inputs and a single output for the Ampex 350 [tape machine], which is how Sam recorded."

Using designs exhibited in the Memphis Rock and Soul Museum, Hampton and Curry have also built a replica of Phillips' original mono speaker. "When we want to use Sam's exact same slapback method, we run the two Ampex 350s we have," Hampton says. "There was quite a bit of Sam's slapback on the Matt Stansberry project."

A few more choice details from the session: "We liked the RCA console preamps for organ and drums," Hampton recalls. "We had our two RCA 77s for lead vocals and two RCA 44s as overheads on drums and electric guitar. It was awesome, helping the band understand that they weren't in some modern studio, and had to play down some of their louder songs. It turned harder, funkier tunes into more chill, almost jazzy numbers."

## SESSIONS: SOUTHEAST



Low Cut Connie frontman Adam Weiner

Arden Studios recently hosted sessions with alt-rock band Deer Tick and engineer/producer Adam Landry. The band worked on their upcoming sixth album in Studios A and C, making use of the studio's long-held collection of classic gear.

Earlier this year, indie rock 'n' roll band Low Cut Connie were in Studio C, tracking a pair of albums for release on Contender Records next year. Both projects were engineered by Adam Hill and Dave Chale, and produced by frontman Adam Weiner, along with Hill and Chale. "Our guitarist James Everhart was honored to use [Big Star guitarist] Chris Bell's electric guitar on some of the songs," says Weiner. "I played a couple different pianos, including the gorgeous Yamaha grand. We had an antique vibraphone on a tune, and used Arden's famous Mellotron, which was used on Big Star Third. There were also a bunch of drunk pizza-guzzling degenerates clapping and screaming on a few songs. Studio C has some magic vibrations and energy and it got wild and frothy in there. Lots of sweat and crying. Always a pleasure to make records at Arden."



Ludacris (center) with Childish Major (left) and DJ Famous

"My Favorite MC's" that was released in September.

### PARHELION RECORDING STUDIOS, ATLANTA

At Parhelion Recording Studios, noise band Whores finished up recording and mixing their latest album for eOne Records. Other recent sessions include: Ludacris tracking new songs with DJ Infamous and Childish Major producing; singer Lloyd putting the finishing touches on his new release; singer J Holiday adding vocals to a Stafford Brothers production. And last but not least, Cee Lo recorded a new song called



L-R: Roger Niven, Bobby Macdonald, Ben Lorio, and Iain Clark

### THE MUSIC SHED, NEW ORLEANS

Scottish band Twisted Blues was in The Music Shed to record with staff engineer Ben Lorio (Galactic, Jason Marsalis, Trombone Shorty). Pictured here are Roger Niven (guitar and vocals), Bobby Macdonald (bass and vocals), Ben Lorio (Engineer), and former Uriah Heap member Iain Clark (drums). The busy Music Shed is equipped with Pro Tools HD3, a Trident 80B console, ATC 100 speakers and more.



Jerry Brown

and most recently, alt-roots group Mandolin Orange, who self-produced their latest album, *Blindfaller*, there with Brown recording, mixing and mastering.

### RUBBER ROOM, CHAPEL HILL, N.C.

Celebrating its 20th year offering engineering and mastering services, Rubber Room specializes in Southern roots and string-band music. Artists who have had the pleasure of working in engineer/owner Jerry Brown's Chapel Hill facility include the Mountain Goats, Ben Folds Five, Lucinda Williams, and most recently, alt-roots group Mandolin Orange, who self-produced their latest album, *Blindfaller*, there with Brown recording, mixing and mastering.

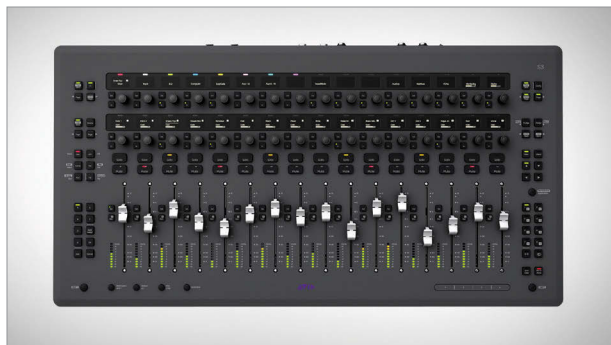


Lawrence "Boo" Mitchell at the MCI console

### ROYAL STUDIOS, MEMPHIS

At Willie Mitchell's Royal Studios, chief engineer Lawrence "Boo" Mitchell engineered Melissa Etheridge's album of soul covers, *Memphis Rock and Soul*, this past spring; Etheridge co-produced with John Burk. Last month, Royal hosted jazz singer Dee Dee Bridgewater. And just weeks before we went to press, Mitchell was in the studio with artist/producer/former Eurythmic Dave Stewart.

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# THE 'ASHEVILLE SYMPHONY SESSIONS'

Echo Mountain Leads the Way on Homegrown, Full-Blown Production

STORY BY BARBARA SCHULTZ // PHOTOS BY JOSH REINHART



Ben Lovett and producer Michael Selve look on during a session with the Asheville Symphony Orchestra

The staff of Steve Wilmans' Echo Mountain Studios (Asheville, N.C.), which includes a beautiful restored church as well as a converted Salvation Army building, spearheaded and hosted more than a year's worth of tracking and mixing work on the album *Asheville Symphony Sessions*. Designed to showcase the talents of local artists in western North Carolina, the project paired local bands with veteran arrangers and the Asheville Symphony to create new orchestral versions of the bands' tunes.

The executive producers of this project were Echo Mountain studio manager Jessica Tomasin and producer Michael Selve; the studio's chief engineer, Julian Dreyer, handled all of the engineering for the bands and orchestra.

"Jessica Tomasin, Michael Selve, and the symphony director, David Whitehill, threw a lot of names around and came up with a list of eight bands," says Dreyer. "Then we scheduled one-day sessions for each one, for each band to record a single of one of their songs."

The roots, rock and singer/songwriter acts who were chosen to appear on the album are Rising Appalachia, Doc Aquatic, Ben Lovett, Electric Owls, Free Planet Radio featuring Lizz Wright, Matt Townsend, Shannon Whitworth, and the Steep Canyon Rangers. Most everyone tracked a song live in the church, though Lovett pre-recorded some of his parts piecemeal in the personal studio he rents within Echo Mountain.

The single from each group was then sent to one of the arrangers who had agreed to participate, including Van Dyke Parks (Brian Wilson, Ry Cooder), Michael Bearden (Neil Young, Academy Awards), and Jonathan Sacks (*Toy Story*, *Cars*) as well as some local arrangers. "One of the arrangers, Chris Rosser, plays guitar, keys, and dotar in Free Planet Radio and plays in the symphony as well, so he did his own arrangement," Dreyer explains. "And Ben Hovey, who is a local musician, did the arrangement for the Electric Owls track."

Once the orchestral arrangements came back, the symphony set up





Andy Herod (guitar) and Rodney Easter (bass) of the Electric Owls



in the church studio. Dreyer employed a Decca Tree array using a Neumann U47 in the center and two KM56s at the sides; he also section-miked the musicians with the studio's generous supply of ribbon microphones.

"We had two days of them playing over the parts that we had recorded already. And that is the first time we'd ever had such a large group," says Dreyer. "There were varying sizes of ensembles, depending on the track, but the Michael Bearden and Van Dyke Parks ones were full—30 people. It's a big room, but it gets real small real quick when you put in 30 people with their music stands and chairs.

"One of the really cool things was seeing local artists who might think this kind of thing would be out of their reach, and then all of a sudden they're standing there listening to a symphony back their track."

Studio manager Tomasin adds that after the album was completed, the music was then employed as the soundtrack to a documentary about a local Asheville philanthropist, Julian Price, whose contributions to the Asheville downtown community helped revitalize the city. "The film, *The Julian Price Project*, has been making the festival rounds, and we've already won a number of awards," Tomasin says.

Visit [mixonline.com](http://mixonline.com) to watch videos of the Asheville Symphony Sessions. ■

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# Tech // new products



## BLUE CAT AUDIO DESTRUCTOR PLUG-IN

Versatile Amp Sim &  
Sonic Mangler

This tone-shaping channel strip from Blue Cat (\$99 Mac/PC) simulates analog or digital distortion, guitar and bass amps, saturation, clipping, compression, bit crushing and more. The GUI comes with hundreds of editable presets, plus 1,400 visual styles to customize the screen. Other features include an input gate and compressor, pre and post-filtering, dynamic shaping controls including a brick wall limiter, sidechain or internal triggering of distortion, real-time spectrum analysis, and dynamic distortion curve display with embedded signal histograms.

