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**On the Cover:** The Dauphin Street Sound studio complex (Mobile, Ala.) is not only a world-class facility, it's also ground zero for MLB pitcher Jake Peavy's downtown revitalization efforts. Pictured in front of the API 1608 are chief engineer Keylan Laxtan and engineer/producer Trina Shoemaker. **Photo:** Beth Childs.

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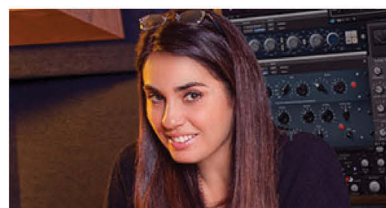


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## From the Editor

### LIVING THE LIFE OF AN OUTSIDER

Something is going on in Mobile, Alabama. You can feel it in the winter air, walking along Dauphin Street downtown, turning into the block-square, well-maintained, 19th-century parks, looking up at the second-story, wrought iron railings a la New Orleans, glancing left to the famed Saenger Theatre, then strolling by Soul Kitchen, Wentzell's Oyster House and The Brickyard, where Ben Jernigan and Friends rock out every Thursday night till closing time.

There's an opera, a symphony and clubs featuring live music up and down the street, on a weeknight. There are music festivals in spring, summer and fall, and the city goes all out every February to celebrate the country's oldest Carnival/Mardi Gras two-week bacchanal. Murals cover the occasional brick side-walls, people walk the streets at night, and the restaurants—featuring local catch from Mobile Bay and the wider Gulf—stay open late. Art shops, dress shops, a piano as public art—this is a town rich in culture, and its history dates back to 1702.

There are also blocks of abandoned storefronts along the way, with signs for lease, some crumbling brick facades, a reminder of the economic realities and civic dislocation faced by so-many mid-market cities across America in the 20th century. And the stigma of its associations in the Civil Rights movement will forever linger. But here, now, in Mobile? You can feel the change happening. Two more blocks and we're at Dauphin Street Sound, pictured on this month's cover and home base for guitar-playing, Cy Young Award-winning Major League pitcher Jake Peavy and his Merry Band of Outsiders.

But you won't see Peavy on the cover; he's far too humble for that. He will likely blush at the notion that I just called them "his" Merry Band of Outsiders. He is simply happiest when surrounded by family and friends, usually with music involved. While he had established foundations in each of the cities he has played in—San Diego, Chicago, Boston and San Francisco—when it came time to establish the overall Jake Peavy Foundation, with its emphasis on Boys and Girls Clubs and music, he brought it all back home. To Mobile. To be run and developed by family and friends.

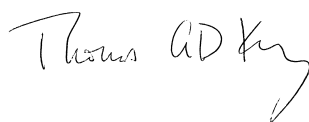
There's the uniquely irascible yet always charming pater fa-

miliars, Danny, Jake's dad, an expert cabinet maker by trade and a fastball-throwing early influence; best friend and brother Luke, a catcher and a better hitter than Jake, who in a corporate world would be considered head of operations but in real life "just takes care of stuff," he says; friend and monster guitar player Ben Jernigan, who comes up with crazy new ideas to expand the reach and then actually makes them happen; Sarah Lauren, head of the foundation with a New York style and Southern mentality; and Thomas Fowlkes, head of marketing, who was a teenaged Boy Scout with Ben and whose great-great grandparents just happen to be buried on Jake's ranch in central Alabama.

When the team needed a headquarters for Jake Peavy Productions and the foundation, Jernigan found a studio. Local engineer Keylan Laxton came onboard, bringing technical expertise and a slew of local contacts. And then they cold-called Grammy-winning engineer Trina Shoemaker, asking her to come in and advise them on what to buy by putting together a wish list. Shoemaker, an original Outsider living the past decade in nearby Freeport, following an exodus from Katrina-ravaged New Orleans, is now a partner. She seems happy and completely at home.

While the studio provides a base for the Peavy efforts in Mobile, the reach extends to whole city blocks, which he has bought up to revitalize, concentrating on arts and cultural-based development. There is weekly outreach to the Boys and Girls clubs in the area. And in a recent visit to launch the overall Outsider brand for the company, an audience of industry professionals was treated to a performance and roundtable discussion with a local teenage big band jazz ensemble, supported by the foundation.

It's a good story: A favorite son returns home and gives back to the community. This one just happens to be real. And it shows.



Tom Kenny  
Editor



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## Mix Presents Sound for Film & Television



Sound designers, editors, mixers, recordists, Foley artists, composers, technologists, chief engineers and all those working in audio post-production, mark your calendars: The fourth annual Mix Presents Sound for Film and Television will be held on Saturday, September 16, 2017, once again on the lot of Host Sponsor Sony Pictures Studios in Culver City, Calif.

Following its launch in 2014, with a focus on the emerging Immersive Sound formats, the one-day exhibition and expert-panel event has expanded into sound design, production sound, virtual reality, television post and other areas. Last year saw the addition of the Production Sound Pavilion, the Dolby-sponsored VR Demo Room and the end-of-the day Sound Reel Showcase, where 8-minute reels from 12 different films were introduced by their sound teams.

"Each year has been better than the last, and that's what you hope for," says Tom Kenny, editor of *Mix*. "We have tried to introduce new areas of the sound-for-picture world each year, while keeping in mind that the core audience is rooted in the creative use of technology. This year we will be adding a Composer's Lounge, where the audience will be able to interact in small groups with some top musicians and artists writing for visual media. I'm excited to start calling up some of the talent!"

Mix Presents Sound for Film & Television is held in the world-class re-recording stages and post-production facilities of Sony Pictures Studios and produced in coordination with the Motion Pictures Sound Editors and Cinema Audio Society.

Details on programming, panelists, sponsors and keynote speaker will be released in the upcoming weeks and months. Visit [mixsoundforfilm.com](http://mixsoundforfilm.com).



## Best of Show Awards: NAMM 2017

The editors of *Mix* and *Pro Sound News*, representing the NewBay Media Pro A/V Group, roamed the aisles of the 2017 NAMM Show, January 19-22 in Anaheim, Calif., and came away with our product picks for Best of Show.

**Antelope Audio Orion32 HD:** 64 channels of stunning audio quality via HDX or USB3, and compatible with any DAW on the market. Antelope Audio's superior clocking technology and powerful FPGA real-time effects modeling capabilities. With HDX, USB3, MADI, ADAT and S/PDIF connectivity and 32-in/32-out analog input via DB25.

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**BLUE Microphones Bluebird SL:** Pristine, highly versatile condenser, with a switchable highpass filter and -20dB pad. Ideal for capturing standout vocal performances, the true tone of guitars, piano and more—extended upper clarity, smooth mids and rich lows.

**Mackie Big Knob Series:** Compact and affordable, Big Knob Passive lets users choose between two sources, two monitors and control it all. Big Knob Studio adds USB recording/playback, a routing choice between three sources and two monitor pairs, integrated talkback and dual headphone outs. Big Knob Studio+ adds 4x3 routing, including USB playback from a DAW with 192kHz/24-bit audio conversion.

**PMC MB3 & BB6 Reference Monitors:** Built on the MB2 and BB5, with profound low-frequency response, tonal accuracy, the latest generation of drivers and intelligently applied DSP. Available in single-cabinet and twin-cabinet (XBD) versions. All feature a hand-built, precision-matched 34mm soft-dome tweeter and 75mm fabric midrange driver, coupled with the latest Radial low-frequency driver.

Note: Products were selected from submissions made by the manufacturers, then judged by editors in-person at the convention.

## Corrections

In our January feature on Pacific Recording in Hollywood, we scrambled some credits on co-owner, engineer/producer Ted Greenberg. He did not work on *20 Feet From Stardom*; his Grammy and TEC awards are for the movie *Standing in the Shadows of Motown*, in which he has 10 credits. Also, a quote regarding the honesty and success of partners was taken out of context. *Mix* regrets the error.

A picture credit in our January feature on Prairie Sun Recording was incorrect. The three studio photos were taken by Dave Rollans of [Dave-RollansFilms.com](http://Dave-RollansFilms.com).

Finally, in our Regional: Miami section, we listed credits incorrectly for Histeria Music. The engineers are providing only engineering for *Bloodline*, and they worked on seasons one and two of *Ridiculos*.



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# Music



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**NEWS & NOTES**  
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**CLASSIC TRACK:**  
**AEROSMITH: "WALK THIS WAY"**  
By Robin Flans **18**



Photo: Danny Clinch

## VALERIE JUNE AND THE ORDER OF TIME

Roots Instruments, Open Approach Yield Unexpected Sounds

By Barbara Schultz

**W**ondrously resonant and authentic, the music of Valerie June is roots-fueled yet defies category. The songs on her new album of all-original songs, *The Order of Time*, are by turns soulful in a Stax-with-brass way, down-home with a high lonesome sound, or really just her own thing, where the gentleness of her plaintive voice may be undercut by spacey, distant drum hits, a mean electric guitar or a gritty B-3—just for example.

June and engineer/producer Matt Marinelli recorded *Time* with many players she now tours with, about a year ago, beginning with exploratory sessions on a few tracks in Brooklyn Recording,

where they worked with engineer Andy Taub.

"I don't think we intended for that stuff to end up on the record," Marinelli says. "It was more of an experiment, but it went great and everybody was fantastic. So we ended up keeping those three songs: 'Got Soul,' 'Slip Slide on By,' and 'Two Hearts,' the last three songs on the album.

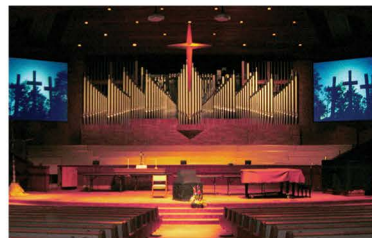
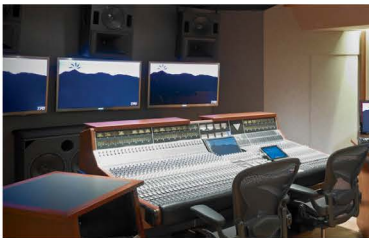
"There was a core group of musicians who worked on the record, but in varying configurations," Marinelli adds. Those included Marinelli playing some electric bass and some guitar, Dan Reiser on drums, Andy MacLeod playing some guitar and drums, and Pete Remm playing various keyboards, including B-3.

The band balanced further studio sessions with a busy touring schedule. A month later, they were back in Brooklyn to record the lovely ballad "With You," a delicate arrangement that evokes Chinese and European classical influences.

"That was done as a one-off, live with strings," Marinelli says. "We had Valerie [vocals, acoustic guitar], me, John Bollinger playing drums, and Mazz [Swift] on violin and Marika [Hughes] playing cello. That was a special day.

"I'm a firm believer in doing as much stuff live as possible," he continues. "Logistics wouldn't allow for all of the horns to be live, but we tracked everything else as a band. More than half of the





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tracks on the album have the live vocals. Other than the songs where there's multiple keyboards, the basics and most of the electric guitars were done live.

"Val plays all her guitar or banjo parts live while she's singing, as well," Marinelli continues. "When she's writing these tunes, she's so used to accompanying herself, it would change the mood of the song if she didn't have an instrument in her hands. It affects her vocal delivery, and it helps everybody else lock into the feel of the song if you can hear where the groove should lie."

Marinelli also believes in the magic of spontaneity: "Val and I would have an arrangement in mind and her parts were worked out beforehand, but I didn't send demos to the other people in the band. We would work it out on the floor and just play the tune a few times. All the folks who played on the record are really talented, so they would pick things up fast, and it would keep things very fresh."

Some sessions were captured to a Studer A827 24-track tape machine with Pro Tools running as a backup, while others went straight to Pro Tools. "In some cases a track only took three takes," Marinelli says. "But if we needed more time to work out the song, Pro Tools is just more economical if you want to roll for hours."

Though the sessions in Brooklyn went very well, Marinelli says it was always the group's intent to decamp to Guilford Sound, in the foothills of Vermont's Green Mountains.

"There were three big reasons to go to Guilford," Marinelli says. "First, I know the studio really well. I have a systems design and integration company called Coral Sound, and Coral helped put together that room years ago. I

know the studio technically and I've done a few other records there. I love [designer/acoustician] Fran Manzella's rooms, and I love the staff: [owner/engineer] Dave Snyder, [engineer] Matt Hall, [studio manager] Cynthia Larsen—everybody who works there is total sweetheart.

"Second, I thought that to concentrate on the number of tunes we were going to get done up there, we had to be outside of New York. We all have so much going on in the city and it's hard to shut off. But if you get four hours north of the city, it's easier to shut everything out.

"The third reason is, our recording setup was going to take a lot of space. It's not a complicated record production-wise, but I wanted to be able to keep things flowing and exciting for everyone, and that just meant having the space to set up in advance. We did one big setup day, with multiple options, so when it came to making changes, there was no down time."

After the technical team's setup day, the musicians spent about a week at Guilford, tracking about two songs per day. June played and sang in a glass iso booth, while the rest of the band was set up in Guilford's naturally lit tracking room, which offers views to the surrounding landscape.

"There are several iso booths, so we'd put amps in those booths, and those doors could be open or closed, depending on the track. I like bleed when it's useful, but if it's a quiet tune, we could easily isolate an amp. On a few of those tunes, though, we recorded as a trio: myself, Valerie and Andy MacLeod playing drums live in the room.

Marinelli kept June's vocal chain largely the same wherever she was situated. She sang into an RCA 44BX that went either into a Purple Audio Biz

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or Grace 201 preamp, then a Universal Audio 175 compressor.

"On tracks where she's singing live in the room with the band, the 44 becomes a little problematic to get positioned, with loud drums," Marinelli says. "So we ended up using a Beyer M500 for that. We were also feeding the vocal to a [Fender Super 6] amp at times, to create more of a sound in the space for people to play to, which doesn't work great with the RCA."

For electric guitars, Marinelli likes to set out a few amp and mic choices, including a Royer 121, Neumann U67, Shure SM7 and a Sennheiser MD409. "I'd quickly switch between signal chains; we'd pretty quickly be able to figure out what was working and run with it," Marinelli says. "The Royer would feed the Purple Audio Biz, the 67 would feed an old Trident B Range channel amp, and then we might swap out one—send the SM7 to the Trident, for example."

Marinelli also likes to have drum-miking options. Reiser had two kits set up, though they used one kit much more than the other, with a U47 FET on kick, AKG 451 on snare top and a Neumann KM56 on snare bottom, a Beyer M160 on hi-hat, and Sennheiser MD409s on rack and floor toms.

"The drum sound would change quite a bit from tune to tune, so if we did need to address a track with a different kick, the drummer would just walk across the room and open up those channels," Marinelli says. "We also had a few overhead options. We had a pair of Neumann M269s set up, but I also had a mono option and an RCA 77 out in front of the kit that ended up being used a lot in the mixes, and some more older RCAs in various positions in the room."

"I hate trying to run wires and patch things up in the live room when everybody is there working on arrangements," he continues. "So I tend to set

up a lot in advance and then pare it down."

There were a lot of elements to sift through, and one of the most critical is June's banjo. "On this record, she is using an open-back banjo instead of a resonator, and I think the best sound we got from that was with a Sony C37A; that tends to be a great banjo mic," Marinelli says. "Some of the banjo sounds we were trying to get were not necessarily what I would define as 'good' banjo sounds. For instance, on 'Man Done Wrong,' getting a very representative banjo sound wasn't the goal; we were trying to do something a little different from the natural approach you would take on a bluegrass record."

"Banjo is a funny instrument. It gets pigeonholed a lot, but that's not necessarily Valerie's approach to the instrument; the way she uses it opens up possibilities to recording it differently or manipulating it differently."

Some of the overdubs for *The Order of Time* were actually done during a holiday visit to June's family home in Tennessee; others were cut in Seaside Lounge and Rayzor Studio in Brooklyn. And one song on the album, "Just in Time," was produced, recorded and mixed by Richard Swift at National Freedom and Reservoir studios in New York. However, all but one of the album tracks were mixed by Marinelli on the API Legacy console at Guilford.

"Probably the most critical thing across the record was finding a vocal reverb that I was happy with," Marinelli says. "We used varying combinations of the EMT 140 plate at Guilford and some AKG spring reverbs that I brought. Guilford also has a chamber that we used a little—more on instruments than voice—and I have a chamber in my own space in New York where I pre-tracked some reverbs. It was critical that we found a signature reverb sound." ■

## ...from Radial!

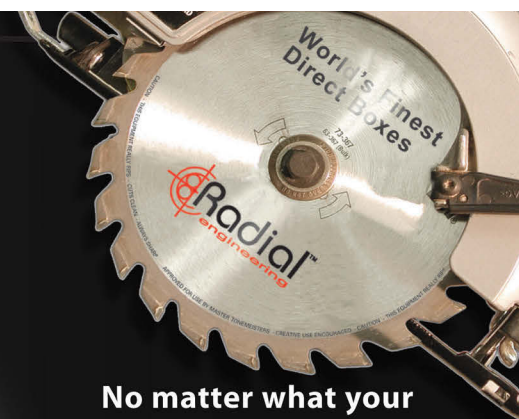
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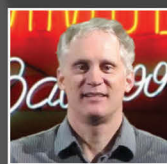
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## SAMPHA'S 100% HUMIDITY

Sampha Sisay's collaborations with Kanye West, Drake, Frank Ocean and Solange, to name just a few, have had the 27-year-old soulful singer/songwriter traveling far and wide from his UK home. During the course of these experiences, Sisay, who uses Sampha as a pseudonym, discovered a correlation between the way he felt when he was singing, and the weather. "I was noticing my body was more adaptable to hotter environments," says Sisay, a characteristic he feels might be biologically ingrained in him from his original home country of Sierra Leone.

Sisay's warm and smooth debut album, *Process*, was recorded in studios located in primarily chillier environments, in the UK (Sarm, Westpoint) and Norway (Ocean Sound). To re-create the tropical climate, humidifiers were purchased. This was a first for producer Rodhaidh McDonald, who works in-house at XL Recordings studio, home to Sisay as well as Adele, Radiohead, the xx and others.

