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# GENELEC®

# Legendary Beatles Recording Engineer Geoff Emerick, Dead at 72

BY CLIVE YOUNG

LOS ANGELES, CA—Legendary recording engineer Geoff Emerick died in Los Angeles on October 2 of an apparent heart attack. The four-time Grammy winner recorded The Beatles from 1966 through their dissolution in 1970, contributing to albums such as *Revolver*, *Sgt. Pepper's Lonely Hearts Club Band*, *The Beatles* (aka *The White Album*) and *Abbey Road*, and additionally worked with dozens of well-known acts in the decades that followed. He was 72.



Geoff Emerick

Born December 5, 1945, Emerick was raised in the North London suburb of Crouch End and became an assistant engineer at EMI at age 15, where he assisted on recordings with Judy Garland, The Hollies, Manfred Mann and the first Beatles session with Ringo Starr on September 4, 1962, which resulted in the single "Love Me Do."

Emerick eventually took over the role of first engineer for The Beatles in 1966; his first track in that position was the pioneering psychedelic song "Tomorrow Never Knows." When John Lennon requested that his voice be effected, Emerick suggested warping it by putting it through a rotating Leslie speaker, and he also applied close miking on the drums—against EMI in-house regulations at the time—to alter their acoustic properties. The resulting sounds cemented him in the role.

During his time with The Beatles (he briefly left during the *White Album* but returned for the next album), Emerick won Grammy Awards for his work on *Sgt. Pepper's Lonely Hearts Club Band* and *Abbey Road*. Throughout the 1970 to '90s he worked with acts as varied as Split Enz, Jeff Beck, Elvis Costello (who he also produced), Cheap Trick, Big Country, Ultravox, Supertramp, Art Garfunkel, Chris Bell (of Big Star), Kate Bush, Badfinger and Trevor Rabin.

Still, his connection to The Beatles followed him through the years, as he recorded four Paul McCartney solo albums, recording in studios around the world and, for 1978's *London Town*, on a boat in the Virgin Islands. His efforts ended up netting another Grammy for his work on 1973's

*Band on the Run*. Emerick took home a fourth trophy—a special merit/technical Grammy—in 2004. Throughout the years, he was an active and vocal member of the Audio Engineering Society.

Emerick had a history of heart problems, which led to his having a pacemaker put in, according to his manager, William Zabaleta. Nonetheless, his passing was unexpected. He was set to host an event, Geoff Emerick's London Revival, in Tucson, AZ, that weekend, and had a three-day recording masterclass scheduled for mid-October at Power Station New England in Waterford, CT.

Emerick died on October 2 while on the phone with Zabaleta, who said in a public statement on YouTube, "I was making my way back from Arizona to Los Angeles to go pick up Geoff so we [could] transport some gold records and platinum plaques to our show in Tucson. While I was on the phone with Geoff, he had complications, dropped the phone. At that point I called 911, but by the time they got there, it was too late."

In the wake of his passing, Abbey Road tweeted, "We are hugely honored to be part of Emerick's story and we are committed to ensuring his legacy lives on at the studios." Yoko Ono noted, "He was the best engineer. Not only was he the best engineer, he was very, very kind. Love, Yoko."

McCartney posted online, "Woke up this morning to the sad news of Geoff Emerick's passing. He was a great engineer and friend, and even though The Beatles had many great engineers over the years, Geoff was the ONE. He was smart, fun-loving and the genius behind many of

the great sounds on our records. I worked with him after The Beatles and it was always fun, and the sounds he managed to conjure up were always special. Having seen him earlier this year when he came round to our studio, I'm shocked and saddened to have lost such a special friend. God bless you. Geoffrey—Love, Paul. X"

Artists from later in his career also shared their thoughts online. Neil Finn (Crowded House, Fleetwood Mac) recalled, "He produced the first album I made with Split Enz. Amazing sounds and sensitivity, a master."

Midge Ure (Ultravox, Band Aid/Live Aid) offered, "Geoff was Sir George Martin's 'right-hand man' and worked on Ultravox's *Quartet* with us. A lovely, quiet, unassuming man who helped change the way music was produced. RIP."

Nick Heyward, who recorded his first solo album with Emerick after leaving Haircut 100, stated, "The greatest record producer/sound engineer I've ever known has passed. RIP Geoff Emerick. Thank you for achieving the dream. My little songs got to sound vast, magnificent and magical thanks to you. An amazing and humble wizard."