## PLUG-IN ALLIANCE BX\_ROCKRACK V3

High-End Guitar Amp Simulators



Brainworx bx\_rockrack V3 (\$199 / \$29 upgrade) is a collection of eight 1:1 emulations of high-end guitar amplifiers from Marshall, Mesa and ENGL packed into one plug-in. The group of 40 impulse responses combines cabinets with EQ settings and other gear including an onboard noise gate, vintage delay, plus shaping filter

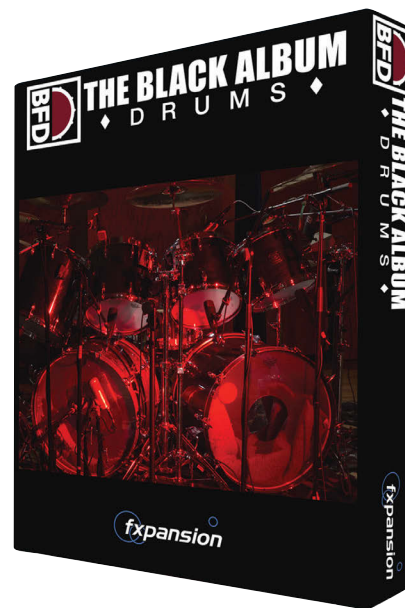
effects. Improvements over the original include workflow enhancements, reduced CPU usage and increased sound quality. The V3 player is free and features all amps and 26 non-editable presets. Users have unlimited access to bx\_rockrack V3 Player's presets and can upgrade to the full version at any time. Other collections include Brainworx bx\_metal2 (\$49) emulating the Boss MT-2 stomp box, and the Brainworx bx\_blackdist2 (\$49), an emulation of the ProCo Sound RAT 2 pedal.



## STUDIO TECHNOLOGIES MODEL 362

Listen-Only Beltpack Features Dante

Intended for use by on-air talent or production personnel, the Model 362 is a 2-channel user device that supports headphone monitoring of two audio channels. Features include configurable audio channel routing, dual level controls, 1/4-inch and 3.5mm output jacks, and Power-over-Ethernet powering. With only a PoE connection and a pair of headphones or an earpiece, a complete broadcast talent cue or audio monitoring location can be created. The Model 362 can be used with other Dante-enabled products such as party-line intercom and IFB interfaces, 2- and 4-channel intercom beltpacks, and announcer's consoles.



## EXPANSION BLACK ALBUM DRUMS

Chocolate Audio BFD3 Expansion Pack

This new expansion pack for BFD3 (\$125) is inspired by the drum sounds featured on Metallica's Black Album. The production team used the same kit, studio, mics and recording techniques used on the original album. The collection features 17 kit pieces in total, sampling up to 286 times per articulation, and an array of mics including Neumann U87s, AKG C12s, Telefunken ELAM 251E tube mics, and more. BFD3 is the third generation of FXpansion's software featuring a revamped interface, plus a new mixer and sound browser.

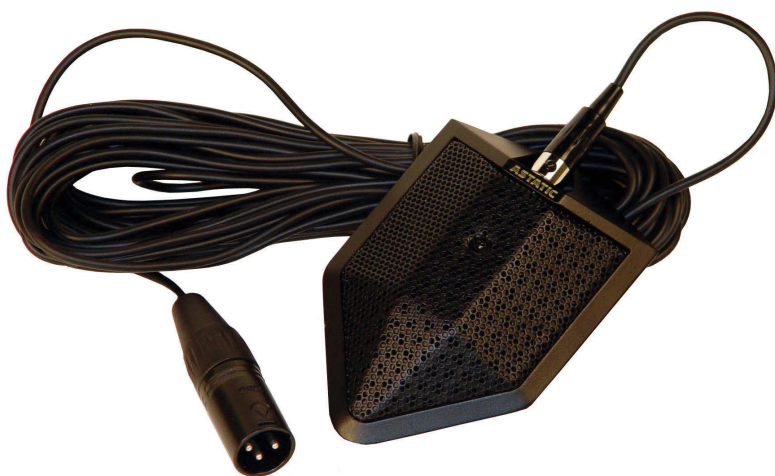




## STEINBERG UR22MKII AUDIO INTERFACE BUNDLE

### Beginner's Luck!

Looking for a year-end gift for an entry-level audio engineer? The UR22mkII Recording Pack (\$299) features a premium audio interface, headphones, microphone, and music production and editing software. The UR22mkII Recording Pack comes with the UR22mkII mobile USB audio interface alongside the ST-M01 studio microphone, the ST-H01 studio headphones and an XLR cable. The package also includes the latest software versions of Cubase AI and WaveLab LE, plus Cubasis LE for easy music production and audio editing on computer and iPad. The interface features two TRS/XLR combo inputs, two TRS outputs, MIDI I/O, plus one separate headphone output.



## CAD ASTATIC 901VP BOUNDARY MIC

### Remote or Local Switching of Polar Patterns

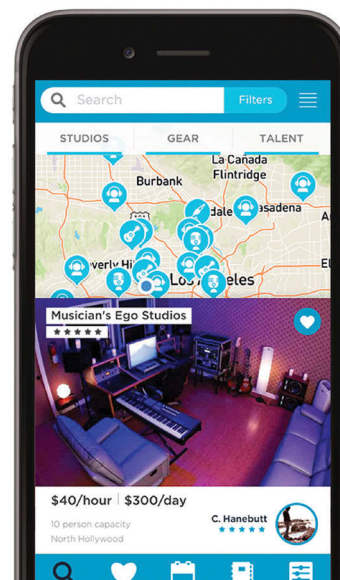
CAD's Variable Pattern technology makes the Astatic 901VP (\$199) the only boundary mic that features a continuously variable polar pattern (cardioid, figure-eight and omnidirectional). The 901VP's pattern can be changed locally by setting the onboard variable pattern control and remotely with CAD Audio's Remote Variable Pattern Control Box (VPC-1) between the microphone and audio mixer. The pattern can also be electronically controlled using the 40-360 DSP cable and corresponding software with compatible digital signal platforms from Biamp and Nexia. The 901VP is primarily designed for speech and vocal pickup in governmental, institutional, house of worship and corporate applications (but who's *not* going to try this on a kick drum?).



## FOCUSRITE CONTROL DESKTOP APP

### Remote Control of I/O over iOS

Taking the Focusrite Control desktop app to the next level, Focusrite iOS Control (free) offers control over cue mixes and preamp settings remotely from your iPad, iPhone or iPod Touch. Focusrite iOS Control works with the Focusrite Control desktop application that comes with all Focusrite audio interfaces from the Scarlett 6i6 (2nd Gen) up, including the Clarett and Red interface ranges. Other features include complete control of hardware inputs, software playback, panning, solo and mute, as well as the preamp settings on your interface (controllable features vary depending on the Focusrite interface model).



## SESH PEER-TO-PEER APP

### Musician/Studio/Artist Networking Tool

Sesh is a new free app that connects studios, engineers, musicians, songwriters and more. The iOS app features a profile page, chat window for connecting with collaborators, a calendar and more. The intention is to connect musicians to recording studios, rehearsal spaces, gear and talent for hire. You can conduct your transactions within the app, where it handles payments, scheduling, locations, ratings and reviews.

# New Sound Reinforcement Products



## PRESONUS STUDIO LIVE AR USB-SERIES HYBRID MIXERS

### Versatile Mixers for Live and Studio

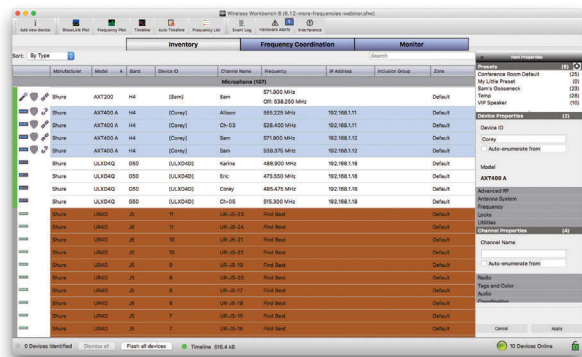
StudioLive AR USB mixers are equipped with a Mac- and Windows-compatible, 24-bit, 96 kHz, USB 2.0 audio interface, plus PreSonus' Capture live-recording software and Studio One 3 Artist DAW production software. Other features include the PreSonus Super Channel, allowing users to play audio from four stereo sources simultaneously; Class A mic preamps; instrument and line inputs; semi-parametric 3-band EQ; and an internal stereo effects processor. Models include the StudioLive AR16 USB (\$599.95); StudioLive AR12 USB (\$499.95); and StudioLive AR8 USB (\$399.95.)