"When Sampha sings, there is never any problem with getting the energy, and the emotion is always dialed in," says McDonald, who uses either a Neumann U87 or M149 (on the rare occasion an SM57 for more upfront or louder vocals) through a vintage Neve 1073 preamp into a Universal Audio 1176 as the signal chain.



Sampha Sisay

"I might say I want you to project more or try a slight change on the dynamic, but we never get stuck in terms of getting the takes, just in getting his vocal warmed up," he continues. "A couple of humidifiers in the studio got a smoother tone to the vocal that is audible. It's as important as any piece of equipment to have a lubricated vocal. Having the humidifier firing off in the vocal booth at all times became an important part of the process. It's quite a relaxing thing to have in the studio, just this vapor, so it creates a nice feeling." —*Lily Moayeri*

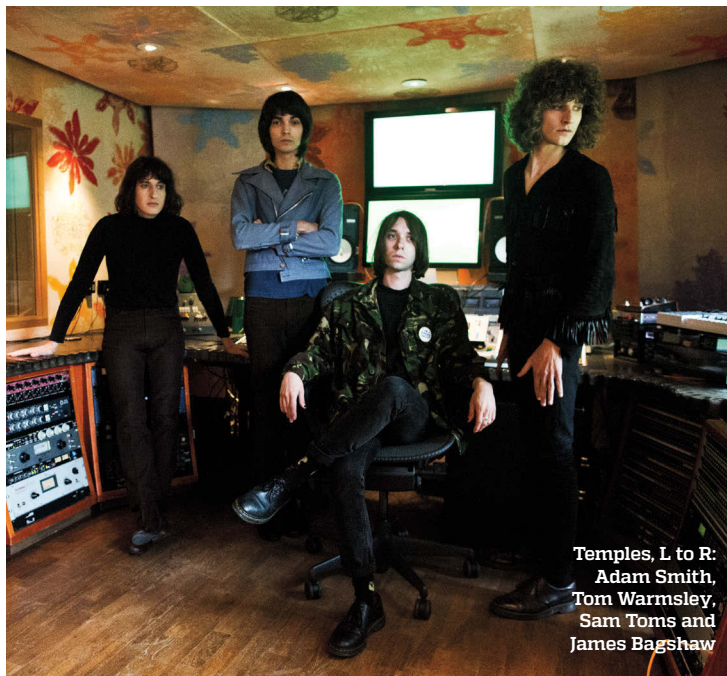
## TEMPLES: CONTEMPORIZATION OF VOLCANO

Since their 2012 single, "Shelter Song," and its follow-up full-length, *Sun Structures*, the UK's Temples have caught ears because of their clever interpretation of '60s and '70s psychedelic rock sounds through modern technology. This ethos is carried to their second album, *Volcano*, but not necessarily replicated.

Recorded primarily at vocalist James Bagshaw's home studio, which since *Sun Structures* has expanded out of one room into two plus a storage unit, the setup is a combination of vintage and modern pieces. Updates for *Volcano* include a Neumann U47, whose quality pushed him to switch to Apogee Ensemble, which brought a better sound with more headroom. From a sonic point of view, the main change for Bagshaw for *Volcano*, which he produced on his own, is going from a stereo setup to a 2.1 setup. The addition of a subwoofer allows him to be more aware of what is happening subharmonically, which makes for a higher fidelity, more contemporary and bigger sound.

"You can contemporize with production without compromising on songwriting," says Bagshaw. "Last time, we had go-to sounds we liked and didn't stray from them. This time, we weren't afraid to put on sounds that wouldn't, on paper, necessarily fit into the mix. It was just a case of manipulation."

When overdubbing drums, Bagshaw puts the bottom snare through a Fender '63 Reissue Tube Reverb Blonde Tolex. "The reverb didn't have the headroom and the same balance it would with the guitar level," he says. "I brought the input down to the guitar level and gained it up afterward because it was hitting it too hard. That sound nobody wants but they all have, which can be very apparent, is going through a valve reverb to take

Temples, L to R:  
Adam Smith,  
Tom Warmesley,  
Sam Toms and  
James Bagshaw

that horrible '80s thing away."

The older pieces tend to have extra noises. On the song "Strange or Be Forgotten," for example, a Clavioline with a loud hum is used, but in the mix it was too loud for the bandmembers' liking. For this, Bagshaw employs a Waves X-Hum plug-in. "You can try to ground lift, or some other unsafe things. We used the plug-in but we could have just done an EQ filter on the frequency on the input, but we didn't think about it at the time." —*Lily Moayeri*





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## TIPS & TECHNIQUES

*From the Pros*

### 1 Rest Those Ears

When we listen to music, either recreationally or professionally, it's easy to forget that our ears can get tired, often fatigued to the point where they exhibit symptoms such as numbness, soreness, an inability to clearly hear frequencies, and so on. This is commonly referred to as ear fatigue, and it is often caused by listening to music at extremely loud volumes (95 dB and up) for a prolonged period. An effective way to prevent ear fatigue is to take occasional breaks to let your ears "reset" themselves; even allowing them to rest for 15 minutes in between listening sessions could go a long way to ensuring long-lasting ear health.

### 2 Use Short Delays for a Pseudo-Stereo Guitar Effect

How do you make that killer guitar take your just recorded sound fatter, without trying to double it by replaying it perfectly note for note? Simply use a short delay to create a nice pseudo-stereo effect to beef up your performance. First, create a new mono Aux track, pan it hard right, insert your favorite delay plug-in, and set the delay length to about 25ms. Next, pan the original guitar track hard left, and use an Aux send to buss the signal from the guitar track to the delay you just created. Make sure the level of the send is set to zero.

### 3 Record a Bass Drum with Dynamic & Condenser Microphones

Though it's certainly possible to get a nice bass drum sound by recording with one mic, the use of two microphones can often give you a fatter kick sound, and ultimately more sound-shaping possibilities when it comes time to mix. Start by placing a dynamic mic (Shure SM 57, for example) about 4" inside the kick drum. Next, position a large-diaphragm Condenser mic about 4" away from the front head, with the capsule facing the drum. Have the drummer, or whomever is available, play the kick drum at a slow and steady interval, and adjust the mics' positions in small steps until you hear a sound with which you're happy.

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# Classic Tracks

By Robyn Flans



## "WALK THIS WAY"

Aerosmith

**I**t's a good thing Aerosmith needed a break one day while recording a track at Record Plant New York for their most successful album, *Toys in the Attic*. The unforgettable smash song "Walk This Way" likely would not have come to be if the musicians in the studio hadn't gotten itchy and decided to head down the block to the movies, to see a Mel Brooks comedy that had everybody repeating one-liners back in the '70s.

"We all took a break and went to see *Young Frankenstein*," recalls recording engineer Jay Messina. "And that line that Marty Feldman said when he turned around to Gene Wilder and handed him his cane and said, 'Walk this way,' is where the birth of the song came from."

Messina says that the luxury of a movie break in the middle of a session probably wouldn't happen now, given today's smaller budgets (or maybe it still would, if you're Aerosmith), but thankfully it did back then because it led to a great Top 10 song.

Messina's relationship with Aerosmith stemmed from his work with producer Jack Douglas whom he met at The Record Plant when Douglas was an assistant back in 1971.

"He got assigned to one of my sessions and we hit it off right away," Messina recalls. "I liked him because I didn't have to tell him every

single thing to do. So when he got an opportunity to produce, it was a natural choice for Jack to pick me."

Messina had worked on the Boston-formed band's second album, *Get Your Wings* (1974), and then again joined them at Record Plant for *Toys in the Attic* in 1975.

"Jack would get quite involved musically with the band, and lots of times have cool musical ideas for them that they were very receptive to, but generally it was Steven [Tyler, lead singer] and Joe [Perry, guitarist] that were the creative driving force," Messina says.

Messina listened back to the song to jog his memory in preparation for this interview, and the first thing that jumped out at him was that Perry's riff was on the left side, which was unusual for the way he remembers mixing the band as a rule.

"Generally, from my recollection, when we used to mix Aerosmith, Brad [Whitford, guitarist], was usually on the left and Joe was on the right," Messina says. "It was Joe's riff, and Joe plays all the lead, which comes on the right, so that's confusing."

There seems to be little doubt that Perry created and played the famous riff. He owns it in live performance, and every year more young musicians learn to play the famous part in his style.

Messina recalls that most of the recording for *Toys in the Attic* was captured to a custom-built 16-track MCI tape machine, and he says about 90 percent of the mixes were done in Studio A on a Spectrasonics console; unfortunately, he says, the board was not terribly versatile as far as "being able to do lots of technical tricks."

Joey Kramer wasn't in an isolated drum booth, Messina recalls, but was set up in the studio on a little platform with low baffles built around it, not high enough to obstruct his vision of the rest of the room. "We would see him from the shoulders up looking out from the control room," Messina explains. The drum mics, he says, were probably Sennheiser 421s on the toms and U87 overheads, a Neumann KM84 on the hi-hat and an Electro-Voice 666 on the kick drum.

"We had [bassist] Tom Hamilton going through an [Ampeg] B15 amp, where we took an output—a custom direct out of the head of the amp—and we would mike it with an RE20," Messina adds. "Then just on the other side of the glass in the control room was a section of wood, which is where we used to record strings, and that's where we had the two guitar amps."

"We would usually use three mics on a guitar and combine them and then maybe compress that track with a Pultec after it," the engineer continues. "If it gave the guitar sound a little extra edge to add some flanging effect in there, we would just mix it in and print it. So with that kind of mindset, that's how you could end up with an open track [for possible overdubs later] and not have to worry about getting that guitar sound again that everybody loved that particular day. That's the beauty and advantage of printing these effects. If you love it and print it, you



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The mighty Aerosmith lineup from *Toys in the Attic*: Steven Tyler (lead vocals, keyboards, percussion, harmonica, piano), Joe Perry (guitar, backing vocals, slide guitar, acoustic guitar, talkbox), Brad Whitford (guitar), Tom Hamilton (bass, rhythm guitar), Joey Kramer (drums, percussion)

***“We would usually use three mics on a guitar and combine them and then maybe compress that track with a Pultec after it. If it gave the guitar sound a little extra edge to add some flanging effect in there, we would just mix it in and print it.”***

**—Jay Messina**

know you’ve got it. We used to make commitments and print.”

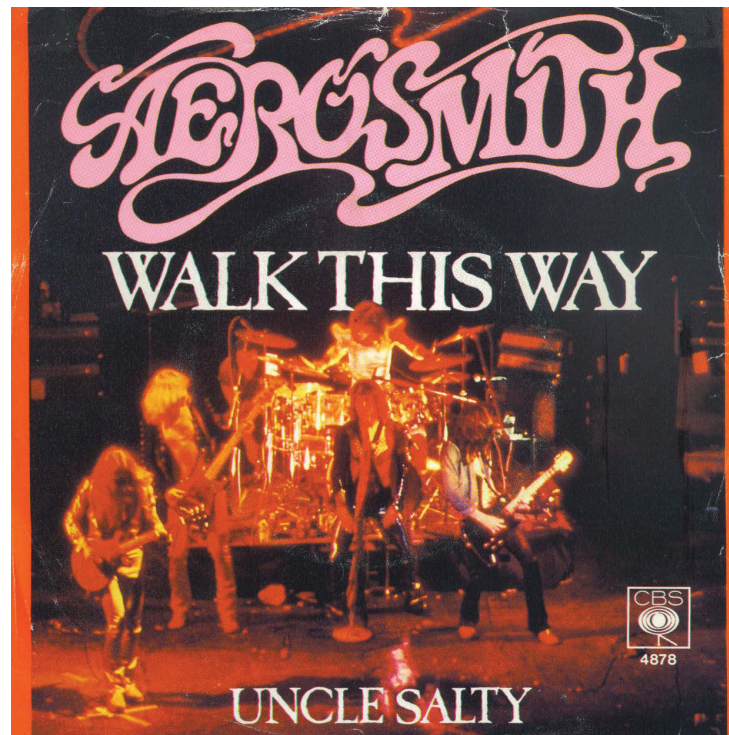
Messina says the band and production team would usually nail down drum sounds first, then they would work with Hamilton on bass sounds. Guitar sounds would be next, and then the band would begin recording live, all together.

“That’s not to say we necessarily kept those [live] performances, but chances are we kept the bass and drums,” Messina says.

The music for “Walk This Way” was written before the band had lyrics ready, so basic tracks were laid down without Tyler present. This meant that after Perry and Tyler finished writing the words, the singer had a complete track to sing to, but as Messina notes, the recorded track was also rapid-fire, so once the lyrics were complete, Tyler had to sing fast and furious.

“I can’t take anything away from Steven,” Messina says. “That’s where it starts. He was able to deliver those lyrics that way. I’ve always said, ‘If you want to get a good drum sound, start with a good drummer.’ Same thing: If you want to get a good vocal sound, get a good singer.”

Messina believes Tyler’s vocal chain included a Neumann U87, a



Teletronix LA-2A and a Pultec, “which maybe I took some 30 cycles out and then added at 10k.” Tyler also overdubbed some triangle, to create the school bell sounds in the song.

The guitar solo that ends the track in a fade is all one track, Messina says. “When we mixed, that was probably a 30 ips delay on the opposite side of the lead track, which is what gives it that spread,” he says. “That was probably a Fender Twin. At Record Plant, we used to have these vintage amplifiers. They were small amps that had really meaty power without tearing your head off with volume. Probably three mics [were used]: a Sony C37, which provided the meat and bottom end of the sound, an SM57, and a Sennheiser MD421, which provided the edge. The combination of all three was compressed through a UA 1176, followed by some boost at 5k in a Pultec EQP-1A.”

Messina says that when he hears “Walk This Way” or “Sweet Emotion,” he feels a particular sense of pride to have been involved in the project. “It makes me feel good that they still play something that I was involved in so many years ago,” he says.

In 1977 Aerosmith’s “Walk This Way” peaked at Number 10, and then in 1986 the song served as a bridge to a new genre of music when producer Rick Rubin introduced it and the band Aerosmith to a breakout group called Run-D.M.C.

The Run-D.M.C. version of “Walk This Way,” from their album *Raising Hell*, marries Perry’s classic riff and Tyler’s vocals with scratching and rapping; the groups’ sound is often credited with helping to break hip-hop and rap into the mainstream. The rap-rock version of “Walk This Way” became the first song of its genre to make it into the Top 5 on the Billboard pop charts.

“I was really glad to hear it,” Messina says. “I thought it was great. It gave that song new life.” ■



# Live



## TOUR PROFILE:

AMOS LEE

By Candace Horgan **21**

## ALL ACCESS:

TWENTY ONE PILOTS

By Steve Jennings **24**

NEWS AND NOTES **26**



Photos: Steve Jennings

Amos Lee onstage at the Fox Theater Oakland.

## AMOS LEE TOURS WITH SPIRIT

Eclectic Set List Means Engineers Keep Hands on Faders

By Candace Horgan

Over the course of an Amos Lee show, fans will get a taste of nearly everything—his delicate and haunting hits like “Arms of a Woman,” a bluegrass or old-timey number or two such as the classic “Will the Circle Be Unbroken,” the infectious folk-rock of “Windows are Rolled Down,” or the soul of songs like “Vaporize.” *Mix* caught the Bay Area show at the Fox Theater Oakland in late October; the tour continues through March.

Mixing the excellent-sounding show, on the

heels of the artist’s release of the self-produced *Spirit*, are BJ Pendleton at FOH and Drew Consalvo at monitors; Consalvo has also taken over as the production manager and quickly emphasizes that one of the things that makes this tour unique is the close working relationship he has with Pendleton: “I’ve worked with a lot of engineers, but seeing someone get personally, hands-on involved with it to the degree BJ does and the fact that he’s concerned with not only what he’s doing and delivering to the audience,

but with how it feels up on the deck based on what he is doing, is kind of a rare thing in this day and age.”

Pendleton, who got his start mixing bands in high school while playing bass, lives in Charlottesville, Va., and got the gig with Lee through contacts with nearby Red Light Management. For this tour, he is mixing on a Yamaha CL5 console.

“The reason I’ve always liked the Yamaha format is it’s simple and straight-ahead,” Pendleton says. “I don’t have to spend a lot of time

getting things built and patched; it's streamlined so that whenever I had my five different jobs I used to do, I didn't have to worry about the desk. I enjoy its sound quality, knowing all the little Yamaha quirks. The premium rack is one of my favorite parts of it, with all the Neve stuff built in."

Pendleton doesn't carry any outboard gear, and keeps his use of plugins as consistent as possible from song to song.

"I'm constantly touching faders and EQ and doing little things, so the mix is always evolving along with the music," he explains. "I use the Portico 5043 compressor on Amos and several other inputs and outputs. I tend to use my subgroups a lot to help me get more control over the channel, so I route his voice through one of my subgroups, and I have a parametric beyond the one that's just on the channel strip on that subgroup. It gives me more ways to fine-tune it, especially in different rooms."

The goal for Pendleton's mix is what he likes to call a "low-volume, high-fidelity show. It should be pleasing, rather than feeling like you have to leave the room or wear earplugs."

The tour used house-provided racks and stacks, but Pendleton does system tuning from the CL5.

"I can have my router hooked up to the desk, and I tend to work with the parametric EQs on my matrix outputs and also the insertable parametric EQs that I can use," he says. I just go through each zone on the matrixes and do some really fine-tune EQ. I can also go to the output stage on the CL5 with the iPad, so it allows me to do time alignment; I can get right up in the face of the speaker and slowly walk the room and listen to some music."



Consalvo, who has been mixing since the '80s, got the gig with Lee through referrals, but found it interesting that Lee called him personally; Consalvo didn't know he was talking to the artist at first.

"I got a call from some guy who said, 'Hey, this is Amos, I wanted to talk to you a bit about you doing production management and monitors,'" he recalls. "I had no idea who I was talking to and after about 10 minutes of the conversation it dawned on me that I was speaking to the artist. I stopped the conversation, and explained that with all due respect I didn't know who I was speaking to, and he seemed to find that kind of refreshing, and introduced himself, explained he was a singer/songwriter and had a large band he was going out with, and suggested I go on YouTube

# Neve



**...No Question**





Drew Consalvo mixes monitors on an Avid Profile.

and listen to some of his stuff and then talk to him later about whether it was something I'd be interested in."

