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November 2017



ROCKIN' THE MOROCCAN—The Moroccan Lounge, a new 275-seat venue in Los Angeles, is the latest offering from the team behind New York City's Mercury Lounge and Bowery Ballroom. Despite its size, the Lounge sports an d&b audiotechnik Y Series main speaker system and Soundcraft Vi2000 console at front-of-house, seen here in use by Will Pfeffer, production manager, as he mixes three-piece band Brainstory. For more, see page 38

# Rack-Mixer Revolution: Tablet Mixing Burgeons

BY STROTHER BULLINS

roprietary mix surfaces are still the norm at FOH positions around the world, yet seemingly every new digital mixing product on the market boasts some touchbased or GUI (Graphic User

Interface) feature. Many are nearly or completely operable via a tablet or another freestanding, multi-touch CPU. As an industry, yes we still love our buttons, knobs and faders. Yet we increasingly seem to, for example, love the freedom (continued on page 48)

# Remixing R.E.M. for



After 25 years, producer Scott Litt and engineer Clif Norrell returned to their work on R.E.M.'s classic 1992 album. Automatic For The People, to balance history and progress as they remixed it for Dolby Atmos.



# 500 Series Modules Near 40th Year

BY STEVE HARVEY

ext year will mark the fortieth anniversary of the first commercially produced 10-s ot powered 500 series module rack. Commonly known as the "lunchbox," the rack has spawned an industry, inspiring everyone from boutique operations working out of garages to major pro-audio manufacturers to produce 500 series modules of modern and vintage circuitry.

Once API formed the VPR Alliance in 2006, making its formerly proprietary specifications available to allcomers, the 500 Series industry, which takes its name from API's 500 series console modules, took off. The VPR Alliance webpage currently lists 85 approved modules produced by 42 member

manufacturers.

The lunchbox concept originated because of individuals removing API and other modules from consoles and handcrafting rackmount and carrying cases for them. The business has now come full circle, with a cottage industry springing up to make modern recreations of mic pre, EQ and other processing from hard-to-find classic British mixing consoles, as well as vintage outboard gear.

(continued on page 47)

### Educating NYC on 3D Audio



Immersive audio may be catching on with consumers, but many audio pros still need to learn how to create audio that makes the most of emerging technological advances. Sennheiser answered some of that need with a four-day October event in New York



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# IIIIsoundBUSINESS

# Focusrite Debuts New Professional Division

BY CLIVE YOUNG

NEW YORK, NY—At AES, Focusrite has announced the formation of its new Focusrite Pro division, aimed at

### briefs

### Iron Mountain Nets Bonded Services

BOSTON, MA—Storage and information management services company Iron Mountain (ironmountain.com) has acquired the Bonded Services group (Bonded) for about approximately \$77 million, expanding its capabilities for sound, art and film asset management. Founded in 1930 in New Jersey, Bonded provides services for media content preservation, management and distribution, and manages more than 10 million assets for 2,000 clients worldwide, with offices in the U.S., Canada, UK, France, the Netherlands and Hong Kong, all capable of providing inhouse digital services that help media and entertainment companies extend their content across digital platforms.

### Waves Marks 25th Anniversary

KNOXVILLE, Tn-Digital signal processing solution and digital music production tool provider Waves Audio (waves.com) is celebrating its 25th anniversary. The company kicked off-and likewise kicked off the contion of the Q10 Paragraphic Equalizer. Since then, the company has developed more than 200 plug-ins and was awarded a Technical Grammy Award in 2C11 for its efforts. Noting the anniversary, the company is shipping updates of the Q10 Equalizer, the AudioTrack channel strip plug-in, and the L1 Ultramaximizer level maximizer/peak limiter.

# PMA Values Industry at \$1B

LOS ANGELES, CA—Revenues generated by product on music are estimated to be \$1 bi lion annually, according to the Production Music Association (pmamusic.com). The PMA estimates that production music will generate revenue of at least \$500 million a year in the U.S. alone in 2017. The PMA hosted its fourth annual Production Music Conference in early October; for more on the event, see page 23.

serving audio professionals. The Focusrite Pro division specifically oversees the company's Red multi-format audio interfaces; RedNet modular audio-over-IP solutions; and ISA microphone preamplifiers and analog signal processors.

The reasons for creating the new professional brand are numerous, according to Richard Nevens, VP Global Sales: "Focusrite Pro seeks to engage with professional audio clients, both pre- and post-sale, as they transition their workflows and facilities to an audio-over-IP infrastructure. Dante technology provides capabilities and a level of flexibility not previously available, and Focusrite is the leading provider of this technology throughout this significant industry transition."

With the creation of Focusrite Pro as a brand, Focusrite now offers four

# Focusrite<sup>®</sup>

Focusrite Pro created a new division specifically aimed at professional users.

brands—Focusrite, Focusrite Pro, Novation and Ampify. For pro users, Focusrite Pro is intended to be a "client-facing team," he said, supporting users with both technical guidance and sales solutions that are tailored to their workflows. "This includes arranging demos, providing system integration recommendations, offering comparative proof points through the sales engagement process, and further assistance to ensure the client's needs are met," said Nevens.

Will Hoult, product manager, noted that the creation of Focusrite

Pro is resulting in tighter integration between sales, marketing and product management—a situation expected to improve the organization's client focus, ensuring it addresses client needs as it develops products in the future.

Tim Carroll, CEO, Focusrite Audio Engineering, said, "The sole focus of Focusrite Pro is to enable audio professionals with best-inclass audio solutions for modern-day workflows. Audio professionals now have a dedicated team of professional audio product designers and sales and support staff. This new team will help them build and deploy solutions that address the needs of modern-day audio production in broadcast, post-production, music production, live and installed sound."

Focusrite Pro focusrite.com

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# RIAA Reports Signs of Recovery

BY STEVE HARVEY

washington, DC—The RIAA's latest semi-annual report estimates that retail revenues from recorded music in the United States hit \$4.0 billion in the first half of 2017, growing 17 percent.

Retail revenues for recorded music owe their increase to 30 million music subscriptions and a talented array of artists and the professionals who support them, says Cary Sherman, chairman and CEO, RIAA, in a statement. Sherman further notes, "The labels we represent have also invested \$4.5 billion in discovering, nurturing and promoting artists."

At wholesale value, the industry was up 14.6 percent to \$2.7 billion, a growth that reflects a continuation of the trends from 2016. But overall, market revenues remain significantly below the levels they were in 1999, the last year that the recorded music industry posted a growth in revenue.

Total revenues from streaming platforms, accounting for 62 percent of the total market for the first half of 2017, were up 48 percent to \$2.5 billion. Revenues from sales of digital tracks and albums, however, continued to decline. Overall digital download revenues were \$757 million, down 24 percent to compared to the first half of 2016. Digital downloads, the best-selling format until as recently as 2015, accounted for only

19 percent of total industry revenues.

The total value of shipments of physical products defied recent historical trends, dipping only 1 percent, to \$632 million. Those figures were bolstered by a decrease in the rate of returns of physical goods to record labels, states the report.

Revenues from shipments of CDs were down 3 percent to \$431 million. Vinyl album revenues grew 3 percent to \$182 million and accounted for 29 percent of total physical shipments at retail value, their greatest share since the eighties.

Overall, according to the report, while the industry's revenues are still well below those of the nineties, the growth of paid subscriptions is helping offset the decline in both digital and physical unit-based products.

"We estimate that there may be a trillion streams in 2017, counting both on-demand services and digital radio (some 460 billion in first half of the year)," notes Sherman. Yet there is a "value gap," he continues, and payouts to creators are very different and vastly impacted by outdated or abused laws and regulations: "For the second half of 2017, we look forward to more great music, and hope that that we can make more progress on addressing fundamental inequities that stymie music's full potential."

riaa.com

# P&E Wing Sets Best Practices

santa Monica, ca—The Recording Academy Producers & Engineers Wing has published a new paper, "Recommendations for Hi-Resolution Music Production," and an updated version of its longstanding "Recommendations for Delivery of Recorded Music Projects."

The brand-new paper, "Recommendations for Hi-Resolution Music Production," addresses concerns that the industry currently lacks hi-res production standards, causing confusion and inefficiencies in the digital music supply chain.

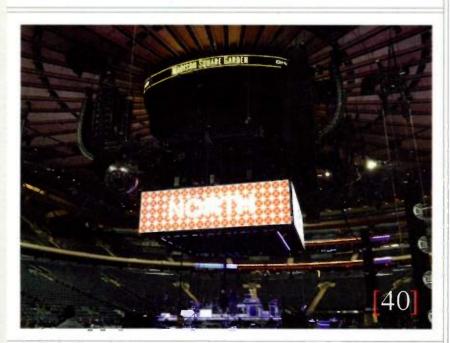
Meanwhile, the new revision of "Recommendations for Delivery of Recorded Music Projects" explores how best to ensure that recorded masters are safely stored and remain accessible for both the short and long term. The updated version discusses available technologies and includes a new section on recommended file hierarchy and management for recorded music.

The Recording Academy
Grammy.com

# e Drosoun November 2017







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#### SOUNDTECHNOLOGY

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in *PSN* . . . . . . . . . 30, 31, 32, 33, 34 Blue Baby Bottle SL Large Diaphragm Condenser Microphone; Apogee Symphony Control Software; API 2500 Compressor Plug-In; Center Plug-In; S1 Stereo Imager Plug-In; dbx 160 Compressor Plug-In; SSE E Channel Plug-In; JST SideWidener Spatial Widener Plug-In; iZotope Vinvl Plug-In; IK Multimedia iRig Acoustic Stage: Beverdynamic TG 500 Wireless System; Bittree ProStudio PS4825F Lunchbox Desktop TT Patchbay; Verse Bluetooth Binaural Microphone/Earpieces

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Prog/Metal Festival Powers ATL .... 38 ProgPower USA, a power metal and progressive

rock festival held annually in midtown Atlanta, sold out once again this summer. Niels Jensen, chief FOH engineer for the event, reveals how he brought the rock to the four-day metal feast.

Live Sound Showcase: Arcade Fire . . 40 The kings of indie rock are back on the road behind

their latest album, Everything Now, and recently played Madison Square Garden. The tour's massive L-Acoustics K1/K2 rig supplied by Solotech is believed to be the largest AVB-based touring system yet assembled.

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### SPECIAL REPORT

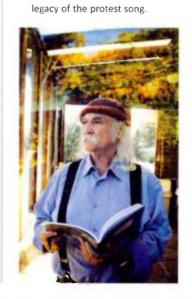
Post-Production Trends . 8, 12, 14, 20, 27 With the public's seemingly endless hunger for content across every platform imaginable, there's more demand for post and production music services than ever before. PSN profiles a variety of facilities, services and the format options they may soon offer as the line between traditional studios and post facilities continues to blur.

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# 181 fromtheEDITOR

### CLIVE YOUNG



# Game Audio Industry Survey is an Eye-Opener

rying to get ahead in the video game audio business? Get that college degree, pick up some freelance gigs on the side, and above all, network, network, network. Those aren't just nuggets of advice, however they're facts, statistically proven by GameSoundCon's new 2017 Audio Industry Survey.

Released in early October as part of the run up to GameSoundCon, a conference for video game composers and sound designers held in Los Angeles, this year's survey has some eveopening stats. While the annual appraisal has always asked about work environments, job hunting, use of live musicians, gender inequalities and more, this edition added new questions to cull information on respondents' education and to determine typical industry salaries for entry-level workers.

A full 89.2 percent of the 464 respondents provided answers on compensation; cumulatively, they revealed that the median pay for audio employees is \$64,000, with salaried jobs grouping into two main peaks around \$60,000 and \$150,000. Perhaps unsurprisingly, the latter salaries tend to be tied to management titles, such as audio director.

At the other end of the spectrum, employees who are new to the indus-

try should expect considerably lower pay: The median game audio firstyear salary is currently \$33,276. It's safe to say some of that will be used to pay back student loans, because 74 percent of game audio professionals have a Bachelor's degree or higher.

The wage disparity that women experience in other fields is unfortunately present in game audio, too, where on average they earn 83 percent of what men do, despite typically having worked in the industry longer. with a median time of 8.5 years versus 8 years for men. Despite those distressing statistics, there appear to be more women entering the field than ever before. In 2015, the survey found that women represented only 7 percent of the game audio workforce. That number bounded in 2016 to 10.4 percent, and grew further this year, as 12.7 percent of the responding game composers and sound designers are female.

One thing that comes across from the string of statistics is that game audio pros have a considerable work ethic. A full 72 percent of game composers also deliver SFX, and it's not uncommon for salaried game audio professionals to scrape up some extra freelance gigs on the side. In fact, 15 percent of those surveyed earn freelance money doing extra related work, and it tends to pay off: The

salaried or freelance, finding a new job is never easy, and in the game audio field, as with so many others, it often comes down to who you know. According to the survey, only 19 percent of respondents found their current gig via a job posting; instead, the vast majority 50.8 percent were recruited or referred for their latest position. The key to making that happen, of course, is networking, whether through social media, events or

ing that GameSoundCon will provide plenty of opportunities for face-toface networking when it's held November 7 and 8 at the Millennium Biltmore Hotel in Los Angeles. Presenting the event's keynote speech will be Becky Allen, audio lead at PopCap/Electronic Arts, and the conference will serve up two days of sessions and tracks covering music and sound for games, including a dedicated Virtual Reality Track. You can learn all about GameSoundCon and read the Game Audio Industry Survey 2017 in its entirety (there's far more surprises and insights to be found in its pages) at gamesoundcon.



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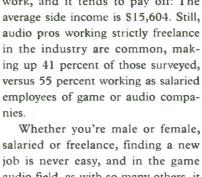
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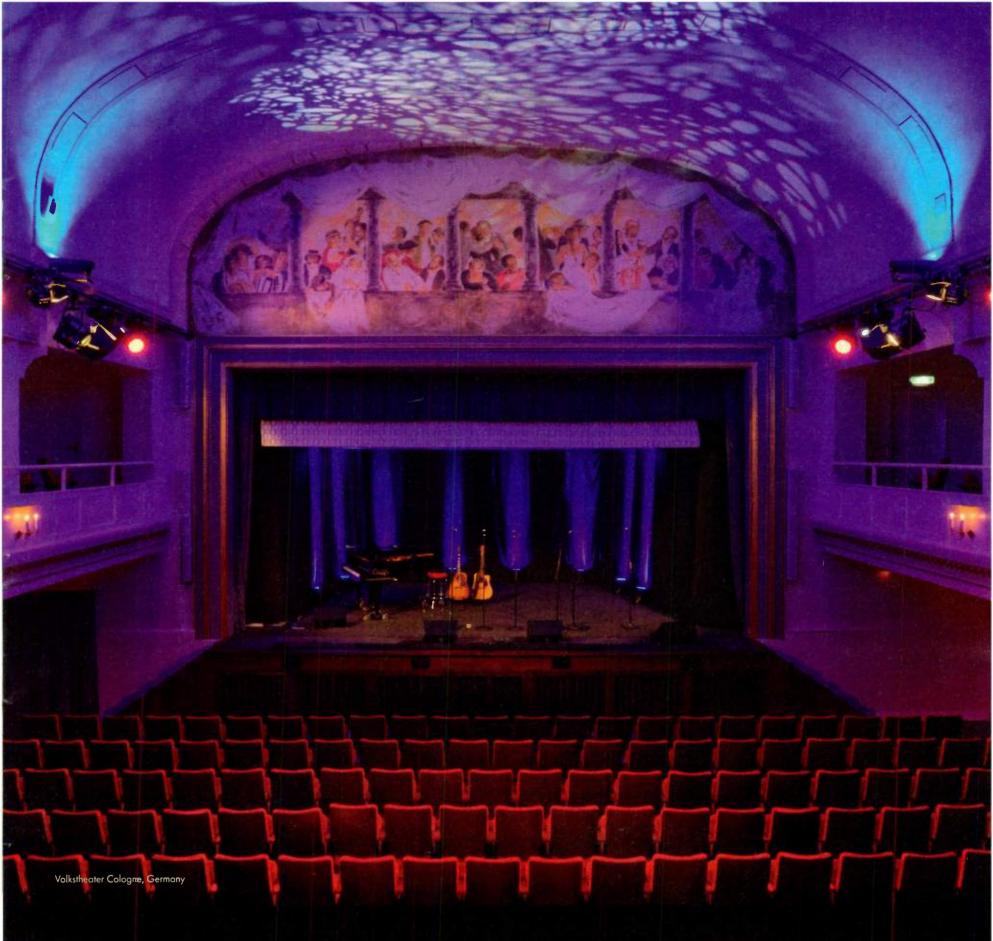
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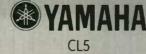
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# ≡ Hip-Hop Engineer Seth Firkins, Dead at 36

#### BY CLIVE YOUNG

NEW YORK, NY-Seth Firkins, a mainstay of the Atlanta hip-hop recording community, died in his sleep Saturday, September 23; he was 36. Over the course of his career, Firkins worked with the likes of Future, Jay-Z, Rihanna, Young Thug, Gucci Mane, Zoey Dollaz and many others.

Born in Louisville, KY, Firkins started out in live sound by talking friends in the band Element H into letting him take on their FOH mix. Developing his mixing ears while on the road with the band, he got a taste of the recording life while working with the group in the studio and found he had a knack for it. Once he was off tour, Firkins went to work at Head First Media in Louisville in 2003, before starting his own studio.

Moving to Atlanta in 2006, he formed 5X5 Media Group and built another studio, picking up notable recording credits along the way, in-



cluding work on Jay-Z's 2008 set, American Gangster, and Rihanna's Unapologetic, before going on to become the main studio engineer for

Numerous artists took to social media to remember Firkins, including Future, who wrote on Instagram,

Future in the early 2010s.

THERE'S MORE ▶ Catch video of Firkins discussing life at Tree Sound Studios and the importance of vibe at prosoundnetwork.com/nov2017.

"I always gave racism a cold shoulder because my real brother Is a white guy by the name of Seth Firkins...I love u beyond this post, I will cher-

ish u forever big bro, I just wish u would've text me & told me u was going to sleep and i wasn't going to be able to wake u up this time...

# Post Exec Paul Rodriguez, Dead at 65

#### BY STEVE HARVEY

LOS ANGELES, CA-Motion picture and television sound executive Paul Rodriguez passed away September 26th in Los Angeles of cardiac arrest after a brief hospitalization. He was 65.

Rodriguez was president of South Lake Audio Services and vice president of audio services and development at Roundabout Entertainment in Burbank where he oversaw post-production sound for projects including HBO's Westworld. (Rodriguez and Roundabout were featured in PSN, May, 2016.)

He was also a long-time board member of the Motion Picture Sound Editors (MPSE) and served as its treasurer for eight years. He produced the organization's annual MPSE Golden Reel Awards ceremony.

An active member of the professional sound community for more than 30 years, Rodriguez served in executive, sales and creative capacities at Todd-AO/Soundelux, Wilshire Stages, 4MC and EFX Systems. He was also co-owner of the Eagle Eye Film Company, a supplier of picture editing systems. He joined Roundabout Entertainment in 2015.

Known for his infectious humor



Rodriguez was vice president of audio services and development at Roundabout Entertainment in Burbank, CA.

and gregarious personality, Rodriguez was a tireless ambassador for the art of entertainment sound and enjoyed respect and affection among his industry colleagues and friends. "Paul will be remembered for the energy, wisdom and true dedication he gave to the sound industry," said MPSE president Tom McCarthy. "His passing leaves a great void on our board and in the hearts of our members."

Rodriguez is survived by his son Hunter, daughter-in-law Abbie and granddaughter Charlie; daughter Rachael and son-in-law Manny Wong; daughter Alexa and her partner James Gill; his former wife, Cathervn Rodriguez; and several sisters. Donations in Rodriguez's name may be made to Montrose Church, Best Friends Animal Society or Alzheimer's Association.

# Producer/Engineer Johnny Sandlin, Dead at 72

#### BY CLIVE YOUNG

NEW YORK, NY-Producer/engineer John Everett "Johnny" Sandlin died of cancer September 19 in Decatur, AL; he was 72. Over the course of his career, Sandlin worked with numerous Southern Rock and Country acts, including the Allman Brothers Band, Ronnie Dunn, Dixie Dreggs, Kitty Wells, Elvin Bishop, Eddie Kendricks, Bonnie Bramlett, Delbert McClinton, Gatlin Brothers, Marie Osmond and others.

Born April 16, 1945 in Decatur, Sandlin started out in music as the drummer for The Five Menits; in 1967, that band teamed with Duane and Gregg Allman and renamed itself Hour Glass, recording two albums. After the group fizzled, Sandlin became a session musician at FAME Studio in Muscle Shoals, AL, but by the turn of the 1970s, he had discovered that production was his calling. As an in-house producer and mixer for Capricorn Records, he reunited with some of his former Hour Glass bandmates on their new venture. The Allman Brothers Band, as he mixed the classic live album, At Fillmore East, and its follow-up, Eat a Peach, going on to produce Broth-

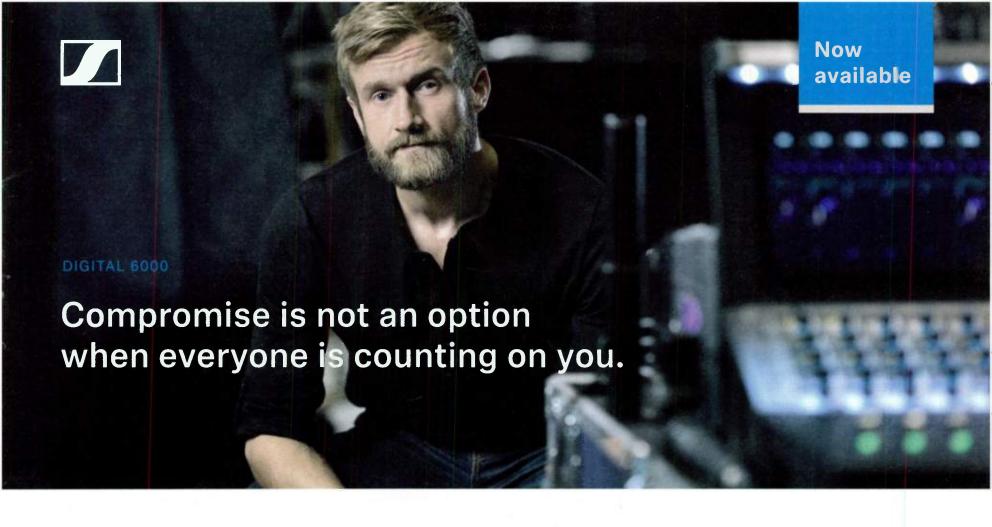


Johnny Sandlin produced and engineered The Allman Brothers Band's commercial highpoint, Brothers and Sisters.

ers and Sisters (the group's commercial highpoint, powered by the hit, "Ramblin' Man"), Win, Lose or Draw and The Road Goes on Forever for the group.

Sandlin went independent, producing country acts like Jerry Reed and Mac Davis in the 1980s as well as various solo projects and spinoffs for Allman Brothers Band members. Returning to Decatur, he opened Duck Tape Studios. The 1990s saw Sandlin oversee multiple albums for Widespread Panic, as well as Col. Bruce Hampton and the Aquarium Rescue Unit and the likes of Derek Trucks.

He is survived by his wife, Ann, and three daughters.