## YAMAHA MONITORMIX APP

### Expanded Control for Android Users

Free now from Google Play (plus iOS from the Apple store), Yamaha's wireless "MonitorMix" application for CL, QL, and TF Series consoles allows individual wireless monitor mixing from up to 10 iOS and Android devices simultaneously. Features include grouping control over instrument collections, level, pan controls and even a pin number for security. The app automatically recognizes and connects to mixers on the network after which groups, individual channels, and planners are managed via the touchscreen. Groups may be moved, colored, and named using the simple editor menu.



## SHURE WIRELESS WORKBENCH SYSTEM CONTROL SOFTWARE

### Wireless Network Management and Monitoring

Version 6.12 of Shure's Wireless Workbench (free download) features Timeline, a new logging utility designed to capture essential channel status information over time. Information recorded includes RF level, antenna status, audio level, interference, ShowLink Remote Control status, and battery level. Version 6.12 also includes a new set of frequency coordination enhancements, and Wireless Workbench 6 can now connect to devices outside of a local network.



## AVLEX MIPRO ACT 2400 SERIES WIRELESS SYSTEMS

### Single- and Dual-Channel Receivers in 2.4GHz Range

The new MIPRO ACT 2400 Series wireless systems (ACT-2401, \$350.00; ACT-2402, \$580) consist of several models encompassing both single- and dual-channel half-rack receiver systems with a variety of transmitter options. The system utilizes the 2.4GHz ISM band and offers stable 4-frequency FSK (frequency shift key) modulation circuitry with exceptional range, strong RF signal stability, and channel density. Other features include frequency-hopping spread spectrum technology utilizing four frequencies for each channel in an adaptive tracking algorithm that avoids interference from 2.4GHz products on channels 1, 6 and 11. These systems employ dual-tuner true digital diversity reception and deliver 12 compatible simultaneous channel operations at receiving distances up to 100 meters with no signal dropouts.





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# Tech // reviews

## AVID PRO TOOLS 12.6 SOFTWARE

Clip-Based Processing, Collaboration and More



The new Channel Strip features a four-band EQ, filters, and compressor/limiter.

**S**ince Avid's jump to delivering its popular DAW within a subscription model, the company has delivered on promises to upgrade at a faster clip. There was initially some skepticism about the change from pros and new users alike. Reactions ranged from, "Why do I need another monthly bill?" to, "What's the advantage?" But if the past year is any indication, it is clear that Avid is serious about living up to its promises, making it enticing to opt-in to the new purchase and support plans. The latest upgrade, Pro Tools 12.6, much like 12.5, delivers incredible new features that have taken the DAW to new highs in quick step.

### LET'S COLLABORATE

Before looking at the latest version, let's dig into 12.5's collaboration feature, which was teased at nearly a year ago at NAMM 2016. In mid-March, days before 12.5 was officially released, I sat down with Tony Cariddi, Avid Marketing Director Audio, and Tim Carroll, VP of Audio Products, at The Blackbird Academy in Nashville for a live *Mix* webcast on Pro Tools Cloud Collaboration. At the time, I hadn't used the software, but what Tony and Tim showed me seemed incredible.

Days later, I got to use it extensively on my own rig and realized that this would change how we all work—especially once the average user's bandwidth matches Avid's vision. But poking around 12.5

and using it as a pro are two different things, so I set up a collaborative overdub session between Blackbird's Studio C in Nashville and percussionist Javier Solis' home studio in Texas. Blackbird has a hefty up and down to the Net, but because the session was at 96k/24-bit with a lot of tracks, I was most concerned about Javi's connection at the other end. He works out of his home in suburban Dallas.

To keep things neat and hopefully rolling, the night before the session I created 96k stems of a session with recording artist John Stoddard. My stem workflow is to use Pro Tools' 12's Commit feature from groups of tracks created with the New Track feature. I first Save my session As... and call the new session <song name – Stems>. Then I select each track in my stem group (e.g., Drums), and while holding Option + Shift, I click on any track output in the group and choose New Track from

the pulldown. Then I choose to make a stereo Aux track, give it a name, and de-select the "create next to current track" so the group shows up at the end of the line. It happens a lot faster than you can read about it, and in the process each track's output, the group channel's input, and the group channel's name are all the same, making for easy housekeeping when making multiple stems.

The next step is to select the just aux group track's name (e.g., Drums), right click and choose Commit. From the Commit pop-up, you can consolidate clips, render automation, copy sends/group assignments, and choose what to do with the source track.

Using this process, I quickly got the original session down to seven stereo stems, hid and made my sources inactive, and quickly uploaded to the Avid Cloud. I texted Javier, who downloaded the stems in preparation for the session the next day. [Because we were both new to the software, I texted his phone, but there is a cool texting feature built into Pro Tools that makes it easy to text back and forth during a session.]

### TRY THIS

Instead of using a de-esser plug-in, which can alter the sound of a track if set too aggressively, use the new Channel Strip to solve the problem. First, split the problem sibilance by selecting it and using the letter "B" shortcut. Then use the Vocal De-Esser Traditional or Aggressive Channel Strip preset to nail it down. You can also save your own version of the De-esser and use that by recalling it over a new bit of sibilance. It's quicker than using volume automation editing and written right to the clip.





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The next day we both logged in to Pro Tools at session time and got things rolling. Right away the light bulbs started flashing. Javier already had the tracks from the cloud, so there was no delay in him creating a new track for a triangle overdub. As soon as he created the track and pushed his “share” button, the track appeared in our session, which was set to “auto.”

The collaboration section in Pro Tools 12.5 is intuitive and simple. Up, down and share buttons appear on each track in both the Mix and Edit windows. You can make the tools appear or not appear just like Comments, I/O, and the other views. You can also choose to manually share, push or pull tracks, or set each to Auto, which happens a collaborator makes a move.

We were watching Javi work via FaceTime, which was frankly the clunkiest part of the experience. I hope that Avid will include a video feed in future versions, one with a simple talkback feature that would mute, or un-mute the video feed’s audio once recording starts. After the first OD, Javi pushed the audio to the cloud; after a short time for download, I started editing into the other choruses while he moved on to Congas. The rest of the session worked without a hitch, which was especially impressive at our sample rate.

After running one session, I started to have flashes of other workflows. For example, because you can share the session with up to three users, you could do overdubs and collaborate between two sessions while a third user edited tracks, cleaning up noise between passes and making everything neat. The potential for production power and speed is boggling. Before we move on, it’s important to note that collaboration is available in Pro Tools 12.5 HD and non-HD, whereas the new channel strip is HD-only.

## CHANNEL STRIP AND BEYOND

Pro Tools HD 12.6, released six months after 12.5, debuts the new Channel Strip, among other features. Unlike other DAWs that put an EQ on each channel in a session, the new Channel Strip works at the clip level providing an EQ, filters and compressor. It’s not a plug-in; it resides at the top of the edit window, or not—you choose the view. It’s not automatable; it’s more “analog” than that. And it’s not an Audiosuite process; you don’t have to render files, and it sits in the session in real time with zero latency. Clip processing is only available on pre-recorded clips; you can’t use it while recording. The clips themselves keep track of what you’ve done by adding an “EQ” or “DYN” tag right on the clip. You can process clips separately, then group them and apply global processing while keeping the original tweaks. This would be great for de-essing, or de-popping clips, then universally compressing them or adding other sweetening.

The power in the concept is that Channel Strip processing may be applied to each clip on the timeline, on all tracks in real time. This puts an astounding amount of processing power into a session right at your fingertips. The EQ, filters and compressor are easy to use, sound great, there’s a list of presets for quick setups, and just like a plug-in you can create your own. This tool is going to grow. Avid released a software

## PRODUCT SUMMARY

**COMPANY:** Avid

**PRODUCT:** Pro Tools 12.6

**WEBSITE:** Avid.com

**PRICE:** HD \$2,499 (perpetual license w/ upgrades, bonus plug-ins); HD \$83.25 (monthly, one-year plan w/upgrades, bonus plug-ins); non-HD \$8.25 (student, monthly, one-year plan); non-HD \$24.92 (monthly, one-year plan); non-HD \$299 (perpetual license). See website for support plan and upgrade pricing.