Like his cohort at FOH, Consalvo went out on the tour in 2016 with something familiar, an Avid Profile, as he has used it for many years.

"What I like about that desk is its ubiquitous nature, and the fact that I've been using it for some years so muscle memory is there," he says. "As a monitor engineer, having your hands go where you need them to go when you need them to is really important. I do like its user interface and its ease of use."

For the early 2017 portion of the tour, Consalvo planned to switch to Avid's latest, the S6L. "Seeing some of the things I could do with that machine, especially scene-based operation versus the Profile, it became

apparent to me and got me chomping at the bit to get my hands on it."

Most of Lee's band is on in-ears, using Sennheiser 2000s for the receiver and transmitter and JH Audio in-ear monitors. Consalvo himself uses JH Audio Roxannes to listen to his mixes. However, Lee and multi-instrumentalist Zach Djanikian use wedges. For 2017, Consalvo switched to the d&b M2 after using the M4 in 2016.

Mics included a wide range of Shures, such as SM57s for snare and pedal steel guitar, KSM132s for electric guitars, and KSM9s for vocals, and an Audio-Technica AT4050 for the old-timey part of the show around a single microphone, though that was backed by Neumann KM 184 mics down low for mandolin and banjo. Lee uses a DPA d:facto vocal mic, which gives pristine vocals, but as the volume crept up over the course of the 2016 tour, it presented Consalvo with a challenge, a challenge later solved by providing Lee three wedges on two mixes.

"[The d:facto] is a chore when we get really loud in the wedges, so it takes a steady hand and nerves of steel," Consalvo says. "It's an amazing-sounding product, but when we get going, it can get a little demanding. I'm a scene-based mixer, so I will respond to artist's preference song to song. The ear mixes are set, and I do some touch-up work, but Amos' stuff I pretty much mix live. Once we get the in-ear mixes dialed and set, I mix Amos live all the time, and because the musical content is so wide-ranging, I have wildly different levels for his acoustic guitar on solo stuff vs. when he's really digging into it. It's about laying in on a particular set of faders and getting his mix balanced just right." ■

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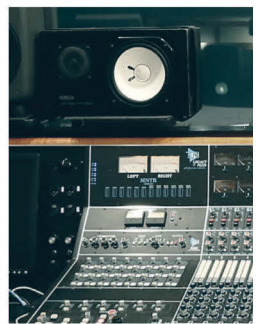
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## TWENTY ONE PILOTS EMOTIONAL ROADSHOW 2017 TOUR



Mix caught up with the band Twenty One Pilots—**Tyler Joseph** on vocals/keyboards, **Josh Dun** on drums—at the SAP Center in San Jose, Calif., on February 11. Now on the third leg of an enormously successful two-year run that started in 2015 with the Blurryface Tour, TØP has continued with the Emotional Roadshow 2017 tour, running through April in the States before heading to Australia. The tour is supported by VER Tour Sound out of Nashville.



“On this tour I’m on the DiGiCo SD5,” says **FOH engineer Shane Bardiau**, seated with (L-R) **VER systems engineer Kenny Sellars** and **P.A. tech Murphy Johnson**. “For the past two years, I’ve been mixing TØP on a Midas console, first the Pro2 then the ProX, both of which are amazing-sounding. But for this tour I wanted to try something different, and my systems engineer pushed me toward the DiGiCo world. I was nervous because I didn’t know the console well at all. So far it’s been an amazing experience. The open architecture is mind-blowing, and having the capability to put whatever I want wherever on my console is great.

“Another great thing I have is the DiGiCo Digitube,” he continues. “It makes the input sound ‘colored,’ which gets me close to that Midas pre I loved. I use it on drums and piano, but not on Tyler’s vocal and tracks where I need more clarity. I’m hearing things in those tracks pop out more than ever. This console is so transparent; it really exposes my mix.

“For plug-ins I’m running the whole Waves universe—mainly just a few compressors like the SSL buss comp and API 2500 for flavor. I’m also using C6s, but with DiGiCo’s built-in dynamic EQ I find myself using less C6s than I used to. All effects are plug-ins, as well—H reverb and H delay. The only outboard gear we are using is a Chandler pre on our bass input because we don’t use an amp, as well as a Rupert Neve pre for ukulele. All processing at FOH is digital in the console. I’m a true believer in keeping things digital and avoiding converting back and forth.”

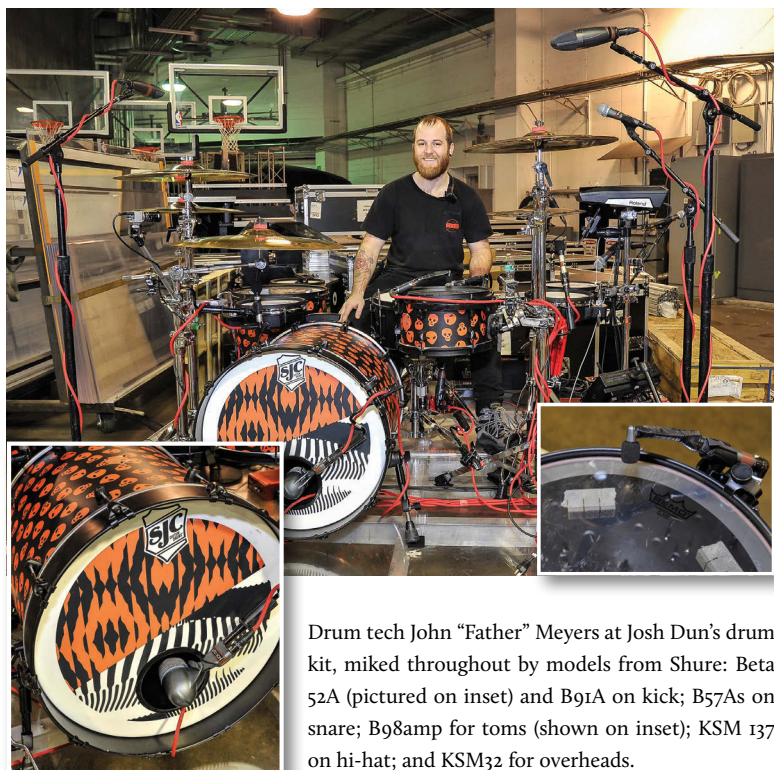




"I'm mixing monitors on the DiGiCo SD10," says **monitor engineer Lawrence "Filet" Mignogna**, seated, with **monitor tech Dustin Lewis** (left) and **stage tech Alex Martinez**. "I love the DiGiCo lineup; they sound great and it's the most versatile digital desk out there. A favorite feature is the bandwidth compression that can be used on every channel. The choice of the SD10 versus the 7, 8 or 5 is only based on input/output requirements."

"For plug-ins, I'm using a Bricasti M7 for Tyler's vocal 'verb,'" he continues. "The rest are just the stock internal effects for some instrument 'verbs and simple delay. I'm also using the internal Oscillator, gated for Josh's drum Thumper—a cool little trick I learned awhile back when doing drum thumpers."

"Tyler's ukulele runs thru a Neve 517 preamp and his bass runs thru a Chandler TG2-500. Both before hitting monitors and FOH. We're using an in-ears Shure PSM 1000 wireless monitor system."



Drum tech John "Father" Meyers at Josh Dun's drum kit, miked throughout by models from Shure: Beta 52A (pictured on inset) and B91A on kick; B57As on snare; B98amp for toms (shown on inset); KSM 137 on hi-hat; and KSM32 for overheads.



"VER is providing sound, lighting, video and rigging," says systems engineer Kenny Sellars, who has been with the company for a bit over three years. "Our P.A. system consists of the Meyer Sound Lyon for our main hang, 20 per side; Lyons for side hang, 16 per side; Meyer 1100 LFC for flown subs, three per side, in cardioid; Meyer 1100 LFC for ground subs and front fills, six stacks of two; then six Meyer Mina on top of the subs, and two Meyer UPJ-IPs. There are also four Meyer Leopards for onstage fills."



Drummer Josh Dun, with a kit captured by all-Shure mics.



"Tyler's main vocal mic is a Shure KSM9HS capsule with the Shure wireless Axient transmitters," says FOH engineer Bardiau. "The microphone that hangs down from the cable is a gutted Shure SM58. We replaced the foam with some LED strips for a cool glowing look as it slowly drops from the truss above. Sounds nothing like a standard SM58, but, hey, it's cool looking!"



# BELAFONTE RE-RECORD, 60 YEARS LATER

The 1957 film *Island in the Sun* made it clear that Harry Belafonte was no ordinary entertainer. He was an actor, artist, political activist and creative intellect all rolled into one. He also co-wrote and performed the film's title song, with lyrics that speak to the harsh labor conditions faced by working-class people in the fictitious country of Santa Marta, and by extension, throughout the world.

Belafonte, still active as he approaches his 90th birthday, thought that having a multicultural group of children record the song might offer a counterweight to the divisive forces that defined the 2016 political season. He enlisted his son David to produce the recording.

David Belafonte looked at a number of recording studios, choosing Sear Sound in New York City, in part, because of the blend of old and new technologies. "You have this incredible old studio with an aggregation of old and new equipment. The microphone cabinet, the modified consoles, there's just no place like Sear."

The session was tracked in Studio C, which opened in



A multicultural children's choir in Sear Sound, Studio A, recording *Island in the Sun*.

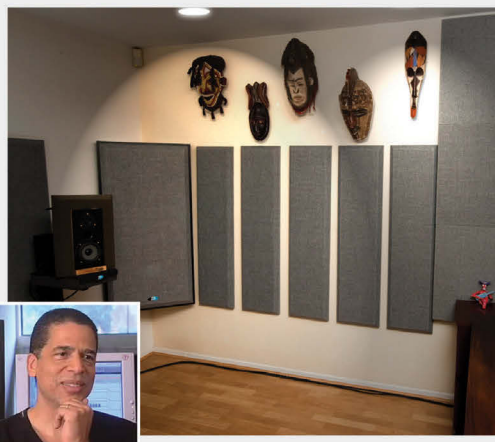
## Primacoustic... better design, better



"The ease of install really allowed us to experiment with placement and with the quality of the treatments, we achieved the sonic balance we were looking for!"

~ **Tommy Lee**

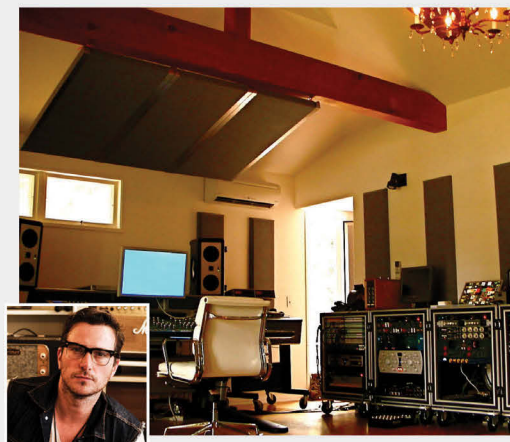
Founding member - Mötley Crüe.



"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, George Duke and Jennifer Lopez.



"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, Sevendust, Hot Hot Heat, Simple Plan, The Donnas.

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





The selection of Sennheiser and Neumann mics used on the children's choir.

2000 and features Sear's custom console affectionately dubbed the "Frankenconsole," as it began life as a Sony MCI 36-channel board, later to add mic preamps and an EQ package designed by Avalon.

Tracks were recorded to Pro Tools but mixed off the reproduction side of the ATR 102 that resides in Studio A. "We thought about running the tracks out of Pro Tools into a Studer multitrack and going back into Pro Tools, but for reasons of time and budget we decided to save the analog gear for the mix chain," Sear chief engineer Chris Allen explains.

To capture the children's choir, Allen pulled a number of Sennheiser and Neumann microphones out of the studio's vast collection. A Sennheiser e914 picked up the low end sound emanating from the hole in the back of a cajon and a Neumann TLM170 captured the player's hands on the front. Three TLM170s were used to record congas.

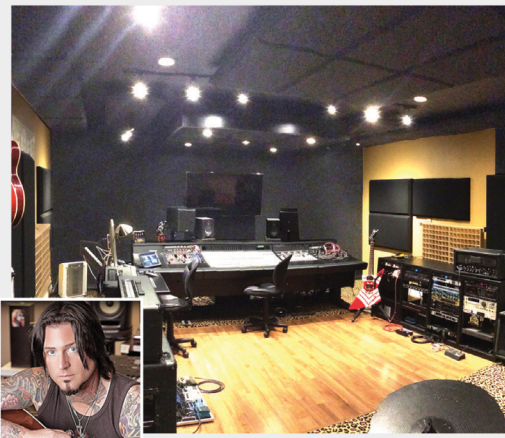
"Every other percussion layer was recorded with one Sennheiser MKH800, which also served as an overhead mic on the cajon and congas," Allen says. "We used the MKH800 on the acoustic guitars, as well. The electric guitars were recorded with a Sennheiser e904 and a Neumann TLM67 on the amplifier; a TLM149 was used as a room mic.

"The children's choir was recorded with one TLM67 in omni mode," he continues. "The kids stood in a circle around the microphone. We recorded the main melody, doubled it, and then did the same with two layers of harmonies. All of the keyboard overdubs went through Countryman direct boxes."

Chris Allen and David Belafonte mixed the session at Sear Sound on Neumann KH120 monitors.

The project is expected to be released this spring, with proceeds to benefit various organizations. —Gary Eskow

## performance, amazing results!



"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 - Five Finger Death Punch.

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

~ John Rzezniak

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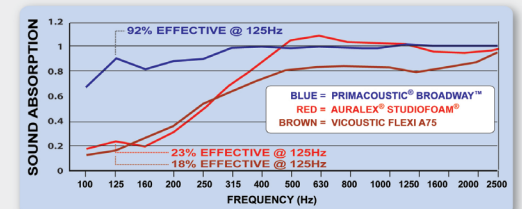


"We've got a mixture of bass traps, diffusion and clouds and the result was phenomenal. It ended up costing less than 25% of the custom solution and it turned out very cool."  
~ Keb' Mo' - Grammy winner, roots-legend.

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# On the Cover

By Barbara Schultz // Photos by Beth Childs

## DAUPHIN STREET SOUND, MOBILE, ALA.

Studio As Creative Nexus in Rebirth of a Hometown



The live room at Dauphin Street Sound, with three iso booths. Note the clear Flex48 Adaptive Treatment System on the walls.

**M**LB pitcher Jake Peavy has a reputation for fierce intensity on the mound. His competitiveness has helped to earn him a Cy Young Award and two World Series championships. But baseball isn't Peavy's only focus. He can get just as fired up about music as he does about throwing strikes.

"I feel like music really found me," Peavy says. "I just had no choice. I came to the big leagues when I was just 20. I wasn't old enough to go out and drink beer with my teammates, but I had this coach, Tim Flannery, who played guitar. He

would take a bottle of wine and his guitar into a stairwell, and he sat and played his music. He was such a cool tie for me, because, being from Alabama, I had a deep love of traditional country music, and I grew up in church listening to gospel.

"Tim Flannery is from Kentucky and plays a lot of gospel, bluegrass and country stuff, but he's California-raised and was also really into the Flying Burrito Brothers-type free spirits," Peavy continues. "So when he'd had most of that bottle of wine, he'd go to putting that guitar down sometimes, and I'd pick it up and say, 'Show me how to play 'Pancho

and Lefty,' or something. Next thing I knew, there was a Taylor guitar in my locker with a note from Tim saying, 'Bring this with you on the next road trip.'"

When he wasn't blowing away batters, Peavy dug deep into the blues in Chicago, rock 'n' roll in Boston, and the Grateful Dead-inspired jam-band scene in San Francisco, where—touring being one of the commonalities between sports and music—the Giants' Director of Team Travel was Bret Alexander, a former Tour Travel Manager for U2.

Along the way, Peavy also founded the Jake





Dauphin Street Sound assistant engineer Josh Daigrepoint, at the SSL AWS948 in Studio B, the mix room, which features Dynaudio BM6MkIII monitors.

Peavy Foundation, a nonprofit that has benefited veterans' and childrens' charities in the cities where Peavy has pitched.

Now Peavy has invested all of his passion for music and for giving back—and a generous amount of his capital—in his hometown of Mobile, where he's helping to bring about a cultural renaissance.

"I wanted to come back and put my foundation on the ground where I was from," Peavy says.

Peavy also knew that he wanted to energize the music scene in Mobile, a scene with a long and storied tradition, but he didn't set out to open a studio. He conferred with his friend Ben Jernigan, a guitarist who was working a day job as an EMT when Peavy recruited him to help bring some cohesion to his philanthropic efforts and his love of music.

"We talked about a music venue, we talked about developing the foundation," Jernigan recalls. "There were many arms of our potential plan, so Jake tasked me first with finding an office, and I ended up finding a defunct recording studio that used to be called Jada Entertainment.

"I could see that it had the square footage for a number of things that we had talked about doing," Jernigan continues. "It was pretty bare-bones, but we decided to revive it as a working, creative space; the idea was to spearhead a scene with the studio as ground zero for that."

"We were new to this game, though," Peavy says. "So we went about putting together the most qualified team of like-minded people who are crazy talented. We wanted to do things the right way."

Peavy's right hand through all of this has been his brother, and business manager, Luke Peavy. "My family is everything to me," Jake Peavy says. "My relationships are what I value the most, and I don't have a better relationship in life than the one I have with my brother. It's as comforting as anything I can imagine, knowing that during the baseball season Luke can manage things here."

Jernigan and the Peavys began renovating the former Jada facility, starting with the lobby. "We wanted it to immediately feel like a place where you wanted to make music," Jernigan says. "When you walk in, the first wall you see is made of rough-cut timbers that we pulled down from Southern Falls [Peavy's 5,000-acre ranch/retreat in central Alabama]. Once we had that in place, everybody was celebrating, like

'We have a lobby! It's awesome here!' But we still needed a functional studio."

Grammy-winning engineer Trina Shoemaker was called up to offer some personal recommendations for the studio equipment and workflow. As she explains on page 30, she never expected the studio to follow her suggestions to the letter. But before another year had passed, Peavy and his team—which by then included homegrown chief engineer Keylan Laxton—had assembled Shoemaker's dream studio largely from her and Laxton's recommendations, and from design plans provided by acoustician Gavin Haverstick.