## briefs

### Jones Named to TEC Hall

ANAHEIM, CA—Leslie Ann Jones, the groundbreaking engineer, producer and director of music and scoring for Skywalker Sound, will be inducted into the NAMM TEC Hall of Fame at the 34th annual NAMM TEC Awards (www.tecawards.org) on January 26, 2019 in Anaheim, CA. "It is quite humbling to know I will be joining a list of past inductees whom I have admired, respected and looked up to my whole career," said the four-time Grammy Award winner.

### Full Compass Goes with Synchrony

MADISON, WI—Full Compass (www.fullcompass.com) has partnered with Synchrony, a consumer financial services company, for its Pro Buyer Card, a new financing option for products and equipment. Qualified customers will be able to purchase Full Compass gear in the store and online, and repay the amount over time. A dedicated account team from Synchrony will service Full Compass customers.

### Sennheiser, Magic Leap Team Up

WEDEMARK, GERMANY—Adding to its presence in the VR/AR field, Sennheiser (www.sennheiser.com) has partnered with spatial computing leader Magic Leap and joined the "Works with Magic Leap" certification program, which denotes specialized tools for Magic Leap developers to use in creating their work.

## Producers, Engineers to Benefit from Music Modernization Act

BY STEVE HARVEY

WASHINGTON, DC—Codifying the right of music producers and engineers to collect digital royalties through a consistent, permanent process, among other significant provisions, the Music Modernization Act (MMA) was signed into law on October 11 following its unanimous passage through the House and the Senate.

The 185-page bill is the most sweeping reform of music licensing in

(continued on page 16)



The Music Modernization Act was signed into law on October 11.



## SOUNDRECORDING

**Master Class Looks Back, Ahead . . . . 18**  
Top engineer Chris Lord-Alge led the second annual Csaba Petocz Master Class at his private Mix LA studio facility in September, sharing mixing secrets and memories of his friend Petocz to the dozen students in attendance.

**Studio Showcase: Oktaven Audio . . . . 20**  
Oktaven Audio co-owner Ryan Streber says his studio has grown over the last decade while recording almost solely “art music, not stuff with any commercial appeal. It’s a little disturbing and perverse, but somehow it has worked out.”

## SOUNDPOST/BROADCAST

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Rising post-production company Sugar Studios recently expanded its mixing facilities in Los Angeles’ Wiltern Tower, building a Dolby Atmos room and more, reinventing itself as a streamlined, all-in-one facility.

**PMA2018 Explores Getting Paid, AI . . . 25**  
This year’s Production Music Conference in late September was full of surprises and insights as panelists tackled everything from how to get paid to using music “written” by artificial intelligence.

## SOUNDTECHNOLOGY

**Sound Innovations: Holoplot Wave Field Synthesis Technology . . . . . 27**  
Ole Schnieders of Germany-based Holoplot discusses the search for the true reproduction of sound and how that led company founder Helmut Oellers to look for a live audio solution that would achieve correct localization and reproduction of the original signal for everyone in the audience.

**The METAlliance Report: JBL 7 Series Studio Monitors . . . . . 28**  
Producer/engineer—and METAlliance member—Chuck Ainlay weighs in on how JBL LSR-708p studio monitors became the go-to speaker for his home studio.

**Pro Audio Review in PSN . . . . 30, 31, 32**  
Ehrlund EHR-M Condenser Microphone; Auralex Mudguard V2 Microphone Isolation Shield; Beyerdynamic FOX USB Microphone; Sonarworks Reference 4 Monitoring Correction Software

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## SOUNDREINFORCEMENT

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**Live Sound Showcase: Phil Collins . . . 38**  
Phil Collins crossed North America in October, playing sold-out arenas on the latest leg of his two-year Not Dead Yet world tour. We caught up with his equally international audio crew to get the scoop.

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## SPECIAL REPORT

**AES Wrap-Up . . . . . 1, 8, 12, 14, 15**  
Audio pros from around the globe descended on New York City’s Jacob K. Javits Convention Center in October to connect with their industry and fellow sound professionals at AES. We highlight the events of the biggest pro audio show in the U.S., from who was there to what cool gear was released.

## COLUMNS

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Craig Anderton isn’t daydreaming when he asks if recording studios can live in the cloud.

**viewfromthetop. . . . . 46**  
After nearly 20 years of being owned by financial institutions, Eastern Acoustic Works was sold in September to pro audio manufacturer RCF Group. EAW’s president, TJ Smith, recounts the deal, lays out what it means for the company and reveals what’s next.

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Jacques Sonyieux talks with singer/songwriter Adam Hood about keeping it raw, being true to working-class roots and the pleasure of stepping away from overproduction.