**PROS:** New Channel Strip (HD-only) is ground-breaking and sounds great. Non-HD features including collaboration make it a worthy upgrade.

**CONS:** Texting within session works well, but built-in video communication is sorely needed.

developer’s kit at AES so third-party companies can write for the strip. I can imagine tuning and “personality” processors like emulated compressors built into the strip. The sky’s the limit.

If there is a downside, it’s that the processing is only available in HD. But Avid doesn’t completely leave non-HD users out in the cold. Channel Strip processing applied in Pro Tools HD still works if you open the session in Pro Tools 12.6 (non-HD). You lose the channel strip interface from HD but not the sound. You can choose to keep, or not use the channel strip processing applied on an HD session.

## SO WHAT ELSE?

Pro Tools 12.6 adds a bevy of other features from simple tweaks like a blue playlist indicator to the right of the track name to show when you’ve got other resources below the topmost playlist, to more advanced re-recorder workflows for post

users. For example, huge HDX film sessions with a lot of tracks can now reside on a single system without timing and latency issues.

Another addition is the new Layered Editing button, parked to the right of the annoyingly easy to toggle Insertion Follows Playback button at the top of the edit window. When Layered Editing is on, you can drag one clip over another (which now goes 50% opaque as you move it) without losing what’s below. In other words, if you move the edit back, the underlying clip is still there, not an empty hole as in the past. Pro Tools will also warn you if you’re dragging a clip onto another clip that’s offscreen by turning the clip red as you move it.

Shift+up/down on a selected track now toggles between playlists. This shortcut would benefit from a lock on/off switch. Someone poking around trying to find other time-savers might accidentally change a playlist when hunting for a similar shortcut. Fading also got an upgrade in 12.6. From the smart tool, you can now alter fades freely by hovering at the vertical halfway point of a fade, holding the mouse then moving them around. I’d like to see an option+click function here that would snap a fade to linear.

## DO YOU NEED IT?

Is Pro Tools 12.6 worth the move? In a word, YES! I regularly jump between Pro Tools 11 and 12 for tracking, overdubs and mixing on various systems. By far, Pro Tools 12 delivers the goods that truly make a difference in workflow speed and function. And if you’re way back at PT 9 or before, it would behoove you to make a move now.

Case in point, I went from a 12.5 tracking session and used Save Copy In... to save back to Pro Tools 7►9 for a band that was still using Pro Tools 8 at home. The session would not open. It stalled at loading the fades with some audio showing up, and other tracks sputtering. I don’t have experience with it, but I can’t imagine that going back to 5.1►6.9 would work any better. It only makes sense that there has to be a backward breaking point, and I believe this is it. So bank on the future, Pro Tools 12.6 has what you need, whether you know it or not. ■

*Kevin Becka is Mix’s technical editor*



# Your search for a new microphone ends here.



## AEA N8

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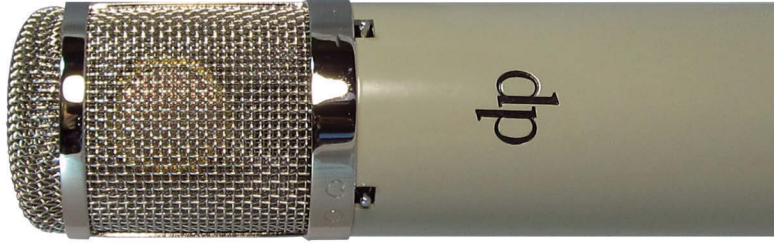
## JOSEPHSON C715

Unique single-diaphragm variable  
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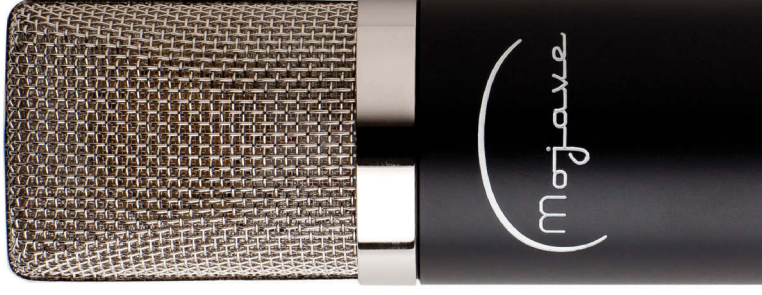
## TELEFUNKEN AR-51

Multipattern LDC boasting  
smooth mids, open top and  
balanced low end



## MOJAVE MA-300

Multi-pattern tube LDC  
promising warm, full-bodied  
sound reproduction



# GENELEC 8350A SAM AND 7360A SAM

## Smart Active Monitors With Sophisticated Correction Software



The 8350A uses a Class D amp for the woofer (200W) and 150 watts for the tweeter.

**E**ngineers often find themselves working in rooms that, for a variety of reasons, may offer less-than-ideal acoustics. Some of the problems can be tamed through the use of acoustic treatment or through analysis and correction of the room response. Genelec's range of Smart Active Monitors is designed to do the latter, by combining advanced DSP technology and Genelec Loudspeaker Manager 2.0 software. For this review, Genelec sent *Mix* a set of SAMs consisting of a pair of 8350A, one 7360A subwoofer, and a Loudspeaker Management System.

The 8350A is a two-way SAM with an 8-inch woofer and 1-inch metal dome tweeter. Onboard biamplication is Class D, generating 200 watts for the woofer and 150 watts for the tweeter. There's no mistaking the 8350A's distinctive pod-like aluminum housing. Its Minimum Diffraction Enclosure features rounded edges, curved sides and a Directivity Control Waveguide to minimize diffraction, control directivity and maximize internal volume for enhanced low-frequency response. The cabinet is formed from two pieces of die-cast aluminum. It's lightweight, stiff and easy to damp; it also serves as a heat sink for the power amps and provides electro-magnetic shielding. The cabinet sits atop an integrated IsoPod pedestal that decouples it from the resting surface and allows easy adjustment of listening angle.

Audio input is via rear-panel balanced XLR analog or AES/EBU digital inputs. A digital thru routes audio to the next 8350A in a stereo pair. Also found on the rear panel are a set of DIP switches for stand-alone operation, an IEC power inlet and a power switch.

Occupying the middle position in the SAM subwoofer range is the 7360A, which houses a 10-inch woofer powered by a 300-watt Class D amplifier. The first thing you'll notice about the 7360 is that it's heavy. I was just able to manage moving it without help, so I was happy to finish experimenting with its position in my control room.

The 7360A looks different from most subwoofers due to its Laminar Spiral Enclosure; in fact, the enclosure is round while the exterior frame is squared off for stability. LSE employs a patented spiral vent yielding minimal turbulence and squeezes a very long reflex tube into a compact area. Multichannel audio can be handled using the 7360A's extensive complement of eight analog audio I/Os, LFE I/O, and link I/O connectors. Stereo digital I/O is available via AES/EBU connections, and the 7360A has a set of

DIP switches for making adjustments in stand-alone operation. A footswitch jack facilitates easy bypass of the 7360A, in which case the 8350As are restored to full-range operation.

I set up the SAMs in my control room on 36-inch stands alongside the desk, which put the tweeters a few inches above ear level. I was easily able to adjust the focus of the 8350As using the IsoPods, tilting them down a bit toward ear level. Once set, the IsoPods held position securely. I connected the output from my monitor controller to the 7360A's main analog inputs, then from the 7360A's outputs to the 8350A inputs, enabling the system to achieve proper crossover and relieving the 8350As from the need to produce the lowest frequencies. After experimenting with placement, the 7360A settled underneath the desk to the right of the room's centerline.

### GLM SYSTEM

Using the Loudspeaker Management System was a breeze. The GLM Network Adapter connected to my MacPro via USB, and the supplied Cat 5E cables daisy-chain the monitors to the Network Adapter. A measurement microphone plugs

### TRY THIS

GLM 2.0 allows you to create a speaker layout that mirrors the components in your system. First connect all of the SAMs to the network and turn on power. Opening GLM for the first time reveals a drag-and-drop box containing the system components and a room layout on the right (or you can create a new layout using File>New). Simply drag each monitor into its respective position. As you drag a monitor, an ID tone is played, ensuring correct position of the monitor in the layout. Before commencing AutoCal, confirm that the measurement mic is equidistant from each speaker. If it is not, the software will apply different time-of-flight delays to the 8350As.



into the Network Adapter via 1/8-inch jack, as does an optional remote volume control.