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# ■ Sennheiser Educates NYC on 3D Audio

BY CLIVE YOUNG

NEW YORK, NY-Much has been said about emerging advances in immersive sound and 3D audio, but while consumers are starting to latch on to formats that use these technologies, much of the professional audio world-the individuals who will actually create and curate the aural materials to be experienced by the masses-still needs education to both appreciate what the formats can do, and, more importantly, learn how to create audio that makes the most of emerging technological advances.

It was in that spirit that Sennheiser held a free four-day event-Shape the Future of Audioat Interface NYC in Manhattan, October 4-7. Teaming with music/tech education series The Digilogue to present master classes, performances and panels, the audio manufacturer highlighted its offerings while providing insights and education that visitors could apply going forward.

The first day was focused on VR/3D, spearheaded with a panel devoted to virtual reality and Sennheiser's AMBEO 3D offerings. Other days during the event examined "The Streaming Economy," serving up panelists from Spotify and Atlantic Records, among others, and the use of music applications like Snapchat, Genius, Mixcloud and others.

The VR/3D AMBEO panel on the first day was led by the company's own Sofia Brazzola, user experience manager, and Sebastian Chafe, strategic innovation manager, who had flown in from Zurich and San Francisco, respectively, to host the discussion.

Brazzola outlined different ways



Sennheiser's Sebastian Chafe, strategic innovation manager, and Sofia Brazzola, user experience manager (both on right) kicked off Sennheiser's four-day event with a lively masterclass on AMBEO 3D Audio.

3D audio is being applied, such as cinematic virtual reality, 3D live music recording, live sports broadcast, 3D audio listening, 3D gaming, 3D acoustic modeling and augmented reality. Much of the discussion centered on Sennheiser's AMBEO VR Microphone, an ambisonics microphone based around four matched capsules in a tetrahedral arrangement in order to capture an immersive environment.

Also discussed was the upcoming AMBEO Smart Headset, expected in O4, which has small microphones on both earbuds, allowing users to make binaural recordings on the go. That creation owes a fair amount of inspiration to Neumann's 1970s Dummy Head microphone technology, albeit now utilizing the recordist's own head. Nonetheless, another iteration of that 40-year-old technology was present in the form of the Neumann KU100 Binaural Dummy Head, which the company positioned as having been reimagined due to the use of modern processing technologies to enable new binaural mixing workflows and the ability to additionally enhance sound with spatially processed spot microphones.

Still, while having newly developed tools to create 3D audio is an intriguing proposition, all their users have differing levels of experience, technological background and, frankly, time and patience when it comes to learning how to apply those tools to the task at hand. With that in mind, Brazzolla and Chafe discussed AMBEO Recording Blueprints-specialized collections of best practices, tutorials, downloadable plug-ins to aid the mixing process, and case studies. The three current offerings are matched to different applications: AMBEO for loudspeakers, binaural and virtual reality. Intended to be quick guides to recording and mixing live music in these formats, the Blueprint series is available on Sennheiser's website. Sennheiser

Sennheiser.com

# Messe/ PL+S To Get 2018 Revamp

BY STROTHER BULLINS

FRANKFURT, GERMANY-Messe Frankfurt has announced an aggressively reconfigured layout for its annual Musikmesse and Prolight + Sound trade fair, aiming to better serve audio, recording and DI-oriented exhibitors as well as live, PA and fixed audio system exhibitors, too. With a new, central presentation platform, all audio, recording and DJ exhibitorswho, in the past, were spread over several halls at the combination Messe/PL+S event-will be located within Hall 4.1.

As a result, according to Messe Frankfurt, products such as "microphones, effects and signal processors, cables, mixing desks, control units, monitoring tools, production tools and recording hardware and software" will be next door to Prolight + Sound's live sound/PA and fixed installation products, in Hall 3.1.

Advantages of the new layout will include shorter walking distances for both audio recording and live sound-curious visitors, as well as "optimum target-group reachability for exhibitors...in the heart of Frankfurt Fair and Exhibition Centre," according to the organization. "Hall 4.1 will be a component part of both Musikmesse and Prolight + Sound and, therefore, integrated into the visitor marketing and information services of both events, from the exhibitor search engine to apps and the official catalogue."

Hall 4.1 will be open from April 11-14, 2018, Wednesday to Saturday, on all days of Musikmesse. Messe Frankfurt is the world's largest trade fair, congress and event organizer with its own exhibition grounds. Touting over 2,300 employees at some 30 locations, the company generates reported annual sales of around €647 million.

Musikmesse musikmesse.com

Prolight + Sound prolight-sound.com

# 33rd TEC Award Nominees Announced

ANAHEIM, CA-Nominees for the annual NAMM TEC Awards have been announced in both the ranges of Outstanding Technical Achievement and Outstanding Creative Achievement. Set to be held at the 2018 NAMM Show in Anaheim, CA on January 27, 2018, the event will once again honor the best and brightest in the pro au-

This year's Outstanding Technical Achievement Nominees were chosen

across 23 categories, ranging from computer audio hardware to recording microphones to wireless technology, while the eight categories for Outstanding Creative Achievement cover everything from tour sound to film sound production. This year's winner of the Les Paul Innovation Award and inductee into the NAMM TEC Hall of Fame will be announced at a later date prior to the event.

To see the hundreds of nominees



The 33rd TEC Awards will be held January 27. 2018 at the NAMM Show in Anaheim, CA. across the complete list of 31 award categories, visit prosoundnetwork.

# IIIIsound INTERNATIONAL

# Meyer Sound Partners with Roskilde Festival

DENMARK—To paraphrase Shake-speare, something is rockin' in Denmark—and it's usually the Roskilde festival. To ensure that continues, however, the annual event has partnered with Meyer Sound, and starting with the 2018 edition, all stages at the Roskilde Festival will use Meyer Sound reinforcement systems exclusively. Additionally, Meyer Sound will train the festival's technical staff and also create a new Roskilde Festival Academy that will offer advanced audio training year round.

Meyer Sound executive vice president Helen Meyer remarked, "We feel honored that the Roskilde Festival reached out to us for a collaboration that is absolutely unique in our industry. Certainly we will offer our extensive technical resources to ensure optimum sound quality at every stage, and at the same time the festival will give us a full-scale field laboratory for new product development and evaluation of audience response."

The partnership agreement was negotiated over the course of six months, led by Signe Lopdrup, CEO of the non-profit Roskilde Festival Group. Others involved



Touring one of the FOH positions at this year's Roskilde Festival were (I-r): John Meyer, CEO, Meyer Sound; Dennis Tholema, Meyer Sound EU technical support; Helen Meyer, executive vice president, Meyer Sound.

included head of Production Bertel Baagøe, production manager Lars Liliengren, commercial partner manager Lars Orlamundt, and Roskilde Festival Academy project manager Morten Büchert. For Meyer Sound, Helen Meyer was joined

by the sales manager for Scandinavia, Klaus Hansen, as well as members of the company's education and R&D departments.

The education components will be overseen by Roskilde Festival Academy project manager Morten Büchert, who also serves as a faculty member at Denmark's Rhythmic Conservatory in Copenhagen. Under that effort, the festival will hire and train its own technical staff for designing, deploying, and optimizing all festival audio systems. It will also help develop emerging engineers through a close mentoring and education program. Additionally, the festival and the company will work together to educate audiences in sound technology, and to involve audiences in participatory sonic experiences using proprietary Meyer technologies such as Constellation active acoustics and Space Map three-dimensional panning.

"We realize that hiring and training our own technical staff for sound and lighting is an ambitious step forward, one essentially unheard of in the festival world," acknowledges Bertel Baagøe, "but we feel this is essential to make sure we can consistently provide the very best results. We want their Roskilde performance to be the highlight for every artist for their entire summer tour."

Meyer Sound
Meyersound.com



# CODA Brings the Rock to Royal Arena

COPENHAGEN, DENMARK—When the new Royal Arena opened in Copenhagen a few months ago, the first act to play it was Metallica, but the 'hometown' opening came a few days later when the country's own metal heroes, DizzyMizzLizzy and D-A-D, headlined the facility.

Ensuring all 16,000 in attendance heard every note was audio provider DPA Soundco of Copenha-



Danish rockers DizzyMizzLizzy and D-A-D headlined the new Royal Arena in Copenhagen, utilizing a CODA Audio PA for the show.

gen, which fielded a sizable CODA Audio system for the occasion. DPA Soundco brought in 60 AiRAY, 42 ViRAY and 24 LA12 boxes, bolstered by a half-dozen SCV and 28 SCP subs, plus 16 SC-3 bass extension boxes. All that was driven by 56 CODA Linus 10 DSP amplifiers.

DPA system tech, Ulrik 'Thunder' Rasmussen, recalled the evening, noting, "The engineers for both bands were blown away by the PA and said its output was unbelievable. The CODA gear really is extremely powerful for its size and delivers very high resolution and fantastic projection. The sound is really 'in your face' but the clarity is still exceptional and the low-end is warm, tight and distortion free. The fact that CODA systems are all seamlessly compatible meant that we were able to get exactly what we wanted for optimum coverage in the arena without any problems." CODA Audio

codaaudio.com

# Mackie Moves Into Monitorworld

BAD OEYNHAUSEN, GERMANY—German hip-hop, reggae, and dancehall artist Frank Dellé (aka Eased) has been touring in support of his latest solo album, Neo. While he's best-known for leading the band Seeed, Dellé has also worked as a film and audio engineer, so he got hands on when it came time to put together his solo tour's monitorworld, and as a result, it's centered around a Mackie AXIS digital mixing system.

The AXIS system consists of a Mackie DL32R 32-channel rackmount digital mixer, mated with Mackie's DC16 Dante-enabled control surface and Master Fader wireless control app for iPhone and iPad. "One attraction of the Mackie AXIS system is that it's small," Dellé said.

"That makes it easy to bring the system with us for our entire European tour. We put it in a box and, fly to Barcelona, so we never have to rely on someone else's monitor system. Since we can save all of the settings, setup is fast and easy, we can handle quick changeovers at festival



German artist/engineer Frank Dellé (AKA Eased) chose a Mackie AXIS digital mixing system to be the centerpoint of his monitor system.

gigs with no problem, and we start with the same basic monitor mixes at every show."

While AXIS is just starting to gain notoriety, Dellé noted that his audio team had no problem adjusting to it. "At one point, we had to change monitor engineers shortly before a gig, and the new engineer was able to step in and handle the monitor mixes right away. Master Fader can be operated offline, so he figured out the software offline before the gig."

mackie.com

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# Tuning Wisseloord Studios' Monitors Remotely

HOLLAND-Based outside Amsterdam, Wisseloord Studios has recorded everyone from U2 to Michael Jackson to Foo Fighters over the years, so when the facility decided to make changes to one of its studio spaces recently, it was not a decision made lightly. Bringing in designer Jelle Van der Voet of Pinna Acoustics, a large tracking room was divided in half to create both tracking and control rooms in the vintage space. And when it came time to tune the new control room's monitors, that's when things got even more unusual.

The studio installed an Augspurger monitoring system for the new Studio 4 room, opting for a compact three-way main monitor system, the Solo 12MF with

1X12 subwoofer, acquired through Robbie Dunne of Miloco Gear, London. "The choice of Augspurgers was driven by a desire to serve a growing clientele of Hip-Hop and EDM artists and producers, as well as offer something new," said studio creative director Malik Berrabah, "We have a great bunch of speakers in our stu-



When Wisseloord Studios recently revamped its Studio 4, the result was a new control room with Augspurger monitors that got dialed in remotely from the U.S. by Augspurger president, Dave Malekpour.

dios. We were looking for something different and unique in continental Europe; something with more body and low end.'

Bringing in that level of firepower meant the room's acoustics had to be able to accomodate it, Van der Voet explained: "Now with a full range and really powerful monitor system, the room must be able to handle all that low frequency energy. We designed some seriously tuned low frequency bass trapping so the room acoustics don't interact negatively with the full range spectrum of the Augspurger system."

Once the monitors were installed, the next step was to tune the system to the room using advanced DSP technology, fitted in to the onboard Class D amps. Augspurger president, Dave Malekpour, along with Wisseloord engineers, dialed the system in remotely, across the Atlantic ocean. Using Skype and advanced tuning software, Malekpour tuned the Holland-based system from Augspurger HQ in Hanover, MA.

Van der Voot commented, "I never did a transatlantic tuning session but it turned out great. Dave took the time to tell us a lot about the company and the speaker system. I sent him some acoustic measurement files of the room with the Augspurgers and he tweaked the DSP power through a desktop remote session."

"We worked closely with the team, remote tuning the system, measuring, listening, making changes, until all were feeling the music," said Malekpour.

Augspurger augspurger.com

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"The Radial Key-Largo is my new best friend! It's hard to believe all the audio connectivity goodness inside this compact unit. After I plugged in 2 stereo keyboards, my stereo iPad and my Seaboard as well as a standard MIDI keyboard through the DIN port, all I could do was smile!"

~ Jordan Rudess

Keyboard player, composer / Dream Theater, David Bowie, Liquid Tension Experiment, Dixie Dregs, Steven Wilson **Key-Largo: small box...** Large Sound!



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### Five Tracking Solutions (in order of importance)

Engineer/PSN writer Rob Tavaglione shares some great ways to save a session. It's easy to get frustrated when dealing with poor tracks whilst wearing our "mix engineer" hats. Unwanted noise, hum, buzz, clicks, level inconsistencies, bad punches, awkward edits, polarity reversals, poor timing, inappropriate tone, lifeless performances.... There's a lot of ways bad tracking can ruin a mixer's day, or at least slow it way down.

Here's my advice on the top five tracking solutions and ways to apply them. If some of this seems old hat to you veterans, let me remind them that "fix it in the mix" is more popular than ever and proper tracking is often the Achilles heel of many an otherwise effective personal/re-purposed studio.

Help the performer: Happy performers lay better tracks, plain and simple. The single best way to make your mic and signal-chain choices appear ideal is via great performances which sort of "trivialize" the importance of signal chain. If you can create the perfect recording environment, your reward is often time saved, better quality achieved and a better vibe, as performers are keen on personal attention and a little TLC.

Obviously, a great cue mix is the ideal place to start, so make sure it's clean; has headroom; is stereo (mono cues are okay, but especially singers like wide mixes with their dominant vocal front and centered); and quickly re-balanceable and monitor-able by you so YOU can "hear what the performer hears" in the event of trouble.

For Rob's other tips, visit prosoundnetwork.com/nov2017.



### sweet tweet links



Pro Sound News brings you audio news every weekday on prosoundnetwork.com, Twitter (@prosoundnews) and Facebook (facebook.com/ProSoundNews)—but we also use

social media to share links to interesting mainstream audio stories. Here's a few we recently shared; get their links at prosoundnetwork.com/nov2017.

- ▶ Excellent profile of @johnlennon/@Aerosmith producer Jack Douglas (@Awarewolf1), by PSN alum Chris Walsh (@CT\_Walsh).
- ▶ Kent Stump, rocker in @HouseOfWoFat/owner of Crystal Clear Sound, on how he turns off his producer mindset onstage.
- ▶ Great studio tale: The session that accidentally created @tompetty & @StevieNicks' "Stop Dragging My Heart Around."

# BLOGGINGS

#### RETRO PSN: THE SOUND OF TOM PETTY'S WILDFLOWERS TOUR

Legendary rocker Tom Petty died October 2, following a heart attack in Los Angeles; he was 66. Over the course of his four-decade career, Petty deftly combined roots rock with



mainstream pop to create a long string of classics, including as "American Girl," "Don't Come Around Here No More," "Free Fallin," "Refugee," "The Waiting" and many more. In the live realm, Petty spent the last 22 years shaping his sound with FOH engineer Robert Scovill, and that long, trusted audio relationship began with 1995's "Dogs With Wings" tour, backing the triple-platinum Wildflowers album. In remembrance of Petty, PSN looks back at the start of that era with a tour profile from our May, 1995 issue—a story that found the artist adopting then-cutting edge technologies like in-ear monitors and Scovill devising a precursor to the modern-day Virtual Soundcheck capabilities found on today's digital mix systems.

#### STUDIO CONSTRUCTION: ALMOST THERE

Producer/engineer (and longtime PSN reviewer) Russ Long has been building Dangerland, a new studio in his backyard. In this fourth installment chronicing the construction, he recounts configuring a temporary gear setup in order to tackle an inaugural project—mixing a live album of saxophonist David Liebman playing Miles Davis' album On the Corner.

> Find these blog posts at prosoundnetwork.com/nov2017.

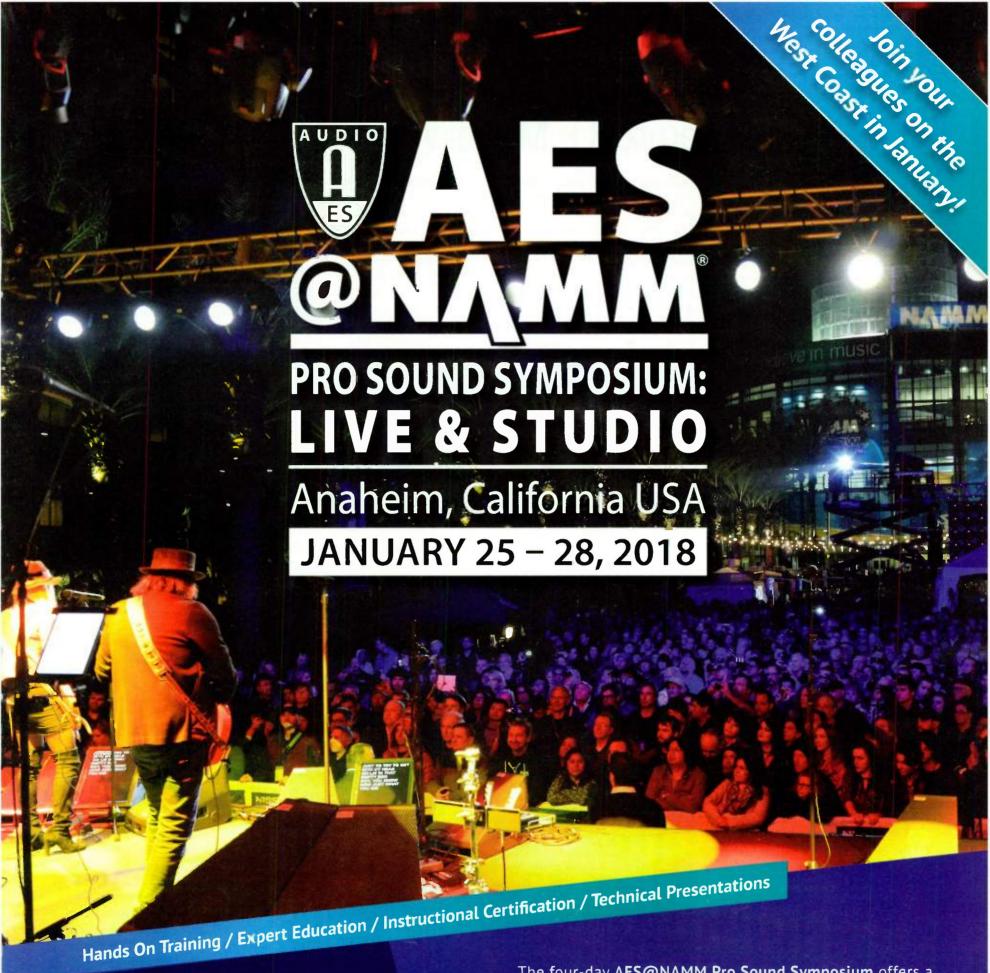


### video vault

### Oram's Ancient Optical Synth

Get a taste of what the future used to sound like via a fascinating BBC profile of U.K. Electronic Music pioneer Daphne Oram. Throughout the 1950s and 60s, she developed an intricate optical-based synthesizer—the Oramics Machine; to create music, users painted waveforms on to celluloid film, waited for the paint to dry, and then ran the film through the machine, which translated waves into notes. Far ahead of its time, today, the Oramics Machine belongs to the London Science Museum. Catch the clip at prosoundnetwork.com nov2017.





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# [20] SoundRECORDINGIIII

# **≡** Litt, Norrell Remix R.E.M. For Atmos

BY STROTHER BULLINS

wenty-five years ago, R.E.M.'s eighth studio album-the monumental Automatic For The People—was released. On November 10, Craft Recordings will reissue the classic 1992 album in a variety of remastered formats, the most elaborate of which—the Deluxe Anniversary Edition—features four discs of previously unreleased material, a 60-page book, and a remix of the entire original album in Dolby's Atmos format.

Turning their attentions back to Automatic For The People a quartercentury later are original producer Scott Litt and engineer Clif Norrell, who dug out the original multitrack tapes residing on both 24-track analog and 32-track digital (ProDigi) formats.

What was it like, diving into rather uncharted territory, remixing a massively successful, timeless and loved record in this new immersive audio format? "It was hard," admits Litt. "It was hard because there was no precedent. Everyone always kept saying, 'There are no rules' and I would say

'Well, can't there be, like, one rule?"

Litt and Norrell both agree that the inherent nature of Automatic For The People—a largely organic, rather solemn, acoustically rich and tonally deep album-does lend itself to Dolby Atmos, as the overhead channels allow the listener to sit within the spaces and moments occupied by Michael Stipe, Peter Buck, Mike Mills and Bill Berry all those years ago, experiencing it all as if it were happening live and today.

"The overall sense of [remixing in Dolby Atmosl was to create a more immersive sound that washes over you," offers Litt. "If you close your eves, you could be in the middle of this room, sometimes with an orchestra, sometimes without. It was about finding places where certain things worked and that would be our rule of thumb [going forward]. It turned out not being an experiment of terrorwith things flying around the roombut more about making the original stereo mix sound like mono, and making the Atmos mix sound like a full-fledged stereo listening experience, where 360 degrees are working

This project was not the first time material from Automatic For The People was remixed "beyond stereo." "I had actually done a surround sound mix for 'Man On The Moon' years ago for the film [Man On The Moon]," explains Norrell, "so I had an idea [of the process] going in. But because it's a band, I wanted to stay

true to that, as if the mix were a band performing in front of you. That was my philosophical part of it: to allow the listener to have an immersive experience with the album-that they are inside the music."

Further, the success of the album encouraged Norrell to remix with reverence. "This is an album people are very familiar with already," he explains. "And we felt like we pretty much got a lot of it right originally. We wanted to stay true to that, [but] just make it bigger and better, take advantage of the format and not really try to reapproach the songs, not try to change them. We tried to stay true to the original approach and the sounds."

Mixing for Atmos, explains Norrell, is an entirely new world com-

R.E.M.'s Automatic for the People is being

reissued this month in a variety of versions, including a Deluxe Anniversary Edition that includes the entire 1992 album remixed in **Dolby Atmos format.** 

pared to traditional surround due to its overhead channels. "Instead of a 360 degree/2D experience, it is a 360, 3D experience," he comments of Atmos. "There's a sense of depth and space that Atmos allows that hasn't really been possible before. It opens up a lot of possibilities for me as a mixer, in terms of letting the listener to really feel inside of it.