Haverstick's business is based in Indianapolis, and he was referred to Peavy by Sweetwater sales engineer Brendan Murphy. "It was really a lot of fun for me," Haverstick says. "It's always great when clients are willing to build custom treatments."

Haverstick provided guidelines for acoustical clouds, and for the live room he recommended the curving, clear Flex48 Adaptive Treatment System panels that he had developed in collaboration with Acoustical Fulfillment.

"Flex48 has rubber built into a removable shield so it will curve easily," Haverstick explains. "The panels have more low-frequency absorption when the shield is in place and scatters the mids to highs, but when the shield is removed it acts the way a traditional absorber would."

"Keylan told me that on sessions they will set up a drummer and have him play through 12 bars or so, then walk around the room and add a few of those shields until it sounds the way it's supposed to; then they can mark that in their notes and they can always go back to that drum sound."

Haverstick also provided the design and acoustics for the facility's main addition, an SSL AWS948-based mix room with Dynaudio monitoring.

Chief engineer Laxton had worked at Jada previously, as well as

## The Gear

### **Studio A: Tracking and Mixing**

Console: API 32-Channel 1608 with Automation

Monitors: Barefoot Sound Micromain 27 Gen 2

Selected Outboard: Neve 1073DPX, Shadow Hills Quad and Dual Vandergraph, GAMA with Iron Mod, Retro Instruments 2A-3, Empirical Labs EL8X Distressor, UA LA2A, Bricasti System 2

### **Studio B: The Mix Room**

Console: SSL AWS924

Monitors: Dynaudio BM6MkIII

Selected Outboard: UA 1176LN, Avalon VT737SP, Focusrite ISA 430, API 3124

### **The Mic Cabinet**

RCA 77DX, Coles 4038 Stereo Pair, EV RE20, AKG D12 and D112, Shure SM7B, AEA R92, Neumann TLM103 matched pair, Sennheiser MD421 MkII and e906, and many others

## Trina Shoemaker on Dauphin Street



Engineer/producer Trina Shoemaker, at the API 1608 with her own pair of Genelec 8351 SAM monitors.

Photo: Will Eggleston

Three-time Grammy-winner Trina Shoemaker has no illusions, and offers none, about the music business. Despite her unsparingly beautiful body of work and star-studded resume (Blues Traveler, Sheryl Crow, Queens of the Stone Age, Iggy Pop, etc.), she has been through down times and a hurricane. Yet she remains a hopeless gear geek and music lover.

These days, Shoemaker is happy to lend her endorsement to her new favorite monitors, the Genelec 8351s, which she's installed in her personal studio, and she seems to have found an ideal home away from home at Dauphin Street Sound, just 30 minutes from her front door.

### How did you get involved with Jake Peavy and the studio?

I only learned after the fact that Jake and these guys were working to help create a music scene here in the truest sense—an authentic renaissance of music and art in downtown Mobile. But first, I got a call from Ben [Jernigan], and he said, "Can you come down and look at this space, as a producer on the level you work, and let us know what it would take to make this a place you would book."

So I came down and put together a type of proposal. It was fun for me because it could be a dream room. Anything you want. At first I was like, "That's kind of bullshit. Who are you guys?" But they paid me a day rate, and I went for it and turned it in... and they went and bought it *all*, and they did the install, and then they called me.

I was blown away. I had no idea there was any backing. I thought they would see my list and go, "Oh, okay, that's a

million dollars, we're not studio owners." But I got a call from Luke [Peavy] about me coming to the studio with my 32 years of knowledge and my name, because that's really all I have. I didn't make an enormous amount of money making records. I made enough to stay in the middle class, but the point is, I really do this, and I really do love a great tracking room and I don't want to travel all the time.

So I checked it out, and what I found there were these really young, smart people who were determined to make it matter, to make it real. At this point in my life, I need stability. I need to know that I don't have to travel all the time. I can be here for my family, but I can still make records. And so I partnered with them.

### What is your role in the studio?

When I say I partnered, in no way did I come up with any capital. I still have my own mix room at home, and all my capital goes into that little—that sad little space compared to this [Laughs]. I mean, I partnered with my name and my expertise.

And it works great. I just got done mixing [albums for] Josh Ritter and Secret Sisters, and I'm able to stretch out in this room because they met that bar.

They said we will do what you think is right to make this real. To give it a great feel and a sound, and there cannot be anything unethical or inauthentic about it. I said, "If it has my name, it's got to be right," and they rose to that—superseded it, in fact, on many levels.

### What were some of those big things that you asked for in terms of gear and workflow?

It was an in-depth list, but basically it was to acquire a gear inventory that could compete with Sunset Sound or The Clubhouse up in New York. The best gear, things people spend years collecting. Stuff you can fall in love with and always fix—not replace but always repair.

### It certainly sounds like they met your needs.

They met the bar. They said, we will do what you think is the right thing to make this real. And I said the only thing that makes this real is, it sounds great, records get made here, and people talk about it; people need to know that it's got a great feel, and it's happening here, in Mobile.

I know that my name gives this place credibility. I know that people know who I am and what I do, but this business is never about you and your Grammys. It's about the people who really want to do this for a living and will make the sacrifices to do it. This is people's lives. We bleed for this.

So it's important that people also know that this is not just a cool place for old gear geeks. It's truly a place for young people to come to get their start, and to flourish. ■



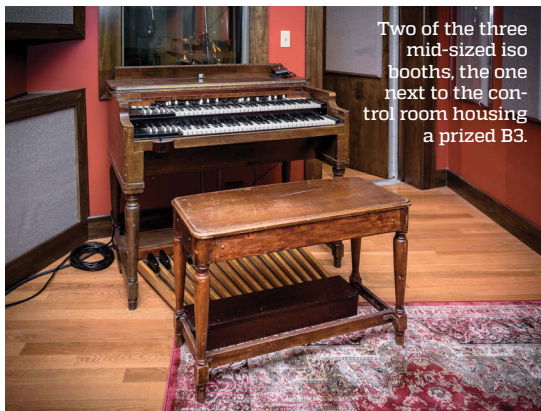
operating a personal studio, so his experience with the facility and local artists have proven valuable.

"It's been a blessing working with [Jake and Trina]," Laxton says. "I've learned from both of them. Trina has a great understanding and a great truth about her. There are no blurred lines. If something doesn't feel right to her, she'll let you know. It's like something Jake said to me before we even met her that really rang true. We were talking more along the lines of baseball, and he said, 'Keylan, you're only going to be as great as the people you surround yourself with, and you're only going to be as great as the people you're learning from.'"

"And then I met Trina, and suddenly I have a mentor who has won Grammys. When she comes around, I am always full of questions, and she will have computer questions for me. We have a mutual love and respect for each other, and I think we work great together."

Now that Dauphin Street Sound is up and running, the Peavys and their team have progressed with other plans that fit their vision of a revitalized downtown Mobile arts district: They've purchased an entire city block, where they've already developed a "social club"/rehearsal space, and a band house with convenient accommodations is in the works.

Meanwhile, Haverstick is helping to design a second tracking room, and in keeping with the the business is paying it forward by mentoring college-student interns. They have also joined with local Boys and Girls clubs to offer music and audio



Two of the three mid-sized iso booths, the one next to the control room housing a prized B3.



Jake Peavy Productions director of new business, Mackenzie Harrell, in the lobby of Dauphin Street Sound, in front of the rough-hewn wall made of wood brought in from Jake Peavy's Southern Falls ranch.

education to youngsters.

"We're taking our time to piece all of this together," Peavy says, "to give people an experience and do it in Mobile, in this 300-year-old city that has such rich tradition, history and culture." ■

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# BROADWAY IN A STUDIO

CAST ALBUM RECORDING FOR *FALSETTOS*, *SHE LOVES ME* // BY ANTHONY SAVONA



The *Falsettos* cast album featured seven vocalists in the main room of Avatar's Studio C and the four musicians who make the show's orchestra in iso booths.

Photo: Joan Marcus

where the producer of the show co-owns the master with me. It is an as-set and another marketing tool—and they can make money on it.”

Even in the familiar confines of a recording studio, creating a cast album has its challenges. The union performers all get a week's pay for every eight hours of studio time, so speed is essential. Plus, you have to work in between the eight performances a week.

Of course, playing through rehearsals, previews and the weekly shows means that your artists know their material really well. How long does it take to record the music? “Typically one take and a safety of each song,” says Lawrence Manchester, a frequent engineer/mixer on many Sh-K-Boom releases and also music mixer/producer for NBC's *The Tonight Show Starring Jimmy Fallon*, adding that with such tight schedules, preparation is key. “I take a full day to set up. Plus, I always try to see the show from the audience perspective and make a trip to the pit to see the setup—see

their natural environment and sight lines to the conductor. Find out what is important for the performers.”

For producer Deutsch, preparation means working with the show's composer and director on what gets included in the recording script—figuring out which songs, what dialog and sound effects, if any, are included, and so on.

“After a take, I would give notes to the director, who would talk to the performers,” Deutsch explains. “The orchestrator is in the studio, as well, to make sure the music is right and all the notes are being played. A lot of people are responsible for making sure we get everything we need in the can with control and isolation so we can build from there.”

Cast album productions are as diverse as the shows they represent. To demonstrate, Deutsch and Manchester walk us through the recording of *She Loves Me*, which was done live with a full orchestra (“Fifties style,” as Deutsch calls it), and *Falsettos*, which was a smaller affair with a four-piece band and seven vocalists. Both *She Loves Me* and *Falsettos* have been released on Ghostlight Records, an imprint of Sh-K-Boom.

## SHE LOVES ME

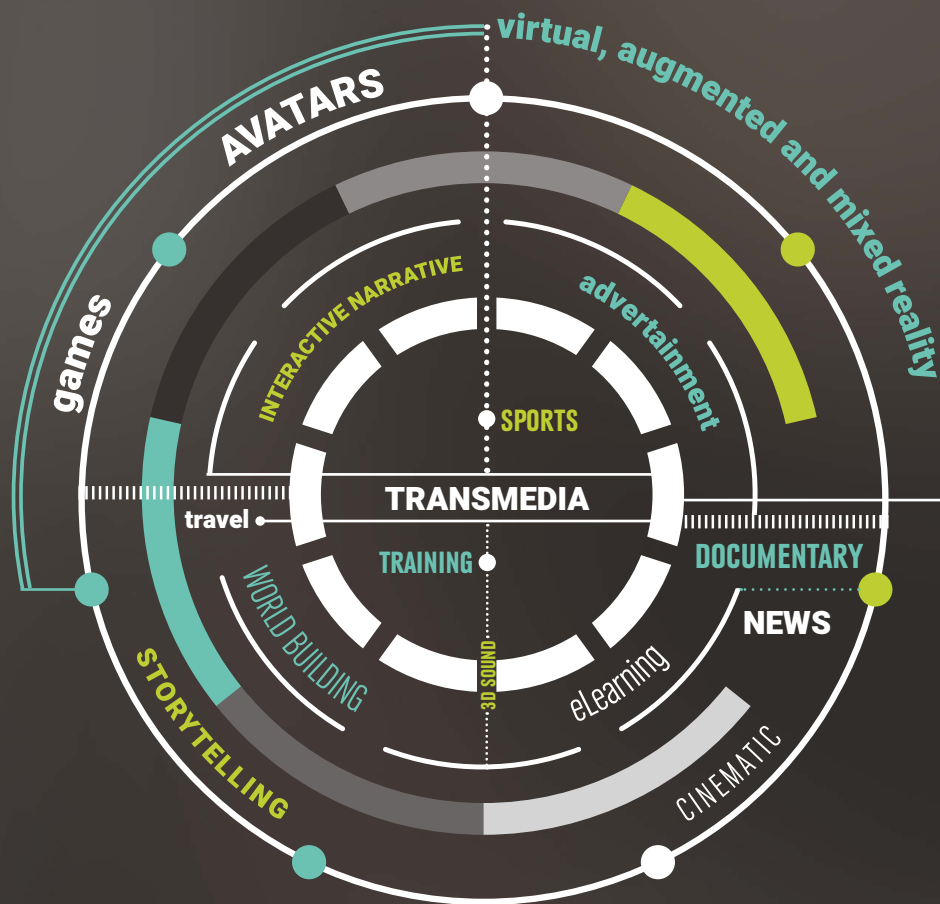
The 2016 version of *She Loves Me* was a Tony-nominated, limited-run revival of a musical first seen on Broadway in 1963, which is based on a play

**C**onfession time: As a young man, I believed that Broadway cast albums were recorded right there on the theater stage—actors in full costumes and makeup going through the motions of the show to an empty theater. How else could that flavor of theatrical musicality be properly captured? As I would later find out, it was captured where so many other great musical moments are, in the recording studio. Although my original theory wasn't too far off...

“Some London cast recordings are done in the theater, with an audience,” says Kurt Deutsch, co-owner of Sh-K-Boom Records and producer of many, many cast albums. “The reason we can't do it here in the theater is that if you use the theater, every single member of the Local 1 union has to get paid for the recording, and it makes it too expensive.” (As with most rules, there are exceptions, as Deutsch explains that the Sh-K-Boom release of the *Passing Strange* cast album was recorded at its theater in front of a live audience.)

A former actor, Deutsch started Sh-K-Boom Records with his then-wife, Sherie Rene Scott, also a Broadway actor, because the record deals he saw for Broadway performers and the shows themselves didn't really benefit either. “Shows never made money off of their cast albums because the royalty structure was archaic. So we started a business model





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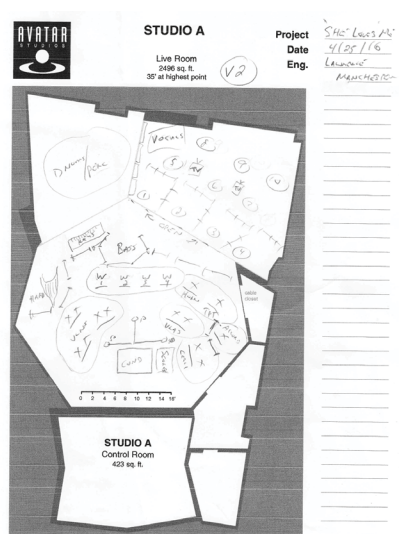
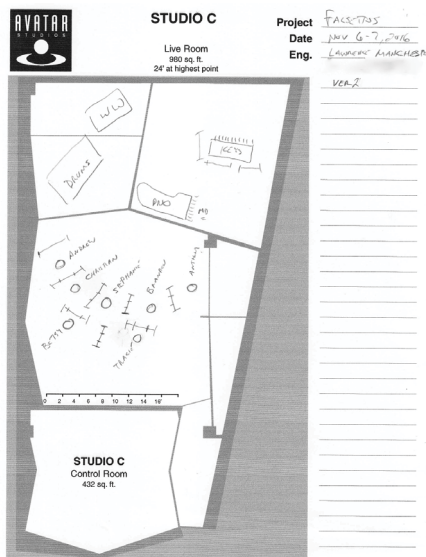
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**LET'S THRIVE.**



Studio setups for recording *Falsettos* in Avatar Studio C, left, and *She Loves Me* at Avatar Studio A, New York City.

by Miklos Laszlo that also became the basis for the classic films *The Shop Around the Corner* and *You've Got Mail*. The musical ran at the famed nightclub-turned-theater Studio 54, where the orchestra was placed on the sides of the stage along with conductor Paul Gemignani, who inspired Deutsch to record the album using this semi-retro approach.

There are not many rooms left in New York City that can handle a full orchestra, but Avatar Studios is one of them, so they get the bulk of work from Sh-K-Boom. Avatar Studio A held the full orchestra (strings, woodwinds, bass, horns, harp, accordion, and keys) for *She Loves Me*, with drums and percussion in one large booth toward the rear left of the studio and the singers placed in another spacious booth toward the rear right.

"The drums get a lot of mics, so I can get a fairly tight, contemporary sound," says Manchester. "I generally go with a Shure Beta 52 $\frac{1}{2}$  combo for the kick drum, and I use Avatar's large collection of Neumann KM86s for overheads and on certain percussion instruments because you can adjust the pickup pattern to omnis or figure-eights to your advantage. For snares, I use a Shure SM57 on top and Sennheiser MD441 on the bottom. I use an AKG C451 on hi-hats and smaller clip-on mics for toms, like Sennheiser 604s where I can get in tight without having to put up a mic stand—you can get overtaken by the number of mic stands you have to use."

In the main room, Manchester says he "used a lot of room mics—my Neumann M50s and more KM86s on each section leader of the group. Woodwinds are individually miked with AKG C414s or some Sennheiser MKH 40s."

In the back room, the vocalists were separated by windowed gobos, miked with

Sennheiser MKH 800s and facing forward so they could see the conductor. "We left the panels open so they could hear the orchestra without headphones," adds Manchester. The performers were all offered headphones, but many opted not to use them. "We knew they performed that way in the theater, and the cast was comfortable with hearing the orchestra in the room."

As for leakage, it wasn't a problem, explains Manchester: "I had the option to close panels if needed, but I didn't. Leakage is something people are averse to these days, but if you take some chances, try some things, and employ your microphone theory, you can get really close sounds—nice, beautiful sounds that have some space to them—and even if there is some leakage, it can be very workable."