Genelec has done a nice job on the GLM software, making it very easy to configure (see Try This). After creating a monitor layout, AutoCal is ready to run. Initially, I used AutoCal with the box checked for “Each front left-right pair shares the same equalizer settings.” This should be reserved for rooms that are closely symmetrical. If your room is not, then uncheck the box so that AutoCal can apply different equalization for the left and right speakers. In one fairly symmetrical room I used the same EQ but in another (not-so-symmetrical) control room I allowed AutoCal to calculate EQ separately for the left and right 8350As. AutoCal can run single- or multi-point analysis, and you can store, name and recall different measurement positions in a room—for example, “Producer Desk” or “Engineer Position.”

Running the process produces a series of tones from each monitor; the front-panel LED of the respective monitor blinks while the sweep is playing. Response of the measurement microphone is taken into consideration based on its calibration at the factory, identified by its serial number. GLM software updates the database of microphones periodically, so it's not something you need to think about.

Working on mixes and tracking sessions, the first thing I noticed after AutoCal was the startling center image. Vocals were presented almost as if there were a center speaker. The midrange, in particular, was very transparent and uncolored—a trait that I value highly, especially when tracking. Transient response on drums and percussion was excellent but never harsh or fatiguing. The bottom end was very tight and controlled but was noticeably reduced compared to what I expect in my room.

Switching AutoCal in and out while listening was an ear-opening experience: I could hear the low end tighten up with AutoCal on, and become exaggerated when AutoCal was bypassed. Spectrum analysis pre- and

## PRODUCT SUMMARY

**COMPANY:** Genelec

**PRODUCT:** 8350A Compact Studio Monitor, 7360A Studio Subwoofer, Loudspeaker Management System

**WEBSITE:** [www.genelec.com](http://www.genelec.com)

**PRICE:** 8350A, \$2595 each; 7360A Subwoofer, \$2850; Loudspeaker Management System: \$495

**PROS:** Excellent sound reproduction; AutoCal is capable of compensating for room deficiencies

**CONS:** Technology like this ain't cheap; You may not like what you learn about your control room.

post-AutoCal (using a Phonic PAA6 analyzer) confirmed that AutoCal smoothed the bass response from 100 Hz down, in some areas by as much as 10 dB. The resultant response after AutoCal was flat within about  $\pm 5$  dB across the frequency range—which is impressive.

However, I felt like some of the mixes made using the 8350A/7360A system traveled to other studio and home systems with a bit too much bottom end. Like most engineers, I understand the concept that if my room emphasizes the low frequencies, my mixes should sound “bassy” in the control room to sound balanced elsewhere. Listening to the Genelec system after AutoCal, I felt like my mixes were a bit light in the bottom—but if I mixed the bottom to a comfortable level in the

CR, then it was too loud when the mixes were played elsewhere. AutoCal's parameters can be manually edited, so I raised the output of the subwoofer 3 dB to produce a bit more bottom in the CR.

## THE FINDINGS

As an analysis tool, GLM is extremely valuable, the graphic response curves clearly showing where problems exist in a control room, and what AutoCal has done to compensate. Keep in mind that GLM corrects through the use of filters, and by definition applies cuts. If you have a notch in the room response, GLM won't fix it with a boost—which is just as well because such EQ boosts (especially in the LF range) eat up headroom very quickly.

The Genelec 8350A and 7360A combination is an excellent system capable of making extremely sophisticated corrections to room response, but don't expect it to cure all of the issues in your control room. Anyone who is purchasing a top-notch monitor trio in this price range owes a listen to the Genelec 8350A and 7360A. ■

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

# Goliath. World's most powerful audio interface



The advertisement features a composite image. On the left, a computer monitor displays the 'Vintage Hardware-Based Effects' software interface. In the center, a hand holds a pair of drumsticks over a blurred background of a drum set. In the foreground, the Antelope Audio Goliath audio interface is shown, featuring a silver faceplate with multiple knobs and buttons. The interface has a central display showing a frequency spectrum. To the right of the interface is another unit, likely the subwoofer, with a similar design. The Antelope logo, a red silhouette of a leaping antelope, is in the bottom right corner. The website [www.AntelopeAudio.com](http://www.AntelopeAudio.com) is printed in red at the bottom center.

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## GRACE DESIGN M108

8 Channels With 192kHz ADC, Hi-Z inputs, Dante Option

**M**ost pieces of analog audio gear can be categorized by one of two design philosophies. Either the device is designed to impart a unique color or tone, or it strives for accuracy and sonic purity. Since the 1990s, Grace Design has been creating products that trend toward the latter with great success. The company's mic preamps, compressor and monitor controllers all have the ability to pass signal through their circuits with utmost clarity, detail and robust signal, without introducing additional harmonics or saturation.

In addition to continually striving to produce the highest fidelity tools, Grace designers aim to integrate these tools into the most modern of workflows. The Colorado company's latest offering, the M108 preamp with ADC, echoes the innovation made available in the M802, an 8-channel, remote-controlled mic preamp. Integration with the Pro Tools through MIDI control provided convenient operation. The M108, builds on this, adding some slick new digital I/O options and a variety of remote-control methods, all while reducing the cost. The end result is a high-quality 8-channel mic preamp with integrated ADC, seemingly perfect for remote recording, broadcast or live sound applications.

### GETTING CONNECTED

Most of the M108's connectivity can be found on the rear panel, with the exception of a pair of instrument jacks and a headphone jack on the front of the unit. On the rear, there are eight XLR input jacks that can accept mic or line-level signals. Each mic preamp has a generous gain range of -6 to 69 dB. The M108 can be used as a purely analog mic preamp, while outputting through a balanced DB25, 8-channel output.

Alternatively, the signals can be A/D-converted and fed to a variety of digital output connectors to ensure compatibility with a variety of interfaces and workflows. Conventional options include an 8-channel AES/EBU output, connected via another DB25. Toslink jacks are also available, allowing high-resolution 24-bit/96kHz S-MUX ADAT operation, though a single jack is able to provide eight channels of ADAT optical signal up to 48 kHz.

The M108 also features a USB 2.0 connection, allowing the unit to perform as an 8x2 DAW interface. When running on a Mac, there is no driver install necessary, and the unit plugs and plays. To facilitate monitoring when recording through the M108, an optional analog output card can be installed, providing a pair of TRS balanced outputs. In the absence of this option, audio can be monitored through the front-panel headphone jack.



The M108 features a USB 2.0 connection, allowing the unit to perform as an 8x2 DAW interface.

Each of these stereo output options presents several choices of source signals. Either can be fed a post-DAW, USB return from the host computer, though this source can be subject to latency, especially considering the reliance on USB 2.0 connectivity. A low-latency blend of input signals can be created instead, using the M108's integrated mixer, and that can be fed to either or both outputs.

The M108 includes an option slot, which can be loaded with a Dante interface card. For those not yet hip to Dante, it is a digital protocol allowing high-resolution audio in large channel counts, capable of spanning fairly long distances thanks to its use of Ethernet connectivity.

### TAKING CONTROL

Adjusting gain, applying phantom power, building the monitoring mix and addressing general settings can all be done through a concise set of controls on the front panel of the M108. In the center of these controls is a fairly large, monochromatic OLED display. This is flanked by two large rotary-encoders with integrated soft-keys which, along with a quartet of additional multi-purpose soft-keys, perform all of the control functions.

The two main knobs work in tandem in each menu, with one often focusing on adjusting input gain, while the other is dedicated to building the monitoring mix. It seems that anyone could get comfortable with the preamp functions fairly quickly, as there is plenty of visual feedback and fairly intuitive operation. Jumping back and forth between input gain and monitoring menus gets a little trickier.

Remembering which button to press, or whether you have to hold it or press it once, takes getting used to. Different display modes are available, each prioritizing information on the display differently, which seems like it would help the learning curve, though it only seemed to add more variables. At the end of the day, picking one display mode and getting comfortable with it seems the best strategy.