"When I'm mixing in Atmos, I'm really mixing for that sweet spot in the room," continues Norrell. "The mix does change quite a bit as you (continued on page 26)

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# Hit House Moves Home, Leads in Trailers

**BY STEVE HARVEY** 

TORRANCE, CA-When Sally House, executive director of The Hit House, and her husband, creative director Scott Miller, realized that clients were no longer attending sessions, they decided to relocate the business to their home, cutting out three hours of daily commuting. Initially, Miller and composer William Hunt worked out of a pair of backyard cabins, but earlier this year moved into permanent production facilities in a newly constructed extension to the couple's house in a quiet neighborhood in Torrance.

Construction began around April, 2015 and was ready for move-in within a year. A good-sized room for Hunt, a double-height control room with attached tracking room for Miller and various additional office spaces and amenities were designed by Ken Goerres of Exakte Recording Studio Design, who also tuned the rooms. Robert Lyons at Champion Walls provided the comprehensive acoustic treatment in the two studios.

The principal focus at the custom music shop is trailers, mainly for motion pictures but also for video games, as well as for television



Inside The Hit House's new home are (I-r): Scott Miller, Sally House, William Hunt and Marshall

commercials. Currently, for example, Hunt's music-a track entitled "Payload"—can be heard in the Blade Runner 2049 spot, and recent campaigns for Valerian and Spider-Man: Homecoming also featured work from The Hit House.

The audio team also includes a third composer, Dan Diaz, who operates out of his home just up the 405 freeway in Culver City. Chad Hughes, a multiple Emmy Awardnominated sound designer, works

out of a home studio near Temecula. in California's Riverside County, on shows such as FOX's Gotham.

This can be a fast turn-around business, says House. "We always have a deadline. Even when we're not working on custom jobs, we always have our next album. Currently, we're working on Kinetic Reaction 2.0, a fun action album. We brought the first one out at the beginning of the year. Normally we don't do a sequel so quickly, but it was so successful-it

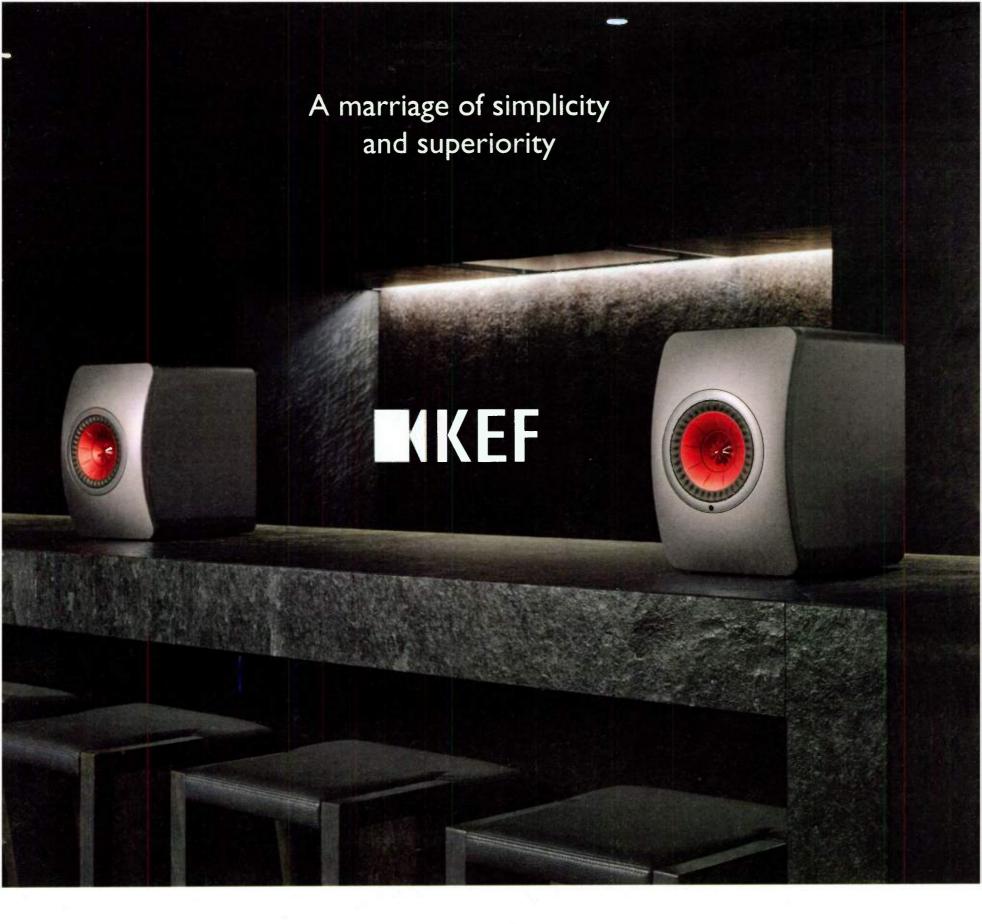
was in TV spots for Wonder Woman, Spider-Man, Baywatch-that we've had music supervisors asking for another one."

Miller had a heart-stopping moment shortly before the new studios came online. "Monday morning, one room had to be good to go. Saturday morning, I woke up at 6 a.m., so excited-it was the day I'd been waiting for," he recounts. "We were setting up William's room and the power supply in one little USB hub went wrong and fried his main computer; it melted the motherboard. We didn't know what it was and plugged in his old computer-and it fried that as well." Fortunately, the recovery process was relatively quick and painless, says Hunt, who worked in a room adjoining Miller's while his system

"We were buying up gear for quite some time, ready for this," continues Miller. "We knew we were going to have a tracking room, so it was a question of, what's our vision down the road?"

That vision included a collection of microphones and mic preamps, but as it transpired, they have largely been redundant. "We got the Steven

(continued on page 26)



## LS50W Powered Music System

LS50W features audiophile-grade amplification and sound processing, as well as extensive connectivity.

LS50W is driven by factory-optimised 230-watt x2 amplification and features four 192kHz/24-bit high resolution DACs. Combining KEF's Uni-Q driver technology with a time-correcting DSP crossover, LS50W brings a true high-fidelity listening experience to active streaming audio.

Plus, with a wide array of connection options available and a dedicated app offering three levels of customiseable EQ control settings, the LS50W is now a complete state-of-the-art audio system.



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# STUDIOshowcaseIIII

# A Fully Collaborative Environment: Artists of the Industry



#### BY STROTHER BULLINS

NORTHBROOK, IL—Based in an affluent Chicago suburb, Artists of the Industry (AOFTHEI) is a burgeoning creative content agency and production studio with a variety of approaches to music and artist development up its sleeve. Launched this year by chief creative officer Duane Tornquist, AOFTHEI boasts a recording studio that uses its analog flavor to augment the company's 360-degree A/V production business model; other offerings include web design, photography, live event production, cinematography, presentation technology, motion graphic production and editorial services.

Working for recording studios such as A&M Recording Studios (now Henson Recording Studios) in the late '80s/early '90s, followed by time in the corporate live and hospitality events industries, Tornquist has specialized in both marketing and content creation for years. "But my soul comes from the music industry," Tornquist explains, "though [the industry] all changed with workstations at home as the big studios and record industry started to change. For a while, I found my home in the events industry, working with game developers, and even the 3D world. That all came together in the hybrid concept of what Artists of the Industry is about. In order to build a creative company, you have to go back to a Pixar-kind of approach, which is all about surrounding yourself with people that are better than you are and, in doing so, creating a powerful team. I have a passion for business, but I also have a creative passion, especially for the emotional connection that music and visuals bring together.'

Tornquist's longstanding business partner, Jim Carlson, sold his

company-American Audio/Visual Center, an Arizona-based A/V content firm servicing the hotel and resort industry-before tapping Tornquist to lead the development of AOFTHEI. "Over the last six years of the company, it was making \$125M a year," tells Tornquist of American Audio Visual Center. "Because we were successful in creating content, coming up with creative teams, and providing a warm, hospitable environment, we began to consider, 'How could we do this in another way?' It was all about taking care of people and people's needs. So we set forth to create a company based on the premise of it being an artist collaborative. In doing this, people represent the brand 'Artists of the Industry,' but [the participants] have a stake in it. Our goal is to turn the company into an employee-owned company, giving people some of the shares down the road. At this point, it's a freelance group with department heads at the studio so we're not sure how it will work yet-but we're moving forward with the idea in mind."

Building an elite content com-

pany today is admittedly a challenge, offers Tornquist. "The problem is, there's so much content to choose from today," he explains. "We also have to prioritize the new mechanisms for delivering content. What is it going to be? In the B-to-B world, the buzz is on virtual reality and augmented reality. Clients are coming our way with this in mind-Marriott Hotels, Coca-Cola, and others are such clients. So, if we can bring together all these different talents and disciplines within a brickand-mortar studio environment, all in-house, we can design ourselves as a hybrid agency of the future. That's where Artists of the Industry hopes to be, and people are starting to gravitate towards us [for those reasons]. Our clients, which come to us from both old and new relationships, are just beginning to tell us who we are."

Artists of the Industry's studio was designed by Tornquist and his former A&M cohort Roland Alvarez. Together, they gleaned insight from many former colleagues while building out their Pro Tools | HD-centric music recording facility. "We

have Jonathan Little's Little Labs microphone preamps in here," says Tornquist. "We have the API 1608 console because I just fell in love with the sound of the API in Studio C at A&M back in the day. We brought the concept of a warm analog front-end to Artists of the Industry. I always want to include music production in what we do."

Another motivation behind launching Artists of the Industry, explains Tornquist, was a disappointment in overall audio quality within the industry over the past decade or so. "The sounds that were coming out of bedroom studios-out of a creative vacuumwere disappointing," he admits. "So, I will always reference back to the experiences of walking through the hallways of A&M. In one instance, Cheap Trick were in one studio, and Chrissie Hynde of the Pretenders were in another. And all of a sudden, they brought a couch into Studio A, and Chrissie was singing on a Cheap Trick song. It's that collaboration happening and it being the norm-and then seeing it go away that is really disappointing. I thought that, if we could facilitate that kind of collaboration againeven at a much smaller level-it would be great. That's what we're aiming at now."

Today, Tornquist calls upon his deep list of contacts-from songwriters to A-grade musicians to publishers to create modern creative mashups like the instance described above. "We're trying to pull together the best of the old-school scenarios with the new-school distribution technologies," he explains. "We plan to take our musical artists directly to visual content producers so they can find exactly what they are looking for, and we will do custom work, too. I know it's a lot, but I've been spending years building the best rosters of talent I can find to create a customer service environment that is legitimately collaborative: a diverse, broad-based, rich content environment."

Artists of the Industry artistsoftheindustry.com

### Other Equipment Highlights

 Select microphones: Neumann U87, Neumann U47 fet, AEA R84, Royer R-121, Neumann KM184, AKG C414 XLS, Sennheiser MD 421 II, Shure Beta 52A, Shure SM7B, Shure SM57

# The Gear of Jam in the Van

LOS ANGELES, CA-Creating a solarpowered studio in an RV that could record bands live inside, show the performance outside via a PA and video system, and throw it all on to YouTube sounds like the kind of daydream that friends would joke about while killing time at a festival. As it happens, that's just how Jam in the Van happened.

"We were music fans who used to go to the Bonnaroo festival in an RV," says Jam in the Van co-founder Dave Bell. "One day we thought, why not get our own RV, film some live bands playing in it, and take it around? So what started as a backvard fun project has turned into a full-time job and a company with a full-time staff. We can literally film a band anywhere—at our office in L.A., in an alley behind a venue where artists have a gig, in a park next to the Grand Canyon, or at music festivals, which is where we spend a lot of our time."

The psychedelic-painted RV is a hit, too-150,000 people subscribe to its YouTube channel, where it posts three new songs every day, Monday through Friday-and meanwhile, crowds invariably gather outside the RV while performers are recording, digging the songs via video screens and a PA. The pro-audio heart of that process is a QSC TouchMix-30 Pro digital compact mixer with 32 channels of live digital mixing and signal processing with USB DAW interfacing inside, feeding an Avid Pro Tools rig, while outside, fans hear the bands via QSC K10 and K12 powered loudspeakers and a KSub subwoofer which double as playback monitors after the fact.

"We've set up our audio system in some pretty rustic places-parks, beaches, the side of the road and the middle of the desert. Because of this our speakers need to be able to take a lot of outdoor exposure," said creative director Jack Higgins. "While a typical day's shoot for us is six to eight bands, we've had times where we have recorded as many as 16 acts in one day. After each session, we play back the audio on the K Series loudspeakers outside the van for the artists to hear. The TouchMix-30 Pro makes it easy to recall each song and session quickly."

Jam in the Van jaminthevan.com

OSC asc.com



The pro-audio heart of lam in the Van is a OSC TouchMix-30 Pro digital compact



www.audionamix.com/PSN17

# [24] tracks look at the recording scene



**ARTIST:** THE KNELLS **ALBUM: KNELLS II LABEL: STILL SOUND** RECORDS **PERSONNEL:** 

Produced by: Andrew McKenna Lee Engineered by: Joseph Higgins, Andrew McKenna

Mix Engineer: Andrew McKenna Lee

Studios: Creekside Sound, Still Sound Audio (Brooklyn, NY)

Mastered by: Joe Lambert at Joe Lambert Mastering (Jersey City, NJ)

#### **EQUIPMENT NOTES:**

Universal Audio, API. Shadow Hills, Chandler, Purple, Thermionic Culture, Vintech Summit, Focusrite pres; Lynx Aurora, Avid converters; Apple Logic Pro; Avid Pro Tools; Genelec 1031s, Adam A7x studio



**ARTIST: UNRULY HEATHENS** ALBUM: 2 LABEL: SELF-RELEASED **PERSONNEL:** 

Produced by: Sam Reese, Geo Stabile **Engineered by: Sam Reese** Mix Engineer: Geo Stabile Studios: WXCS 92.9FM

(Cambridge Twp., PA) Mastered by: Sam Reese at The Upper Room (Cambridge Twp., PA)

**EQUIPMENT NOTES:** Allen & Heath Qu-16, Harrison Mixbus 32C consoles;

Cockos Reaper; Shure KSM42; Yamaha NS-10M studio monitors



ARTIST: RAI FIGH **ALBUM: POWERHOUSE BLOOM** 

**LABEL: SELF-RELEASED** 

#### **PERSONNEL:**

Produced by: Raleigh. Nyles Spencer, Shawn Everett, Graham Lessard **Engineered by:** Nyles Spencer, Shawn Everett, **Graham Lessard** Mix Engineer: Nyles Spencer, Graham Lessard, Scott Munro Studios: Bathouse Studio (Bath, ON), Luscar Studio Banff Centre (Banff, AB) Mastered by: Infinite Wave (Calgary, AB) **EQUIPMENT NOTES: Mid-**

1970's API 1604, Euphonix CS300, API 1608 consoles; Neve 1073. Chandler TG, Helios 69 pres; Avid Pro Tools; tape machine: cassette multi-track; Yamaha NS10, Barefoot MicroMain 27, Dynaudio **BM15** studio monitors



**ARTIST: NICK WISDOM ALBUM: INTIMATE STRANGERS** 

**LABEL: BASTARD JAZZ PERSONNEL:** 

Produced by: Nick Wisdom, Nate Drobner Engineered by: Nick Wisdom

Mix Engineer: Nick Wisdom, Nate Drobner Studios: Sounds Good Studios (Vancouver, Canada) Mastered by: Ron Shaffer at Atlantic West Studios (Dover Plains, NY)

**EQUIPMENT NOTES:** 

Steinberg UR824 interface; Ableton Live 9; Adam A5x studio monitors



**ARTIST: IRREVERSIBLE ENTANGLEMENTS ALBUM: IRREVERSIBLE ENTANGLEMENTS LABEL: INTERNATIONAL** ANTHEM / DON **GIOVANNI RECORDS PERSONNEL:** 

Produced by: Keir Neuringer Engineered by: Jason Mix Engineer: David Allen

Studios: Seizure's Palace

(Brooklyn, NY) Mastered by: Helge Sten at Audio Virus Lab (Olso, Norway)

**EQUIPMENT NOTES:** Otari 18R Status console; Otari MTR90 MkII recorder



**ARTIST: BULLY ALBUM: LOSING LABEL: SUBPOP PERSONNEL:** 

Produced by: Bully **Engineered by:** Alicia Bognanno Assistant Engineer: Jon San Paolo

Mix Engineer: Alicia Bognanno Studios: Electrical Audio (Chicago, IL) Mastered by: Emily Lazar,

assisted by Chris Allgood, at The Lodge (New York, NY) **EQUIPMENT NOTES:** 

Neotek Series II console; Studer A820 recorder; B&W Matrix 805 studio montors



**ARTIST: FREE RADICALS ALBUM: OUTSIDE THE COMFORT ZONE LABEL: FREE RADS PERSONNEL:** 

Produced by: Nick Cooper Engineered by: Nick Cooper, Brian Baker, Matt Serice Mix Engineer: Nick Cooper **Studios:** Sound Arts Recording (Houston, TX) Mastered by: Nick Cooper at Sound Arts Recording **EQUIPMENT NOTES:** 

Trident 80B console with Neve BCM-10 sidecar: Avid Pro Tools: ATC SCM25 studio monitors



**ARTIST: STARS ALBUM: THERE IS NO LOVE 1N FLUORESCENT LIGHT LABEL: LAST GANG** RECORDS / EONE **PERSONNEL:** 

Produced by: Peter Katis,

Engineered by: Peter Katis, Greg Giorgio

Mix Engineer: Peter Katis Studios: Studio Mixart (Montreal, Canada); Tarquin Studios (Bridgeport, CT) Mastered by: Greg Calbi at Sterling Sound (New York,

#### **EQUIPMENT NOTES:**

Neve 8058 console; BURL Mothership converters; Avid Pro Tools; Neumann KH-310, Dynaudio Acoustic M3 studio monitors



**ARTIST: HARRISON STORM ALBUM: CHANGE IT ALL** 

**LABEL: NETTWERK** 

RECORDS **PERSONNEL:** 

Produced by: Hayden Calnin, Joel Quartermain Engineered by: Hayden Calnin, Joel Quartermain Studios: Rolling Stock **Recording Rooms** (Collingwood, Ont., Canada)

Mastered by: Robin Schmidt at 24-96 Mastering (Karlsruhe, Germany)

**EQUIPMENT NOTES:** 

Various 500 series pres, EQs, compressors; Avid Pro Tools 12; Focal Solo6 Be studio monitors



**ARTIST: JOHN DENNIS ALBUM: SECOND WIND LABEL: RAINFEATHER** RECORDS **PERSONNEL:** 

**Produced by:** Bryan Clark **Engineered by:** Mark Lange, Chris Brush, Bryan Clark

Mix Engineer: Bryan Clark **Studios:** Plethoratone Studio (Brentwood, TN) Mastered by: Frank Gagliardi

**EQUIPMENT NOTES:** Avid Pro Tools HD 10; Yamaha NS-10M, Mackie HR824 studio monitors

### notes

### Power Station NE Relaunches

### Clouds Hill Adds ADAM S Series

Audio (auditiraudio.ue) ty that has hosted sessions by The Beach Boys, The

### Lauten Tops Billboard Chart

York using his Lauten Audio

### Abbey Road Launches App

users to snare mes, sing lyrics tags and nictures find

# IIIISOFTWAREtech [25]

# Yes, Even Guitars



ANDERTON

more likely to be associated with tubes and retro technol-

ogy than cutting-edge software, but that's changing in everything from recording to live sound. Although guitars aren't total strangers to technology-MIDI guitar continues to maintain its niche, and there have been other technologies like the Sustainiac, Gizmotron and Gibson's robot tuning those ripples are turning into tidal waves.

Amp simulations are becoming increasingly realistic. Line 6's Helix raised the bar for digital floor multieffects, and now the same technology is available in the Helix Native plug-ins. IK Multimedia continues to refine AmpliTube, Peavey's Re-Valver 4 can model different guitar sounds before going into the amp simulation itself, and Universal Audio has partnered with Softube to add amp modeling to UA's line of Powered Plug-Ins.

But the device that has caused the biggest stir is Kemper's Profiler Amp, which is available as a standalone processor or complete amp (both with rack versions). Its patented process creates a "profile" of how a physical amp responds to levels, the cabinet, miking and the like to mimic not just a single amp sample,

Wagener (Poison, Dokken, Queen, Motley Crue, Alice Cooper, Skid Row, etc.). On a recent visit to his studio, he said he was getting rid of most of his collection of amps because "I haven't turned them on for two years." He had profiled the amps (which users can do; they don't need to depend on factory profiling) and said no one could tell the difference between a recorded version of the amp and the profiled version anyway.

As software technology continues to evolve, the initial skepticism many guitar players had about the power of digital processing is fading fast.

but its dynamically varying character. What's more, the profile is customizable for example, you might like the sound of a particular amp, but wish it responded somewhat differently to touch.

Guitar players are notorious about tone, and generally suspicious of digital technology. Yet the Kemper has even found a fan in acclaimed producer engineer Michael

Profiling's limitation is the same as sampling for keyboards-garbage in, garbage out—and a profile's quality depends on the expertise of the person doing the profiling. However, some people (like Michael Britt) have become experts at creating profiles, and offer packs of Kemper profiles commercially. Also note that it's possible to create profiles from guitar recordings, although that limits the available sonic range; and there are user-created Kemper profiles in the cloud.

The importance of profiling for the studio is significant—you can profile a particular amp sound you liked during a session, then come back months later and reproduce the same sound. Guitarists don't need to ship their "special" amps to recording sessions, and studios can have an essentially infinite amp backline.

Although not the same as profiling, Fractal Audio's Tone Match process modifies a preset that's close to an amp's sound so that it matches a reference signal from a physical amp. This generally involves first capturing an IR of the amp's cabinet, and after capturing the reference sound, tweaking frequency reference plots of the matched and original sounds to resolve discrepancies, if any.

This new generation of realistic amps is also transformative for live sound. It's not just the convenience of plugging a box that fits in your carry-on into a PA instead of hauling around a Marshall stack; in addition it's about having the same

(continued on page 26)



"I was suspect at first, but after a few minutes with the Recoils I realized how much difference they made. Especially on the low end I'm keeping these... they work.

~ Al Schmitt (Barbra Streisand, Steely Dan, Ray Charles, Quincy Jones)



"I first heard them at AES and I told Primacoustic President. Peter Janis, that they were snake oil. I was dead wrong. Now I own 6 pairs, so much for my opinion... I can't record or mix without them.

~ Vance Powell (The White Stripes, Jars of Clay, Jimmy Buffett, Faith Hill, The Raconteurs, Jack White, Kings Of Leon, Buddy Guy)



"They cleared up a cloudiness in the bass and mid bass that I had been battling in my studio. I also noticed a clarity in the imaging I did'nt have before. They're an affordable and effective problem solving product. I love these things!"

~ Ross Hogarth

(Melissa Etheridge, Keb' Mo', Jewel, Rooney, John Mellencamp, Jonas Brothers, John Fogerty)



"I love the Recoils! Before them my ProAc Response D monitors couldn't be turned up without the drivers breaking up. Now, the bottom end sounds tight and I can actually play the monitors louder.

~ Michael Brauer

(Coldplay, John Mayer, Leonard Cohen, Bob Dylan, My Morning Jacket, Simon & Garfunkel, Paul McCartney, Colbie Caillat)



The Recoils have become my monitor standard. Wherever my near fields go, my Recoils are right there underneath. I don't monitor with out them. Thanks for a great product."