Everything was brought into Avatar's custom Neve 8088 40-input console, along with a few Focusrite and Grace outboard mic pre's. "With the Neve, the mics go to the large fader then to the Pro Tools recorder," says

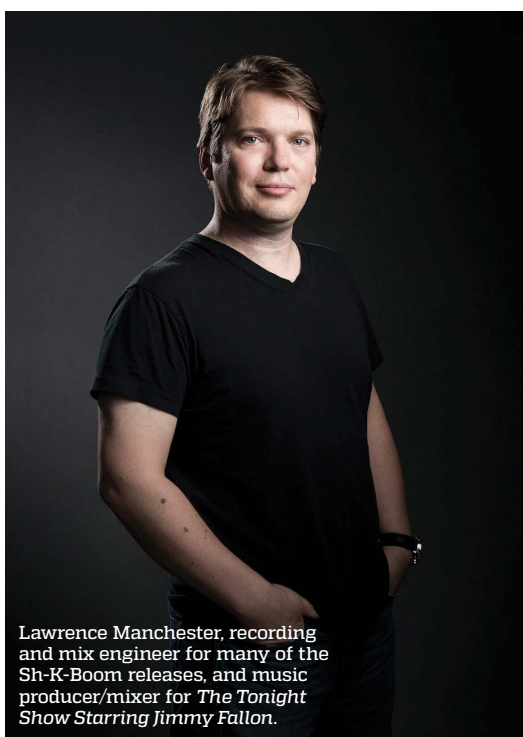
Manchester. "That allows me to ride the vocals as they are being printed to the recorder and work with the dynamics of the singer so I can make sure, if they are singing softly, that I can ride them up to a healthy recording level and, similarly, if I know there is a big note coming up, I can pull them back and make sure we are not overloading anywhere."

"You want the big notes from the singer, but not to push," agrees Deutsch. "You try for intimacy, but keep the energy and intensity that they deliver on stage."

## FALSETTOS

Like *She Loves Me*, *Falsettos* is also a revival, comprising two one-act plays featuring the same characters, originally staged years apart. This is not the first time that it has been performed as a complete play on Broadway; but it is the first time that the show will be preserved as a whole on a cast album. "With revivals," says Deutsch, "it is important to give the audience something on this version that they haven't had before."

Deutsch, Manchester and the *Falsettos* crew moved into Avatar Studio C to capture the show, where Manchester did a little "reverse engineering," so to speak, which meant he placed the band in the iso booths and the singers in the main room. *Falsettos* has a four-piece band—a drummer (with glockenspiel and xylophone), a pianist (who was also the conductor), one woodwind player (oboe, flute, clarinet and saxophone), and a keyboardist with an elaborate split keyboard setup that had a whole sequence of patches programmed ahead of time, so the player could layer up left-hand bass with samples of tuba, harp, celeste and classic synth sounds.



Lawrence Manchester, recording and mix engineer for many of the Sh-K-Boom releases, and music producer/mixer for *The Tonight Show Starring Jimmy Fallon*.

Photo: Lloyd Bishop



"Studio C has a lot of booth options built around sliding panels that you can open or close as needed, with glass windows and great sight lines," says Manchester. "I put the piano and keyboard in one booth, which allowed me to leave the lid full-stick and I didn't have to blanket it off, so I got a nice open sound. The drummer was in his own drum room, and the woodwind was in a small booth."

"In the big room," continues Manchester, "the singers faced the music director with direct eye contact for two-way visual communication, separated from each other by windowed gobos. Yes, there was leakage, but the direct sound was nice and clean, so that even when they were all singing together, I had a clear sound on each of the Sennheiser MKH800s. The comping and the editing process also involved cleaning out the leakage when they were not singing, which was a little tedious, but worth doing."

All the feeds went through Studio C's Neve VRP 72-input console. This time there were headphones for everybody.

*She Loves Me* cast member Jane Krakowski and cast album producer Kurt Deutsch.



Manchester's overall approach to recording cast albums is to "keep the recording chain very clean for the simple reason that you do so few takes of each song. I try to minimize the risk that a piece of gear might go foul—no inline compressors—and I try to leave a lot of headroom on my mic pre's so that if a singer goes for a big note, you can catch it on the first take. I tend to go conservative with my levels so there is room for surprises, and I use modern condenser mics instead of classic tube mics, which might introduce artifacts."

### CURTAIN CALL

For Deutsch, there is no doubt in his mind that every musical needs to have a cast album. "Even if it is not a hit, for a show to have any chance at a future life, they have to have an album," he says. "Licensing companies will first ask if there is an album. If

there is no recorded album, it is like it didn't even exist."

Fortunately both *She Loves Me* and *Falsettos* will live on — along with all the other shows captured forever by Sh-K-Boom Records. ■



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# THE NEW WAVE OF STUDIO MONITORS

## High-End, Nearfield, Three-Way Systems

BY STROTHER BULLINS

Marking somewhat of a burgeoning trend between the October 2016 AES Show in Los Angeles and the January 2017 NAMM Show in Anaheim, an impressive number of premium-quality studio monitors have been unveiled to the pro audio market. Many of these are three-way powered studio monitors, joining other well-received three-way debuts over the past few years.

Arguably, discriminating audio content creators are increasingly more concerned about hearing midrange as their mastering engineers do; perhaps more production and mix engineers are mastering their own work. Meanwhile, other new high-end two-way offerings are packed with unique and intriguing innovations. As such, options abound for golden-eared engineers in need of the latest and greatest among our industry's top studio monitor brands. Below is a collection of those most worthy of consideration.



The third generation S Series is **ADAM Audio's** new flagship active studio monitor line, comprising five models and packed with superb proprietary technology. At the top of the series is the impressive S5H three-way model featuring the German handmade

Precision S-ART ribbon tweeter with HPS waveguide, a 4-inch DCH (Dome Cone Hybrid) carbon midrange driver with MPS waveguide, and dual 10-inch ELE (Extended Linear Excursion) Hexacone woofers. Key specifications include a SHARC-chip based DSP engine, total power (RMS) of 1,800 W, 24 Hz-50 kHz frequency response  $\geq 131$  dB maximum SPL (per pair @ 1m),  $\geq 131$  dB maximum SPL (per pair @ 1m), and AES3 digital inputs alongside various expansion options. Designed to sit horizontally, a vertically arranged three-way—the S3V, introduced at the NAMM show—is also available.



Having launched the buzzed-about SCM45A Pro three-way active studio monitor, British monitor manufacturer **ATC** is experiencing success due to the model's distinctive yet "honest" sound and well-conceived size and form, allowing it to fit mid-

to near-field monitoring applications. The SCM45A Pro features dual 6.5-inch drivers for deep bass response and increased SPL, ATC's proprietary dual-suspension tweeter—reportedly the result of six years of

R&D—and much more. ATC's attention to detail and world-class build quality has notably created a worldwide group of fans.

Launched at the 2017 NAMM Show, the Footprint 01 three-way powered near-field is a smaller, more affordable **Barefoot Sound** monitor, yet it remains a "high-end" choice for savvy audio engineers desiring those signature Thomas Barefoot features such as Dual-Force opposing subwoofers, the dual ring radiator tweeter and Multi-Emphasis Monitor Emulation technology—just like the MicroMain and MasterStack lines. The Footprint01 features dual 8-inch paper cone subwoofers, a 4-inch aluminum-cone midrange driver and a 1-inch dual ring-radiating tweeter; a two-way DSP crossover paired with dual Class D amplifiers delivering 500W and 150W to the subwoofers and midrange and tweeter, respectively; a 45 Hz-40 kHz ( $\pm 1$ dB) frequency response, and much more.



Distributed in the U.S. by Yorkville, **Dynaudio PRO** recently unveiled its latest addition to the LYD studio monitor range—the LYD 48 three-way midfield active monitor—which couples an 8- and a 4-inch woofer with a 1-inch tweeter. It is designed and built

in Skanderborg, Denmark. Each of the woofers and the tweeter are powered by a dedicated Class D amplifier, effectively delivering 80W, 50W and 50W of power per monitor, respectively. The amp features a 24-bit, 96kHz signal path, selectable input sensitivity and the same Standby Mode as the original LYD speakers. Further, the new three-way version features Bass Extension, allowing switching between the default and maximum bass or maximum volume settings; these changes affect the low-end response while linear frequency response remains intact, offers promotional materials. The LYD 48's Sound Balance option is effectively a "tilt filter, tipping the tonal balance gently," Dynaudio confirms. "It emphasizes one end of the spectrum while decreasing the opposite end by the same amount." Touted as different from most shelving filters, it is designed to alter the frequency response without interfering with phase. Sound Balances toggle between "Bright" and "Dark" labeled settings.

British studio monitor experts **PMC** have announced two additions to its next-generation Main Monitor range of active Advanced Transmission Line (ATL) loudspeakers, the MB3 and BB6. Both are designed for freestanding or soffit-mounted use, are available as single- or twin-cabinet (XBD) versions, and offer digital and analog inputs. Key features include the same proprietary Class D amplification from PMC's QBr-A main studio monitor; and hand-built, precision-matched 34mm



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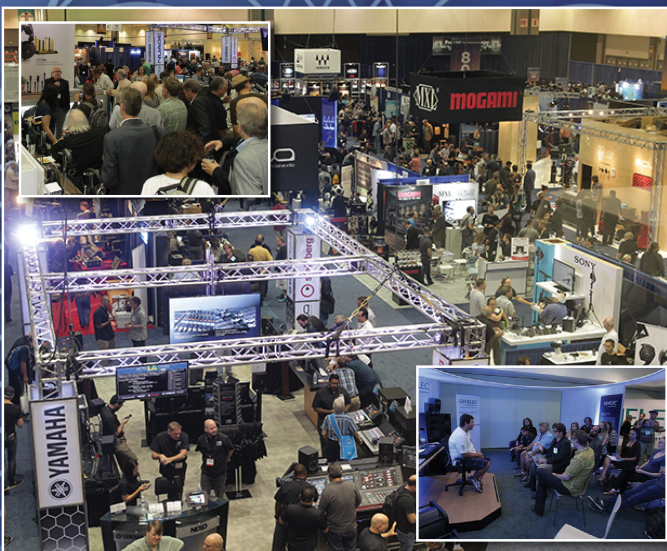
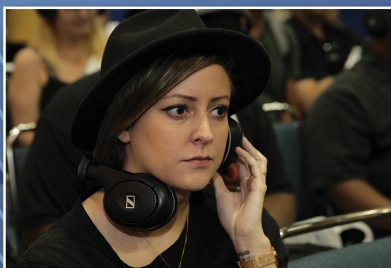
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soft-dome tweeter and 75mm fabric midrange driver paired with the Radial low-frequency driver. The MB3 features a 12-inch Radial driver; the BB6 features a 15-inch Radial driver; as such, these provide a flat response down to 20 and 17 Hz, respectively. Both the MB3 and BB6 are available as single-cabinet (MB3-A and BB6-A) and twin-cabinet (MB3 XBD-A and BB6 XBD-A) active versions; the latter pro-

vides 3 dB more headroom.

French studio monitor manufacturer **Focal** continues to create new customers with its Trio6 Be three-way studio monitor, which sits midway in price between the SM9 and the Twin6 Be. Most notable for its rotatable baffle, allowing the speaker to be oriented in four different positions—vertical with woofers on top, vertical with woofers on bottom, horizontal with woofers outside or horizontal with woofers inside—the Trio6 Be features two 8.5-inch round openings; an 8-inch woofer fills the first opening and the second is filled with a rotatable aluminum baffle incorporating a 5-inch midrange/woofer. A 1-inch inverted dome beryllium tweeter—the same tweeter in Focal's SM9—and a pair of ports is also included.

One of two quite visually-striking monitors in this collection, the acoustically coaxial three-way 8351A is packed with innovative **Genelec**-pioneered technologies, including internal amplification; the aluminum Minimum Diffraction Enclosure; Directivity Control Waveguide; Iso-Pod vibration isolation/tilter; rear internal reflex tube/port; digital and analog inputs; the Smart Active Monitor system (SAM) for Genelec's Loudspeaker Management system (GLM); and much more. According to Genelec, the directivity pattern

of the low frequencies in the 8351A is equivalent to about an 18-inch driver, if arranged vertically; its unique oval woofers—with flat plane surfaces over a honey-comb-like infrastructure—measure 8.5x4 inches and are key to its design. Other key features of this Finnish wonder include the 5-inch midrange and 3/4-inch tweeter, AutoCal in-room system calibration, a maximum (peak) SPL of  $\geq 123$  dB (per pair @ 1 m), and notably excellent on- or off-axis neutrality.

**Modern Audio Design's** MAD-Max two-way active near-field monitor is a 17x8.5x11.75-inch reflex front-ported design featuring dual 180W amplifiers, 1.06-inch Sonolex soft-dome tweeter, 6.5-inch Dynaweave composite cone woofer, and an amalgamation of other key features. A



( $\pm 5$ dB). Notably, producer/mixer Ron Saint Germain is a proud user of the MAD-Max, having worked with Modern Audio Design principals Richard Gerberg and Graeme Bridge during its R&D process; Saint Germain attests that, having never been a fan of active near-fields, he's found a lot to love in the MAD-Max.



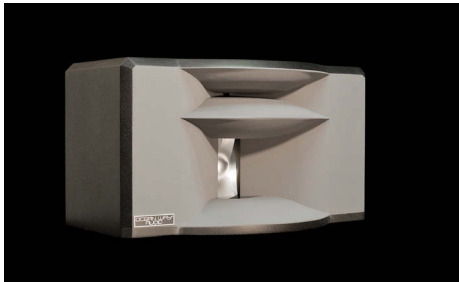
The second visually unique monitor featured here, **MunroSonic's** Eggroo is the smaller sibling of the well-received Egg150, both of which are designed and manufactured in the UK by Munro Acoustics and Sonic Distribution. With a smaller body than the Egg150 and featuring a 4-inch LF driver, the Eggroo system comes with a separate control unit and amplifier with passive analog crossovers, LF and HF trim pot EQ for location setup, and integrated Class A headphone amplifier. Other key features include its unique single-hull construction, making it rigid and resonant neutral, offers MunroSonic; no internal standing waves; a custom-designed speaker holder for adjustable vertical alignment, allowing vertical and horizontal placement; and more.



**Neumann** utilized the 2017 NAMM Show to launch its KH 80 DSP studio monitor to the American marketplace, notably Neumann's first studio monitor with digital signal processing. With Neumann.Control software on the way, the KH 80 DSP two-way near-field studio monitor will be able to fully calibrate to any studio environment, whether automatically (Precision Alignment), via a simple Q/A (Guided Alignment), or user-adjusted via built-in 8-band fully parametric EQ (Manual Alignment). Key specifications of the KH 80 DSP include 4- and 1-inch LF and HF drivers powered by 120 W and 70 W amplifiers, respectively; a 57 Hz - 21 kHz ( $\pm 3$  dB) frequency response; 108.8 dB maximum SPL; and a compact 9.2x6.1x7.6-inch and 7-pound, 8-ounce size and weight, respectively.

Designed by **Ocean Way Audio's** legendary founder, Allen Sides, the HR4 Reference Monitor is an integrated two-way dual-horn active





provides a 116 dB maximum SPL between channels. It measures 24x14x14 inches and weighs 45 pounds. Due to its low-reaching frequency response, Ocean Way Audio confirms that it needs no subwoofer for a powerful, truly full-range performance.



midfield delivering a 100-degree by 40-degree dispersion "window" via its 8-inch LF driver and 1-inch HF driver; a three-way model is reportedly available. Built to deliver a frequency response of 35 to 25k Hz, the HR4

**Quested** boasts its V3110 three-way as the "world's most accurate midfield monitor." While any such claim is debatable, it is a fact that the V3110 is Quested's most powerful active monitor to date, featuring dual 150 W Class A/B amplifiers

for its HF and MF sections, and a 700 W "Ultra Cool" Class D amp for its long-throw custom 10-inch driver. Other specifications include a 30-20k Hz ( $\pm 2$  dB) frequency range; 120 dB maximum SPL; and a 98 lb. weight. It can be arranged vertically or horizontally.




Experiencing a bustling booth at the 2017 NAMM Show, **Unity Audio** touted its Boulder Mk II three-way midfield/main active monitor boasting four discrete, custom-designed Esoteric Class A/B amplifiers, and much more. Key features include dual 8-inch proprietary SEAS aluminum woofers; a dual concentric 4.5-inch ELAC midrange driver; 50 kHz folded ribbon tweeter; a 32-38k Hz ( $\pm 3$  dB) frequency response; and Unity Audio's striking 1.2-inch thick front baffle made of Corian. According to the company, the Boulder Mk II is expandable via dedicated Boulder Bass Extenders or if paired with Unity's Avalanche subwoofer. ■

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# MIX REGIONAL: NORTHEAST



## PHILLY SOUND, PHILADELPHIA

Inside an old, stone church in South Philadelphia, Philly Sound Studios caters to local and international musicians. Studio partner and house producer Drew Raison, who also owns and operates the city's Modern Media Academy and South Philly School of Music & Arts, reports that recent sessions have included rapper Andy Mineo working on new material for his upcoming release; and Baby Blue Sound Collective completing their second release, *Home, Tonight, Forever* (engineered by Rich King and mastered by Raison).

Also, "Members of many classic rock acts pulled together to create an amazing backing band for a remake of the classic 'Brother Louie' by Joey DiTullio. The song was mixed by Mariano Mattei and mastered by Paul Hammond. David Uosikkinen [The Hooters, *In the Pocket*], Kenny Aaronson [Bob Dylan, Joan Jett], Steve Butler [Smash Palace] and others provided a killer performance."

In addition to production work, Philly Sound Studios has also hosted numerous live radio and broadcast events with acts such as Steve Aoki, Fall Out Boy, All Time Low, We the Kings, Kris Allen, Phillip Phillips and Ingrid Michaelson.



L-R: Studio partners Mike Lawson and Matt Teacher, Steven Tyler, singer/songwriter Katie Barbato, Sine Studios engineer Taylor Kogut.

## Sine Studios, Philadelphia

Sine Studios has been owned and operated since 2006 by Matt Teacher and Mike Lawson—friends and business partners who have been making music together since middle school. Offering a Sony MXP-3036 console, Pro Tools 10 HDX, Reason 6, and a wide variety of modern and vintage mics and outboard equipment, as well as plug-ins, Sine serves music-production, filmmaking and audio book-production clients.

Recent projects at Sine have included sessions with Boyz II Men, a listening party for Steven Tyler's new album, and mixing B-sides for Philly rock band *mewithoutYou*. "We also continue to mix—and sometimes remix—records from the Motown vault alongside Universal VP Harry Weinger and engineer Obie O'Brien," Teacher says. "We just completed sound design and mixing for the new Bon Jovi documentary about Camden, New Jersey, as well."

Work on the Bon Jovi film included altering and placing clips and samples from Bon Jovi's new album into the film music bed, as well as field audio clean-up and final mixdown for sync-to-picture.