## ETHERNET CONTROL

Aside from the Ethernet connections available on the Dante expansion card, the M108 has its own Ethernet connector for dedicated remote control functions. When connecting this port to a networked router, some very unique control options open up. One is to download the M108 control app for Mac or Windows and run the software on a computer connected to the same network. From this software, global ADC settings like clock source and sample rate can be addressed, as well as channel-specific functions like gain, phantom power, polarity and channel name. When adjusting gain, feedback is provided by a dBFS meter, which is surprisingly quick and responsive.

Once the M108 is connected to a network, the unit's IP address can be entered into any Web browser and a GUI very similar to the standalone app appears in the browser. One significant omission is the meter, so either the preamp itself, or whatever system it is connected to has to be in view when using IP-based remote control. Despite that, I think this is a pretty cutting-edge innovation because it is completely platform-independent. Whether running a Web browser on Mac, PC or Linux, or on a portable Android, iOS or Windows phone, all devices can control the M108 equally, with no software to install. For me, it worked very reliably across several different devices.

Finally, the M108 borrows a couple of functions from the Grace Design M802 mic preamp. The M802 has a hardware remote control that connects via a DE-9 (Sony 9-Pin) connector using the RS-422 serial machine control protocol. The M108's back panel has a pair of DE-9 connectors that can be used to connect to the M802 remote, but they also double as a MIDI in and out connector. This unconventional MIDI connector requires an adapter to interface with a standard 5-pin DIN connector, but when employed, it adds the M108 to a short list of mic preamps that can be controlled directly from the Pro Tools HD software. This function is designed to work with the Avid PRE, but the M108 can emulate that unit, allowing Pro Tools to control any function that the M108 and Avid PRE have in common.

While all of these control options can do a great job of setting input levels and global settings, none of them provides any functionality for easing the operation of the M108's monitor mixer. It seems like the primary function of other interfaces' software control panels is to ease the functionality of blending playback channels with zero-latency input signals. The visual aspects of fader position and output signal level meters prove very useful in these cases. The absence of any such functions through the M108 control software leaves something to wish for in future software updates.

## IN USE

Prior to trying out the M108, I considered the Grace Design m501mic preamp to be a go-to option in any situation that demanded generous amounts of gain, high amount of detail, and the lowest possible self-noise. This included any application where ribbon mics came into play or especially when recording Foley. When the M108 arrived, I was excited to see how it would stack up against its 500 Series sibling. I just happened to be recording Foley, so I quickly put it to the test and was not disappointed.

The M108 delivered the same monstrous amount of gain that I had come to expect from the m501 with the same unnoticeable noise floor.

## PRODUCT SUMMARY

**COMPANY:** Grace Design

**PRODUCT:** M108 Mic Preamp/ADC

**WEBSITE:** [www.gracedesign.com](http://www.gracedesign.com)

**PRICES:** \$2,845 (street)

**PROS:** Great sound. Good variety of digital output and control options.

**CONS:** Not the strongest standalone USB interface.

The only real difference that I noticed was that the M108 seemed to take the detail to an even higher level. Everything sounded so clear and present. This was particularly noticeable when performing noise removal. In some cases, despite the low self-noise of the preamp, I still had to remove some ambient room noise.

When removing noise using iZotope RX or other broadband noise removal, I have always noticed that more detailed harmonic structures have held

up better to the processing. It seems that it is easier for the software to distinguish between desirable audio and unwanted noise if there is more information to work with. The M108's tracks managed to stay remarkably clear without being subjected to artifacts, which is a testament to their initial complexity.

When recording any kind of hits or footsteps, the sound was very tight and transient response was very quick. My only complaint was the M108's fan. In some cases, I was recording myself, and as a result, I was in the room with the preamp. All would be well for a while, but when the fan would kick on; it was very audible. It was the kind of thing that you didn't really notice in a control room, while listening to audio through monitors, but when the room was miked, you could definitely hear it.

I think the most impressive thing about the sound of the M108 was the stereo imaging that it was able to capture. I recorded a variety of acoustic instruments with a combination of spot mics and ambient room mics. In every case, the close mics continued to have the same level of detail that I had been experiencing, with a defined, full-sounding low end. What really caught my attention, however, were the room mics. The localization of sources in the sound field was incredible. When recording an acoustic guitar and an acoustic bass, both miked by the same stereo miking rig plus spot mics, there was full, open sound of the room in the recording and you could see the positioning of the players in your head when listening back.

The DI input was also a solid performer. Recording a DI bass, the bottom end was massive, but the support from the midrange harmonics of the instrument helped maintain an intelligible shape. There was a generous amount of headroom, and I never found myself fighting levels. Sometimes with DI inputs on multi-purpose units like this, things either sound small and thin, or they are pushing distortion. This was not the case with the M108 at all. I could get great tone with responsible headroom, consistently.

## THE FUTURE?

It was no surprise that the M108 sounded phenomenal, as that is what we have come to expect from Grace Design. This being my first experience with the company's A/D converters, I was optimistic, but they may have surpassed my expectations. The imaging was so accurate, it was eerie. With the amount of gain available, coupled with the detail and clarity, this has to be one of the finest preamps on the market today.

The new tech features were also pretty strong. While the USB interface option isn't the most fully featured, it is a handy function in a pinch and would be useful for remote recording. The Web browser control was very cool and most definitely useful, and while I didn't have the opportunity to test the Dante option, that technology is on the rise and will most definitely be a draw for many. Altogether, I would say that this is a hit. ■

## MCDSP ML8000 ADVANCED LIMITER

Discrete Multiband and Wideband Units in a Single GUI



Controls for the ML8000's multiband limiter are positioned in the bottom half of the GUI's center and in the bottom-left corner.

**T**he McDSP ML8000 Advanced Limiter incorporates two completely independent stages of limiting: Its 8-band limiter is followed in the audio path by a wideband master limiter. The plug-in's proposed primary application is mastering, but it's also extremely well-suited to use on buses and individual tracks. Wide-ranging Knee controls—one for each limiter stage—adapt the processor to use as a limiter or compressor, or both simultaneously.

The ML8000 is available in AAX (Native and DSP), AU and VST formats, and in both mono and stereo configurations. I reviewed the AU version in Digital Performer 9.01, using an 8-core Mac Pro running OS X 10.9.5.

### THE PLOT THICKENS

At the top-center of the GUI is an interactive response plot that shows frequencies (along the horizontal axis) vs. gain (vertical axis). The plot allows some control adjustments and graphically depicts the ML8000's multiband action. Color-coded shadings show input gain for each band, and a white curve moves up and down to reflect changes in in-band gain due to processing (see image above).

You can drag vertical lines left or right to adjust the bandwidth of each of the multiband limiter's eight bands. (The multiband limiter eschews using crossovers to split up bands for processing, instead using active processing to minimize phase distortion between adjacent bands.) Each band also has a gain "dot," which you can drag up or down to respectively boost or cut input gain for the band. Click on two small buttons below the response plot to apply a highpass and lowpass filter to bands 1 and 8 before dynamics pro-

cessing. The filters use the bands' respective crossover points for their corner frequencies and employ 12dB/octave slopes.

Below the response plot lie the majority of controls for the multiband limiter. Controls for each band include a gain fader, threshold control (which sets the output ceiling, or maximum output level), and bypass, link, solo and key-listen buttons. The threshold level is adjusted by vertically dragging an orange arrow positioned alongside the band's input-level meter (which shows signal level after the band's input-gain fader), providing an intuitive visual reference as to how the two identically calibrated levels compare. Any combination of bands can be soloed: Rather than monitoring the soloed frequency bands' spectra, soloing deactivates processing in bands that are not soloed. (All control settings are retained for subsequent reactivation.)

Clicking a key-listen button monitors the corresponding band's input signal post-fader and before dynamics processing. Each band can be linked to any combination of other bands: Click on the M (Master Link Enable) button for one of the bands to select it as the gain, threshold and bypass controller for all other bands that have their L (Link Enable) button activated. Fortunately, control offsets are maintained after linking, and each linked band can have its own gain and threshold controls adjusted independent of the master band; with this design, you don't have to defeat the link function temporarily simply to fine-tune control offsets between bands. Nice! You can automate all controls for the ML8000, and linked bands follow the link master's automation.

Global controls for the multiband limiter (situated in the lower-left corner of the GUI) include Release (time), Knee, Bypass and global Character Mode and Focus buttons that affect how the multiband limiter detects and acts on input signals. Cycling through the six Character modes (Clean, Soft, Smart, Dynamic, Loud and Crush) progressively changes the multiband limiter's action from transparent and pristine (Clean) to loud and pumping with some signal distortion (Crush).