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CLIVE YOUNG  
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# Highlighting Pro Audio's Entrepreneurial Vibe

BY CLIVE YOUNG

Pro audio has always been an industry of entrepreneurs. I was reminded of this fact while walking around the AES Convention this month—all the big brands were at the show, but there were also plenty of boutique audio manufacturers on hand, presenting their latest creations, be they physical recreations of classic gear or all-new plug-ins that will alter your audio in ways previously unfathomed by humans.

The entrepreneurial spirit can be found throughout this issue, too. When you have a personal stake in seeing something succeed, regardless of whether it's a product or a company, you try harder and you achieve more. In our View from the Top column, TJ Smith, president of EAW, relates how he and the company's employees are feeling that way these days as the loudspeaker manufacturer gets a new chance to forge its own path. On the cover, our former publisher, Paul Gallo, recalls proofreading the first issue of *Pro Sound News* 40 years ago with his family around his dining room table.

It's not that hard to catch the entrepreneurial spirit, but it can be tough to maintain it. That's something that came to mind recently when I watched an episode of the

reality web series *Small Business Revolution*, where the hosts helped a fledgling studio, Lighthouse Sounds, renovate not only its premises but its business plan and brand image.

Reality TV shows have dipped their toes into the recording world before. Animal Planet's *Treehouse Masters* built airborne mini-studios for Bear Creek Studio in Woodinville, WA, and Brian Kelley of Florida Georgia Line in 2014, and FYI's *Tiny House Nation* built a backyard recording room for Lil' Jon last year, but the *Small Business Revolution* episode I saw features a comparatively more serious business makeover for Lighthouse Sounds.

Each season, the series, sponsored by small business services titan Deluxe Corporation, provides a \$500,000 revitalization to a small town and several of its local businesses. The latest season centers on Alton, IL, where Lighthouse Sounds is based, so the episode (viewable at <https://bit.ly/2JdmwBB>) finds Deluxe's Amanda Brinkman and co-host Ty Pennington (*Trading Spaces*; *Extreme Home Makeover*) helping the partners behind Lighthouse figure out how best to keep the lights on.

Naturally, the revitalization process plays to Deluxe's offerings (the owners get surprised with a new logo, website and merch) and Pennington

helps frame up a new recording space in a quick montage, but there's more going on than the usual reality TV tropes.

Over the course of the half-hour, we watch the studio's young partners, Jay (Hart) Stanley and Alex St. Cin, struggle to keep their tempers as they work with a lawyer to define who owns the business from a legal standpoint. (Stanley owns the building and pays the bills, while St. Cin is the engineer and owns the equipment.) When St. Cin has to leave town for two weeks to get trained for a new side job (repairing gear for Vintage King), they grudgingly accept that they need more than one engineer on staff. And at one point, they get a not-so-gentle review from visiting studio pros Juanita Copeland, president/COO of Nashville's Sound Emporium, and her head engineer, Mike Stankiewicz, who inform the pair they're being pennywise and pound foolish by not adding a crucial element to their construction plans. All in all, the lessons imparted by the hosts and studio pros are broad enough to be applied to any new business, but they may well sound familiar to the small studio owners out there.

Does it all work out for the young partners? In the short-term length of the show, well, of course; this is reality TV after all. But in the long-term, when the cameras have left Alton, IL? That's where the real "reality" part will come in—and where the entrepreneurial spirit will have to take over.

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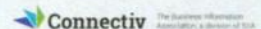
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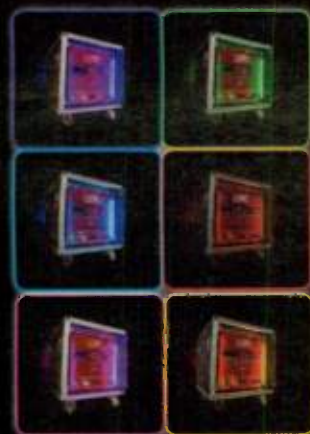