Another music-meets-film project that Teacher was excited about: "We, along with Obie O'Brien, transferred, cleaned up, and mastered all of Larry Kane's original quarter-inch interview reels from the time he spent touring with The Beatles in '64 and '65. A majority of these previously unreleased interviews were used in Ron Howard's recent documentary *The Beatles: 8 Days a Week*."

But there's nothing that Teacher is more fired up about than the studio's recently launched label, The Giving Groove. "It puts a philanthropic twist on the traditional record label model," Teacher says.

The plan for Giving Groove was borrowed from Teacher's father and stepmom, Buz and Janet Teacher, who founded a cookbook-publishing company, Burgess Lea Press. "The Burgess Lea Press model was this: 50 percent of all after tax profits go directly to the author, the remaining 50 percent go to a non-profit, food-related charity.

"The Giving Groove will operate under the same model within the music industry: 50 percent of all after-tax profits go directly to the artist; the remaining 50 percent goes to a 501(c)3 non-profit, music-related charity that we work alongside the artist on selecting. Two of the initial charities that will be beneficiaries are MusiCares and Girls Rock Philly."

The first three bands signed to The Giving Groove Label are The Dead Milkmen, Decontrol and Oolala. "We knew we wanted to do something that was artist-friendly and socially conscious," Teacher says.





**L-R: Graham Maybe (bass), Rob Sansone (Guitar), Benny Kohn (keys), Matt Cimini (artist), Kenny Aronoff (drums), Will Schillinger (producer), Pat Waltman (assistant).**

## PILOT RECORDING, HOUSATONIC, MASS.

Will Schillinger's Pilot Recording has hosted many music-recording sessions in recent months: Matt Cimini completed a new album with a star-studded band, including Kenny Aronoff, Graham Maybe, Benny Kohn, Rob Sansone and Peter Stroud; Schillinger produced and engineered. Musician Robbie Lee was also in, mixing with producer/engineer Joe Blaney and assistant Adam Tracht.

And apart from his work with music artists, Schillinger also recently mixed a short film, the directorial debut of actress Karen Allen (*Indiana Jones* films, *Scrooged*). The project is an adaptation of an early Carson McCullers story, "A Tree. A Rock. A Cloud.," which, set in 1947, is about a meeting between a young boy and an older man in a roadside café.

"We just finished mixing the film," Schillinger says. "We recorded some ADR and some Foley, but primarily my gig was mixing the film, including dialog and music. Some of the music has been written by a local composer named Mark Kelso.

"When my studio was in New York, where it was for 15 years, we did a lot of films—I'd say one every couple of months," Schillinger continues. "But now it's a little more rare. We focus primarily on music, and we continue to design and build some of our own gear, including our line of mic preamps."

## SESSIONS

Photo: Michael G. Stewart



**L-R: Engineers Randy LeRoy and Charlie Pilzer, studio manager Mike Petillo, and engineer Don Godwin**

### AIRSHOW MASTERING

Engineer and studio co-owner Charlie Pilzer at Airshow Mastering's East Coast facility (Takoma Park, Md.) mastered the Smithsonian Folkways album *Spiritual and Shout Songs* from the Georgia Coast by the McIntosh County Shouters; this album was produced by Daniel E. Sheehy and Art Rosenbaum, and engineered by Pete Reiniger, who was assisted by Shane Baldwin. Randy LeRoy mastered Colin Hay's *Fierce Mercy*, which had been mixed by Vance Powell and Gordon

Hammond. And Don Godwin mixed The Priests' *Nothing Feels Natural*, which was recorded by engineer Hugh McElroy and producer Kevin Erickson; the album was mastered by T.J. Lippie.



**The Thoreau Piano Trio**

contemporary instrumental project, "First Year," for Greg Notaro, who self-produced.

### BLINK MUSIC STUDIOS

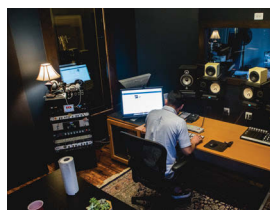
At Blink Music Studios (Cambridge, Mass.), producer/pianist Paul Jacobs and engineer Tim Lukas captured audio and video of The Thoreau Piano Trio performing the third and fourth movements of Shostakovich's Piano Trio in E Minor, Op. 67. Lukas also captured a



**Bob Ludwig and Adam Ayan**

### GATEWAY MASTERING

Just a few sessions from each of the always busy engineers at Gateway Mastering (Portland, Maine). Adam Ayan's recent projects: Lady Antebellum's single "You Look Good," Shakira's song "Chantaje" and Reba McEntire's *Sing It Now*. And from studio founder Bob Ludwig: Bruce Springsteen's *Chapter and Verse*, Sting's *57th and 8th*, John Legend's *Darkness and Light*, and Moana: *Original Motion Picture Soundtrack*.



**Andrew Ha**

### REPERCUSSIONS STUDIOS

Owner/engineer/producer Andrew Ha of Repercussions Studios (Philadelphia) upgraded to a new 900-square-foot space that he built from the ground up, to accommodate recording live bands. Repercussions caters to hip-hop artists, focusing on vocal production, mixing, and mastering. Ha recently completed recording, mixing, and mastering an EP for rap duo Main Topic.



**Gillian Anderson visited Cybersound**

### CYBERSOUND

Jordan Knight of New Kids on the Block was in Cybersound Recording Studios (Boston) with Danish producer Lars Jensen. Perry Geyer (owner of Cybersound) finished up his production for the latest single by J-Pop star Mai. Other sessions at Cybersound include rapper Sammy Adams recording his latest single, a remix for Grammy nominees Flume, and X-Files star Gillian Anderson reading for her audio book *The Sound of Seas*.

# PRODUCT HITS FROM NAMM 2017

## NEW PRODUCTS, NEW FEATURES ACROSS THE BOARD

by THE MIX EDITORS

This year's mid-January Winter NAMM show in Anaheim was busier than ever, offering more new gear than any show in recent memory. All product categories were ripe with options, and pro audio showgoers had plenty of eye and ear-candy to fuel their gear lust. *Mix's* 2017 NAMM roundup features our hits of the show.

### MIXERS AND CONTROLLERS

There are now three ways you can buy **Mackie's** Big Knob controller: Big Knob Passive, Big Knob Studio and Big Knob Studio+. Big Knob Passive is the most simple and affordable option, while its bigger brothers act as high-resolution USB interfaces featuring two Onyx mic preamps providing 60dB of gain.

**Peavey** showed its **Crest Audio** Tactus Digital Mixing System, built in collaboration with Waves. It is a combination of the Waves eMotion LV1 mixer, SoundGrid server technology, and Crest Audio Tactus IO interfaces, and includes 32 mic/line inputs, XLR mic and TRS 1/4-inch line inputs, 16 line inputs, gigabit Ethernet switch, and more. Also at the booth was Peavey's new UNITY DR16 Digital Mixer, offering 16 inputs, eight of which use Peavey's Silencer mic preamps.

**Radial Engineering** had the new Key-Largo, combining a multichannel keyboard mixer with the performance attributes of a real-time footswitch controller.

**DiGiCo** had the SD12 small-footprint live console featuring the latest generation of Super FPGA chips and 72 input channels with full processing. Other features include 36 aux/group buses, a 12x8 matrix, and an LR - LCR bus, all with full processing.

**PreSonus'** new third-generation StudioLive Series III digital console/recorders now come in two configurations: the 24-input, 16-channel StudioLive 16, with 17 touch-sensitive, motorized faders and XMAX preamps, and a 40-input StudioLive 32 offering 33 touch-sensitive, motorized

faders and 33 XMAX preamps.

**Soundcraft** announced its new, remote-controllable Ui24R. Users can access the device via Ethernet or built-in dual-band Wi-Fi (iOS, Android, Windows, Mac OS and Linux). It features Lexicon, dbx and DigiTech signal processing; 20 Studer-designed mic preamps; Lexicon reverbs, choruses and delays; dbx compression; dbx AFS2 automatic feedback suppression; and two channels of DigiTech guitar and amp modeling.

The RC-SS150 Flash Remote Controller from **Tascam** can control the new SS-R250N solid-state recorder and SS-CDR250N solid-state/CD recorder with IF-DA2 Dante card. The RC-SS150 features a full-color LCD screen, Start and Stop control and 12 flash play buttons.

### INTERFACES AND CONVERTERS

The Orion32 HD from **Antelope Audio** delivers 64 channels of I/O via HDX or USB3 and is compatible with any DAW on the market. It also offers Antelope's clocking technology and FPGA-based real-time effects models. Connections include HDX, USB3, MADI, ADAT and S/PDIF, with 32x32 analog I/O via DB25.

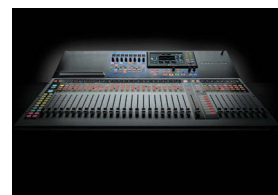
**Focusrite** debuted the Scarlett OctoPre and OctoPre Dynamic 8-channel mic units. Scarlett OctoPre features eight Scarlett mic and line inputs, while the Dynamic offers eight Scarlett second-generation mic preamps with analog compression on every input channel. Both feature Focusrite 24-bit conversion at up to 192kHz resolution with 109dB dynamic range.

**SSL's** Sigma V2.1 upgrade offers a lot of new features, including the new 16-fader Sigma Delta16 plug-in, bringing compatibility to Logic users. The plug-in allows users to write automation for Sigma's 16 analog faders from one plug-in window, solving Logic's inherent limitation of only being able to write data to one plug-in at a time.

**Universal Audio** had the new Apollo Twin MKII, a ground-up redesign of the world's most



Radial Key-Largo



PreSonus StudioLive Series III



Soundcraft Ui24R



Tascam RC-SS150 Controller



SSL Sigma Remote Control Analog Summing Mixer



Blue Bluebird SL



popular professional desktop recording interface for Mac and Windows. The new units offer Duo and Quad DSP options, plus Unison-enabled UAD plug-in operability, all under a slick, dark-gray top panel.

The **Lynx** Aurora(n) converter features a modular design and an onboard 32-channel microSD recorder across 14 models. The first three of these modules will include a preamp, plus an analog summing and a digital (AES3+ADAT) module to be released in 2017.

**RME** launched the new Fireface UFX II, 30x30 audio interface, combining flexible recording and playback using RME's low-latency hardware and drivers. Features include DUREC (Direct USB Recording) and TotalMix FX mixing and routing software, delivering a comprehensive set of features for pro and home users. (See the Fireface UFX+ review in this month's issue of *Mix*.)

## MICROPHONES

The Bluebird SL from **Blue Microphones** features a new onboard switchable highpass filter and -20dB pad that provides the flexibility to track a wide variety of sound sources and keep recordings clear at any volume. Bluebird SL comes in a wooden storage box and includes a custom shock mount.

**Audio-Technica's** new ATM350a Instrument Microphone Systems (reviewed in this month's issue) provides musicians with solid mounting solutions for a host of instruments. Each of the six systems features an ATM350a cardioid condenser microphone.

The **Soundelux** USA U99 (\$2,599) from designer David Bock uses a k67 dual symmetrical backplate, dual-membrane capsule along with the signature Soundelux USA "fat" switch. The U99 uses a "new old stock" tube and true linear high-current power supply for the fullest possible sound.

The **MXL** CR20 condenser microphone is a fixed-cardioid pickup featuring a gold-sputtered diaphragm and an innovative tube emulation switch. At a flip of the switch, the sonic characteristics of the MXL CR20 change from crisp and clear with detailed high end to warm and balanced with a rich bottom end, similar to the tones of vintage tube microphones.

**AKG**, meanwhile, debuted the C636, featuring a custom-tuned capsule with hand-selected components, plus feedback, handling noise and plosive rejection. The C636 combines a uniform

cardioid polar pattern throughout the entire frequency spectrum, with a specially designed suspension and grille for the capsule.

## MONITORS & HEADPHONES

The new MB2 and the BB5 from **PMC** are available in single-cabinet and twin-cabinet (XBD) versions. All feature a hand-built, precision-matched 34mm soft-dome tweeter and 75mm fabric midrange driver, coupled with the latest generation of the Radial low-frequency driver built specifically for use with PMC's ATL designs (a 12-inch Radial on the MB3 and a 15-inch on the BB6).

**Sennheiser** showed its HD 200 PRO headphones and the new **Neumann** KH 80 DSP studio monitors, the company's first speaker with processing. It features a 4x1-inch close field, bi-amped speaker design, with control via a central network right from your tablet or computer.

**Barefoot Sound** introduced the Footprint O1, a three-way monitor featuring dual opposing 8-inch paper cone subwoofers, a 4-inch aluminum cone midrange driver and a 1-inch dual ring radiating tweeter, components that all share a lineage with Barefoot's other products. The best news? Barefoot technology at only \$3,500 a pair.

The **Dynaudio** PRO LYD 48 (\$1,529 each) features a three-way speaker design using an 8-inch and a 4-inch woofer with a 1-inch tweeter. Power is supplied by a Class D amplifier, delivering 80W/50W/50W of power per monitor. The amp features a 96kHz/24-bit signal path and selectable input sensitivity, as well as the same Standby Mode as the original LYD speakers.

**Transaudio Group** showed the new passive ATC SCM12 monitor and the ATC P1 PRO standalone amplifier, among much more from their extensive lines.

**Blue Microphone** revealed the new Sadie, Ella and the soon-to-be-released Satellite Bluetooth noise-cancelling headphones.

**Audeze** showed its iSINE20 in-ear headphones featuring planar magnetic technology moved by the company's patented Fluxor Magnet Arrays. (See the reviews of Blue's Ella headphones and Audeze's iSINE<sup>20</sup> beginning on page 45.)

## LIVE SOUND SPEAKERS

**RCF** had its HDL Series of line arrays with the addition of the new HDL6-A, an active two-way module for flying, pole mounting or ground stacking applications. It houses two 6.5-inch mid-



Soundelux U99



MXL CR-20



AKG C36



PMC BB5



RCF HDL Series



UA Apollo Twin



Altec Lansing ALX Series

range drivers with a 1-inch compression driver on a 100°x10° waveguide, powered by an onboard 1,400-watt dual-channel amplifier with DSP.

**dBTechnologies** debuted its B-Hype Series, a compact and lightweight family that includes four two-way cabinets, each equipped with 1-inch compression drivers and, respectively, 8-, 10-, 12- and 15-inch woofers. Powered by Class D amplification, the B-Hype generates up to 126.5 dB.

**Altec Lansing** unveiled its ALX line of pro audio speakers, including the ALX-S18P front-firing subwoofer, the ALX-15P two-way powered speaker and the ALX-1525LA and ALX-2528A line array speakers. The ALX-S18P is an 18-inch high-excursion driver with a 3-inch, high-temperature voice coil and 800W of Class D power, while the two-way ALX-15P features a built-in digital signal limiter and LED indication that monitors the speaker's thermal activity.

**Cerwin Vega**'s new CV Series powered P.A. line includes three speaker groups. The CVE range includes four powered, full-range models featuring single 10-, 12- and 15-inch woofer tops, plus one 18-inch sub. The larger CVX Series comprises single 10- and 15-inch, full-range tops with 18- and 21-inch subwoofers. The largest, CVXL, encompasses five active speakers: single 12-, 15- and dual 15-inch, full-range tops, and single 18- and dual 21-inch subs.

## ANALOG PROCESSORS & PLUG-INS

Cliff Maag Sr. and Jr. had the **Maag** MAGNUM-K compressor on the floor, comprising two compressor sections and a parallel EQ. Designed in Maag's signature blue color, the compressor is full-featured, including input and output gain control, ratio, threshold, sidechain input with filter, attack and release, plus a switchable feedback or feed-forward option.

Aimed at composers and sound designers, **Halion 6** from **Steinberg** features an all-new wavetable synthesis engine with leading-edge editing and analysis tools, a new sampling editor, which records, maps, and plays sounds directly within the software, and a new Macro Page Designer that allows users to design custom user interfaces.

**Plugin Alliance** and **Black Box Analog Design** announced a novel tube-emulation plug-in and the companies' first collaboration—HG-2—a turbo-charged digital version of Black Box's high-end analog processor with the same name.

## ODDS & ENDS

**API's** **TranZformer** is a high-end guitar pedal featuring an API 525 feedback-type compressor with a guitar-optimized three band equalizer, both independently in/out-switchable.

The **ProMAX v2** from **Auralex** features a 24x48x3-inch absorptive Studiofoam panel with an updated angled reflective rear surface for tonal variability when rotated or flipped. Users may alter the quantity, orientation and spacing of multiple ProMAX v2s for changing the amount of room ambience.

The **Cloudlifter Zi** is targeted for use on electric guitars, bass, low-output piezo pickups used with acoustic guitars, or vintage electro-mechanical stage pianos employing a passive output. Tone-shaping features include variable input impedance from 150 ohms to 15k ohms, letting you load the Cinemag instrument transformer inside the Cloudlifter Zi to create a range of tonal variations.

**Sound Tap** from **Ultimate Ears** is a compact and versatile stage accessory that plugs directly into any on-stage speaker, passing through to a passive IEM without impacting the system. UE Pro Sound Tap has been designed to work with wedges, sidefills and other stage equipment; it supports both line-level or speaker-level inputs. (See the review of UE's Ultimate Ears 18+ PRO starting on page 45.)

**Slate** introduced the **Virtual Studio**, a suite of hardware and software products working together to create a studio system. The analog audio interface features onboard mic preamps that can then be altered in the box via Slate's proprietary modeling software.

The **Harman** Connected PA is free and offers intuitive setup, configuration and control of live sound products through the PA mobile app. The current and growing list of products include Soundcraft mixing consoles, AKG microphones, dbx stage boxes and JBL speakers.

**Waves** showed the new official software version of the **Dugan** automixer for automatic control of multiple mic gains, designed for integrated use inside their eMotion LV1 live mixing console.