There are also three Focus modes: Fixed (which elicits standard active processing), Vari-1 (slightly narrows the bell-curve shape for each band), and Vari-2 (provides the most narrow bell-curve shape for

### TRY THIS

For a bombastic sound on room mics for drums, first click the ML8000's Snap button to move the multiband Threshold controls to their bands' respective input levels. Set the limiter to Crush mode and the softest knee and quickest release time possible. After linking all the bass bands, you can discretely control how explosive the kick drum will sound by adjusting the input-gain and threshold controls for the link master.



each band). Because each mode's action is further influenced by your Knee setting, you can fashion a huge variety of dynamic responses to tracks. A convenient Snap button is also provided; clicking on it sets all Threshold controls to the approximate signal level each band's input meter shows.

The ML8000's second processing stage contains a master limiter that uses the same algorithm as the company's ML4000 Limiter plug-in. The master limiter employs 1 ms of fixed lookahead detection to minimize distortion. Controls for this limiter (situated in the top-left corner of the GUI) include Threshold, Ceiling (maximum output level), Release (time; adjustable from 1 ms to 5 seconds), Knee, Bypass and Character Mode selector (which offers the same six Character Modes as the multiband limiter and adjusts how the master limiter reacts to signal peaks).

On the right side of the GUI are left- and right-channel meters that show the master limiter's input (post-multiband limiter) and output levels, along with a singular gain-reduction meter and clip LEDs.

#### CRUNCH TIME

I got very good results processing a full mix with the ML8000, using a very hard knee and fast release times in Clean mode for both limiter stages. Using the multiband limiter, I could transparently control bass level, sibilance and other excess spectral energy. For example, I could boost the input gain in bass bands and then limit them to create a bigger yet tighter bottom. The master limiter section very transparently increased the mix's perceived loudness by reducing peak levels overall.

All that said, I wished the ML8000's control set enabled the more discriminating processing needed to execute surgical mastering techniques. Because the ML8000 lacks freely programmable internal sidechain filters and external sidechain inputs, I couldn't make the kick drum's bottom-octave spectra key the limiter's high-frequency band (at roughly 4 kHz)

#### PRODUCT SUMMARY

**COMPANY:** McDSP

**PRODUCT:** ML8000 Advanced Limiter

**WEBSITE:** McDSP.com

**PRICES:** Native: \$199 (\$179 MAP);  
HD: \$299 (\$279 MAP)

**PROS:** Sounds great. Separate multiband and wideband limiting stages. Includes a variety of limiting modes. Bands can be linked, with offsets preserved. Intuitive GUI.

**CONS:** No freely programmable internal sidechain filters or external sidechain inputs. No M/S mode. Can't clear all clip LEDs at once.

to exclusively rein in the kick's excessively clicky beater hits; instead, limiting high frequencies also unavoidably attenuated snare drum strikes, which didn't need any treatment on this particular cut. I also wished the ML8000 had a mid-side mode to allow discrete dynamics processing in each channel. For example, limiting excess midrange energy in center-panned elements of a mix also attenuated the same spectra in the mix's side channel.

I got great results using the ML8000's multiband limiter section in Crush mode on room mics for drums. Dialing in the softest knee and fastest release time delivered an explosive sound, and I could tailor how much the kick and snare each got limited (see the Try This sidebar).

I also got terrific results using the ML8000 on electric bass guitar. I used the multiband stage to pump up the gain in the lower bass band, and then limited the band using a fairly hard knee in Soft mode. Using a very soft knee for the master limiter (also set to Soft mode) and about 2 to 4 dB of gain reduction added subtle distortion that made the bass growl while sitting it perfectly in the mix. Awesome!

My only disappointment with the way the ML8000's GUI functioned was, there was no way to clear all meter "overs" at once (say, by double-clicking one clip LED); McDSP says it plans to implement this capability in the future.

The ML8000 gets very high marks for its excellent sound quality, separate multiband and limiting stages, wide variety of limiting algorithms and intuitive GUI. The plug-in sounds terrific on individual tracks and does a great job handling basic mastering applications. There are more flexible and fully equipped limiters for executing advanced mastering techniques, but what the ML8000 does, it does great. ■

*Michael Cooper is a recording, mix, mastering and post-production engineer and a contributing editor for Mix magazine.*

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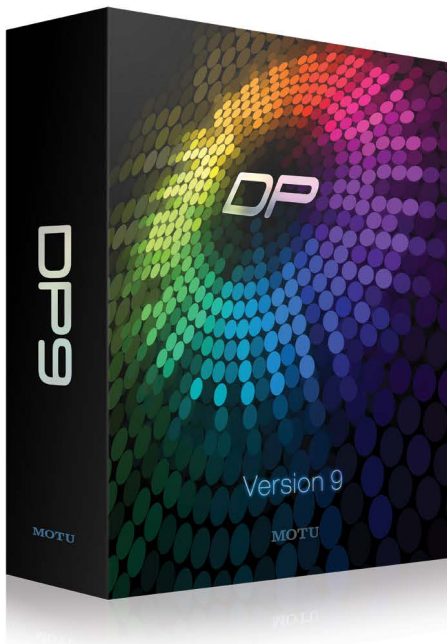
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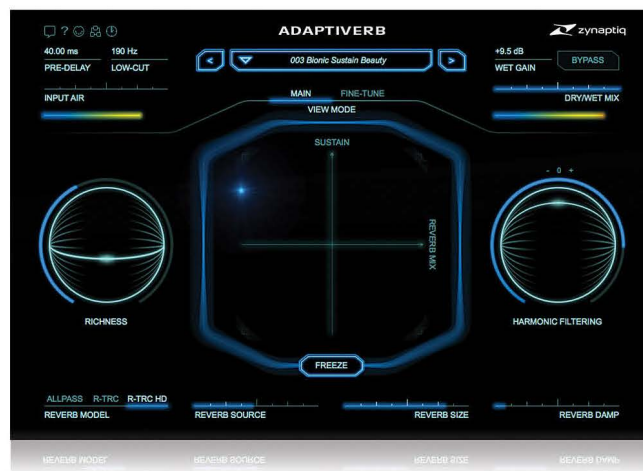
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The TLM 103 combines a capsule drawn from the legendary U87 with tried-and-true transformerless circuitry to deliver classic Neumann sound to any project studio, professional facility or performance venue. Incredibly low self-noise, robust feedback suppression and solid construction make the TLM 103 a must-have mic for any situation.

## Focal Trio6 Be

### 450W 3-way studio reference monitor

The Trio6 Be was designed to meet the standards of the most demanding engineers. This dual monitor is the new reference in its price range owing to its extreme neutrality, its precise stereophonic imaging, and its ability to resolve the most minute sonic details, while its Class G amplifiers deliver SPL levels to suit all musical styles.



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## The Year in Gear



By Kevin Becka

**H**ere we are again at the end of another year in audio. How's the weather?

I live in Nashville, which is growing at an astounding rate. The studio and live business here is brisk, with a lot of bands either moving in or coming through town to record or play the local venues. Your area and experience will differ but what we all have in common is the gear that comes through the pipeline.

In some cases prices are dropping; for example, Steven Slate lowered his Everything Bundle prices across the board. It's now \$14.99 monthly for the annual plan; \$24.99 month to month; or \$179.88 flat rate for the year. Slate also bowed the VerbSuite Classic, FG-STRESS plug-in model of the Distressor, and the D16 Repeater modeling 23 classic and neo-classic delays.

Plugin Alliance has launched its Holiday calendar sale with a different plug-in offered on special every day. They were going for \$9 each in November, so there should be some great deals to be had this month, as well. PA has also been busy developing new products, releasing the new brainworx bx\_rooMS reverb and Unfiltered Audio Sandman Pro delay.

Affordable gear in 2016 isn't just about plug-ins. ATC released its most affordable monitor yet at AES. The SCM12 Pro is a passive, two-way monitor with a 6-inch woofer and 1-inch tweeter that goes for \$1,990. ATC's P1 Pro amp stays upmarket, providing 150 W of clean power for \$3,490. Watch for my review in the new year. Also affordable, and out of the ordinary, is the BAE Hot Fuzz guitar pedal (\$225). It's two pedals in one that can be used in parallel or in series. The left side is a high-frequency boost, and the right side is an English 1970s-style fuzz box. Radial Engineering, the company that regularly comes to NAMM and AES with a dozen or so new products, released the Studio Q talkback system for \$299.99, and the LX2 and LX3 passive line splitters.