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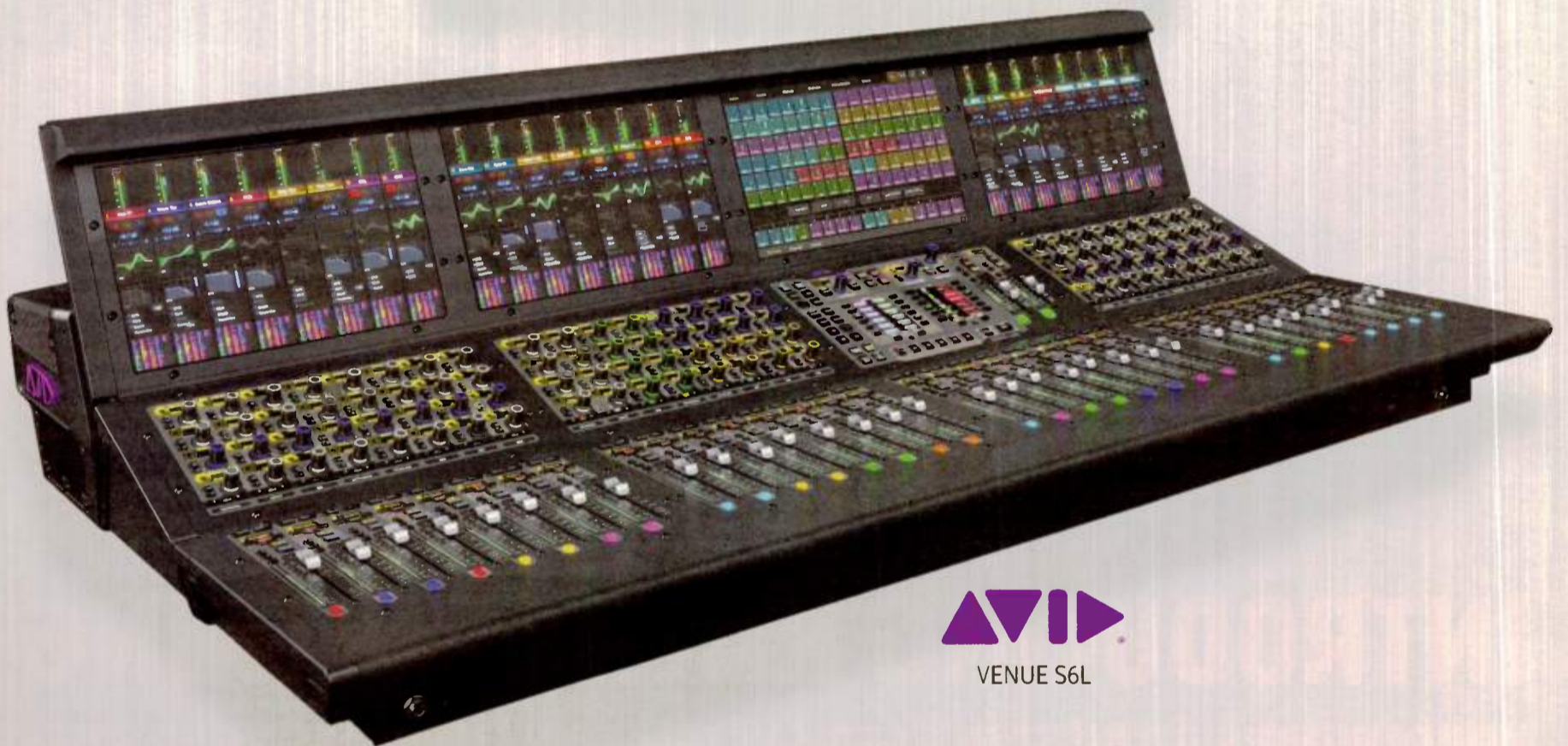
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## DCC Acquires Jam Industries

NEW YORK, NY—DCC has acquired Jam Industries, the massive North American value-added distributor of musical instruments, professional audio and consumer electronics products, in a deal characterized by both as a new partnership.

For DCC, an international sales, marketing and support services group, the move comes just a month after its acquisition of Stampede in July 2018, positioning the company with a \$600 million-plus revenue business in North America focused on pro audio and visual technologies, musical instruments and consumer electronics.



Headquartered in Dublin, Ireland, DCC has four divisions—LPG, Retail & Oil, Healthcare and Technology—and operates in 17 countries, employing approximately 10,000 people. Jam Industries falls under the DCC Technology division.

Jam Industries Ltd., based in Montreal, Canada, is a North American distributor and supply chain service provider in musical

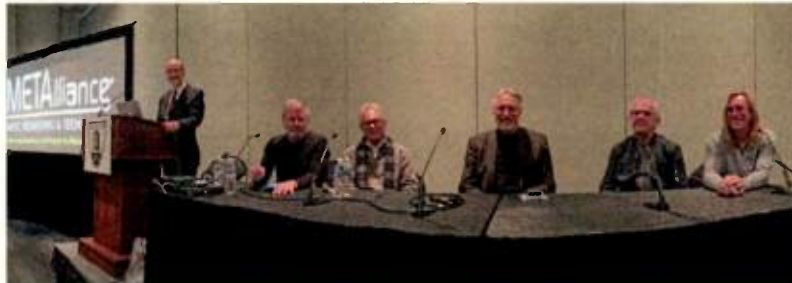
instruments, pro audio/video and consumer audio. With sales offices across the United States and Canada, and warehouses/logistics services in Memphis and Montreal, Jam Industries is one of the largest service providers in this space, employing more than 600 people. Jam operates in the U.S. as American Music & Sound, KMC, U.S. Music, AVS, Ashly and Davitt & Hanser.