**Littlelabs** had the new **Monotor** on hand featuring an audiophile circuit path using a single active stage per headphone output. Ideal for checking phase and analyzing artifacts in compressed digital files, **Monotor** features separately amplified, dual ¼-inch and ⅛-inch headphone jacks and extensive mono monitoring options: left-plus-right, left, right, and left-minus-right. ■



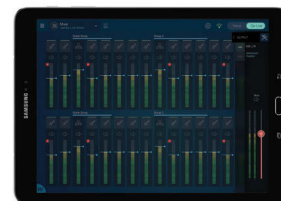
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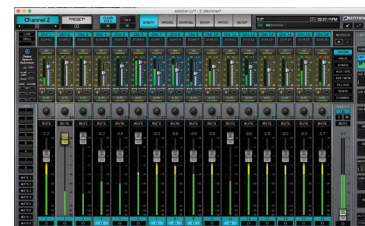
Auralex ProMAX



Cloudlifter Zi



Harman Connected PA



Waves Dugan Automixer



Littlelabs Monotor



## 3 NEW HEADPHONES, 3 NEW APPROACHES

Blue Ella, Audeze iSINE<sup>20</sup> & Ultimate Ears 18+ PRO

**W**e're now well into the 2017 trade show season, and no matter the event, there are always plenty of new mics, speakers and headphones on display—the transducer category never gets tired. Here, we look into three head-worn listening devices I saw at Winter NAMM in January. Each company's products offer new approaches; all are boundary stretchers for the participants.

Blue Microphone's Ella is the company's first high-end planar headphone; the iSINE<sup>20</sup> is Audeze's first one-size-fits-all, compact, planar in-ear headphone; and the Ultimate Ears 18+ Pro is UE's top-of-the-line IEM in both features and price.

The test system for this review sources files at full bandwidth, or Apple Lossless files through the Audirvana Plus 2.6.6 player through an Emotiva Big Ego USB digital-to-analog converter. When listening, WiFi and Bluetooth were off, and I engaged Audirvana's SysOptimizer's options to disable Spotlight, Time Machine and detection of iDevices on USB.

### BLUE ELLA HEADPHONES

Last year, Blue brought the Mo-Fi (\$349.99) and Lola (\$249.99) headphones to market, and this year brings three new models. Sadie is a Mo-Fi reboot (\$399.99), Ella, reviewed here (\$699.99), and the soon-to-be-released Satellite Bluetooth noise-cancelling headphones. I reviewed the Mo-Fi last April in *Mix*, and they were spectacular in their ability to be both a consumer and pro headphone in the same go, which is no mean feat.

Ella has the same basic design as Mo-Fi with some tweaks. First, it's just half an ounce heftier and beautifully done. All surfaces are top-notch with the same unique, spring-loaded headband design as the Mo-Fi, which is both comfortable and stylish. LEDs showing battery-powered operation and indicating charge is integrated into the Blue logo on the outside of the ear cups.

Ella's main difference is a redesigned 250mW amplifier and 50mm x

50mm planar magnetic drivers. Like Mo-Fi, the removable cable fits deeply into the port at the bottom of the left ear-cup, which doubles as a three-way rotary switch for passive, amplified or bass-boosted listening. Unlike with the Mo-Fi, the new cables that come with Ella are covered in braided cloth. This moderately helps reduce cable-handling noise. The drawstring storage bag is not as nice as the bag that came with the Mo-Fi, which had a separate, inner cable pouch and magnetic clasp.

Included in Ella's bag is a generously long cable with one end wired for Ella, and the other carrying an attached 1/8-inch universal stereo adapter. Also included is a separate 1/4-inch adapter plug with an open end that confidently and deeply connects with the 1/8-inch plug should you need to take them into the studio. There is also a USB cable (Type A to Micro A) for connection directly to Ella for charging. I missed that Ella does not come with an AC-to-USB Type A female adapter for powering at an outlet.

Also onboard is a shorter cable for use with a phone with a 1/8-inch mini-plug. It has volume control, song start/stop buttons and an integral mic. I used Ella with my Samsung Galaxy S5 phone to call a friend, and he said I'd never sounded better on a call. However, the cable's controls are iOS specific—on my S5, Ella's buttons would not control volume or my audio player, but on an iPhone, they worked as you would expect. There is no Lightning cable option for Ella at this time.

The fit is comfortable, but I miss the increase/decrease tension adjust-



Blue Ella headphones

### PRODUCT SUMMARY

**COMPANY:** Blue Microphones

**PRODUCT:** Ella

**WEBSITE:** Bluemic.com

**PRICE:** \$699.99

**PROS:** Great sonic performance across the frequency range. Beautifully made and comfortable.

**CONS:** Fit is not as firm as the Mo-Fi. Ella occasionally squeaks, depending on head orientation

ment found on the Mo-Fis, which have a firmer fit and thicker foam at the ear pad and top. I also found that Ella occasionally squeaked depending on the orientation of my head. This may relax over time and is masked when music is playing.

The audio reproduction from Ella is very good, albeit different depending on which of the three listening modes you choose. The transient response is punchy without being too forward (especially in passive mode), the bass is full, and high frequencies from percussion, cymbals and other bright elements are even and not overly emphasized. In passive mode, and more in the active mode they are forward in the 3-5kHz range, which tends to emphasize sibilance in vocals, hand percussion, snare and tom attack, and other elements. This would make them great for tracking with a band where there are a lot of room distractions outside the ear cups. The bass-boosted mode is too broad and obvious even at low volumes. Overall, Ella provides a pleasant listening experience, and like the Mo-Fi, they sound great and offer a transition between pro and casual listening in a comfortable, well-designed package.

#### AUDEZE iSINE<sup>20</sup> IN-EAR

Audeze is no stranger to manufacturing great headphones, including the LCD and EL-8 over-ear, SINE on-ear, and now the iSINE in-ear series. All feature Audeze planar magnetic technology using diaphragms thinner than a human hair moved by their patented Fluxor Magnet Arrays, delivering near-zero distortion and incredible sound. I reviewed the EL-8s for *Mix* in April 2016 and loved them. I've also had the pleasure of hearing the company's top-of-the-line LCD-4s; they deliver a unique and beautiful listening experience. How they fit all this tech into such a light and great-sounding product is remarkable.

The iSINE series consists of three models, the iSINE<sup>10</sup>, iSINE<sup>20</sup> (reviewed here), and the iSINEVR for use with virtual reality goggles. The iSINE<sup>20</sup> comes in a slick plastic display box with a flip-top magnetic lid. Inside are the drivers mounted on a removable plastic and foam block, multiple bags of accessories, a cloth and leather carrying case with a magnetic flip-over clasp, and one of two cables. You can order an iOS Lightning cable compatible with the latest iOS iPad, iPad, or iPhone offering DSP and a controller/app, or a standard 1/8-inch cable compatible with a multitude of devices.

Accessories include three rubber ear tips for different ear-canal fit preferences, four pairs of plastic over-ear and in-ear guides that hold the drivers in place, and a cleaning tool. The ear tips and guides take some careful wrestling to put in place on the driver, but the pieces are solidly made and fit tightly. I'd like to see some more ear tip size options included—even the largest tip was not quite tight enough for my ear. The left/right split at the other end of the 1/8-inch plug fits tightly into the drivers and are clearly marked L and R, so there's no question that your stereo connection is set up properly.

With listening products that fit inside your ear there is always a trick



Audio-Technica iSINE<sup>20</sup> headphones

## PRODUCT SUMMARY

**COMPANY:** Audeze

**PRODUCT:** iSINE20

**WEBSITE:** Audeze.com

**PRICE:** \$549

**PROS:** An unparalleled listening experience from an earbud. Comfortable fit.

**CONS:** Ear tip fit is critical to a great experience; only three sizes are included.

to learning how to get them on, in and comfortable. I chose the larger mount that hooks over the ear and it worked great. The trick with the oddly shaped iSINE20 is to put the ear tip lightly in place, then rotate them forward. Then, slide the end of the ear mount over the top of the ear and rotate them back until they sit perfectly over the ear. Once in place with the ear

tip pushed tighter into the ear, they are so light and comfortable you forget you're wearing them. Not being custom, the fit of the ear tip is critical to the experience. I chose the widest option, and it worked perfectly. The fit was sealed enough that the low end was even and full. Even when shaking my head, the iSINE<sup>20</sup> stayed put. Cable handling noise is slight and acceptable.

The sound is remarkable for an earbud. The frequency balance is good, the low end is punchy and full, and the top end crisp without being overbearing. I think with a larger ear tip that I could fit tighter into my ear, the sonics would improve. These would be incredible with a custom fit option. The planar drivers are open-back, so ambient noise is apparent. For casual listening when you need to know what's going on around you, these are perfect—like listening with great speakers that freely move around with you. Audeze is a company that never fails to surprise with its unique design, sonic integrity and outside-the-box thinking. The iSINE<sup>20</sup> is another product that fits this description perfectly.

#### ULTIMATE EARS 18+ PRO IEMS

Ultimate Ears is a company with big plans for IEMs. The company was first to use digital ear scanning, freely offering it at their booths at the last two Winter NAMM shows. Once you are scanned, your files remain in UE's database should you decide to buy their custom products. This is a major savings over the older method of paying an audiologist to fill your ears with goop and making reverse impressions that only last two or three times before they have to be redone. I previously reviewed the UE Pro Reference, then the Pro Reference Remastered IEMs. The 18+ PROs fall under the company's new audiophile series of products.

The 18+ PROs use six proprietary balanced armatures divided into four frequency bands, with two True Tone drivers dedicated to the highs. They are decidedly larger than the Capitol Remastered units but still fit into the hockey-puck sized, sturdy metal container that comes with a cleaning tool. UE has dropped the reward system on the box for this go-around, which was a nice way to get your IEMs back should you lose them.

Other features include a twisted pair of cables that feed each ear-





Ultimate Ears 18+ Pro

## PRODUCT SUMMARY

**COMPANY:** Ultimate Ears

**PRODUCT:** 18+ Pro

**WEBSITE:** pro.ultimateears.com

**PRICE:** \$1,500

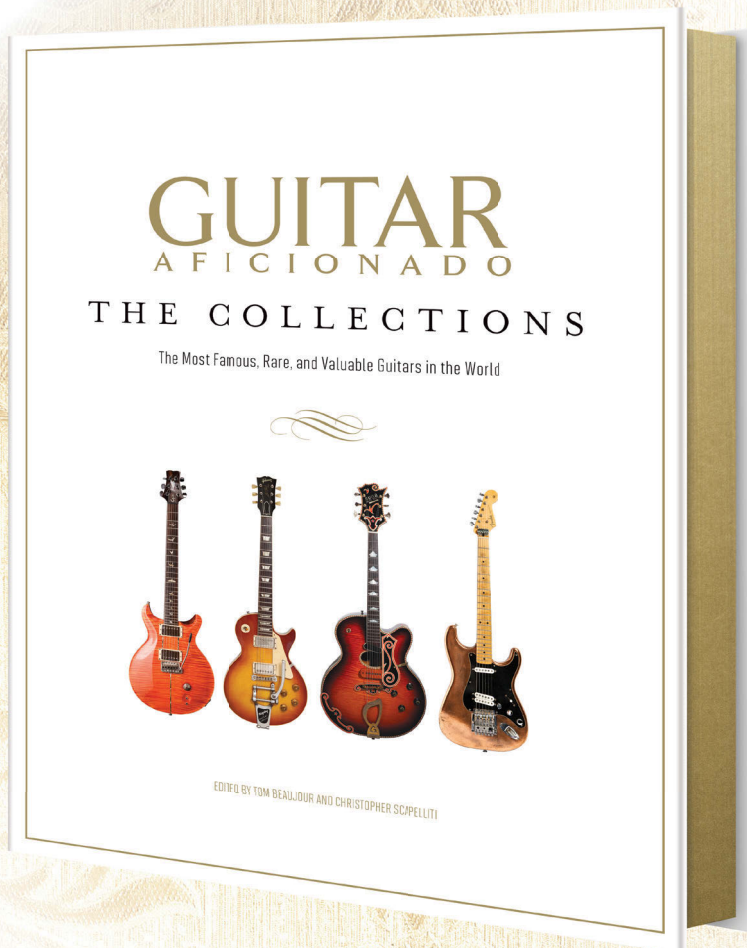
**PROS:** Beautiful in-ear listening. Well-made. Cable has incredibly low handling noise.

**CONS:** Slightly more forward in the low end than UE Pro Reference Remastered.

piece and is then braided to make the run down to the 1/8-inch connector. Cable handling noise is minimal. Other features include a midrange band-pass filter, staggered highpass filters, and a four-way mixed crossover designed to separate electrical load on each balanced armature. From the manual: "The patented triple bore sound channels keep the lows, mids, and highs separate until they interact with your eardrum." The micro science here is beyond me. How they fit all this into a package that fits so perfectly inside the human ear is miraculous. Like other custom IEMs, the isolation is -26 dB, which is what separates them from the pack. No headphone or consumer earbud can accomplish this.

Listening with the 18+ PRO is luxurious. Like the UE Pro Reference Remastered IEMs, they are well-balanced across the frequency range, although a bit more forward in the bottom end. As a reference for panning, there is nothing better. The stereo picture comes alive both from the isolation and proximity to the ear drum. Transients are crisp, quick and well-defined, the bottom end is full and punchy, and the top end clean without being brash or overly bright. The low-end presence below 100 Hz is slight, but enough that I would trust UE Pro Remastered more for mixing. That said, the 18+ Pro is an excellent IEM that provides an unparalleled listening experience. ■

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## RME FIREFACE UFX+ INTERFACE

Four Preamps, Flexible Routing and I/O



In 2004, when RME released the first product in its Fireface line, Firewire audio interfaces were still a relatively new concept. The Fireface 800 had a ridiculous I/O count for the time, taking advantage of ADAT, S/PDIF and AES/EBU, in addition to analog I/O. The latest in the family, the Fireface UFX+, is right in step with the expectations set forth by its predecessors.

With the new model, the I/O count rises to 188 total channels by adding MADI connectivity, and Thunderbolt or USB 3.0 provides the necessary bandwidth for getting into your Mac or PC. This amount of power, paired with a newly designed software mixer, suggests that the Thunderbolt era is a perfect home for RME's way of thinking.

### THE BASICS

The Fireface UFX+ is a single-rackspace interface whose full potential depends on Thunderbolt or USB 3.0 connectivity; for the sake of compatibility, USB 2.0 is also supported at the expense of MADI I/O. The interface provides 12 AD converters. Eight balanced line-level signals can be accepted through the rear-panel TRS connections, while the other four channels of input are accessible through front-panel XLR/TS 1/4-inch combo jacks. The four front-panel inputs are each equipped with high-quality mic preamps capable of providing up to 75 dB of gain. The 1/4-inch component of the combo jack is designed to accept high-impedance instrument signals, as an alternative to the mic input.

There are also 12 included channels of DA conversion. Four are broken into a pair of high-gain, low-distortion headphone outputs found on the front panel. A pair of rotary encoders, which can be repurposed as input gain controls, adjust the output level of each of these jacks by default. While the control room

level can be dimmed or muted using the included software, there are no physical controls for dim or mute functions. It would be nice if pressing the rotary encoder, for example, muted the output, but this is not the case. The remaining six channels of DA feed a set of 1/4-inch TRS connectors on the rear panel.

Other I/O includes four Toslink connectors, a pair of XLR connections providing stereo AES/EBU I/O, and MADI I/O offering 64 input channels and 64 output channels using the SC optical connector type, with included dust caps. A pair of BNC word clock input and output connectors can be repurposed as MADI connectors, instead of using the optical MADI I/O.

The Fireface UFX+ is meticulous about proper clocking, providing some functions to verify and stabilize throughout the system. In addition to the dedicated BNC wordclock I/O, the unit can feed clocking pulses to any digital audio output or slave from any of the digital inputs. When slaving to incoming signals, RME's SteadyClock technology accounts for the fact that clocking signals, which are embedded into data streams containing digital audio packets, are inherently prone to jitter. SteadyLock takes these questionable clock sources, removes the jitter, and tightens them up so that the unit's own AD/DA will be extremely accurate even when clocking externally. This repaired clocking signal is also passed through the unit's wordclock and digital audio outputs so that other digital gear connected to the Fireface UFX+ will be clocked equally accurately.

### TOTALMIX FX

The TotalMix FX software, which handles routing duties for the Fireface UFX+, was a little overwhelming at first glance. Other software mixers that I've encountered, like Apogee's Maestro, for example, have been clean, simple and intuitive enough that I



## PRODUCT SUMMARY

**COMPANY:** RME

**PRODUCT:** Fireface UFX+

**WEBSITE:** [www.rme-audio.de/en/](http://www.rme-audio.de/en/)

**PRICE:** \$2,799 (Street)

**PROS:** Variety of I/O with extremely flexible routing

**CONS:** Only four built-in mic preamps

could easily build headphone mixes minutes after taking the hardware out of the box. The TotalMix FX software threw me for a loop. I tried clicking around, and after a while, I thought I had things figured out, but there were still a lot of functions that confused me. So I read the manual and realized that this software was extremely powerful and far more feature-packed than I imagined.

With TotalMix FX, any physical input or software return can be fed to any physical output. With 94 total input channels, 94 software returns, and 94 physical outputs to which any of those 188 sources could be routed, I suppose that simplicity is inherently out of the question. However, understanding the goals of the mixer, and how the software addresses these goals, I am extremely impressed with just how intuitive the mixer became. It is so well-designed, in fact, that the Fireface UFX+ could be considered for purchase not only as an audio interface but also merely as a MADI router, feeding MADI signals to and from different converters and destinations. To serve this purpose in the most basic way, a simple grid-style routing matrix, similar to the Pro Tools I/O settings window, is available.

For more advanced mixing, a full-on fader-based mixer takes on the task. Every single input and output has its three-band, fully parametric EQ, a highpass filter with adjustable slope and frequency, and dynamics processing, including an expander, compressor and customizable auto-leveler, which serves as a limiter. Every return has a send for Reverb/Delay. On top of that, a pair of time-based processors providing reverb and delay can be fed by a single send from each source fader and returned at individualized levels on the fader feeding each output. Best of all, utilizing these effects has little impact on CPU performance, because the processors use the hardware's DSP.