Just a month or so ago, Avid released Pro Tools 12.6, which I chose as one of my Top Gear picks for the year. When 12.5 bowed with elegant, embedded collaboration tools, I thought, "How can you top this?" But they did. The new clip-based channel strip in Pro Tools 12.6 HD is top-notch. Read my review in this issue for the full skinny. My next favorites pick is the Focal Trio 6BE monitor. They are full-range, offering plenty of booty-kicking power, and like Focal's SM9, the 6BE is two systems in one box. The Focus mode lets you quickly A/B between a three-way and two-way system at the push of a footswitch. Last on my list is the Chandler Limited RS124

compressor (*Mix* November 2016). It's a new-classic version of three coveted hardware compressors from Abbey Road's Beatle era. It is nothing short of delicious imparting sonic personality that works on any style of music.

*Mix* reviewer Barry Rudolph's favorites from 2016 include the PSI Audio Active Velocity Acoustic Absorber C20. Barry put it into his own room and found that it solves low-frequency room mode issues in an entirely new and revolutionary way. Working with passive room treatment panels, two or more AVAA C20s can be more effective and take the place of much larger bass traps in controlling small room acoustic problems. Read his review online from our June 2016 issue. Barry also picked DMG Audio's Limitless Mastering Limiter plug-in (*Mix* July 2016). It's only \$199, and Barry says, "You can have your mixes loud, achieve a specific LUFS target loudness if required, yet retain musicality and high-quality sound with minimal negative artifacts."

UK-based engineer Wes Maebe picked the UA Apollo 8p interface (*Mix* October 2016). Wes found that it delivered a transparent sound and was extremely intuitive to use. But if you're after a colored sound, the Unison plug-in suite will provide that latency free. Wes summed it up nicely, "If you're looking for a box that will give you crisp and clean microphone preamps with the ability to turn them into classic and vintage sounding ones, look no further." He also liked the Meris Mercury 7 500 Series reverb (\$549). It's a sound shaper that allows you to alter reverb creatively rather than just dial in time and pre-delay.

*Mix* reviewer Brandon T. Hickey spends most of his time engineering audio for independent films. He loved the Audio Ease Indoor reverb plug-in and said, "I had never imagined the elaborate graphics, nor the effect that they would have on quickly finding a sound, but also the ability to powerfully pan sounds into that environment." Read his review of Indoor in November 2016 *Mix*. Second on his list was the Radial Space Heater 8x2 analog summing mixer. "It is hard to imagine any single piece of gear that could have a more profound influence on all of your recordings and mixes than the Space Heater," said Brandon. But B! Tell us how you really feel!

In a year that brought a lot of ups and downs, it's a relief to know that our audio world still turns, and we're still making movies, records, and loving the art of making sound. Thank you all for reading *Mix* and this column and if you'd like to communicate, ping me on Facebook and let's talk shop! ■



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~ **Tommy Lee**

Founding member - Mötley Crüe.



"Being able to fine-tune a room on site makes all the difference. The Impaler mounting system make the panels easy to install and let you make adjustments without trashing the surface. It works!"

~ **David Rideau**

Engineer/producer - Janet Jackson, Sting, TLC, J-Lo.

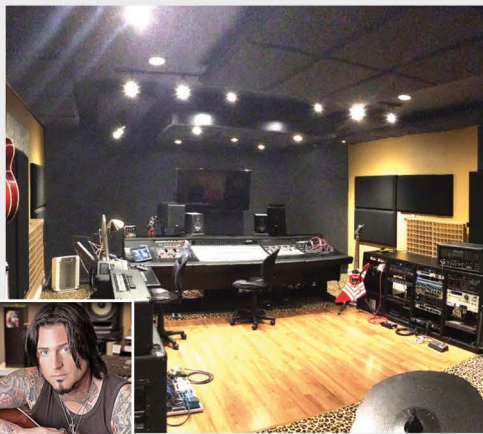


"The Primacoustic is up and kicking butt at my new studio in Santa Monica. I love the way the control and tracking rooms sound now... and so does everyone that records here!"

~ **Butch Walker**

Engineer/Producer - Avril Lavigne, Fall Out Boy, Pink.

***"I love the way the control and tracking rooms sound now... and so does everyone that records here!" ~ Butch Walker***



"When building The Leopards Nest studio, we tested a number of different acoustic treatments and chose Primacoustic. It was easy... Primacoustic did the best job and my studio sounds amazing!"

~ **Jason Hook**

Guitarist - Five Finger Death Punch.



"We've got a mixture of bass traps, diffusion and clouds and the result was phenomenal. It ended up costing less than 25% of the custom solution and it turned out very cool."

~ **Keb' Mo'**

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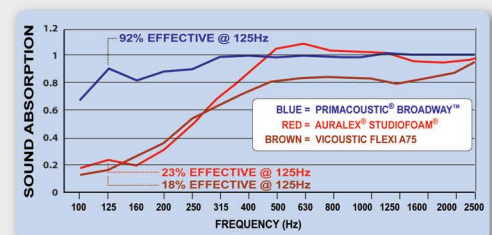
"Not only does my room sound amazing, it's also really beautiful!!!" ~ **John Rzeznik**

Performer/artist/producer - Goo Goo Dolls.

***"Not only does my room sound amazing, it's also really beautiful!!!"***

~ **John Rzeznik**

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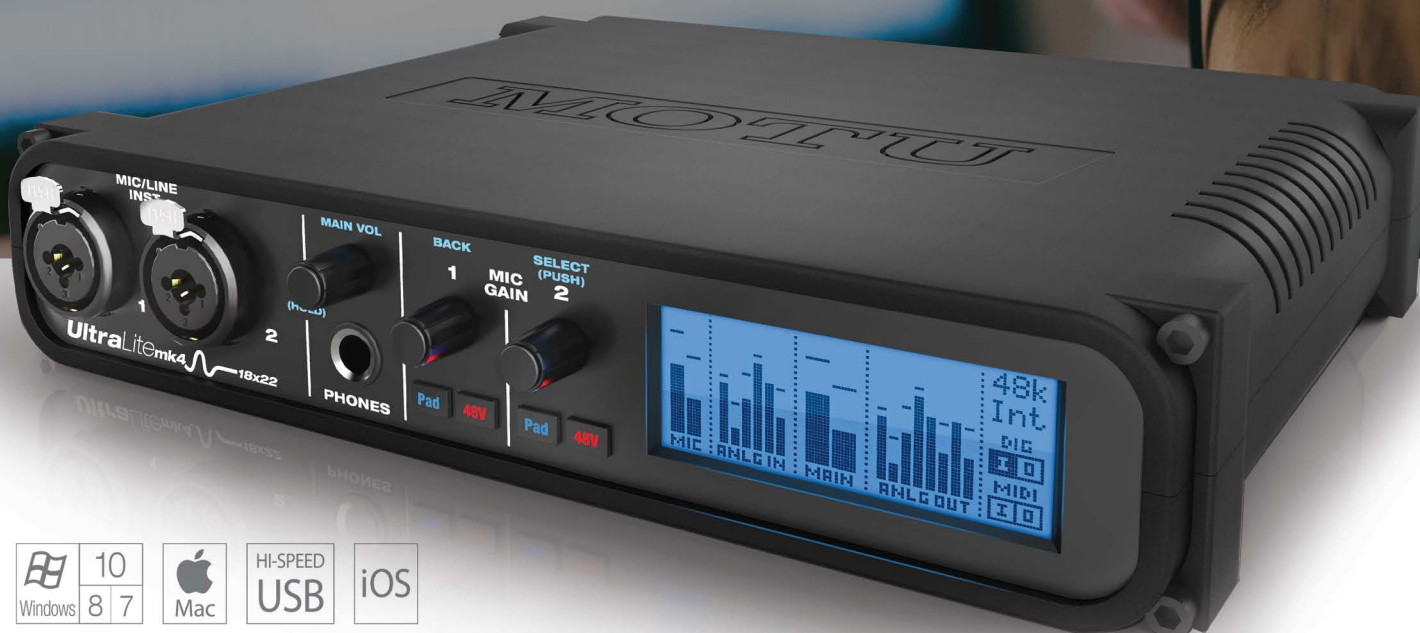
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