~ Bobby Fernandez

(LA film scoring mixer - Clint Eastwood, Sam Raimi, Tim Burton, Alexander Payne



The Recoil Stabilizers work very well.. they've made noticeable monitoring improvements both at home and sitting on top of an SSL in a multi-million dollar studio. The theory behind them makes sense and the results speak for themselves.

~ Paul Northfield

(Rush, Dream Theater, Moist, Asia, Ozzy Ozbourne, Marilyn Manson)

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The Recoil - A solid platform to stabilize your sound!



www.primacoustic.com

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PRIMACOUSTIC



(continued from page 20)

walk around the room, which can really change your experience in a good way; you may hear things you've never heard before. You can hear things with such clarity, too. If you sit in the middle, it will sound like the arrangement that you remember, but as you walk around and perspective changes, you will have a completely different experience, which I think is a really awesome feature of this format."

Featuring acclaimed string arrangements composed by none other than Led Zeppelin's John Paul Jones over time-tested songs and powerful, intimate voices and tones, Automatic For The People can be an active study for listeners in the use of open air acoustics, space and nuance in pop music.

"Part of the consideration [for the Atmos mix] is that [the guys] are a band, and the sounds are nat-

ural-sounding instruments-acoustic instruments, real instruments," concludes Norrell. "And with the orchestra, it all sounds like people playing. Because of that, I didn't want to go too crazy with panning things around while the music was happening. That kind of ends up sounding distracting, rather than allowing the listener to just enjoy the experience of being in there with the musicians. And that's specifically in this case. You could have some modern synths and drum machines in an Atmos mix that lend themselves a certain style of motion and panning. Instead, we're talking about a moment in time 25 years ago that we want to stay true to."

Dolby.com

THERE'S MORE > Find more recollections from Scott Litt Automatic For The People in 1992 at prosoundnetwork.com/nov2017

### Anderton

sound on stage as in the studio. What's more, amps don't have to be cranked to get "that" soundyou can obtain a cranked sound at any level, which simplifies life for the FOH engineer.

Another side effect is changing the definition of a "guitar amp." When a guitarist's total sound (including not just the amp and cabinet but also effects) appears at an output jack, feeding a conventional guitar amp is counterproductive. As a result, more guitarists are plugging into full-range. flat-response amps like PA systems (Bose, Cerwin-Vega, Electro-Voice, JBL, PreSonus, QSC, etc.) or dedicated amps like Line 6's Firehawk 1500. These preserve the sound the guitarist worked so hard to capture.

Of course, there will always be those who insist on using only tubes, even if they can't tell the difference in an A-B test of recordings. And there is the matter of "feel"; standing in front of a cabinet blasting out hundreds of watts of power isn't the same as listening to an amp profile on headphones. But as software technology continues to evolve, the initial skepticism many guitar players had about the power of digital processing is fad-

Visit author/musician Craig Anderton's web site at craiganderton.com, and hear his latest music at youtube.com/ thecraiganderton.

## Hit House

Slate mic. I haven't pulled any mics out of boxes since we got it." The Slate VMS virtual microphone system includes a neutral large diaphragm mic that, in combination with the VMS One preamp, can emulate the performance of numerous classic transducers.

"And you can keep changing it as you go," he notes. "We have a couple of presets that we made for tracking. We have a vocalist who comes in, Ruby Friedman. Her voice is mammoth, so we have a setting for her."

Freidman sang on "Hunt You Down," a piece written by Miller and Hunt for PlayStation's Bloodborne game commercial, for Petrol Advertising, a longtime client. Like a significant number of the compositions that come out of The Hit House, the song, in an extended, full-length version, has become a hit on iTunes and YouTube.

Because of the Slate VMS, some of Miller's racked gear, including a Trident S20 dual mic preamp and a couple of 500 Series modules from Retro Instruments and Rupert Neve Designs, is rarely touched. But one new piece of gear that has been a game-changer for Miller, a guitarist, is Kemper's profiling amplifier.

"It's a god-send; one of the best things ever," says Miller, who previously relied on a Mesa Boogie recording preamp, an analog unit with no recall. Now, Miller says, when a client revises a spot, perhaps extending it by a bar or two, he can refer to the original audio track, where he annotates the guitar and Kemper patch

Despite the pressure of deadlines. the team spend as much time as possible developing signature sounds. "I'm really into altering sounds; I'll find a sound that I hear some potential in and then make it unique, or fit into something that we're doing, using my go-to plug-ins," says Hunt.

"There's so much competition, so differentiation is key. Some of the most successful trailers and tracks are the ones that have a really unique

> "Some of the most successful trailers and tracks are the ones that have a really unique portion that really stands out."

> > Sally House

portion that really stands out," says House. "Our business is built around being unique. We do so many covers or interpretations that we have to find a unique way of doing that, so they find the right sounds before they even start writing."

**Slate Digital** slatedigital.com

The Hit House thehithouse.com

THERE'S MORE > Listen to William August Hunt's "Payload" at prosoundnetwork.com/ nov2017



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# IIIIsoundPOST | BROADCAST [27]

# Inside Auro's Immersive Sound

## briefs

# Lectrosonics Hangs with Car

MONTREAL, CANADA—Mad Paris, a car fanatic, producer, director, videographer and longtime location sound mixer, used his Lectrosonics (lectrosonics.com) LT transmitters and mics, on the first episode of his new web series, Gars de Chars (Car Guys), which featured a Chevy V8-powered

### Voiceover Soho Goes Atmos

LONDON, UK—Adding to its five audio post, music production, Voiceover and ADR studios, Voiceover Soho recently built a Dolby Atmos equipped facility with an Avid S6 M10 work surface, Pro Tools 12, DAD AX32 I/O, Genelec (Genelec.com) 7.1.4 monitoring system and Dolby Atmos HT-RMU rendering unit.

# Sony Upgrades

Foley Stage
CULVER CITY, CA—Sony Pictures Post
Production Services (sonypictures. com) has upgraded the control room and stage of its Foley department, adding an Avid S6 M40 control surface supported by an Avid Pro Tools HDX DAW and Pueblo microphone preamps, as well as processing gear, plug-ins, playback systems, speakers and microphones.

### T-funk Live from the Lab

SOUTH WINDSOR, CT—Telefunken (telefunken-elektroakustik.com) has launched season three of its Live From The Lab series on YouTube, featuring performances by Allen Stone, The Shelters, Hurray For The Riff Raff, Moe, and many others filmed live in the Telefunken microphone laboratory and recorded exclusively with the company's microphones.

### SMPTE ST 2110 Moves Forward

WHITE PLAINS, NY-SMPTE (smpte. org) announced the approval of the first standards within SMPTE ST 2110, Professional Media Over Managed IP Networks, a new standards suite for real-time streaming over professional IP networks for live production, playout and other professional media applications.

#### STEVE HARVEY

MOL, BELGIUM-When 5.1 first became available in the home, at least one consumer electronics manufacturer marketed the multichannel surround format as "immersive sound." More than two decades later, immersive sound has become the generic term for those formats that include overhead channels, thanks in no small part to Wilfried Van Baelen, CEO of Belgium-based Auro Technologies.

Van Baelen, who founded Galaxy Studios with his brother Guy in 1980, had been experimenting with multichannel formats for some time when he mixed a project in 2005 for a German artist, Sylvia Diaz, in 5.1 plus two height channels. When he introduced his Auro 9.1 and 11.1 formats at AES events in Paris and San Francisco in 2006, adding a height layer to 5.1 and 7.1 layouts, he was still looking for a marketable descriptor. "In 2010, when I launched the Auro-3D format in Tokyo, I proposed to call this three-dimensional format

immersive sound, and it has become the generic term for sound in 3-D," he says.

Consumers and professionals alike, perhaps struggling with the conceptual differences between chanimportant to make clear there are three [immersive sound] formats on the market—Dolby Atmos, DTS:X and Auro-3D-and they are all hybrid formats, part channel-based and part object-based."

"Our hearing system is very trained and sensitive about these 3-D reflections. because they help our brain to localize sounds, to understand the size. how it moves, where it is. The most important part, in a natural sound, is still the timbre—the color."

Wilfried Van Baelen

nel-based and object-based audio formats, have sometimes conflated immersive sound with object-based delivery formats. "It's probably one of the most confusing things happening in the industry," says Van Baelen. "It's

More than 600 cinemas have committed to or installed Auro 11.1 by Barco, and well over 50 major mix stages worldwide, including Skywalker Sound, Sony Pictures and Warner (continued on page 29)

# An Earthy Blend for AAA Soundtrack



Abundant Acreage Available is a new film, executive produced by Martin Scorsese, that follows adult siblings (Amy Ryan and Terry Kinney, pictured) in the wake of their father's death.

#### BY STROTHER BULLINS

WINSTON-SALEM, NC-Abundant Acreage Available (AAA)-a drama written and directed by Angus MacLachlan (Junebug, Goodbye To All That) and notably executive produced by Martin Scorsese—is already a 2017 Tribeca Film Festival standout. Set on a modest family tobacco farm in the rural North Carolina foothills, AAA is a quiet, character-driven story of a sister and brother (actors Amy

Ryan and Terry Kinney) who just lost their father after a long illness; meanwhile, three brothers are discovered camping on the property under suspicious circumstances. The film features music by singer/songwriter Jeffrey Dean Foster, who aimed to augment the visual setting and serenity with just the right mix of organic and synthetic sound sources and key melodic themes.

A self-professed "rock and roll songwriter," Foster has done a bit of film- and TV-oriented work over

his years in the music business, but AAA's soundtrack is solely his own. Foster and MacLachlan, both Winston-Salem residents and longstanding friends, have been brainstorming the sounds of AAA for a while.

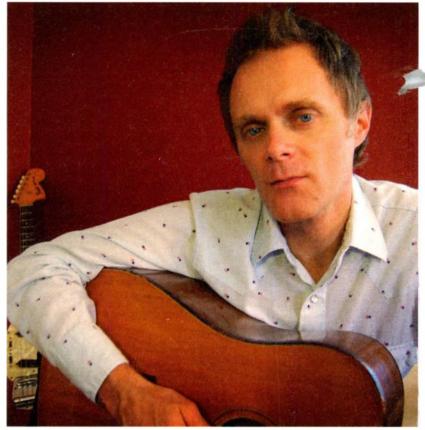
"At lunches every few weeks over the past couple of years, [MacLachlan] and I would talk about it," Foster recalls. "He asked me if I would consider [scoring it], and I was pretty excited; I had read the script and loved it, so I already had a picture of it

(continued on page 28)

before I saw any of the actual film work. But I was still a bit intimidated because I had never scored an entire film from scratch. There was a bit of trepidation, wondering if I would get halfway through just to realize that I didn't know what I was doing—or that they would uncover me as a fraud."

MacLachlan and Foster would discuss soundtracks in general, and soundtracks and albums that Foster specifically liked, which possibly had a vibe or approach that would work for AAA. "Records that I grew up with, like ones by the Rolling Stones and David Bowie records, had weird ambiences," illustrates Foster. "And soundtracks I liked—like One Flew Over The Cuckoo's Nest and Ry Cooder's Paris, Texas soundtrack-were things I played for Angus. You just have to keep whittling on it until you get rid of everything that doesn't belong. [But] once I visited the set, my perspective was changed a little bit. Before we started, I initially wanted to make a bit different soundtrack."

From the onset, both MacLachlan and Foster wanted to avoid any obvious, or cliché, collection of instruments or vibes. "[Though] it's set on a tobacco farm, Angus and I agreed that we did not want to make what would be traditional 'tobacco farm music,' even though I love country, folk and bluegrass," explains Foster. "When you think of 'rural music,' there are acoustic instruments that



Singer/songwriter Jeffrey Dean Foster composed the film's score.

nation of electronics and guitars and banjos and stuff like that."

With the setting of the film now guiding his creative juices, Foster set out to match music with the airy and open scenes. "A couple of the pieces I made early on didn't really work with how the movie looked," Foster admits. "In other cases, I was spot-on [before seeing the set]. With the ambiences and the 'floaty' vibe of some of it, the sound designer for the film really did 'amp up' wind, bird and train sounds. The music just had to figure out a way to exist in that shared space; like any mix you make, every part or over-

In one key scene, AAA's three brothers were featured singing the classic turn-of-the-century song "Beautiful Dreamer" by Stephen Foster (no relation) live in the film, prompting Jeffrey Dean to re-record the song as well as incorporate components of its melody into the film's theme. "It incorporates the 'Beautiful Dreamer' melody for four or five notes, then it goes off into this minor key thing," explains Foster of the film's theme. "As we went along, we thought we might like to have 'Beautiful Dreamer' over the end credits, too. A friend of mine, a really great singer/

"The music just had to figure out a way to exist in that shared space; like any mix you make, every part or overdub has to lay in it. Even if it's a great sound, if it doesn't fit, you have to start over. And sometimes you just have to lay it up against the picture before you know it works or not."

Jeffrey Dean Foster

can be made cliché, of course-mandolins, banjos, and whatever. Though I like that, I wanted to go against the grain, possibly conjuring up some other kinds of feelings. I was even originally thinking that it would be more electronic—and some electronic stuff is in there. But on the set, the ground, the clay, the corn stalks, the colors and the wind were so much a part of the story that they were like another character. The wind and ambient sounds of the farm were almost another type of music, so I felt like I needed to steer back towards some earthier sounds. It became a combidub has to lay in it. Even if it's a great sound, if it doesn't fit, you have to start over. And sometimes you just have to lay it up against the picture before you know it works or not. The [sounds] have to evoke the right emotion."

Standout moments of Foster's work include the slightly discombobulating "Oh My Lord"—a dizzying, Bo Diddley-style tune with an out-of-tempo electronic pulse beneath it. It is an ideal example of Foster's organic and electric balancing act in AAA, well matching the film's aesthetic that manages to be simultaneously grounded and otherworldly.

songwriter and piano player from Florida, Beth McKee, was spending the summer up here. One afternoon, she and her husband and I spent about 30 minutes recording that version of the song, and I loved it. It's a song we've all grown up hearing, but until you listen closely to it, you may not realize how strange and poetic the lyrics are."

A seemingly reoccurring characteristic of MacLachlan's filmmaking style is to include open space, both visually and sonically, that effectively gives his entire creation room to breathe. Many moments of AAA do not deliver aural stimulation, as they

### *AAA* Recording Rig

A self-recording artist, Jeffrey Dean Foster generally keeps his recording rig lean and effective. For Abundant Acreage Available, the singer/songwriter utilized a streamlined Apple Logic X-based rig running on a legacy Mac Book Pro with I/O via Apogee's original Duet interface. All vocals and instruments were captured by a Shure KSM32 LDC or Shure SM7 dynamic microphone.

"I was living in a friend's tiny guesthouse," recalls Foster of the recording sessions. "I recorded everything in the little 8 x 10-foot front room that I slept in. I have some vintage Yamaha N-10 monitors, but they were in storage, so I used some PreSonus powered monitors [PreSonus Eris E5]."

Sound sources included a Gibson J-50 acoustic, Gretsch Monkees Rock and Roll Model guitar, '66 Fender Telecaster, Remo's Veggie Shakers, a few banjos and mandolins, and an "ancient" Roland synth. "Keyboard sounds were from Apple Logic, except when I used my theremin."

are not necessary. "[MacLachlan] is careful not to use music to dictate how you are supposed to feel about the scene," offers Foster. "Phil Morrison, who directed Junebug [written by MacLachlan featuring Amy Adams' Oscar-nominated performance], told Angus to use the music when it's necessary, as a summation of the emotion. We tried to do that. The first half of the movie has very little music in it. It gradually ramps up to the last 15 to 20 minutes of the movie, which has much more in it."

And, when AAA's music is heard, it is almost like an emotional release, yet subtle, like a comforting sigh. "People who have liked the music commented that it almost sneaks in," explains Foster. "In this movie, with its critical turning points, holding the music until those points did make [the music] more effective and overall, a little more special."

Gravitas Ventures
Gravitas ventures.com

Tribeca Film Festival https://tribecafilm.com/filmguide/ abundant-acreage-available-2017

THERE'S MORE ▶ Hear examples of Jeffrey Dean Foster's work at prosoundnetwork.com/nov2017

### Auro 3D

(continued from page 27)

Bros., have integrated Auro technologies. In 2015, projector manufacturer Barco, Auro's exclusive partner for Digital Cinema, introduced Auro-Max, a system that incorporates support for the placement of objects in any immersive mix.

Auro-3D, a scalable system compatible with small and large room speaker layouts from 9.1 through 13.1, differs from its two competitors, says Van Baelen. "Auro-3D is the only immersive sound format on the market that can record, mix and reproduce a 3-D space in channelbased technology only."

Being channel-based offers some advantages, he believes, most significantly in the quality of the audio. For example, objects are frequently mono sources, which, with associated metadata, are rendered during playback. "But those sounds don't contain the 3-D reflections," he says.

"Our hearing system is very trained and sensitive about these 3-D reflections, because they help our brain to localize sounds, to understand the size, how it moves, where it is. The most important part, in a natural sound, is still the timbre—the color. That color is related to how 3-D reflections are recorded and reproduced. And those reflections cannot be reproduced by the renderers at playback from object-based formats."

Van Baelen claims that he discovered during his experiments with vertical panning that exceeding a certain angle between the lower and upper speaker layers results in a loss of coherence: "I found that when that vertical angle of the speakers is greater than 40 degrees our brain hears two different sources. It's not the same as the horizontal field...so there is a relationship between our speaker layout and the fact that we have the most natural sound. It's the speaker layout and our technology."

Adding to that natural sound, he also argues, is that Auro-3D supports high-resolution audio. "In the movie industry, 48 kHz is the standard, although there is an option for 96 kHz that is typically not used. But in the music industry, 96 kHz has been the production standard for a few years."

The ability of Auro-3D to deliver hi-res music on Blu-ray is driving the release of an ever-growing catalog of music recorded and/or mixed in the format by companies such as Sony Entertainment; 2L, owned by Morten Lindberg, who has over two-dozen Grammy nominations, including for surround projects; and multiple Grammy nominee David Miles Huber (featured in PSN, Aug. 2017), whose music is released on the Auro-3D Creative label.

Being a channel-based workflow again offers an advantage, says Van Baelen. "You cannot record in an object-based format; it's a rendering format. And because we are channelbased, we can do the mastering first and then the encoding, and then you have an Auro-3D mastered product. Our format translates the artistic intent much easier compared to other formats."

As for delivery, he says, Auro-3D 11.1 and 13.1 need no extra bandwidth beyond that of a 5.1 or 7.1 PCM carrier, unlike competing products, which require extra bandwidth for the height channels. And there is no requirement for ceiling speakers; Auro-3D's height channels are instead positioned at the top of the side walls, enabling an easier installation in the studio or at home, he claims.

Van Baelen, who enjoys listening to spiritual music, recorded some gongs at high-resolution. "If you play it back over stereo, the magic is lost. In Auro 9.1, you get a connection to your body. This is about the experience. The emotional connection is so much higher, and more relaxing to vour brain."

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review



■ BLUE BABY BOTTLE SL FAVORITE WAVES PLUG-INS JST SIDEWIDENER APOGEE SYMPHONY CONTROL■IZOTOPE VINYL■IRIG ACOUSTIC STAGE®

## **BLUE BABY BOTTLE SL LARGE DIAPHRAGM CONDENSER MICROPHONE**

At first look, Blue's Baby Bottle SL end response. doesn't look like much of a "baby"that is, until you compare it to its behemoth predecessor, The Bottle. I've reviewed The Bottle, and it is indeed a testament to "no holds barred engineering." It's quite possibly the world's most versatile microphone. The Baby Bottle SL doesn't take such a purist (or expensive) route, but still delivers a similarly focused and forward sound.

Blue's hand-tuned, gold-sputtered, brass back-plated Mylar diaphragm starts the party, coupled with discrete electronics, Class A circuitry, a 100 Hz HPF (-12 dB/octave) and -20 dB pad. The end result is (reportedly) best-in-class self-noise of about 10 dB, SPL handling of up to 134 dB and full bandwith frequency response. A shock mount and wooden storage box completes the package.

The Baby Bottle SL is part of Blue's new Essential Series; I'm already a fan of Blue's Hummingbird small-diaphragm condenser with its swiveling head and extended high

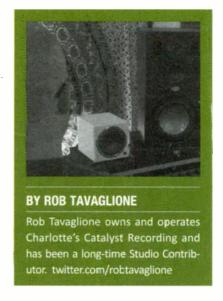
Blue calls the Baby Bottle SL its "warmth and presence" model of the line and I agree—yet with the caveat "for an affordable condenser microphone." I say that because the Baby Bottle SL does indeed sound bright on many sources (acoustic guitar, drums, some vocalists, percussion), but it never quite crosses over into what you could call, harsh or brittle. Drum room applications emphasize cymbals, even while there are some kick/ toms to pull up with processors. Instrument applications brought forward attack and articulation, with body and resonance, just understated. Vocal applications delivered warm baritones recreated perfectly, even if tenor



I can recommend the Baby **Bottle SL over most similarly** priced condensers for its wider versatility, smoother than-most top-end and an overall purity with low self-noise and low distortion.

and soprano vocals aren't the best match for the Baby Bottle SL.

I really got to know this mic well while using it for a live recording featuring a jam band whose singer really sings his scratch vocals like a keeper take. His warm baritone and Southern drawl made for a smooth sound. His Baby Bottle SL scratch vocals were fantastic, nicely balanced, never crispy, always warm, with plenty of detail and lots of soul. All this was doable with a mere SM58 foam windscreen stretched over the Baby Bottle SL's head-



basket (a perfect fit, actually!) paired with a top-shelf Millennia Media mic preamp/compressor front-end.

Vocals were my favorite via the Baby Bottle SL, yet all the usual stuff worked well with it: guitars, drum overheads, bass guitar cabs, electric guitar (while utilizing its -20 pad), piano, etc. You may need some top or bottom EQ to balance things out, but the Baby Bottle SL's midrange is trustworthy, as are the microphone's dynamics.

I can recommend the Baby Bottle SL over most similarly priced condensers for its wider versatility, smoother than-most top-end and an overall purity with low self-noise and low distortion. All those perks may not be "The Bottle" pure, but pretty darn close for only \$399

## APOGEE SYMPHONY CONTROL SOFTWARE

I don't mean to harp on details—well, actually yes, I do. You see, I just upgraded my 24 channels of Symphony I/O conversion to Apogee's new Symphony Thunderbolt I/O and that is working out just fine. I swapped out the converter PCB-cards "no problem" and its Thunderbolt interfacing is proving to be stable, easy to implement and able to help decrease latency.

That's where the details of using the new Symphony Control software come in. Symphony Control replaces last-generation Maestro software and is compatible with Apogee's new Control hardware remote control. New features include talkback implementation (including use of your Mac's internal mic), an effects send in the mixer(s),

mini window that users can conveniently place and have access to all the typical and "essential" controls. Control of headphone output, three monitor outputs, stereo or mono inputs and clock source are all sup-

Via Control's four virtual mixers, users can create some nicely balanced cue mixes, route them directly to analog hardware outputs, and enjoy some oh-so-close-to-zero latency: a mere 1.35 ms, using pre-DAW direct monitoring.