JAM Industries  
www.jamindustries.com

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## METAlliance Sets 2019 'In Session'

NEW YORK, NY—At AES, the METAlliance announced its next In Session with the Guys immersive recording workshop for February 2-3, 2019 at Capitol Studios in Hollywood. The limited attendance event will allow attendees to observe and learn from the team in a supportive environment throughout four sessions across two days. Each session is designed to provide different experiences in the recording process and is led by the founding members. The METAlliance consists of top engineers Ed Cherney, Chuck Ainlay, Al



The packed METAlliance panel at AES.

Schmitt, George Massenburg, Elliot Scheiner and Frank Filipetti (see page 28). "It's another opportunity to share the art and craft we love with people from all walks of

life and levels of experience—it's truly a special event, even for us," said Massenburg.

METAlliance  
www.metalliance.com

## P&E Wing Sets New Steering Committee

SANTA MONICA, CA—The Recording Academy Producers & Engineers Wing has announced its 2018-19 Steering Committee, which will work to address issues confronting music production and promote meaningful solutions to help move the industry forward.

The P&E Wing continues to advocate for excellence and best practices in sound recording, audio technologies and education in the recording arts, along with proper crediting, recognition and rights for music creators overall.

The 2018-19 Steering Com-



The Recording Academy Producers & Engineers Wing 2018-19 Steering Committee: (L-R, back row) Ivan Barrias, Jeff Balding; (L-R, middle row) Manny Marroquin, John Poppo, Ann Mincieli, Maureen Droney, Michael Romanowski; (L-R, front row) Kesha Lee, Linda Perry, Emily Lodge, Piper Payne. Not pictured: Sylvia Massy.

mittee is co-chaired by Philadelphia-based Grammy-nominated producer/engineer Ivan Barrias and New York-based Grammy-winning producer/engineer Ann Mincieli, and includes the following music industry professionals from across the United States: Jeff Balding, Emily Lazar, Kesha Lee, Manny Marroquin, Sylvia Massy, Piper Payne, Linda

Perry and Michael Romanowski, in addition to ex-officio members John Poppo (Recording Academy chair of the Board of Trustees) and Neil Portnow (Recording Academy president/CEO). Mincieli, Barrias and Balding are also currently serving as Academy trustees.

The Recording Academy  
www.grammy.com

## Sound Engineer Dies After Fall on Tom Hanks Film

BY CLIVE YOUNG

MT. LEBANON, PA—James Emswiler, an Emmy-winning sound engineer, died October 11 after falling off a second-story balcony while on location for a Tom Hanks movie filming around Pittsburgh. Emswiler was 61.

The production had been shooting an interior apartment scene for the film *You Are My Friend*, a biopic of children's television legend Fred Rogers. During a break, Emswiler stepped out on to the balcony to smoke, where he may have had a heart attack. No one in the production saw the fall, but numerous crewmembers reported hearing a sound and discovered the sound mixer had fallen. According to reports, the production's nurse and crew rushed to assist him, and Emswiler was taken by ambulance to Mercy Hospital,



James Emswiler

where he died from injuries related to the fall.

Emswiler had worked in the film industry in various roles for 30 years, notably as a sound mixer on films such as *The Avengers*, *The Fault in Our Stars*, *Foxcatcher* and *Jack Reacher*, and in other behind-the-scenes roles on films such as *The Shawshank Redemption* and *Wonder Boys*. In 2015, Emswiler won a Primetime Emmy Award as part of the audio team that won Outstanding Sound Mixing for a Limited Series or a Movie for the HBO film *Bessie*; he was the film's production sound mixer.

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# Wallaszkovits Outlines Inclusive Vision of AES Future

BY STEVE HARVEY

NEW YORK, NY—“Even though there is a persistent gender gap, the impact of women in audio continues to grow,” wrote Marlene Mathew, Jennifer Grössman and Areti Andreopoulou in a paper presented at the 2016 AES Convention. Never have those words been truer, as Nadja Wallaszkovits assumes the role of AES president at a momentous time in the society’s 70-year history.