### IN THE STUDIO

When I unboxed the Fireface UFX+, I was impressed right away by the build quality. The unit is housed in a sturdy steel chassis with a metal faceplate. A small, full-color display can show different functions like metering, input and output gain, different routing functions, as well as controls for the unit's integrated USB recorder. Flipping through different menus using the onboard rotary encoders was a little clunky, as controls would address the functions of one menu but then revert to default functions in others. For many of the more complicated routing functions, using three knobs had a cumbersome, Etch-a-Sketch feel. In almost every case, aside from main output level, I avoided the onboard rotary encoders altogether and used the TotalMix FX software to control all functions.

I listened to the DA converters before I tracked anything with the unit. I shot the Fireface UFX+ out against my Dangerous Source, which I consider to have very clean, punchy and extremely transparent converters. The RME interface was sonically impressive, bringing a great amount of detail and a nice stereo image. I listened to many types of music, but across the board, the distinction between the two characters was very clear and consistent. Overall, the Fireface UFX+ had a slightly more aggressive lower midrange and low end, while the top end was a little smoother and less punchy.

Both showed a nice picture of the room in acoustic recordings and had a pleasantly balanced sound. I was satisfied enough with the Fire-

face's converters that when doing remote tracking, rather than bringing my Dangerous Source along, I relied on the Fireface as a monitor controller. The unit performed admirably, though, again, I kept looking for a mute and dim control. I suppose that if I had had the optional ARC USB remote, its large rotary encoder and fully programmable buttons could have been made to perform these functions.

Because the Fireface UFX+ only has four built-in mic preamps, I knew I was going to have to expand the I/O to record basic tracks for a full band. I chose an 8-channel preamp with ADAT output and word clock I/O and connected a Toslink cable to the first ADAT input of the Fireface. Immediately, the software control panel indicated that a connection was present, but lights started blinking on the interface as well as the mic preamp. The software control panel also blinked different sample rates in the ADAT 1 section.

I like how clear the Fireface's software was about indicating a sample-rate mismatch and clocking problem. I connected a wordclock cable from the Fireface to the preamp, and double-checked the sample-rates and clocking settings on the devices and got solid lights on both. Some interfaces are much more ambiguous about differentiating between the signal present, sample-rate match and locked statuses. The Fireface helped me quickly diagnose the problem and confidently solve it.

Getting ready for a tracking session, I played with the software mixer and continually got overwhelmed by the amount of I/O presented. Conveniently, there were a variety of options to collapse different faders into a narrow meter-only view. On top of that, any channel of input, output or software return could be manually removed from the mixer if not being used. In my case, I never had the opportunity to use the MADI I/O, so I removed those 64 channels from the mixer and radically simplified the whole setup. Even after using it for a while, there were still moments when I would still get lost between the different mixer pages when building headphone mixes or got confused by the positioning of labels. I'm sure that day-to-day use would quickly bring proficiency.

I was very pleased with the sound of the built-in effects, particularly the reverb. It was not bright or cheesy in any of its modes. It was pleasant and usable and complemented drums and vocals nicely. It was great for giving a singer confidence during tracking. The dynamics processors were also handy, especially the auto-level on headphone master faders. As more and more layers of overdubbing built up, it did a nice job of preventing the overall level from overdriving the output.

When I got into tracking, I was impressed by the amount of headroom afforded by the built-in mic preamps. In one instance, I had kick and snare on the first two preamps and was never looking for a pad. The sound of each was full and had a great sense of realism—very punchy and clean with no hint of grit or distortion.

I liked the preamps on a miked a guitar amp. In one case, the guitarist was using a slightly dirty tone with some chorus, delay and spring reverb. I had a condenser backed off about a foot and a half aimed straight on axis with the amp's speaker. The reverb, combined with the little bit of room that was being picked up, created this perfect image of the sound, just like we heard it in the room. Despite the fact that the amp was cranked to a pretty loud volume, the preamp captured the sound with great clarity and no additional distortion; it never sounded harsh.

*Continued on p.51*

## AUDIO-TECHNICA ARTIST SERIES

### Roadworthy Dynamic Mics and New Mounts

**W**hen it comes to choosing microphones for live sound applications, a rugged, low-profile mic that can handle high SPL levels is often desirable. This is a review of the newest instrument mics that Audio-Technica offers with these characteristics in their Artist Elite and Artist Series lines.

The Artist Elite AE2300 is a cardioid dynamic mic tailored for guitar amps, brass and percussion. The Artist Series ATM230PK is a three-pack of hypercardioid dynamic mics intended as a drum kit miking choice, and includes stand- or rim-mounting options. The Artist Series ATM350a includes a single ATM350a cardioid electret condenser mic with a choice of UniMount systems for a variety of miking solutions. That's three mics and their mounts, providing plenty of options for different drum and guitar amp situations on a live stage.

#### AE2300

The AE2300 is a low-profile dynamic mic touting Audio-Technica's proprietary double-dome diaphragm that offers improved high-frequency and transient response. The body of the mic is metal and feels quite sturdy. It is shipped with an isolating rubber stand mount, a soft protective pouch and a 5/8-to-3/8-inch stand adapter. It also features a lowpass filter rolling off around 6 kHz to help eliminate unwanted high-frequency material.

I first tried the mic on a few different drums. On kick, I found it to have a nice attack and a good amount of low end. When used for its attack, and complemented by a mic that has a bit more low-end punch, the AE2300 makes a fine bass drum choice. As a snare drum top mic it has a big and fat body to it. When used on the bottom of the drum, it brought out the pop of the snares without being harsh. When I tried the LPF in this position, it added a gentle roll-off to the snares that would work well if a less aggressive sound was desired. On toms the AE2300 offers a lot of nice stick attack and good off-axis rejection of the other drums and cymbals. The low-mids were a bit strong for my taste but easily tamed with a small bit of EQ.

The AE2300 as a guitar amp mic placed at half a radius from the center of the speaker cone represented the amp well. For clean Stratocaster tones, it produced the quintessential "jangle" perfectly. With an overdriven Fender Twin and Les Paul bridge pickup, it afforded a throaty, aggressive, classic rock sound. I would recommend an HPF around 80 Hz and a gentle low-frequency shelf cut around 125 Hz to tame the low-mids.

#### PRODUCT SUMMARY

**PRODUCT:** AE2300

**WEBSITE:** [www.audio-technica.com](http://www.audio-technica.com)

**PRICE:** \$269

**PROS:** Low profile. Offers nice top-end attack.

**CONS:** Strong low-mid response that may require a bit of EQ.

**Try This:** When placing a mic on a guitar cabinet begin with the mic at half a radius from the center of the cone to the extreme outer edge. This will generally be the flattest frequency response of the speaker. A speaker will produce the most high-frequency energy at the center of the cone, so if the half-radius is lacking HF, move the mic slightly closer toward the middle of the cone. If it has too much HF, scoot the mic toward the outer edge.

#### ATM230PK PACKAGE

The ATM230PK features a package of three hypercardioid dynamic ATM230 mics in rugged metal chassis similar to the AE2300. The package includes three mounting clips that will attach directly to the rim of just about any drum. The mics can also be stand-mounted and include a 5/8-to-3/8-inch stand adapter, as well as protective storage pouches.

I tried these mics on a variety of drums and percussion instruments. While not a great mic choice on kick drum, the ATM230PK worked well on snare, in particular snare top. On snare bottom I found the AE2300 to be a better choice.

Actually, the two mics complemented each other well to create a big powerful snare drum sound. On toms the ATM230PKs produced a good low-end response without as much low-mid as the AE2300, and the attack was sufficient. On a set of congas, the ATM230PK brought out the fundamental frequency well and produced a quite natural tone.





## PRODUCT SUMMARY

**PRODUCT:** ATM230 and ATM230PK

**PRICE:** \$139 and \$349

**PROS:** Cost-effective. Low profile. Smooth low-mid response.

**CONS:** No highpass filter.

**Try This:** When using a top and bottom snare mic, try to aim the bottom snare mic up and pointing directly at the on-axis point of the top snare mic, creating a mirror image. Now, reverse the polarity of the bottom microphone at the console. With the mics in this “mirror image” configuration and the polarity flipped, the blending of the two mics will have a very strong summing result in the mix.



## ATM350A MEGAKIT

The ATM350a systems are made up of a single AT350a cardioid condenser mic and several mounts. System models include the universal clip-on system with 5-inch gooseneck (ATM350U and wireless ATM350UcW); universal clip-on mount with 9-inch gooseneck (ATM350UL); woodwind mount (ATM350W), magnetic piano mount (ATM350PL) and drum mount (ATM350D). All wired systems come with a power module (AT8543).

Each mount is cleverly designed with various adjustments for precise placement on each instrument, but the drum mount is my favorite. Its design allows it to attach to the top of one of the drum's tuning lugs. The mount then provides its own tuning lug atop that so the drum can still be

tuned freely. Very cool!

The ATM350a has a 12dB/octave highpass filter switch and can also be outfitted with an optional omnidirectional capsule or wireless option. I listened to this mic on a rack and floor tom. In both instances it had an even, round tone to it that extended into the lower midrange nicely. For floor tom, I prefer a little bit more low-frequency extension than the 350a provided, but it had sufficient attack as well for both toms.

**Try This:** When placing tom mics, be aware of the polar pattern (i.e., cardioid, supercardioid, hypercardioid). With the AT350 being cardioid, the rejection zone is 180 degrees off-axis. To isolate the tom mics from cymbal bleed, try to point the rejection zone of the mic at the closet cymbal while still pointing the on-axis point of the mic at the center of the tom. ■

*Kyle Welch is a Nashville-based live sound engineer and educator.*

## PRODUCT SUMMARY

**PRODUCT:** ATM350a

**PRICE:** ATM350UcW \$199, ATM350U \$299, ATM350UL \$309, ATM350W \$349, ATM350PL \$349, ATM350D \$349, UniMount systems (systems without mic) \$69-\$119 and UniMount components (gooseneck or mounts) \$30-\$89.

**PROS:** Diverse choice of mounting options. Warm round tone.

**CONS:** Could use more low-frequency response for bigger drums.



## Continued from p.49

Again, on vocals, the Fireface's preamps captured all of the air and detail of the performance. My only complaint would be that there are only four preamps. I would have gladly used them on anything. I also wound up connecting the direct output of the bassist's amp to one of the line-level inputs of the Fireface UFX+. In this case, the unit's preamps weren't involved, but the AD converter still played a role. We never connected the amp directly to a cabinet, so I only heard it through the converters, but the sound was phenomenal. The bass had a rich character with a gigantic bottom end, and a smooth, yet detailed string attack in the top end. Altogether, it cut well through the mix, though in sections where the bass was featured more, it never sounded brash or clicky.

Across the board, I liked the sound of the AD and DA converters. Listening back to a rough mix, where most of the tracks were cut with Fireface preamps and converters, there was this dark, warm Neve-like character to the track. The top end was wide, complicated and detailed; it would not be described as bright or brittle.

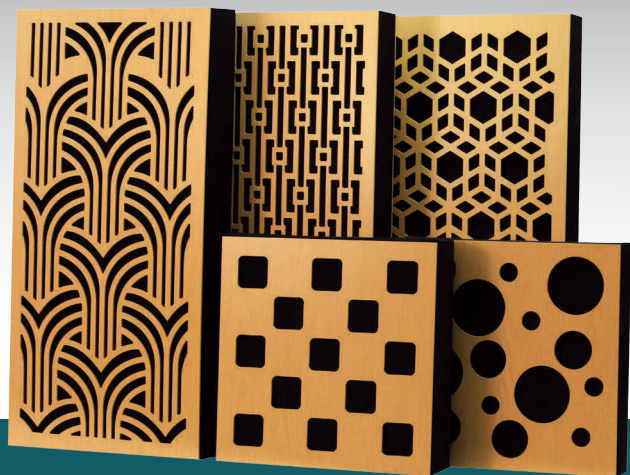
With more and more exposure, the mixer became easier to use, and the onboard effects were a nice touch. I wish it were easier to set levels, engage

phantom power and deal with inputs using tactile controls rather than software. Despite that, I preferred the Fireface UFX+ over many other interfaces regarding ease of use, and it made a very short list regarding sound.

There are only a handful of high-I/O count, Thunderbolt interfaces at this price point right now, so the the Fireface UFX+ joins the Apogee Ensemble Thunderbolt, UAD Apollo 16, Focusrite Red 4Pre, Antelope Orion Studio, and Lynx Hilo regarding price and features. The MADI I/O and the general variety of input and output types would be one thing that sets this unit apart. On top of that, the software mixer is probably the most powerful in the class regarding routing.

The Fireface UFX+ comes up a little short regarding the number of built-in preamps, so that might lead some customers to look at the Apogee Ensemble or Antelope Orion. However, if you can get away with four great-sounding, built-in preamps, if you demand very flexible routing, and particularly if MADI I/O fits your needs, you can't go wrong with this unit. ■

*Brandon T. Hickey is an audio engineer specializing in sound for post-production.*



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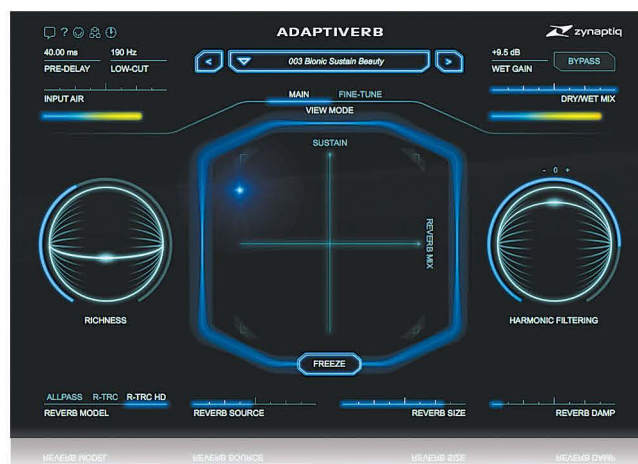
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## Time to Gear Up?



By Kevin Becka

**T**he gear bug is infectious: Once bitten, you're always looking for the next and newest thing that will improve your workflow and inspire you to do your job in a better, fresher and more exciting way. So, the continuous burning question is: Is it time to gear up?

At NAMM, I met with Xander Soren and Bob Hunt from Apple, and they took me through Logic Pro 10.3. The impressive list of features includes a 64-bit summing engine, true stereo panning (Yes!), and support for the TouchBar on the MacBook Pro. Since last year I've been toying with the idea of getting the latest high-end laptop but was put off by *Consumer Reports'* findings where they had mixed results with battery tests (the problem is fixed, and *Consumer Reports* now recommends the laptop). This is also confirmed by my tests after Apple set me up with an editorial loaner system.

Once I got the laptop, which is top-of-the-line in every respect (2.7GHz quad-core Intel Core i7, 16GB of RAM, 1TB Flash drive), I loaded Pro Tools 12.6 to see how it fared. It was stellar. The processor is quick, making Commit and Freeze lightning fast; the graphics look great and it runs well on Sierra macOS. Unlike Logic Pro, Avid's DAW is not integrated into the TouchBar and it isn't clear if it ever will be. The computer itself is lighter and thinner than ever, offering a larger mouse pad, stunning display, the addictively useful TouchBar, and improved stereo speakers with a sub that ports out the bottom of the unit. The downside? I'm not sure I'm ready for a USB-C/Thunderbolt 3-only world. Yes, the four ports on the MacBook Pro provide power, support for video, and compatibility with Thunderbolt 1, 2 and 3, USB, and more, but only through separate conversion cables or a dock.

The best all-in-one converter I found is OWC's USB-C Dock (\$148.75), which offers five USB 3.1 Gen 1 ports (including 1x USB Type-C), Gigabit Ethernet, an SD card reader, HDMI with 4K support, and audio in/out port. But it's not small, being easily three times as tall as the laptop and much larger than any hard drive I carry in my backpack. It also uses a wall wart. Another deal-breaker for me is the MacBook Pro's keyboard—it is LOUD when you type. I love the short throw of the keys, but even with my light touch, typing is annoyingly audible. So the MacBook Pro disappointingly gets

a “not now” answer to the burning question.

New and in my ears are the three-way ADAM S3-H monitors (\$3,499.99). I've always liked ADAMs and listen on the original S3s at Blackbird from time to time. A ribbon tweeter is an acquired taste for some, but I find it easy and pleasant on the ears. *Mix* editor Tom Kenny and I had a NAMM evening meet-up with ADAM's Davids—Hetrick and Angress—who told us about the new monitor's design history. It's an all-new box inside and out, with two 7-inch bass drivers powered by separate 500W Class-D amplifiers, a dome midrange reminiscent of an ATC mid-driver, improved ribbon, new waveguides, and DSP executed in a better way than I've ever seen on a monitor.

I just unboxed a pair last week and they offer a spectacular listening experience—these are not your father's ADAMs. They are a mid-field, but I had them comfortably atop an SSL console's meter bridge and I couldn't help being impressed. The DSP is on the back (the Davids say there will be a remote option) with parameters accessed via a push-rotary knob for changing the parameters on the input (analog or digital), to go with six (yes SIX) parametric EQ bands plus high- and low-shelf options. There is a small and brightly lit OLED display giving you feedback on your choices (no dip switches here!). Watch soon for my full review in *Mix*. These are a “buy.”

How about wireless gear? Not my usual purchase but this is an ongoing stress for houses of worship, venues, live sound companies and others who are waiting for the FCC to complete the ongoing Incentive Auction. I met with Mark Brunner, VP of Corporate and Government Relations at Shure, who gave me the latest news on the soon-to-close auction.

The FCC said they would attempt to make available at least one locally unused TV channel for shared use by wireless microphones and white space devices in the 470-608 MHz band, but until the final TV channel assignments are issued, the feasibility of this plan is yet to be determined. The 614-616 MHz range will be available for use by licensed and unlicensed wireless microphones, exclusively. No white space devices will be allowed to operate in 614-617. Licensed wireless microphones will be able to operate in 653-663 MHz. Unlicensed wireless microphones and white space devices will be able to operate in 657-663 MHz. So it's a mixed bag that is the same waiting game as always. Maybe NAB in April will shed more light? ■

***I loaded Pro Tools 12.6 to see how it fared. It was stellar. The processor is quick, making Commit and Freeze lightning fast, and it runs well on Sierra macOS.***





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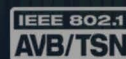
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