But isn't the latency performance good enough with Thunderbolt? That depends on who you ask. I abhor any little bit of latency when tracking or overdubbing, and some (but not all) of my clients are the same way. So, I

find this direct monitoring option to be much more than mere detail. It's one thing if you know you're going to snap to grid, but if you're pursuing some "interacting players making musical magic" then true and responsive timing accuracy is paramount.

The software is well laid out, easy on weary eyes and simple to use with ample level control of I/O sensitivity, savable and recallable snapshots, nice metering, pans/mutes/solos on mixer

> channels, a scribble strip, FX sends and tremendous flexibility. Users can route their choice of direct inputs, computer playback, or a Symphony Control mixer output to any of the analog outputs.

After all is said and done, Symphony Control helps me keep the talent happier—easier than ever-and I need this kind of valuable help, even if the software is free.



and an "Essentials" Symphony Control replaces last-generation Maestro software and is compatible with Apogee's new Control hardware remote control.

### **ROB'S FAVE WAVES PLUG-INS**

Here is a concise peek at a bunch of Waves plug-ins that have recently made it onto my hard drive. Or, should I say, "on to my Waves Central" as their new cloud-based userinterface is pretty cool. Waves Central does require a mandatory look for updates at each opening, but once that brief interruption is over, its excellent interface has checked all your licenses, scanning for updated plugs and (most importantly) transferring licenses to your computer, or your Waves cloud, or your iLok. Waves does not force users to pay for its update plan, so as of right now it is looking a little easier to work with compared to some manufacturers-especially if you're like me, with multiple computers to share the

Below are the standouts amongst my Waves plug-ins collection.

#### **API 2500 COMPRESSOR**

If "punch" is the name of your game,

then this compressor needs no introduction. This API comp manages to kick ass in whatever form factor: rack mounted unit, in the center section of an API The Box or larger console, in a 500-Series rack, or in this plug.

It's a faithful-type GUI, so you can jump right in and squeeze, unlike some of Waves' recent signature offerings with a steampunk aesthetic. The full palate of controls are there, including the big 3 tone-shaping essential ones: variable knee (soft, medium and hard), variable side-chain Thrust detection (normal, medium or loud), and sidechain feedback topology (old, which feeds back with smoothness and gentle grace, and new, which feeds forward with aggression and punch).

the Link section allows completely variable channel linking, with powerful control over the control voltage (flat, or high-passed to prevent stereo low frequency events like hardpanned drums from over-compressing; or low passed, likewise with high frequency events; or band-passed with both, for more rejection of frequency extremes when computing linkage behavior).

Powerful stuff, right? Indeed, it's subgroup heaven and may just earn a permanent spot on your L/R buss, even if you're a genre-hopper. At \$299, it's expensive but worth it.

#### **CENTER**

It used to be that I was tracking instruments, day in and day out. Lately I'm overdubbing "vox on trax" day in and day out. So, it's only natural I've become obsessed with re-balancing the soundstage width, trying to create ways to get vocals to sit right in the pocket.



Center is a natural for re-shaping drum subgroups, carving As if that weren't enough, and shaping ambiences, scuplting loops, and more.



The API 2500 is a faithful-type GUI, so you can jump right in and squeeze.



David Blackmer's dbx was ubiquitous in the '70s and nearly all the music from that era was dynamically shaped, at least in part, by a pair of Dave's quick, clean, feed-forward, soft-knee

Center has quickly proven itself to work for me. There are only Center and Side fader controls, so quick re-balancing is faster than the artist looking over your shoulder can comprehend before you're done. If you have the time, you can add some low EQ-or some high EQ, or punch—to the center or the sides.

Of course, Center is useful for far more than my typical applications. It's a natural for re-shaping drum subgroups, carving and shaping ambiences, scuplting loops, grabbing dialog, and (dare we forget) "whack-a-moling" the vocal for karaoke!

#### **S1 STEREO IMAGER**

Did I mention that I've

been soundstage/width/balanceobsessed? Well, that means I had to buy Waves S1 Stereo Imager as well. Center is cool-don't get me wrong-but S1 brings a different methodology of getting a stereo image where you want it. The Width control is the main element, no doubt, but the Asymmetry and Rotation controls seal the deal.

My music mixing workload finds me inserting S1 into a stereo image as soon as I recognize I want it wide, but I want to lean off center, or "pull in the edges." Percussion subgroups, keyboards, guitars and their subgroups, background vocals and their subgroups are all natural uses to shape and separate.

Sometimes S1 is a big old bandaid. For example, when incoming tracks from novices don't have the proper symmetry, or separation, or balance to build upon, you'll likely

(continued on page 34)



S1 can behave like "a big old band-aid," offers Tavaglione.

roAudio

## JST SIDEWIDENER SPATIAL WIDENER PLUG-IN

I did mention that I'm currently obsessed with shaping the stereo field? I should also mention that the stereoizing of mono tracks has been part of that width obsession, too. Day after day. I'm called on to make bland lead vocals into sexy, stereo, shimmering images of intrigue. Thankfully, Side-Widener helps do just that.

My money channel typically holds a de-esser to start, some subtractive EQ to get rid of trouble spots and resonances, an electro-optical compressor to smooth, my stereo-izer element, some optional "color" EQ (likely Pultec-ish), and some limiting to cap it all off. With SideWinder in that fourth position, I have three algorithms of widening, all mono compatible, with a Tone control, output level control, bypass and the all-important Width adjuster.

It's quite easy to use. Comparing SW settings without needing A-B comparison settings and the goniometer pretty effectively illustrates what's going on. What is going on is anything from subtle enlarging to radical side-spreading that is way over



SideWinder is quite easy to use

the top (without any chorusing) with mono sources like vox and mono vintage lead synths. Subtly stereo sources feed SideWidener nicely, too, so don't be surprised if it works well on a background vocal, guitar or keys subgroup. I noticed repeatedly that bland, nearly-mono stereo sourcespoorly placed overheads, sorta-stereo guitars, piano-responded to widening really nicely.

There are a couple of advanced features that could make SideWidener even more useful, like a variable high-pass filter and a mix control for parallel-processing might be rad, too (but then again, maybe not). One little bug: when in bypass, the track is panned to the left. Hopefully they'll catch this in the next update.

If you don't have a processor like SideWinder, you should try it...and even if you do have something similar, you still ought to add it to your toolkit for its sheer versatility. Based on what I'm hearing in many top hits, ample (perhaps even excessive) stereo-izing is the soup du jour. Grab a SideWidener ladle and start scooping out some soupy center and swirling it

### IZOTOPE VINYL PLUG-IN

I know that I've been asked no less than a hundred times, "Can you make it sound like it's on a scratchy old record?"

I've often skirted the somewhat clichéd or cheeky request by saying, "I can add some static, but it's hard to make it sound really cool." Well, now that I have iZotope's Vinyl plug-in, I'm able to say "Yes, I can do that" followed by "And yes, it will sound cool." It's powerful stuff that is remarkably free.

The reason it's so cool is because there are enough variables to be able to dial in something unique every time. The self-explanatory

RPM (33, 45, 78), Warp Depth, Scratch, Dust, Electrical Noise, Wear and Mechanical Noise controls all contribute to a full palate of options to create authenticity. A mono mode is tremendously useful, as is the Year control which fine tunes frequency response and distortion parameters from the 1930s through the aughts.

That's sufficient for record-playback emulation, but the Spin Down effect is today's effect du jour. Rap and hip-hop producers are taking vocals and putting a really quick spin down to a stop, quickly lower-(continued on page 35)



The reason Vinyl is so cool is because there are enough variables to be able to dial in something unique every time.

### IRIG ACOUSTIC STAGE

Multimedia makes a number of gadgets, accessories and forward-thinking tools that are geared towards the postmodern performing and self-recording musician. However, its new iRig Acoustic Stage is a must-have for both live and studio sound engineers for its unique problem-solving capabilities, coupled with a low price of only \$99.

This acoustic guitar (or acoustic bass,

or ukelele) system utilizes a small (about pick-sized) clip-on microphone that feeds a beltpack preamp housing DSP and an array of features. A quarter-inch input accepts a guitar's electrical output, with polarity reversal and independent level control for proper blending.

"Warm," "Natural" and "Bright" settings are complimented by the same settings for nylon string instruments, with versatility and useful tonal differentiation. Feedback cancellation is helpful for live settings while class-compliant USB interconnection and modeling apps are useful for self-recordists. Overall, iRig Acoustic Stage has ample ver-



iRig Acoustic Stage is a must-have for both live and studio sound engineers for its unique problem-solving capabilities.

satility from the above mentioned features alone.

Studio engineers will find utility for corralling troublesome players and situations, to be frank. So, a player can't sit still enough for close miking techniques? Is there not enough room for instrument mic stands? iRig Acoustic Stage neatly solves those problems, but to achieve the best sonic performance, a calibration is necessary. Once you perform a series of barre chords, the iRig Acoustic Stage's processors manage to milk out a sweeter and more balanced sound. Surprisingly, the three tonal settings still ap-

(continued on page 35)

### BEYERDYNAMIC TG 500 ■ BITTREE PROSTUDIO PS4825F

### **BEYERDYNAMIC TG 500 WIRELESS SYSTEM**

Unveiled at the 2017 NAMM Show in Anaheim, the TG 500 wireless system series is an affordable and flexible wireless collection from renowned German pro audio manufacturer beyerdynamic. Available in five configurations—two vocal handheld kits. clip-on mic, headworn mic, and instrument options-TG 500 systems deliver a reported an operating range of nearly 400 feet, and each of the five TG 500 sets can be used in one of four frequency bands-518-548 MHz, 606-636 MHz, 794-832 MHz and 1.780-1.810 MHz. Up to 72 channels (18 compatible frequencies per band) can be operated simultaneously, making the TG 500 solution an attractive one for a wide range of houses-ofworship, theaters, and so on.

For this review, I received the TG 550 Vocal Set featuring a dynamic TG 500H-D handheld transmitter with a TG V50 cardioid capsule (pictured) as well as the TG 558 Presenter Set featuring the TG L58 clip-on omnidirectional condenser microphone. Beyond performing flawlessly in use, these units provide a bevy of notable, user-friendly design features.

First of all, the TG 500SR receiver, a half-rack unit offering quarterinch and XLR analog audio outputs and an intuitive front panel, was simple to navigate even for one houseof-worship application in which the end-users didn't have the manual onhand. Its backlit LCD screen is easy on the eyes, even in dark environ-



Up to 72 channels (18 compatible frequencies per band) can be operated simultaneously. making the TG 500 solution an attractive one for many houses-of-worship, theaters, etc. Pictured, the TG 550 Vocal Set.

ments, and the one-button synchronization function worked like a charm.

On the TG 500H handheld transmitter, a well-placed on/off buttonopposite charging contacts on its bottom—is wisely placed and offers additional information with repeated presses (group/channel, frequency. and HF power details). Usefully under its battery compartment cover,

the TG 500H provides a two-level sensitivity (gain) switch at 0 dB and 12 dB settings.

The TG 558's TG 500B beltpack transmitter is similarly designed and intuitive. The transmitters are well made of a rugged yet very lightweight thermoplastic material, allowing both to be relatively worry-free when it comes to accidental drops. In use.



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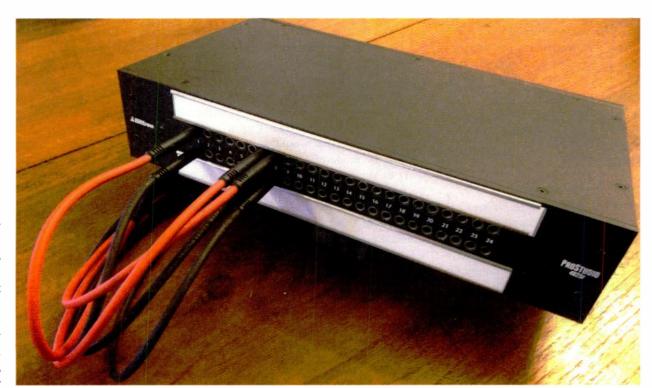
Strother Bullins is NewBay Media's Technology Editor, AV/Pro Audio club-level sound reinforcement wrangler. sbullins@nbmedia.com

the TG 500H feels good in the hand and delivers a rich and smooth, vet detailed sound that works on a wide range of vocal tonalities. I had several vocalists comment on the quality of the TG 500H, comparing it to other handhelds that would easily be hundreds of dollars more than the entire TG 550 Vocal Set, currently available at an undeniable \$499 street.

After spending a couple of months using primarily the TG 550 Vocal Set, I would suggest any of the TG 500 systems to most gigging musicians, club-level live engineers and venues or budget-conscious HOWs and theaters. Both systems I received for review sound great and are true bargains for the features and complete ease-of-use they provide.

# BITTREE **PROSTUDIO PS4825F LUNCHBOX DESKTOP TT PATCHBAY**

For those unfamiliar with the Bittree brand of patchbays, it is worth noting that the company's founder, CEO Glenn Garrard, got his start in the music industry by building and maintaining speakers and tape machines for Detroit's Motown Records alongside the illustrious Berry Gordy, Jr. When Gordy relocated Motown to LA in the early 1970s. Garrard moved, too, eventually working in television (for The Merv (continued on page 35)



The PS4825F Lunchbox Desktop TT Patchbay (\$499 street) is an impeccably built analog hub for the modern recordist who ties together the best of analog processing and the latest digital recording and production platforms.

# ■ Verse Bluetooth Binaural Microphone/Earpieces

#### BY STEVE HARVEY

Everyone is a content creator these days. But while we can capture HD video on our smart devices, says Anthony Mattana, "When it comes to audio on our phones, we throw a Hail Mary and say, 'the mic's open.' People don't even know you can adjust mic gain."

In 2014, Mattana, a former Broadway theater sound designer, founded Hooke Audio, assembled a team of designers and developers, and launched a Kickstarter campaign for Verse, a pair of Bluetooth headphones with integrated binaural microphones. Natively, smart phones are not able to receive audio over Bluetooth, only transmit. So he and his collaborators developed

a proprietary lossless, multichannel recording codec, installed via a free iOS or Android app, that enables streaming of 24-bit, 48k WAV files over Bluetooth. "It's taken three years and a lot of money to figure it out,"

Operation is simple. Download and install the app and follow the prompts to link Verse to your phone's video capabilities. Some Android phones require an extra step or two. Mine, a Samsung Galaxy S7 running Android 7.0 (Nougat), works best



Verse, a pair of Bluetooth headphones with integrated binaural microphones, is well thought out, to the point where its box is pre-cut so that users can use it as a dummy head to hold both earpiece/microphones

in airplane mode, the Hooke Audio website advises. Verse is quite processor-intensive, so it should be the only app running, whatever the device.

Launch the app and the video screen opens, overlaid with a level meter on either side. Input gains are changed by sliding your finger up (to reduce the level) or down. Tap the button labeled "3D," which indicates that the Bluetooth earphones are paired (if it says 2D, it will record through your phone's built-in mic), and you're filming.

You are monitoring as soon as the app opens. A nice feature is that the monitor level is independently controlled from your phone.

Additional separate buttons turn the camera on and off, for audioonly recording; open your Hooke Audio video library; and switch between front and rear cameras. An icon, top right, offers a menu of feature and pairing tutorials, and an email link to the company.

It really is that simple. And in practice, Verse does a great job, providing you keep an eye on your mic gains. Mattana is the first to note that the system is not for audiophiles, but the audio quality is quite decent, enabling anyone to start creating videos with spatially-realistic binaural sound relatively inexpensively (\$239.99 via hookeaudio.com).

Hooke Audio has done a great job with the package. In addition to the earphones, Verse comes with a dual-connector cable to connect the mini USB on the earpieces to a DSLR (stereo eighth-inch) or GoPro (10-pin mini USB) camera. Again, with either device, Verse just works.

The package also includes a USB charging cable, spare mic windscreens, memory foam and silicone earbud tips, and instructions. The kit also comes with a handy semi-rigid carrying case to slip into your pocket, backpack or

Then there is "Jim Head." For those wishing to film a static shot, Hooke Audio has cleverly pre-cut the outer box so that it can be folded into a dummy head that holds both the earpiece/microphones and a smartphone.

Mattana says, "There are other Bluetooth earbud products out there that are interested in adaptive noise listening, changing the way you hear the world. We're about changing the way you record the world."

## Waves Plug-ins

need S1 to tweak the Width, Asymmetry and Rotation. That said, you can sometimes work miracles if all you've got is a poor stereo track to massage into a hit.

I usually work in standard stereo, but the S1 does mid-side M-S, too, opening apps for post-modern mastering engineers.

#### **DBX 160 COMPRESSOR**

Having grown up with classic rock, it's no wonder the sound of a pair of 160s strapped across the drum buss sounds so very right to my ears. David Blackmer's dbx was ubiquitous in the '70s and nearly all the music from that era was dynamically shaped, at least in part, by a pair of Dave's quick, clean, feed-forward, soft-knee sporting VCA compres-

Waves' stereo version of the 160 brings some extra functionality to this classic comp, plus some interest-

ing variables. A Noise control provides the hardware modeled noise floor (if you're the authentic type), Mid-Side M-S functionality (if you like independent squeezing of the sides and center), a Mix control allows New York-style parallel compression and a Sidechain High Pass filter which helps prevent unwanted compression from bassy elements in the signal.

That much control opens up a myriad of apps that would've been beyond the scope of a stock 160, so don't be surprised if this comp works on most anything where you're looking for more saturation and level yet without color or attitude. Sure, drums are a natural, but basses (with sidechain filtering), keys, guitars (especially with parallel blending, vox, whole mixes (especially with sidechain HPF and parallel blending) are all quite good with some added 160

Used hardware 160s are still out there, but they're going for top dollar these days. It sure is nice when a plug-in faithfully recreates the past and adds some modern flair.

#### SSL E CHANNEL

The debate rages on, but I'm in the "E Series rules!" camp of classic SSL topologies. The 4000 Series consoles with the "Black Knob" EQ were developed in 1983 with help from George Martin. I reviewed their Echannel strip in a hardware version many years ago-and loved it-so I was an easy mark when Waves put their E Channel plug-in on sale.

The feature list is all as expected and without surprise. The high-pass and low-pass filters; the four bands of EO (high and low shelves or bells, two midrange parametrics); the threeknob compressor; the gate/expander (that is the VCA stuff of legend); and the chunky LED metering are all notable E Channel features.

The sound is pretty damned authentic to these ears, with that classic "clean attitude," hi-fi punch and "the sound of records." Adding this tonality to your collection won't make you stand out from the pack, this is the sound of the pack-I highly recommended the E Channel plug when you want tried and true, quick "all in one instance" processing and need



I reviewed SSL's E-channel strip in hardware version many years ago-and loved it-so I was an easy mark when Waves put its E Channel plug-in on sale.

a sure thing in getting a channel to

# iZotope Vinyl

(continued from page 32)

ing the pitch and abruptly stopping at the lyric's end. It's fun and creative stuff and you can automate parameters for precise start/stops and screw up parameters for delightfully broken and distressed results.

In an audio world where "high fidelity" has become relatively easy and we spend much of our time trying to artistically muck things up, iZotope's Vinyl is a versatile, powerful and perfectly priced lo-fi solution.

### Bittree

(continued from page 33)

Griffin Show) before founding Bittree later in the decade.

Even without that biography, one look at Garrard's Bittree Patchbays tells me that the man lives and breathes pro-grade I/O. Reviewed here, the PS4825F Lunchbox Desktop TT Patchbay (\$499 street) is an impeccably built analog hub for the modern recordist who ties together the best of analog processing and the latest digital recording and production platforms.

Built to be easily paired with 500 Series analog processors, the PS4825F fits precisely below any API 500-6B six-slot Lunchbox chassis, thus "lunchbox" is in its name, too. It is a 5 lb. desktop patchbay measuring 12.5 inches wide, seven inches deep, and 2.5 inches tall with a 2x24 TT jack configuration and mono (even) jack spacing. On its rear is a DB25 interface featuring six 25-pin female connectors, allowing Pro Tools and TASCAM style pinouts. Though it ships "full normal" with bussed grounds, it offers selectable normalling and grounding. Circuits can be changed via shunts under both designation strips. It is analog and digital 110 ohm compatible, too.

PS4825F promotional materials explain that solid-gold switching contacts are welded and electrically bonded to its spring leaves, "providing superior durability and higher electrical current ratings than competing solutions' pressed-on foil approach." That said, the unit feels as solid as any commercial studio TT patchbay I have had the pleasure of using over the years. As such, for the delight of 500 Series aficionados, this is the perfect patchbay to pair with an API lunchbox.

## IK Multimedia

(continued from page 32)

ply to your custom "patch" and the process is dynamically sensitive; an overly energetic "string banger" (or a gentle string tickler, for that matter) can be mitigated and smoothed out a bit with proper calibration.

I tried the iRig Acoustic Stage

with a nylon-string acoustic bass and a ukulele and received good results in both instances. For optimal results, don't be afraid to move the mic around, even placing it closest to the bass strings. For serious tracking purposes, I found song-specific mic placements, careful blending in of the piezo pickup output and fine tweaked custom calibrations until ideal balances were achieved.

That's a whole lot of utility for a

mere hundred dollar bill, so don't expect a modular mic cable, or a metal case beltpack, or a fancy data display. But do expect a reasonably tough plastic beltpack a storage case that should help preserve the life of the kit and a clever little device that may just save the day the next time the acoustic guitar, or maybe the acoustic guitarist, is giving you problems.



# [36] soundPRODUCTSIII

## **Dynaudio Pro 9S and 18S Subwoofers**

Dynaudio Pro is unveiling its first new studio-oriented powered subwoofers in a decade, each featuring long-throw 9.45-inch woofers. The Dynaudio 9S features a single woofer, while the 18S offers two, arranged in a push-push opposing



design with a woofer per side. Both the 9S and 18S offer a frequency range of 18 Hz to 175 Hz, powered by a 300 W Class D and 500 W Class D amplifier, respectively. The 18S also includes a DSP engine with built-in presets, timealignment functionality and a three-band EQ.

Other features of the 9S and 18S include double front baffles; adjustable LPF (low-pass filters) from 50 Hz to 150 Hz; SAT output with defeatable HPF (high-pass filter); signal-sensing auto-power circuit to save energy; and universal volume control functionality.

### Antelope Discrete 8 Interface

Antelope Audio has unveiled its Discrete 8 Thunderbolt and USB Interface with eight mi-



crophone preamplifiers as well as the accompanying Edge and Verge modeling microphones.

Discrete 8 is a 26-input/32-output interface with offers eight console-grade, fully-discrete preamps plus Antelope Audio's realtime FPGA (Field Programmable Gate Array) effects, which are models of outboard processing from BAE, Gyraf Audio and Lang, among others. Thanks to Antelope Audio's allnew ConnectAFX plug-in, these effects are accessible via any DAW.

Built to be used with Antelope modeled processors, Antelope's new modeling microphones are available as Edge large-diaphragm multi-pattern condensers with dual edge-terminated capsules and Verge small-diaphragm condens-

The Discrete 8's Accusonic 3D Modeling Engine enables users to transform both Edge and Verge mics into vintage-style replica transducers with control over proximity effect, off-axis response, and even post-recording polar pattern changes.

### Newfangled Audio EQuivocate Plug-in

Newfangled Audio has announced availability of its EQuivocate EQ plug-in, available exclusively through Eventide. Newfangled Audio is the brainchild of former Eventide DSP engineer Dan Gillespie.