“I am thrilled by the huge success and involvement resulting from the new AES Diversity and Inclusion Committee on our Board of Governors,” says Wallaszkovits, who has served on the committee since its inception last year. “The last election results show a tremendous success in gender diversity. I will be working with my colleagues Leslie Gaston-Bird, D&I chair, Jessica Livingstone and Piper Payne—all three elected as governors for the coming two years—as well as with my distinguished successor Agnieszka Roginska, who is next year’s president-elect. This constellation of powerful women is exceptional, and I’m very proud to be part of it.”

The Diversity and Inclusion Committee’s stated goal is to promote a



Nadja Wallaszkovits

more demographically representative, diverse and inclusive AES membership, Wallaszkovits continues. “Conventions and conferences are one area where our attitude toward diversity and inclusion manifests, and we would like to ensure our pledge will be successfully implemented.”

Wallaszkovits, who is chief audio engineer at the Phonogrammarchiv of the Austrian Academy of Sciences in Vienna, has been active in the AES for a considerable time, most recently

co-chairing the program for the 2018 AES International Conference on Audio Archiving, Preservation and Restoration. She is vice-chair of the Austrian section and active in the Technical Committee on Archiving Restoration and Digital Libraries as well as the SC-07 Subcommittee on Metadata for Audio.

“AES events are the flagship of our community,” she comments. “Having been involved many times in the organization of AES conventions and conferences, I know how important successful events are to serve our membership and to expand the successful network of professionals, students and the industry.”

Student membership is crucial to the growth and continued expansion of the AES. “The students are our future—and also the big potential for the industry,” says Wallaszkovits. “We support them in many ways—for example, with the student delegate assembly, which has global participation. We fund travel for regional officers of that committee to our international conventions. Student and career development have become important topics of our conventions. A major opportunity to present student works is the student recording com-

petition/recording critiques.”

The AES currently has over 12,000 members affiliated with more than 90 AES professional sections. There are more than 120 AES student sections worldwide. “It is very encouraging to see the strong membership growth in Latin America and Asia,” says Wallaszkovits.

The AES in its conceptual design is outstanding, she says, and its combination of world-leading scientific contributions, educational events and industry connections can be further developed to expand the society’s membership. “Recent events, such as AES@NAMM, have shown great success,” she notes.

“It is more than satisfying to see that this year’s AES in New York has a large number of new exhibitors or exhibitors returning after a number of years away,” she adds. “I think this is a great sign that our constant work on industry relations is a fruitful one.”

Yet there is room for improvement, Wallaszkovits admits. “We should also focus on further development of the European convention and the advancement of industry engagement in the exhibition.”

AES  
www.aes.org

# Scheirman Reflects on Growth and Change at AES

BY STEVE HARVEY

NEW YORK, NY—AES president David Scheirman has presided over a record-making year, serving a 14-month term—alongside his leadership colleagues—and witnessing the election of the first Executive Committee in the society’s 70-year history to comprise three women and two men.

The unusually long executive term was due to a membership-approved bylaw change that moved the leadership transition from the annual U.S. AES Convention to the end of the calendar year. “Aligning AES elected officer terms with our fiscal year, which is January 1 to December 31, is best practice to create synergy between the organization’s corporate goals and priorities with its annual budget,” which simplifies corporate governance, says Scheirman.

The historic gender balance of the Executive Committee’s five voting members comes at the end of the first year of a new group in the society’s leadership. “One of our most active groups has been Diversity and Inclusion, a subset of our Member-

ship Committee. Ensuring a broader global community is more aware of the benefits and rewards of AES membership is a key goal for D&I,” says Scheirman, who is Bose Professional’s global director, concert and rental business.

Scheirman also notes that the society, in its 70th anniversary year, is seeking a new executive director with the help of Stanton Chase, a global top-ten Forbes-listed executive recruiting firm.

The AES is experiencing significant membership growth in several areas outside its traditional core membership base in the United States and Europe, he reports. Latin American membership has increased about 2.4 times over 2017 numbers, and the burgeoning membership in China, which doubled from 2015 to 2017, is up nearly another 50 percent, year-on-year, he says.

In China, says Scheirman, AES membership drive booths appeared in support of CETA’s AES@Palm Expo 2018, the China Entertainment Technology Association’s Pro Audio and Light & Music tradeshow in Beijing and the 2018 Loudspeaker Sourcing

Show in Guangzhou. There was also an AES membership-drive team at the 2018 Summer NAMM in Nashville, TN.

Another membership outreach initiative has been onsite linkage with compatible organizations and activities attracting audio professionals, he continues. “We have once again co-located our AES Convention with the NAB Show New York.” Following a successful pilot project earlier this year, he adds, the AES@NAMM: Pro Sound Symposium, Live and Studio education and training event will return in 2019 (January 24-27 in Anaheim, CA).