Reportedly natural sounding in application, the 26-band EQuivocate is optimized for mixing and mastering applications, re-

ports Newfangled Audio promotional materials. EQuivocate uses filters that are modeled on the human ear, combining them with a linear-phase filter shape intended to reduce pre-echo.

Key features include 26 linear-phase auditory filters; Match EQ to replicate tone from one track to another; Click/swipe EQ curve drawing; artist presets from Richard Devine, Jeremy Lubsey, Alex Saltz, Sebastian Arocha Morton, Richard X, and John McCaig; and more.

### Propellerhead Reason 10 DAW

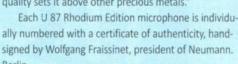
Propellerhead Software has announced Reason 10, said to be the biggest content update in history for the platform. Highlights include two new synthesizers, three new "livesounding, organic" instrument devices, an acoustic piano, a creative modulation device, and 3GB of drum loops and samples.



Reason 10's new synthesizers include Europa Shapeshifting Synthesizer, a dynamically generated wavetable synth, and Grain Sample Manipulator, a granular synthesis instrument. In collaboration with Soundiron, Reason 10's three new sampled instruments include Klang Tuned Percussion with 10 sampled melodic percussion instruments; Pangea World Instruments with 11 world instruments; and Humana Vocal Ensemble, a collection of choirs and solo vocals.

### Neumann U 87 Rhodium Edition LDC Microphone

Neumann is marking the anniversary of the legendary U 87 large diaphragm condenser (LDC) multipattern microphone with the special release of its new U 87 Rhodium Edition, a 'once offered, made to order' version, limited to only 500 units worldwide. According to Neumann, the U 87's "peerless history influenced the choice of rhodium. Far rarer than gold, it reflects light more than any other metal, which is why it is used for the mirrors of high-performance telescopes that study the farthest reaches of the universe. This transcendent quality sets it above other precious metals."





It ships in a Neumann aluminum case and a special Rhodium Edition EA 87 elastic suspension. A pair of black gloves is also included for keeping the limited-edition microphone "in pristine condition."

### ESI Audiotechnik MoCo Monitor Controller

ESI Audiotechnik GmbH has announced availability of its MoCo fully-passive studio monitor controller. MoCo provides two sepa-

rate stereo inputs-one with balanced quarter-inch TRS connectors, the other with both unbalanced RCA and unbalanced eighth-inch TRS connectors-and two separate stereo outputs via balanced XLR connectors and balanced/unbalanced quarter-inch TRS plus unbalanced eight-inch TRS connectors.

Users can select the Input signal via an A/B switch and enable each Output with separate A and B buttons. Mono and Mute features are also included alongside MoCo's large volume

### Josephson C725 Tube/FET Hybrid

Josephson Engineering is shipping its first production model to use a vacuum tube: the C725 hybrid vacuum-tube microphone. Developed for more than five years, the C725 aims to provide smooth, warm sound without loss of detail while being able capture subtle musical nuances. The company developed a circuit using the cascode topology already used in most of its other mics, but with an FET and a tube doing the work rather than two FETs as with other models. The capsule, which is the same dual-diaphragm



multi-chamber design used in the C700 and C716, is manufactured in-house. The C725 uses Josephson Engineering's metal foam grille to provide shielding and protection for the capsule with minimal internal reflections.

### Mackie Onvx USB I/O

Mackie has unveiled its 24-bit/192kHz Onyx USB Interface series, intended for numerous wide-ranging applications including portable audio capture as well as use in home studios and by content creators, self-recordists and more.



Onyx USB Interfaces are USB-powered and currently shipping in two models, the Artist 12 and the Producer 22. The units' key features include Mackie's Onyx mic preamps, zero-latency direct monitoring, a full license for the Tracktion T7 DAW + DAW Essentials Collection, and an offering of I/O. Other features include 48-volt phantom power, dedicated quarter-inch monitor outputs, and headphone output.

### [sound reinforcement] IIIIsound PRODUCTS

### Neutrik ether CON Cat 6A Coupler

Neutrik has announced its new etherCON Cat 6A feedthrough coupler NE8FFX6-W. Created to accommodate Neutrik's etherCON Cat 5 and ether-CON Cat 6A cable carriers as well as standard RJ45 plugs, NE8FFX6-W sports full 10-Gbit bandwidth along with IP65 ingress protection when mated to the NE8MX6 family of etherCON Cat 6A cable connectors. A barrel design is used to help users tell the NE8FFX6-W apartb from its etherCON Cat 5 cousin, the rectangular NE8FF.



Fred Morgenstern, Neutrik USA's product director, commented, "We expect users to be delighted with NE8FFX6-W's high performance, compact and unique size, and superior liquid and dirt/dust resistance. The preliminary response from our customers is that this will be a popular and highly useful accessory."

### **Earthworks DM20 DrumMic** Cardioid Condenser

Earthworks has announced its newest microphones for drum miking, including the DM20 DrumMic (pictured) for close miking toms and snare, as well as several multi-microphone kits. The new DM20 DrumMic is a cardioid condenser microphone designed for close miking toms and snare in live performance and recording environments. Key features of the DM20 include a cardioid polar pattern, 150 dB SPL rating and flat 50 Hz-20 kHz frequency response. A right angle microphone head allows the user to position the microphone precisely, and its gooseneck is stiff vet flexible.

### Soundcraft Vi1000 Digital Console

Soundcraft has announced the Vi1000 Digital Mixing Console, due to ship in November. Created to be the most compact Vi-000 series desk, sitting 34x32 inches, the console is intended for touring, venue and corporate AV work. The Vi1000 retains Soundcraft's Vistonics II channel strip user interface based around FaderGlow, and also



offers Soundcraft SpiderCore, a built-in DSP and I/O engine based on Studer technology with 40-bit floating point processing. The desk can be used on its own or as an additional remote-control surface for any of the larger consoles in the range, using their Mirroring feature.

Onboard processing includes gating and compression on 96 channel paths, BSS DPR901ii Dynamic EQ and Lexicon multi-effects via an insertable processing pool, and the ability to insert up to 64 external devices. STUDER vMIX automatic voice mixing is built-in and BSS 966 graphic EQs are available on all output busses.

#### **EAW RSX218 RADIUS Subwoofer**

Eastern Acoustic Works (EAW) has announced its new RSX218 dual 18-inch subwoofer. Part of the company's RA-DIUS line, it is designed for live sound applications like festivals and clubs or fixed installs in auditoriums, churches and performance venues.



The powered subwoofer sports EAW Focusing and DynO technologies, as well as integration of Dante networking and EAWmosaic, allowing users to follow prediction, control and monitoring via an iOS app. A push button provides user change to cardioid operation in order to reduce excess lowfrequency energy on stage. The RSX218 peak reportedly features output of 141 dB. The all-wood enclosure with EAW Roadcoat finish is loaded with two high-power 3-inch voice coil 18-inch woofers powered by 1400 W of onboard amplification.

There's more information on all the products featured at prosoundnetwork.com/nov2017.



### Radial MIX2:1 Passive Mixer

The Radial MIX2:1 is simplistic mixer that passively sums two audio channels down to one, offering quarter-inch TRS and XLR input connectivity per dual mic preamps. Other features include ground lift, trim control, phase invert and passively summed XLR

Usefully, the MIX 2:1 has a 180 degree flip on Input-2, to help solve issues with frequency cancellation due to inputs being out of phase. After both signals are passively summed together, they feed a single XLR output that can be connected to a powered speaker, or the input of a console, recording interface, etc.

### Ferrofish Dante Verto Line: Expanded

Ferrofish has expanded its Dante Verto Series to offer the Verto 32, Verto 64 and Verto MX converters, integrating digital ADAT and MADI audio formats into a Dante environment.



The Verto 32 and Verto 64 offer ADAT, while the Verto MX supports both BNC and OPTICAL MADI and can be Single or Multimode MADI due to the use of an optional Single Mode MADI Module. All three devices provide word clock I/O for external synchronization and can be controlled remotely via the Dante network. The Verto Series can be used alongside other Ferrofish interfaces as well as other converter brands via the ADAT or MADI I/O.

### Allen & Heath ME-500 Mixer

Adding on to its ME personal mixing system, Allen & Heath has introduced the 16-channel ME-500 personal mixer. Intended for use in houses of worship, rental companies and orchestras, the ME-500 lets users build and control monitor mixes from 16 stereo or mono sources. The ME-500 sports a dimmable display, 16 backlit select keys, mute and solo buttons, master level with limiter and EQ, plus a single rotary encoder for all main navigation and control.

Each ME-500 can store and recall eight user presets for different mixes, users and shows, all of which can be saved to USB. Outputs include minijack and 1/4-inch headphones and a TRS mono out for wedge monitors. EtherCon connectors allow ME-500s to be daisy-chained, or deployed in a star topology using the ME-U or an off-the-shelf PoE switch.

# 

#### PreSonus Debuts SL III Rack Mixers

PreSonus has unveiled its latest StudioLive Series III digital mixers in rack form. The mixers can serve as simple AVB



stage boxes—networkable via CAT 5e or CAT 6 Ethernet cable, combination stage boxes and monitor mixers, or standalone mixers, suggests the company.

The StudioLive 32R and StudioLive 24R offer 26 mix buses, including 16 FlexMixes, four dedicated subgroups, four internal effects buses/processors, and the stereo main mix bus. The StudioLive 16R has six FlexMixes, two effects buses, and the stereo main bus for a total of 10 mix buses. The StudioLive 32R and 24R have 24 Filter DCAs for controlling groups of channels; the smaller rack mixer offers eight Filter DCAs.

An AVB Ethernet connection enables users to network compatible computers and stream up to 55 (StudioLive 32R and 24R) or 32 (StudioLive 16R) channels of audio to and from a Mac or Windows PC. Further, 40x40 (StudioLive 32R and 24R) or 18x18 (StudioLive 16R) recording via USB 2.0 is available.

### 1381 SOUNDREINFORCEMENTIIII

### **=** Prog/Metal Festival Powers ATL

#### BY STROTHER BULLINS

ince 2001. Atlanta has been the host city for ProgPower USA, an annual indoor music festival where progressive rock and power metal bands from around the world perform for American fans who rarely get to see them live on tour. These carefully curated acts are packing the increasingly sold-out multiday festival at CenterStage, a concert complex in Midtown Atlanta. Participants have included Finland's Nightwish, Sonata Arctica and Stratovarius; Sweden's Sabaton and Therion; Holland's Epica and Delain; and the UK's DragonForce, among many, many others. And though a minority, American acts are regularly included in the mix, too-for example, Kamelot, Fates Warning, and Between The Buried And Me.

For September 2017's ProgPower USA XVIII, Netherlands-based mixer Niels Jensen ran CenterStage Theater's FOH hub as chief engineer, working with many bands' own engineers as well as mixing for those bands traveling alone. Jensen started 15 years ago as a hobbyist, learning on audio systems at Dutch youth



Ending its set at September 2017's ProgPower USA XVIII was Swedish heavy metal band Amaranthe (I-r): Bassist Johan Andreassen, harsh vocalist Henrik Englund Wilhemsson, vocalist Elize Ryd, vocalist Nils Molin, guitarist/keyboardist Olof Mörck, and drummer Morten Løwe

centers. Over time, bands liked what he was doing in the club scene, so he began mixing at smaller venues around Holland, Belgium and Ger-

In addition to ProgPower USA, Jensen has worked with ProgPower Europe for four years, and regularly tours with Ayreon, a dizzying musical project including 16 different vocalists spanning many metal subgenres, featuring Tommy Karevik of

Kamelot, Floor Jansen and Marco Hietala from Nightwish, and-interestingly enough—Jonas Renske of Katatonia, whose band headlined ProgPower USA XVIII.

"There's a growing network that I have, which came about because I was trusted doing live sound at this level, for these people," affers Jensen. "[At ProgPower], my job is to make sure that everything is ready, and-

(continued on page 43)

### briefs

### Nickelback Rolls with Yamaha

LITITZ, PA-FOH engineer Joe Keiser and monitor man James Bump recently learned their way around Yamaha (yamahaca.com) RIVAGE PM10 consoles while prepping Nickelback's current Feed The Machine tour. "I grabbed a microphone, my iPhone, JH Roxanne inears, sat down at the desk and off! went," said Bump. "Three hours later, I was set for a makeshift show with compressors and gates turned on and adjusted, mixes sent to outboard IEM units, and the SILK feature applied with just the right amount of saturation on the vocal channel." Please make this one second from the top. Thanks!

### Church Rolls with Renkus

NATCHEZ, MS-The First Baptist Church in Natchez, MS recently replaced its circa 1980s PA with Renkus-Heinz (renkus-heinz.com) IC32-24-RN digitally steerable line arrays and two PN212-SUB dual 12-inch subwoofers, provided by regional audio house, MS Audio. By mounting the line arrays to columns, the MS Audio team achieved the church's aesthetic goals while averting potential issues with the plaster ceiling.

### Adele Drummer Adds Auralex

PHILADELPHIA, IPA-When Derrick Wright needed to isolate his drums for quiet songs on Adele's recent world tour, he went to an off-stage isolated drum room carried by the tour, created with an Auralex (auralex.com) HoverDeck under the kit and ProMAX V2 panels surrounding it to ensure a consistent acoustical envirenment from show to show.

### A dLive at the Opera

BUDAPEST, HUNGARY-When the FINA World Aquatic Championships 2017 held its gala/awards ceremony at Budapest's Opera House, sound for & Heath (allem-heath.com) dLive S Class mixing system. Regional audio provider AV Advice Ltd. brought in a S7000 Surface equipped with Dante and Waves interface cards, a DM64 MixRack, and two DX32 expander racks with redundant connections to the MixRack, as well as ar IP3 controller to provide sound engineers with remote access.

### Moroccan Lounge: More Rock than

Lounge

#### **BY STEVE HARVEY**

LOS ANGELES, CA-The team behind New York's Mercury Lounge and Bowery Ballroom opened a new music venue in downtown Los Angeles in September. The 275-capacity Moroccan Lounge features installed audio and lighting production packages that belie its small size, including a Soundcraft Vi2000 digital console at front-of-house driving a d&b audiotechnik Y Series main speaker system, and a grandMA2 lighting desk and comprehensive stage lighting.

"There's no sub-300-capacity venue that I can think of that has, our audio and lighting specifications," says Will Pfeffer, the venue's production manager. "If you're Grizzly Bear, who can sell out three nights in a row at the Wiltern," referring to the 1,850-capacity L.A theater, "but you want to start off the tour with an intimate show for the biggest fans, and production doesn't want to skimp on the quality of the venue, then this is the venue."

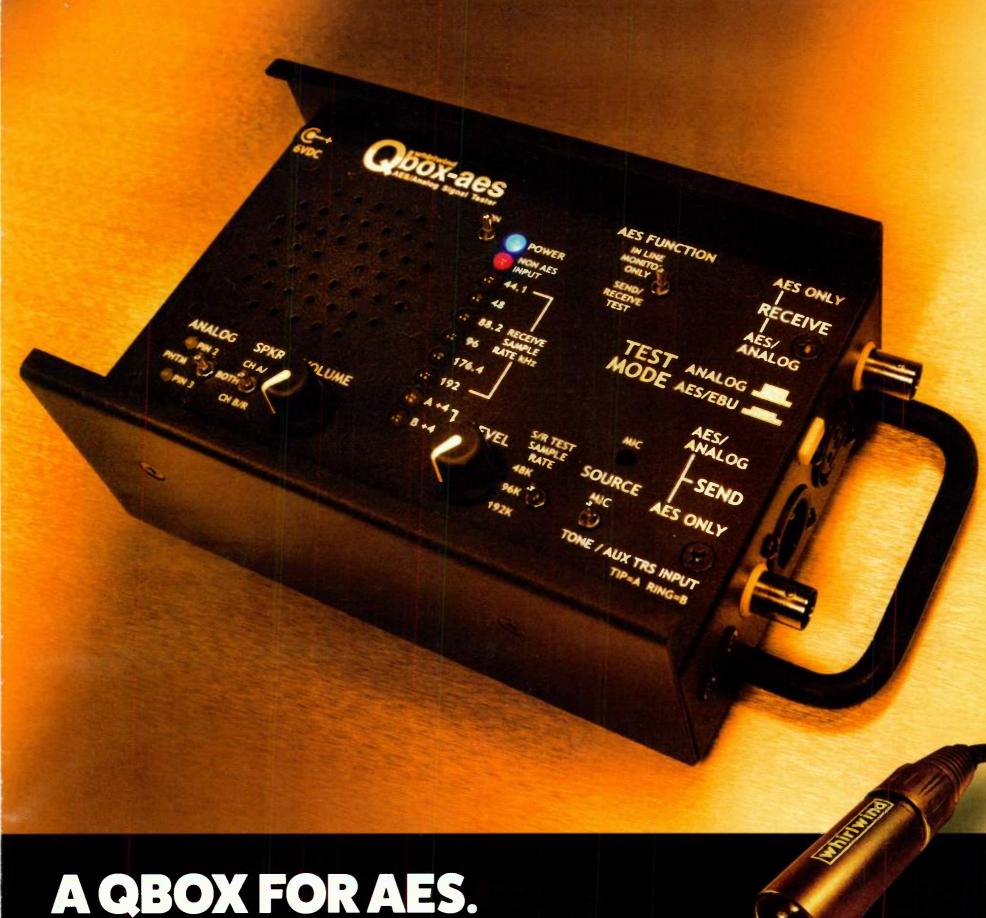


Hollie Cook, daughter of Sex Pistols drummer Paul Cook, recently headlined the new Moroccan Lounge in Los Angeles. The heavily tipped venue sports a Soundcraft Vi2000 digital console at front-of-house driving a d&b audiotechnik Y Series main speaker system.

The Moroccan Lounge, founded by brothers Michael and Brian Swier and their partner Joe Baxley, is the team's second L.A. venue; the Swiers opened the midsize Teragram Ballroom (featured in PSN, June, 2015) two years ago. Both venues reflect Michael Swier's belief that top-quality production technology, acoustics and staging are essential to the experience for the artist and audience

The team saw a quality gap between the city's 300-capacity clubs and 600-plus-capacity venues like the Teragram, reports Pfeffer, who has relocated from the Bay Area, where he was a staff FOH engineer at Terrapin Crossroads, the venue owned by the Grateful Dead's Phil Lesh. "We want to provide a stepping stone for those bands who are not yet able to fill Teragram Ballroom."

(continued on page 43)



### THINGS JUST GOT A WHOLE LOT EASIER

From the Company that invented the QBOX comes the QBOX AES, The ultimate multipurpose testing device for troubleshooting digital AES-3, S/PDIF, and analog audio signals. The Whirlwind QBOX-AES comes loaded with field savvy features that allow you to monitor your AES stream in real time, check the sample rate of your AES stream, and convert your analog signal (MP3 player/ Smartphone...) into an AES stream, and that's just the beginning! With virtually all the features of our legendary QBOX built in, you'll be ready for anything the audio gremlins throw at you.

Made in USA



- Monitor your AES stream in real time
- Check the sample rate of your AES stream
- Convert your analog signal into an AES stream
- Convert your AES stream into an analog signal
- Includes most of the features of our legendary QBOX

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### [40] LIVESOUNDshowcaseIIII

### Arcade Fire Gets Everything Now with Massive AVB System

#### BY LOWELL GREENBLATT

NEW YORK, NY-The floor of Madison Square Garden hadn't seen something like this in a long time. In one night, an in-the-round stage presented both New Orleansbased Preservation Hall Jazz Band and hip-hop pioneer Grandmaster Flash, but they were merely leading up to one of the biggest indie rock bands of all-time.

With the crowd sufficiently worked up, Arcade Fire entered the arena like championship athletes as ropes rose up from the sides of the stage, turning it into a boxing ring where the band ripped into the title track off its latest album, Everything Now, all the while flanked by two large disco balls refracting laser lights. The disco vibe couldn't have been a coincidence, as the album is the group's most danceable to date. It may have been a long way from the vibe of its 2010 album, The Suburbs, but the crowd didn't seem to mind.

While most tours are booked so that a production has time to find its groove before playing a high-profile New York gig, Arcade Fire's Infinite Content tour hit The Garden only four shows into its North American run. Nonetheless, the shakedown period had gone well—a crucial fact, given that the band is carrying with it the largest AVB-based touring system yet assembled, fielded by audio provider Solotech (Montreal/Las Vegas).

The in-the-round PA sports two sets of main left-right hangs, with each hang comprised of a dozen L-Acoustics K1 line array boxes atop



The massive L-Acoustics K1/K2 rig supplied by Solotech for Arcade Fire's tour is believed to be the largest AVB-based touring system yet

four K2s. The two sets of side hangs each have left-right arrays of 16 K2s. Supplementing all of that are four independent hangs, each with eight KS28 subs, flown in cardioid configurations. Powering the entire system are no less than 92 LA12x amplifiers, 80 of which are hung above the stage in four custom amp rack cages. There's so much equipment flown directly above the stage, it almost looks like a cave of sound built for the band.

puter, I can do the patch for the whole system, changing it on the fly; I did that this morning, re-patching 92 amps in five minutes."

Calling it a "viable standard," Germain built the system using only AVNU Alliance-certified products to ensure compatibility primarily two Meyer Sound Galileo Galaxy units, 11 Extreme Networks Switches and 92 L-Acoustics LA12x amplified controllers. Germain handles main distribution from a Meyanalog cabling as backup, just in case. From each rack's switches, Cat 5 cabling connects to the individual amplifiers, with the longest run a mere 48 feet. The result is clear, reliable sound, said Germain. That and "Sometimes I feel more like an IT guy than a sound guy." Mixing the sound that threads

through that AVB system is FOH engineer Jim Warren. For this tour, Warren is happily relying on his trusty Avid Venue S6L console, finding it's been particularly helpful with the new danceable elements of the latest album. "It's got a massive channel count-lots of ins, lots of outs-so things I used to run out of on [my old] Venue system, I don't run out of now," he said. "Also, it sounds absolutely amazing. I was never really worried about the sound of the Venue-and then once I started using the S6L, I was very surprised how much difference there was."

A veteran FOH engineer for Radiohead, Warren aims to overcome challenges inherent to an in-theround set-up. For example, singer Regine Chassagne is featured more prominently on the new album, often with heavily effected vocals, particularly in the breezy "Electric Blue." Warren noted, "It's been a challenge between getting those big, fat vocal sounds and not putting those effects on for the entire band, who are standing all around her."

The key to getting those vocals is (continued on page 42)

"Trust your ears, and when you do your soundcheck, do your vocal first. It's the most important thing—see how loud you can get your vocals, how clear you can get them, and then work everything else in around it. Nobody goes home whistling the kick drum."