Worldwide, the AES added several new sections during 2018, the majority of which are student sections, Scheirman reports. “Our Education Committee has been doing a tremendous job of linking these new student members with high-profile opportunities,” he says. For example, the society’s student recording competitions are increasingly popular, and were included at both European- and U.S.-based AES conventions, and at regional conferences such as AES Mexico and the AES Latin American



David Scheirman

Conference in Uruguay.

“I was privileged to serve as a judge for the Mexican competition,” says Scheirman, “and I can vouch that the quality of participating contestants, and the educational programs that are producing them, will soon make many of these young audio enthusiasts a force to be reckoned with in the worldwide professional audio industry.”

AES  
www.aes.org

# AES: Acting with Intention

BY KATIE MAKAL

NEW YORK, NY—The AES Diversity and Inclusion Committee town hall that took place during the AES Convention built on the momentum of last year's inaugural edition, as committee co-chairs Leslie Gaston-Bird and Piper Payne detailed the AES' ongoing efforts to improve the diversity of its membership across genders and gender identities, races, physical abilities, ages and nationalities, as well as to welcome diverse musical genres and embrace emergent audio fields and research.

The strength of the Audio Engineering Society, a membership-based organization, comes from a diverse membership, according to Gaston-Bird. "This makes us stronger, by having all of these influences."

Payne pointed out that the Recording Academy recently announced an independent task force on diversity and inclusion. Led by Tina Tchen, that group is examining barriers and biases affecting women and other underrepresented voices in the music industry.

Terri Winston, executive director of the Women's Audio Mission and a panelist at this Diversity and Inclusion Committee town hall, commented on the fact that positive results from that push by the Recording Academy have come quickly. She hopes to see similar success at the AES, which is placing emphasis on ensuring diversity across the organization, on committees and the Board of Governors.

"I don't know if I like to think of it as change, per se. I like to think of it more as an evolution," said Agnieszka Roginska, AES president-elect and panel member. "That evolution until recently has been very, very slow, and that's why we have been seeing an unbalanced representation in conference and panels, and on the Board of Governors. But in the past few years—for many reasons, including what has been happening globally—that evolution has taken on a lot more force."

She noted that it was only last year that the first Diversity and Inclusion Committee town hall took place at AES, "but on the panel were Alex Case, who was the president at the time, and Bob Moses, who was the executive director at the time, sitting here and really showing that the [AES] is committed to diversity and inclusion, all of it, not just gender diversity but everywhere. I think that was a very powerful moment, to have the highest level of authority in the

society to state that commitment."

"The society is huge. We have sections all over the world," Roginska added. "We all need to work together because AES is a members-based society. ... I think if we all work together in driving this force, it'll happen faster and in a better way."



Panelists, from left: Terri Winston, founder and executive director, Women's Audio Mission; Piper Payne, incoming AES Governor and co-chair of the AES Diversity and Inclusion Committee; Ezequiel Morfi, producer and engineer at TITANIO Recording in Argentina; and Agnieszka Roginska, AES president-elect; inset: Leslie Gaston-Bird, AES vice president (Western Region) and chair of the AES Diversity and Inclusion Committee



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# Metallica Producer Paul Curcio, Dead at 74

BY STEVE HARVEY

ST. PETERSBURG, FL—Musician, producer and studio owner Paul Curcio, perhaps best known for recording Metallica's debut album *Kill 'Em All*, died of heart failure on September 10 in St. Petersburg, FL, at age 74. His death was confirmed by his daughter to *Billboard* on September 27.

Curcio, born in Rochester, NY, was a guitarist and co-founded the Mojo Men, a psychedelic folk rock four-piece, in Miami, FL, where he attended college. After relocating from Florida to San Francisco in 1964, the band enjoyed singles chart success with 1966's "Dance with Me," produced by Sylvester (Sly Stone) Stewart, and a Van Dyke Parks-produced cover of Buffalo Springfield's "Sit Down, I Think I Love You" in 1967.

In 1968 Curcio established Pacific Recording in San Mateo, south of San Francisco. The facility was largely put together by two members of the Grateful Dead's sound crew, Bob Matthews and Betty Cantor. In Blair Jackson's book *Grateful Dead Gear*, Matthews recalls that Pacific Recording at that time "had an old Altec board from McCune's, with giant rotary faders." They began recording the Dead's classic third album, *Aoxomoxoa*, in the fall of 1968.