All of it is held together using the AVB digital audio protocol. While this is the largest touring AVB rig to date, Solotech systems engineer Marc-Oliver "Marco" Germain, who also toured with the band behind its 2013 Reflektor album, had no qualms about that arrangement. "As soon as I knew this [AVB-based system] was available, I said 'I want to try that," he said. "From my com-

er Sound Galileo Galaxy at FOH, which generates two AVB streams of eight channels that are sent over fiber optic cable to switches that use spanning-tree protocol to ensure redundancy. Each rack of 20 LA12x amplifiers above the stage is connected via two switches, so that if a switch fails, the system can fall over to the other one by swapping a fiber; each rack additionally has 12-pair

# 10-FOCCESHAPED



ULTRA COMPACT DIGITAL MIXERS FOR LIVE, STUDIO AND INSTALLATION







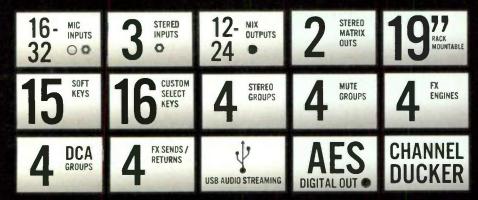












Qu-Pac takes the power and legendary quality of the Qu family and shrinks it into an uber-compact desk or rack mount format. Qu-Pac frees you to mix from your iPad, but the full functions of the mixer can also be accessed from the front panel and touchscreen.

With custom settings and Cat5 expansion up to 38 inputs, Qu-Pac provides a scalable, failsafe solution for hardworking bands, schools, hotels, corporate events, live music bars, conferences, personal mixing and many more scenarios requiring a pro mixing solution in a tiny footprint.



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### ■ Hello d&b

NEW YORK, NY—Bette Midler is well-known for her ability to belt a song, but in her current run on Broadway, starring in a revival of *Hello Dolly*, that admirable skill is one she gets to employ as an artistic choice, rather than a technical one.

"Bette has been accustomed to playing big arenas and concert venues for many years," said Tony Award winning sound designer Scott Lehrer, "so the first thing I had to do was tell her it's okay to be quiet here if appropriate. She doesn't need to use her big voice; it will be delivered by [house mixer] Carin Ford and the system. If the intro to a song is 'conversational,' then make it conversational level. That took her a while, but she likes it now."

The house system making that possible inside the Shubert Theater is a sizable d&b audiotechnik rig. "We have developed three different L/R systems, one for each level: orchestra is V7P, mezz' and balcony use Y8 arrays, plus



Bette Midler's current Broadway run in *Hello Dolly* is benefiting from a sizable d&b audiotechnik rig.

and as delays for the mezz' underbalcony. "I also use three Y7P for de-

For a number of reasons, Lehrer aimed to create an intimate sound for the show by judiciously using the PA: "With such abundant energy available on stage, it's important to make sure every single audience member gets to enjoy that experience as if they were sat front row center. That's not only about harnessing the latest technology; the sound designer's role is as much about managing the performers' energy. With Bette, that's a really exciting challenge."

d&b audiotechnik dbaudio.com

"The sound designer's role is [also] about managing the performers' energy."

—Scott Lehrer

a split orch/mezz center cluster of V8, delays and fills," said Lehrer.

Additionally, there are numerous fills, mainly d&b E6s used downstairs

lay on the balcony truss," said Lehrer.
"There are E8 sidefills to the extreme corners of the mezz' and balcony.
Frontfills across the stage are E5s."



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### Arcade Fire

(continued from page 40)

in the way he approaches building the mix. "Trust your ears, and when you do your sound-check, do your vocal first," he advised. "It's the most important thing—see how loud you can get your vocals, how clear you can get them, and then work everything else in around it. Nobody goes home whistling the kick drum."

While Warren has his work cut out for him nightly, he appears to barely break a sweat behind the S6L. Germain has been working with Warren for years, and their familiarity is a plus, too: "I've been dealing with Jim for a few years now, I know what he's expecting and so I just carry on doing the same contour or EQ curve on the general system, and then he deals with where he wants to boost things. The system itself can handle pretty much anything. We've got songs with really heavy bass pads, like 'Here Comes the Night Time,' and the new one, 'Electric Blue,' has a nice, heavy low end. But it's always under control, even on a song like 'No Cars Go,' where the low end is punchy. It all comes down to what comes out of Jim's desk. It's supposed to be showing up everywhere in the arena, and that's happened so far."

While the sound was strong, showmanship was on the agenda as well. Arcade Fire is known for having a plethora of performers onstage at once, and during "Haiti," it even brought out a Haitian dancer who negotiated the space around her surprisingly well. Elsewhere, midway through its set, the band displayed a phone on the video screens, instructing the audience to turn on its smartphone lights. The rest of the lights slowly dimmed (save for the red exit signs) and Madison Square Garden was illuminated by its vast audience as the band played "Neon Bible." It wasn't quite the 'switch-to-12-pair-cabling' analog emergency that Solotech prepared for, but it was a beautiful sight to behold.

Solotech Solotech.com

L-Acoustics I-acoustics.com

Avid.com

### ProgPower

(continued from page 38)

this is especially important in the prog rock scene—that you can hear every single detail. That's my main focus."

Ideally, Jensen travels with a basic front-of-house insert rack featuring six inserts "because I mix in a lot of subgroups," he explains. "I use this approach to vary the levels for progressive rock audiences, who want to hear dynamics and differences."

Console-wise, Jensen prefers Soundcraft Vi Series as well as DiGi-Co mixers. "For ProgPower, we used CenterStage's very nice Electro-Voice line array and their DiGiCo SD9," Jensen explains. "Being that I didn't travel with any gear other than my laptop, interface and a measurement mic, I mixed without the gear I usually use, though the SD9 allows me a lot of options-audio enhancers and dynamic EQs. I hooked up Smaart and the microphone to a reference channel, I tuned the room as well as I could, and again when the people arrived.

The bands traveling with engineers received calibration files from CenterStage before the event, resulting in 20-minute changeovers between bands. "The acoustics are really good and the room was tuned," offers Jensen of the CenterStage Theater. "The gear and the tones of the performers was what made the biggest difference, though. Even the first band of the whole event was nearly spot on; in the first song, we cut out some unwanted information and we were up and running. We got a lot of good response from the crowd immediately."

Mixing for the discriminating ProgPower audience is a challenging gig, notes Jensen. "Many of the audience members are musicians and/ or studio and live sound engineers. Personally, it drives me to be even more focused on getting it right. A drummer recently came up to tell me that, out of the seven tom-toms on the kit, the fourth tom sounded a little darker and possibly 1 or 2 dB down, and we should fix it. If he listens for those kinds of details, I will make the effort to fix it. In [prog and power metal], all the bands are on a high level, performance-wise. They are perfectionists, and they all want to bring their A game, and their audiences learn to expect it."

Much variety resides under the ProgPower festival banner, making it a surprisingly diverse four days of music. "ProgPower does this well," explains Jensen, pointing to this year's Day 4 headliners. "You have

Katatonia, which is really dark. Then there's Amaranthe, heavy metal with an uplifting, pop element. There are all kinds of bands at ProgPower. But in power metal, there's always lots of double bass [drum], but it's balanced with melody lines. And the gap between a band's live sound and their studio sound is getting smaller and smaller. Prog audiences are expecting the sound of the albums live. But luckily, that's my approach.'

Amaranthe, which uniquely features three vocalists-Elize Ryd, Nils Molin, and Henrik Englund Wilhemsson on melodic female, melodic male, and harsh vocals, respectively-delivers "all that and a lot going on with guitar and all kinds of different soundscapes. But it's most important to equally hear all three vocals; that's the main priority with Amaranthe. [Their set] requires a very active style of mixing.

Katatonia, bringing its British FOH engineer along, precisely matched the sound of its new record, The Fall of Hearts, amazingly well, offers Jensen. "I did a bit of tweaking of the room, dialing in a few things, and the stage manager came to the front and said, 'We're listening to the new Katatonia record.' At least we were getting really close."

**ProgPower USA** progpowerusa.com

> Amaranthe's performance for ProgPower USA XVIII at prosoundnetwork.com/nov2017

### Moroccan Lounge

(continued from page 38)

Jeff DelBello, of New Jerseybased design, installation and sales company dB Sound Design, has provided services at all the Swiers' venues; here, he installed d&b Y10P two-way passive loudspeakers for the mains, and three Y-Subs in an array below the stage.

"In some of these smaller clubs, there are sightline issues, so they wanted to get the speakers up as high as they could," says DelBello. But the ceiling above the audience area to the right of the stage, in front of the FOH position, is slightly lower, so he installed a Y8, which offers more focused directivity, for fill.

DelBello had allowed a week to set up and tune the system, but there was a setback: "When we got there, the general contractor had cut all the wire out for the house system and we had to re-run everything, in five days. The people from d&b came out and did the system tuning with Will and Sam Coy, a local sound engineer who works at the Teragram."

The Mercury Lounge has a Soundcraft Vi1000 at FOH. "People like it, it's simple to use and it sounds great, so they decided to go with it again," says DelBello. "Tom Der [national sales manager, Soundcraft USA] gave us a great deal and we were able to get the Vi2000 at the Moroccan Lounge." Because of the desk's on-board processing, there was no need for outboard gear, he says.

"I would say it's the most userfriendly board out there," adds Pfeffer. "It doesn't skimp on preamps and quality or the Lexicon effects." Monitors are typically run from the Vi2000, he says, but there is space at stage left if a tour is carrying a

Onstage, Pfeffer continues, "We've got a lot of Sennheisers, including a couple of MD431s, my favorite for vocals, and Sennheiser 6 and 9 series for vocals, drums and guitars. We got a whole Telefunken drum mic kit, and the gamut of Shure mics—Betas, 58s, B7s, SM81s, an SM7. And we got the newest K+M heavy-duty mic stands. We run Radial JDI direct boxes."

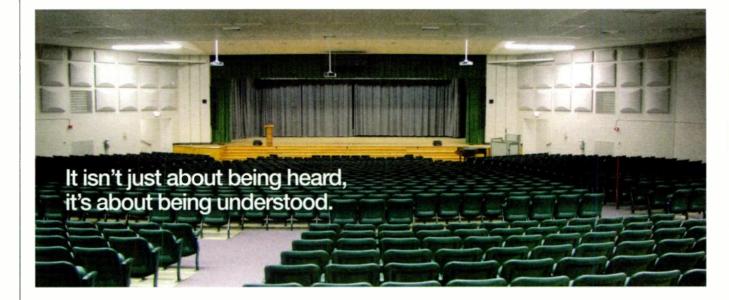
There are six wall-mounted Soundtube speakers in the bar, which are fed from the Vi2000 on show nights and can be controlled by the bartender.

In addition to Grizzly Bear, Julian Casablancas + the Voidz and Grouplove also played during the club's opening period. "Those underplays created a lot of buzz about the place," Pfeffer reports. "We had a lot of interest before we opened, but now it's gone to a different level." d&b audiotechnik

dbaudio.com

Soundcraft soundcraft.com

> THERE'S MORE > Catch a clip of Julian Casablancas + the Voidz playing the Moroccan Lounge at prosoundnetwork.com/nov2017



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△Dante



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### CenterSTAGE TOP 10 TOURS OF THE MONTH

ACT / STATISTICS	CREW	EQUIPMENT	
1 U2   CLAIR GLOBAL	Joe O'Herlihy (he); Alastair McMillan, Richard Rainey, CI Eiriksson (me); Joel Merrill (cc/se); Tim Peeling (ase); Niall Slevin, Brandon Schuette (stage e); Mike LaCroix, Pascal Harlaut, Hannes Dander, Ann Butt (tech)	C: DIGICO SD7; MC: (3) DIGICO SD7; HS: Clair Cohesion CO-12, CO-8; MS: Clair Cohesion CP-118, IEM: Sennheiser 2000 Series, HA: ruppen StakRak; HARDWIRED MICS: Shure SM48, SM57, SM58, SM81, SM98, Beta58, Beta87, Beta91, Beta52, Beta52a, Beta58, FKG C 451 EB, A51, C414 B; Sennheiser MD-421, MKH-416, MKH 50; Audio-Technica AT4050, DPA d:vote 4099, d:fine 4088; Countr I; Radial JD7, ProD8; WIRELESS MICS: Shure Axient; FOH EQUIPMENT: Lexicon 480L, PCM70; Summit DCL-200; Manley VOXbox, AT-737SP; Eventide H3500; Klark Teknik DN6000; Yamaha SPX1000, MONITOR EQUIPMENT: Lexicon PCM80; AMS RMX16; Yamaha PX1000, SPX990; Amek 9098; Antelope Isochrone Trinity	
2 LADY GAGA   EIGHTH DAY SOUND	Paul Ramsey (he); Simon Higgs (me); Wayne Hall (cc/se); Chris Fischer (m tech); Clinton Reynolds (rf tech); Greg Horning, AndyDudash, Chris Smith (tech)	HC: DIGICO SD7; MC: DIGICO SD7; HS: d&b audiotechnik J8, J12, J Sub, B22, V8, V12, MS: d&b audiotechnik M4, B6; IEM: Shure; HA: d&b audiotechnik; MA: d&b audiotechnik; HARDWIRED MICS: Shure; Sennheiser, Radial JCR Reamp, SW8, WIRELESS MICS: Sennheiser, Shure; FOH EQUIPMENT: Bricasti, TC Electronic System 6000; Tubetech; MONITOR EQUIPMENT: TC Electronic System 6000	
3 NEIL DIAMOND   SOUND IMAGE	Stanley Miller (he/sd); Bernie Becker (me/rec e); John Drane (snr se); Matt Grabe (sys/pa tech); Jonathan Melton (foh tech); Greg Lopez (cc/rf/m tech); Scott Lawhead (stage tech); Wayne Teaster (pa tech); Sam Cole (archivist); Peter Danilowicz, Dave Wright, Dave Rapp, Kit Charlton (backline)	HC: Yamaha CL5; MC: (2) Yamaha CL1; HS: JBL VTX-25-II, VerTec VT4886, VTX V20, VTX-S28; IEM: AKG SPR 4500; Aviom A320; HA: Crown I-Tech 12000HD; HARDWIRED MICS: AKG D12VT, D40, D5, C-414, 430, 518; A-Designs REDDI tube DI; WIRELESS MICS: AKG DHT 700; FOH EQUIPMENT: JBL LSR305; dbx DR-4800; Dolby Lake LP8D8; JBL HiQnet Performance Manager; Rational Acoustics Smaart 7; Riedel RockNet; Yamaha DME64N; MONITOR EQUIPMENT: Manley Slam!; Dangerous Bax EQ, dbx 160SL, Antelope Eclipse 384 clock; RECORDING EQUIPMENT: Avid Pre Tools   HDX	
4 JOHN MAYER   CLAIR GLOBAL	John Cooper (he); Bill Chrysler (me—Mayer); Rob Smuder (me—band); Jeff Hargrove (se); Jamie Nelson (mse); Nathan Sonnenberg, Dustin Chrysler, Vincenzo Aceto (techs)	HC: Avid Venue Profile; MC: Avid Venue Profile; DiGiCo SD7; HS: Clair Cohesion CO-12, CP-218; MS: Clair CM-22, Cohesion CP-118, IEM: Shure PSM 1000; HA: Lab.gruppen; MA: Lab.gruppen; WIRELESS MICS: Shure UR Series, OTHER: Radial JD7, SGI, J48, JDI, SW8, Hotshot DM1, Hotshot ABo	
5 BRUNO MARS   CLAIR GLOBAL	Chris Rabold (be); Ramon Morales (me); Chris Sullivan (cc/se); Scotty Megrath (ae); Paul Tobey (rf tech)	HC: DiGICo SD7 with SD Racks; MC: DiGICo SD7 with SD Racks; HS: Clair CO-12, CP-218; MS: Clair CO-8, CM-22, CP-118; IEM: Shure PSM 1000; HA: Lab.gruppen; MA: Lab.gruppen; HARDWIRED MICS: Shure SM 81, 91a, 52a, Beta 181, SM 58, 57; AKG C-414, 45; Sennheiser MKH 451EB, MD 421, MD 409; Beyer M 88 TG; Audio-Technica, Telefunken M80, M60, TK62 capsule; Radial J48, SW8, Spaceheater, EXCT-SA, X-Amp Reamp; Countryman DI; WIRELESS MICS: Sennheiser 9000 with 9235 handhelds; FOH EQUIPMENT: Waves Mercury Bundle, SSL Bundle, Abbey Road Bundle; Bricasti M7; Empirical Labs EL-8 Distressor; Midas XL42; Chandler TG1; TC Electronic 2290; MONITOR EQUIPMENT: Waves SSL 4000, API Bundles	
6 ED SHEERAN   MAJOR TOM	Chris Marsh (he/me/pm); Charlie Albon (s tech); David White (ae); Brian Thorene, Richard Wannacott (pa techs)	HC/MC: DiGiCo SD7; HS: Meyer Sound Leo, Milo, Leopard, Lina, UPA-1P, 1100-LFC, MS: Meyer Sound MJF-212a, 900-LFC, IEM: Sennheiser 2000; WIRELESS MICS: Sennheiser 9000 Series Digital mics/instrument packs; EQUIPMENT: Avalon 737, Bricasti M7; Waves Max BCL JoeCo BlackBox; Eventide Eclipse; API 2500, Meyer Sound Amie, Radial SW8	
7 BILLY JOEL   CLAIR GLOBAL	Brian Ruggles (he); Josh Weibel (me); Rich Schoenadel (cc/se); Jay Yochem (m tech); Tom Ford, Bryan Darling (tech)	HC: DiGiCo SD5; MC: DiGiCo SD10; HS: Clair Cohesion CO-12, i-3, P-2, R4, CP-218; MS: Clair CM-22, SRM, ML-18; IEM: Sennheiser 2050; HA: Clair StakRak (Lab gruppen), MA: Lab gruppen; HARDWIRED MICS: Shure; AKG; Sennheiser; Audio-Technica; Radial J48, JDI, SW8, Firefly; WIRELESS MICS: Shure UR Series; FOH EQUIPMENT: Waves	
8 MARC ANTHONY   VER TOUR SOUND	Jose Rivera (he); Eric "Pyle" Ramey (me); Jimmy Ibañez (se); Michael Mordente (cc); Colin Harty (m tech); Caleb Landmark (tech); Danny Badorine, James Butera, Alex Martinez (360 tech); Nick Bechard (VER pm)	HC: DIGICO SD7; MC: DIGICO SD10; HS: Meyer Sound LEO, LYON, LEOPARD, MINA, 1100-LFC, MS: Meyer Sound MJF-210, LEOPARD, IEM: Shure PSM 1000, P6HW, HARDWIRED MICS: Shure; Sennheiser, DPA; WIRELESS MICS: Shure Axient, KSM9 HS	
9 DIERKS BENTLEY   VER TOUR SOUND	James "Pugsley" McDermot (he/se/cc); Scott Tatter (me); Thomas McNabb (m tech); Cody Seaver (ase/pa tech)	HC: Avid Venue S6L–32D; MC: Avid Venue S6L–32D, HS: Meyer Sound Leo, Lyon, Leopard, 1100-LFC, UPA-1P, UPQ-1P, Galaxy Processing & Extreme Switching AVB, Drive System; IEM: Shure PSM 1000; JH Audio; WIRELESS MICS: Shure UHFR with Beta58 capsules; FOH EQUIPMENT: Neve 5059 Summing Mixer, Portico II Master Buss, Shelford Channel, Portico 5049, Bricasti M7s with M10 Remote; XTA D2, API 7600; Avid S6L Plug-In Bundle; McDSP AE600, ML8000; MONITOR EQUIPMENT: Avid Venue S6L Plug-In Bundle	
10 THE LUMINEERS   SOUND IMAGE	Josh Osmond (be); Brad Galvin (me); Cameron Whaley (cc); Dave Shatto (se); Marc Estrin, Matt Garrett (pa techs)	HC: Avid Venue S6L-32D; MC: DiGICO SD5; HS: Meyer Sound Lyon, Leo, Leopard, 1100-LFC; HARDWIRED MICS: Audix D6; Shure Beta 91A KSM141, 81/C, KSM8, SM58, KSM137, KSM313; Neumann KMS100, KM84i; Telefunken M80, M81-SH; Sennheiser e602, e904, e906; FOH EQUIPMENT: TC Electronic M5000; Empirical Labs Distressor, Summit DCL-200; Bricasti Design M7; Smart Research C2; Galileo Callisto 616; McDSP AE600, SPC2000; MONITOR EQUIPMENT: Neve 5045 Primary Source Enhancer; OTHER: Radial Fire by Tube DI SGI, Twin City ABY, ProRMP	

LEGEND: (he) house engineer. (ahe) ass't house engineer. (be) band's house engineer. (me) monitor engineer. (ame) ass't monitoring engineer. (bme) band's monitor engineer. (se) systems engineer. (ae) ass't engineer. (tech) technician. (cc) crew chief. HC: house console. MC: monitor console. HS: house speakers. PMS: personal monitor systems. MS: monitor speakers. HA: house amplifiers. MA: monitor amplifiers.

Top 10 grossing tours according to *Billboard*. Some tours did not report grosses for all shows; rankings may be affected as a result. Equipment and crew information are provided by the respective sound reinforcement companies.



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### IIIIviewfromtheTOP

### Forging Ahead

### CLAUDIO LASTRUCCI, CO-FOUNDER/TECHNICAL R & D DIRECTOR, POWERSOFT S.P.A.

Claudio Lastrucci began his journey into pro audio as a multiinstrumentalist, playing piano, drums and saxophone "a bit," he admits of the latter. But it was while attending the University of Electronic Engineering in Florence, Italy, that his appetite was whetted for his future. "I actually did a PhD. in power electronics," he offers.

"Before we set up Powersoft, my brother Luca, my university pal Antonio Peruch and I were involved in engineering projects for several third-party designers of products," continues Lastrucci. "These included linear amplifiers, power supplies, power converters, signal processing, RF transmitters, automotive and navigation systems. These were primarily designed for hi-fi use, but also Formula One on-board power management as well as other industrial applications. We also did some acoustical design in those early years."

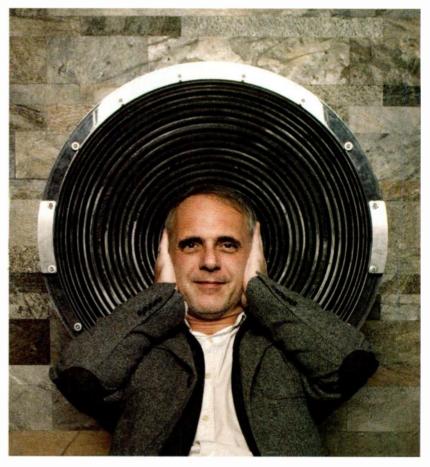
Later, in 1995, Powersoft was born. "We chose the name 'Powersoft' because it embodied 'power' of the hardware for audio amplification and 'software' for artificial intelligence applications," explains Lastrucci. "I've always considered power amplification, signal processing and transducer design in loudspeakers to be one single entity in the pursuit of performance. There's no division between one domain and another, because this would limit the evolution of the products to small changes that don't add up."

Powersoft S.p.A. is a private Italian company with two separate divisions: Powersoft Audio-which produces products such as power amplifiers, loudspeaker components and audio software for use primarily in installed and sound applications around the world-and Powersoft Mobility, which develops and provides products and services for vehicle fleet management. "Our company embodies the concept of Italian excellence," beams Lastrucci, "Our products are available in over 50 countries, and we have a widespread distribution and authorized service network. We also have a sister company in the United States, which contracts with several agents to further extend the company's brand presence. Our R&D department forms about 30 percent of the workforce at our Florence headquarters, with around 30 people focusing on hardware, software or mechanical design."

"Powersoft is focused on creativity, innovation and passion," continues Lastrucci. "We continue to heavily invest in our technical support network, which now includes 22 certified centers around the globe. As an independent company, Powersoft is proud to make autonomous decisions rather than having to answer to an outside board of directors or other entities. The passion of our distributors is the basis of our business, and our reputation is very important—we can lose money, but we cannot lose our reputation."

Arguably, Powersoft's reputation is based on its technological impact within the pro audio communityfor example, in the company's very early embrace and subsequent marketing of its lightweight Class D amplification, years before the rest of the industry followed suit. "When our company started, our technology was far ahead of the market requirements of the hi-fi domain," recalls Lastrucci. "Nowadays, switched mode amplifiers and Class D amplifiers are commonplace, but 20-plus years ago, a digital amplifier was 10 times more powerful for the same size than expected, so not even the professional market was ready. There was a growing awareness of the benefits of greater efficiency and better power to performance ratios...but it was a challenge for us to concentrate solely on audio because it was a new technology that we were trying to bring to

Pushing evolutions within the pro audio community is a defining quality of Powersoft, explains Lastrucci, and the company invests heavily on new ideas—thus new patents and innovations that are both recognized as the company's own and a bellwether of things to come. "Powersoft is much more an engineering company than a marketing and branding-led company, so we've always had ideas that are ahead of the industry as a whole," Lastrucci explains. "We've improved



Claudio Lastrucci, Co-Founder/Technical R & D Director, Powersoft S.p.A.

that balance in recent years by putting more effort into the marketing side to increase our exposure to the outside world—but we are essentially a technology-first company. We feel the responsibility to design audio products that match the market's needs, yet at the same time, we must be able to market to other professionals who may not be familiar with our products.

"Our patented technologies have become the driving force of our core business, and they have also impacted a diverse set of applications such as highly effective power amplification modules for active speakers," he continues. "Also, our merging amplification and transducer methods can be seen in our groundbreaking M-System/M Force and IPAL. I believe it was these switch mode technologies that opened the doors to active loudspeakers as we know them today. The previous huge and largely inefficient amplifiers of yore have since been replaced by solutions that are a lot smaller and considerably more powerful. It is impossible to underestimate the impact that this technology has had on the professional sound industry."

The systems integration market provides Powersoft with an actively upgrading clientele, offers Lastrucci, as they are eyeing power consumption concerns. "[The integration market] is growing faster than the live sector, and our most recent product launches have rounded out our installation line. [In the] meantime, we are seeing growth in the government verticals, along with increased

investment in cultural infrastructure. Speaking broadly, regulations are becoming stricter on power consumption and noise thresholds, particularly in brand-new venues. This is especially noticeable in Europe, and to a slightly lesser extent in the U.S. Broadly speaking, all long-term projects are more carefully examining the issues of power consumption as an investment consideration.

For Lastrucci, Powersoft's success story lies in convincing people that its new technologies can provide benefits worthy of investment over, perhaps, some conventional solutions. "As said before, many of the technologies we introduced were gradually adopted in professional audio applications worldwide due to extremely high efficiency," Lastrucci explains. "By combining our company's knowledge of switch-mode amplifiers, power supplies and the desire to fully exploit the real benefits of the native energy recycling capabilities, Powersoft will continue to make a difference in this industry by providing new products and conceptual hardware and software solutions to meet and exceed market demands."

Regarding what's next, Lastrucci has no intention of spoiling the fun. As for new technologies, "I can't spoil the surprise," he teases. Meanwhile, Lastrucci's Powersoft is cognizant of its competitors and competing products. "We respect our competition," he offers earnestly. "We focus consistently on innovation, education and training to stay competitive."

Powersoft powersoft.it/en

### [46] SoundPEOPLF



Jeff Hawley

Allen & Heath USA has appointed Jeff Hawley to its U.S. marketing team under the American Music & Sound (AM&S) umbrella. For more

than a decade, Hawley was part of the Yamaha marketing team, focusing primarily on digital marketing, corporate branding and B2C initiatives. In his role as marketing manager for Allen & Heath USA, Hawley will leverage his music industry and marketing background to further expand and enhance all facets of Allen & Heath marketing within the U.S.



**Diane Thomas** 

Williams Sound has named Diane Thomas as its new director of Marketing. Thomas brings 30-plus years of marketing experience in an array of markets, with

background in brand strategy, marketing initiatives, product development, analysis, customer engagement and communications. Prior to joining Williams Sound, Thomas served as director of Marketing for Audio Research Corporation, a manufacturer of high-performance vacuum tube electronics in Plymouth, MN. Prior to that, she held the positions of account director, eCommerce Marketing, and director, Email Marketing, for Taylor Corporation, a personalized marketing solutions provider located in Mankato, MN.



Jon Sager

Fulcrum Acoustic has announced the appointment of Jon Sager to the newly created position of Western U.S. regional sales manager. Sager will focus

on leading sales in the Rocky Mountain, West Coast and Pacific Northwest territories, supervising independent sales rep firms in the region. An industry veteran with extensive senior management experience in the professional audio industry, Sager joins Fulcrum after serving as JBL Professional's engineered sound product manager for over a decade. Previously, he held sales management positions with QSC Audio, EAW, Electro-Voice and Mark IV Audio.

Yamaha Professional Audio division has appointed Bob Habel to the



**Bob Habel** 

position of district manager for Commercial Audio sales. He will cover the U.S. Southeast market previously held by Brian Coviello, who recently retired. Before

joining Yamaha, Habel was national sales manager at CAD Audio, managing both internal staff and nine independent rep firms. Prior to that, he held a key sales role for Zenith Systems AV Solutions, growing sales of AV product into enterprise, higher education, security, telecommunications and other vertical markets across the Eastern U.S. Habel has also earned accreditation from ISO/ IEC for his skill set within the area of client needs analysis in program/ proposal development, system design and presentation and project manage-



Randy Riebe

Yamaha has also promoted Randy Riebe to the position of sales manager for CIS products. The Commercial Installation Solutions (CIS) product line has enjoyed signifi-

cant growth since the development of a dedicated sales team in 2016. Riebe brought a wealth of experience in both the commercial audio and CIS business segments when joining the company as district manager for Yamaha CIS products. He previously held senior positions with Polycom, Tandberg and AMX. In addition, he is a regular contributor/columnist for Systems Contractor News Magazine and holds several committee positions with AVIXA, formerly Info-Comm International.



Jérémie Weber

Digigram has appointed Jérémie Weber as the company's new CEO. Weber has served 15 years in the professional audio industry, and holds both a master's degree

in electrical engineering and a master of business administration degree. He started his career at Digigram as a development engineer, then subsequently co-launched AuviTran, a Digigram spinoff that developed products based on the company's EtherSound technology. In addition to his time with AuviTran, Weber has garnered a range of experience in areas ranging from live and commercial sound to broadcast.

### 60SECONDS



### DAVID "WEBBY" WEBSTER

CODA Audio

Q: What is your new position, and what does it

A: It's director of Global Marketing, which, of course, entails more than just marketing. CODA has a strong internal structure and we're at the stage where we need to develop a similarly effective external structure, so I'd

say the role involves working in partnership with Paul Ward to develop and implement a global strategy for CODA Audio.

Q: How has your background prepared you for your new role?

A: Although it's global, the audio industry is comparatively small and the interdependencies, especially where touring is concerned, are obvious. To be shifting speakers, cables and mixing consoles around the world, you need partners and you need solid mutual trust. My experience in the industry means that I already have multiple global relationships in these areas and as someone who was instrumental in delivering DiGiCo to the market, I'd say that I'm someone who will get a fair hearing. At CODA, we already know that the products are exceptional—getting that message out far and wide depends to some extent on people being prepared to listen to a trusted voice.

Q: What new marketing initiatives are we likely to see from the company? A: You're certain to see many brilliantly conceived initiatives, none of which I'll be talking about here, as that would alert our respected competitors to our plans. If I told you...as the saying goes...I'd have to kill you!

O: What are your short- and long-term goals?

A: The short term goal is to see as many people in the world using CODA systems as possible, and in the long-term, it's for everyone to realize that we should be number one—and that, ultimately, we will be.

Q: What is the greatest challenge that you face?

A: Inertia! I think that it's getting people to give sufficient time to really consider just what a genuine game-changer we have at their disposal. People are always interested in new and exciting innovations, but overcoming their natural rejuctance to stray too far from the accepted industry 'norms' and give real time and attention to something, even in a technology-based field like ours, can be challenging.



Chris Caiazzo

Audio industry veteran Chris Caiazzo has joined Orlandobased Professional Wireless Systems as technical sales manager. In his new position, Caiazzo will be

responsible for sales, technical support and project management. The announcement was made by Jim Van Winkle, general manager for Professional Wireless Systems. Caiazzo began his career working for Van Winkle at Masque Sound, parent company of Professional Wireless Systems, in 1994. He began his own audio company, Technically Sound, LLC, in 2006. Since then he has provided a variety of sound reinforcement services in the broadcast, corporate, theater and live sound markets.

Prism Sound has appointed William Rowe to the position of junior sales executive. Rowe recently graduated from De Montfort University, Leicester, with a BSc in Audio and Recording Technology. At Prism Sound, he



William Rowe

will be responsible for supporting the pro audio sales team and dealing with sales enquiries across the company's range of products, including its A/D D/A audio

converters and interfaces.



Morten Lave

Danish guitar pedal company Lunastone has named Morten Lave as its new head of digital development. As the former head of Digital Development at TC

Electronic, Lave now joins former TC notables Allan Strand and Jesper Dalum who previously joined the company. While at TC, Lave also established TC Applied Technologies in Canada, leading the company as its CEO from 2003 to 2015. Lave will become part of the ownership of Lunastone.

### 500 Series

(continued from page 1)

A glance at the 25 best-selling 500 series modules of last year at the Vintage King Audio website, to take just one retail example, indicates that reinterpretations of the classics are popular. The list includes API four modules (512c, 550A, 550B, 560); reboots of vintage Neve EQs, including the 1073, from the likes of Avedis Audio, BAE and Neve; SSL's Listen Mic Compressor, previously only available—other than on a console as a plug-in; Helios, TG (EMI/Abbey Road) and Trident console components; and new and classic outboard in a smaller form factor from Maag Audio, Pultec, Retro Instruments, Rupert Neve Designs, Shadow Hills

Such has been the growth of the 500 series module industry that in 2015, the NAMM TEC Awards added a new category for the format. Nominated this year for Signal Processing Hardware (500 Series Modules) are the BAE G10, Big Bear Audio MP1, elysia mpressor 500, Serpent Audio Splice MKII FET Compressor, Sphere Recording Consoles Fab 500 Series and WesAudio TITAN. The winner will be announced during the NAMM Show in January, 2018.

The 500 format has shown signs of pushing into new technological territory. For instance, Moog's Analog Delay, the company's second 500 series module, along with Polish manufacturer Bettermaker's vintage EQ emulations, pioneered a mash-up of plug-ins and 500 hardware. Both companies offer digital control of their modules, bringing convenient and familiar instant recall and reset of software to outboard analog hard-

The do-it-yourself ethos of early console module rack-makers has also come full circle with the SSL Beta. A hardware development kit in the 500 format, introduced in 2015, it includes a unique, self-illuminating Perspex faceplate and a kit of components-switches, pots and LEDsthat allows enthusiasts to breadboard their own circuit designs.

The Achilles heel of the 500 series for a while was its power provision, which was found to be insufficient to support some collections of modules. especially tube and transformerless

designs. The original 500 series spec also sets out audio input and output connections that some manufacturers have found limiting or insufficient to comprehensively access the capabilities of their modules.

Consequently, 500 series powered rack options have grown in parallel with the modules. Over the years, Radial Engineering has introduced perhaps the widest selection, including enclosures that house 10, eight (with or without an onboard mixer), six or three 500 series modules. Purple Audio was also an early entrant into the 500 rack field.

More recently, Swedish manufacturer Lindell Audio launched its 506 Power, which holds up to six 500 series modules. Midas, too, has introduced a six-module rack, the L6, with advanced audio routing and compressor bus linking options. BAE's 500 series racks are available in 11- and six-space rackmount options and a six-space lunchbox. The Empirical Labs EL500 houses two modules horizontally in a 1RU rackmount. Chameleon Labs' CPS503-PWR is a 1RU, half-rackspace unit accommodating a single 500 module.

At the 2017 NAMM Show, Rupert Neve Designs' 10-space R10 joined the R6 six-space rack in the product line. According to the company, the R10 offers more than 150 percent of the required current, supporting a full complement of powerhungry modules.

Also at NAMM 2017, Trident unveiled its Deca-Dent 10-space rackmount chassis. The unit offers XLR. quarter-inch and D-Sub connections as well as stereo linking features.

In a sign that the 500 series has truly matured, various FOH and monitor engineers have deemed the format roadworthy. Jim Ebdon, working FOH on a Maroon 5 tour, took along a Radial Workhorse that included an electrodyne 501 for guitarist Jesse Carmichael's channel. Dan Housel, monitor engineer for Lionel Richie. used a Radial PowerPre along with a Q4 four-band EQ and Komit compressor/limiter for his principle's vocal chain. Coldplay's longtime FOH mixer Dan Green packs a pair of Radial Workhorses loaded Neve 1073s, Helios Type 69-500 EQs and Shadow Hills Mono GAMA mic preamps. As a result, 500 series modules may become as firmly entrenched in the live world as in the studio realm, further ensuring the continued relevance of a format nearing its 40th anniversary.

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### **Rack-Mount**

(continued from page 1)

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"I'm one of those people that believes there's a place and use for many different kinds of equipment," offers Liz May, live sound mixer, producer/engineer and production manager of Reynolds Auditorium in Winston-Salem NC-and an avid user

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of many different types of traditional mixing consoles as well as new rackmount mix processors controlled by consumer and/or proprietary touch devices. "I like 'tablet mixing' a lot, but there are many instances where I prefer a desk, too.'

May has gleaned plenty of experience with touch or tablet-centric mix systems from manufacturers including Allen & Heath, Behringer, Mackie, PreSonus and Yamaha. While she is an Allen & Heath GLD-80 digital mixing system owner/user, she likewise enjoys working with Mackie's DL32R, PreSonus's StudioLive AI and Yamaha's TF-Rack, too, all controllable via tablet.

"For me, Mackie's DL32R, PreSonus' AI rack and Yamaha's TF-Rack are great—super compact and highly functional," she notes. "Among other perks, the time that you can save in setup is so valuable."

May is in the midst of a full TF-Rack review for PSN, yet she has already come to a few conclusions, finding it "more than a bit different" from working on a standard TF Series console, she explains. "You have a different workflow, but I would prefer to mix using the TF-Rack as opposed to, say, an LS9. I find that I can get around a lot faster using an iPad with the TF-Rack-with the exception of the EOs-than I can on the desk."

"Specifically, EQ is tougher to do on a tablet," May offers. "Every [manufacturer] has a slightly different way of handling it, so I still find that certain types of detailed work are a challenge to do on a tablet. That said,

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with adjusting gain, turning compressors on and off, using sends and effects, routing to monitors and so on, I feel that I can do those things just as fast on a tablet as I can on a desk. just because you're dealing with layers on these digital consoles as it is."

Many mixing tasks are just simpler and easier when using a tabletcontrolled digital mixer. Along with sheer measurement, size and weightbased benefits, operational and strategic conveniences abound. As May often mixes FOH as well as monitors at houses-of-worship, using a tabletcontrolled rack-mount mixing system gives her the necessary freedom such gigs often require. "Sometimes they may not know what they need in their monitors," explains May of some HOW-based performers. "I can just run up there and mix the monitors for them, or take the iPad up there when there's a problem with someone's in-ears. That's instead of having to run back and forth continuously. Being able to cut the 'umbilical cord' to the desk is a great benefit to having a tablet-controlled mixer. That, and I can go sit in the house after a show gets going."

Augmenting the collection of products mentioned above, other touchscreen mixing contenders are increasingly jumping into the game, including Allen & Heath, Crest Audio and OSC.

Building on the power of its Qu Series of compact digital mixers, Allen & Heath now offers its Qu-Pac Ultra Compact Digital Mixer, a Ou Series mixer packed into a rackmount digital mixing and effects unit featuring 16 mic/line channels with recallable preamps, the iLive FX engine and more, all controlled via a built-in touchscreen or the Qu-Pad app for iPad.

Meanwhile, QSC has effectively updated its entire TouchMix Series with newly unveiled Version 3.0 software for TouchMix-8 and Touch-Mix-16 and Version 1.2 for Touch-Mix-30 Pro. The new firmware is available as a free download for current users and is factory-installed in new production units. Version 3.0 for TouchMix-8 and TouchMix-16 provides 20 enhancements, many of which were features previously available exclusively on the TouchMix-30

Finally, yet currently impending shipment, Crest Audio has announced its Tactus Digital Mixing System. Crest partnered with Waves Audio to create Tactus, a modular touch-screen mixer, processor and controller incorporating Waves' eMotion LV1 software. Tactus is centered on a streamlined yet customizable touchscreen-controlled GUI that displays all audio routing, processing and mixing tools at hand. Designed to work with the Waves Audio's eMotion Mixer for SoundGrid, Tactus notably allows the use of Waves plugins for live events, all running via Windows or Mac OS with one, two or three incorporated multi-touch

With so many options available and doubtlessly more to come-rackmount and tablet mixing choices will continue to make inroads into the modern live-sound setup.

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### [50] MUSICetc.

## E Song Servant

#### BY JAQUES SONYIEUX

At age 76, David Crosby's work has spanned multiple generations-notably as a founding member of quintessential rock acts The Byrds, Crosby, Stills & Nash and Crosby, Stills, Nash & Young—whose music has permeated the very fabric of American culture. Recently, Crosby's creativity has experienced something of a resurgence, manifested in a 'trifecta' of diverse solo albums which he's issued over the last four years. The latest, Sky Trails, is the result of a fruitful writing partnership with his son, producer/multi-instrumentalist James Raymond, and many other writing collaborators. The two-time Rock and Roll Hall of Fame inductee spoke with Pro Sound News about 'serving the song' and the power that music can wield in challenging times.

#### ON FINDING THE DRIVE:

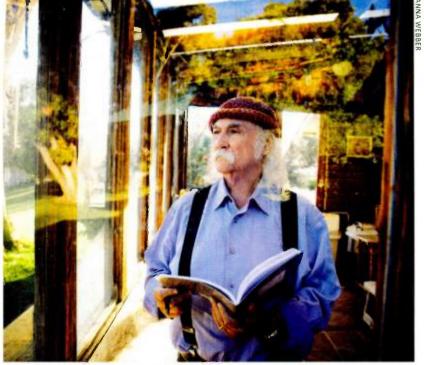
In the past, I've written two or three songs a year, just casually taking songs as they came. Some of these songs I have liked, but I just haven't really pushed at it as hard as I could have. I think there are two things involved that have come out in these last three solo records I've done. One is I quit CSN. It had gotten to the point where it was 'turn on the smoke machine and play your hits' and it wasn't good enough. No slight on those guys, but we didn't like each other and were not happy together. So I had built up a head of steam that had nowhere to go and that was no longer an outlet for me. The other

thing is that I've been writing with my son James continuously for about 20 years now. He is one of the best things that has happened to my songwriting.

#### ON SERVING THE SONG:

I had no overriding unifying theme for this record. Our job is to serve the song, right? So we get a song, we listen to it, and we think 'How do we communicate this song the best?' We don't really try to fit it into an overall schedule of stuff and say 'we're going to make this record all pink'. We deal with each song and use whatever tools we think are appropriate to communicate each song's story and magic.





David Crosby's latest solo release is Sky Trails.

#### ON A WRITER'S PALETTE:

Because I'm willing to write with other people, it has given my songs more dimension. It is as if you were a painter and you had a palette with seven colors on it. When you write with somebody else, suddenly you've got 14 colors, and most of the time it comes out to be a better painting. This is because the other person always thinks of something you didn't. I still write by myself all the time, but am open to writing with other people because the result has been so good. My son writes on keyboard and I write on guitar in tuning. The difference in having the two of us widens the possibilities a great deal.

#### ON KEEPING INSPIRATION CLOSE BY:

I play all the time and I keep guitars all over the wall. In my bedroom, for instance, I keep five or six guitars, all in different tunings, so I can just go from one to the next. There are a couple of McAlisters that I use more than anything else. There is a dreadnaught and a triple O size that I play more than anything else. I still do play the D 45s that I have from 1969 because they are stunners. When I am recording, I always trust my engineers on how to mic them up.

#### ON PAYING HOMAGE:

We took a swing at Joni Mitchell's 'Amelia' because I have loved that song for so long. Joni is probably the greatest living songwriter. I've loved many of her songs, but I've always loved this one in particular and I think it is an incredible piece of work. I've always been scared to try it, because she sang the spots off it when she sang it. So I tried it, and that was a special moment. I asked James to play it on piano and as soon as he did, I knew I had to do it. No two verses are the same and he really expresses himself in his playing.

#### ON THE LEGACY OF THE PROTEST SONG:

When [CSN&Y] made 'Ohio', the record business actually sold records. And the guy who ran our record company, Ahmet Ertegun, actually liked music. It was in Los Angeles; I saw Neil [Young] look at the famous picture of the girl at the Kent State massacre with the 'Why?' expression on her face, and watched him write the song right then and there. Then I called Nash and I said, 'Get a studio right now. Right now!' He did, and we cut the record just like that. On the other side of the record, we put 'Find The Cost of Freedom', appropriately enough. We gave it to Ahmet Ertegun the same night—as we finished cutting it, we handed him the master. He took it to New York and had the record out in less than 10 days. It was his pulling the strings and telling people 'You do it or else' that made it happen that fast. It was so topical, and it came out so close after the Kent State massacre that it was a very strong song. Very often, you know the truth of a song itself, but you don't know what its effect is going to be. The effect of this song was great-it did what we wanted it to do and I am happy about it.

Music has the same power now as it did back then. It is a great tool for transmitting ideas; whether or not someone uses it or not, we'll have to see. I think what we need is a sort of 'fight song' for our times right nowan 'Ohio.' I am trying to write it, and I know a number of other people are, too, so I think it will probably hap-

Jacques Sonyieux is a devout explorer of recording studios and the artists that occasionally inhabit them. Please send any tips or feedback to Jacques at: jacquessonyieux@gmail.com.

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### Tips a techniques



#### 1 You Don't Need to Slam an Input at 24-Bit

In the analog days, it was often desirable to drive preamps as hard as possible, for tonal purposes. The same held true in the 16-bit world, but for issues relating to the noise floor. However, neither of these issues apply to 24-bit, so give yourself valuable headroom—you'll need it later on.

#### Check for Mono Even though it's 2017

In the old days, one often checked mixes for mono compatibility due to technological constraints of the times. You should still do this today, since your average listener won't hear a mix in perfect stereo (think sitting in the driver's seat, or sitting on the left side of a couch).

#### Try Out a Manual De-Esser on Vocal Tracks

What is a manual de-esser? The answer is, you. Go through the track and manually gain down each sibilance, either by clip or pre-fader automation. Pretty quickly, you'll learn to recognize the football-like shape of a peaky sibilance, which will expedite the process. Sure, it takes time, but it's one of the most natural ways to tame those ear-splitting "sssssss" sounds.

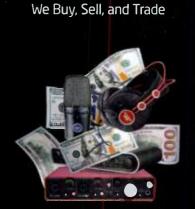
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