The Grateful Dead famously racked up significant recording costs on the project after abandoning its initial 8-track sessions following the arrival of an Ampex MM-1000 16-track machine at Pacific Recording—the first in the Bay Area and



the second in the country. (The first MM-1000 went to Columbia Studios in Los Angeles.) The studio's chief engineer, Ron Wickersham, was also a design engineer at Ampex, located in nearby San Carlos.

Wickersham, who designed and built a multitrack recording console to manage the extra tracks, left after less than a year to join the Grateful Dead's sound team and co-founded the Alembic instrument company, where he still works, alongside his wife and company CEO Susan Wickersham, whom he met at Pacific Recording. The Dead had a

falling out with Curcio (who later sued the band) and finished the album at San Francisco's Pacific High Recording, which was acquired by Alembic in 1971.

Santana recorded the demo that got the band a deal with Columbia and its eponymous debut album, plus a track on follow-up album, *Abraxas*, at Pacific Recording. Blue Cheer, the Doobie Brothers, Linda Ronstadt, Taj Mahal, Crazy Horse, Herbie Hancock and others also worked at the facility.

According to Curcio's online resume, he left Pacific Recording in 1978 and set up and ran Arrow Re-

recording Studio in Santa Rosa, CA, until 1982, before returning to his home town and establishing Music America Studios. The following year he was approached by Metallica's manager, Jon "Jonny Z" Zazula, founder of Megaforce Records.

In a *Billboard* interview, Curcio recalled that Zazula chose him and Music America to record Metallica's debut album because he offered the band an inexpensive rate—reportedly \$15,000 for 17 days. The sessions began May 10, 1983. *Kill 'Em All*, which heralded the arrival of thrash metal in the United States, initially sold slowly, but was certified triple-Platinum in 1999.

"The actual studio was in the basement of this huge old colonial type of clubhouse," recalled Metallica drummer Lars Ulrich in a 2008 interview with *Metal Hammer*. "On the second floor there was a huge ballroom, perfect for getting a good drum sound."

In the interview, Ulrich claimed the place was haunted: "I had to have someone else up there the whole time I was recording. My cymbals would start spinning for no reason, s--- like that. It was scary."

Curcio recorded other projects for Zazula and Megaforce Records, including Blue Cheer's 1984 reunion album, *The Beast Is Back*. He later relocated Music America Productions from Rochester to Nashville, where he operated through November 1994. He subsequently moved to Florida, where he scouted and developed talent into the 2010s and managed the Family Stone Experience.

## Music Modernization Act

(continued from page 5)

four decades. Bringing licensing and royalty collection into the digital age, it combines three pieces of legislation into a single bill, H.R. 1551, that is officially named the Orrin G. Hatch-Bob Goodlatte Music Modernization Act for its champions in Congress. Sen. Orrin Hatch (R-UT) and Rep. Bob Goodlatte (R-VA) were present at the signing ceremony at the White House on October 11, as were various music professionals, including Jeff "Skunk" Baxter, Mike Love of the Beach Boys, Christian rock band Mercy Me and Kid Rock.

Central to the new legislation is the Music Modernization Act of 2018, S.2334, which Hatch and Sen. Lamar Alexander (R-TN) in-

roduced in January. It updates licensing and mechanical royalties related to streaming, setting rates via a "willing buyer/willing seller" standard that is also expected to give the performing rights organizations in a stronger negotiating position for the future. A centralized agency, the Mechanical Licensing Collective (MLC), will collect and administer those royalties on behalf of songwriters and publishers.

A second part, the CLASSICS Act (Compensating Legacy Artists for their Songs, Service and Important Contributions to Society Act), was introduced in February by senators Chris Coons (D-DE) and John Kennedy (R-LA). It closes the so-called

"pre-1972 loophole," which enabled digital services to avoid paying royalties to legacy artists and led to extensive litigation in the courts over recent years.

Finally, the AMP Act (Allocation for Music Producers Act), introduced by Senate Judiciary Committee chairman Chuck Grassley (R-LA) and ranking committee member Sen. Dianne Feinstein (D-CA) in March with the support of senators Bob Corker (R-TN) and Kamala Harris (D-CA), ensures that producers and engineers not only receive credit but also proper compensation. SoundExchange, which administers royalties from non-interactive streaming recordings, will provide direct payment of royalties owed to producers and engineers upon direction by the featured artist.

Music producers have never been

mentioned in any part of the copyright law. The MMA has codified the producer's right to collect those royalties due to them and formalizes SoundExchange's current voluntary policy.

As explained by the Recording Academy, which advocated for the AMP Act, "Since 1995, featured performers have had a statutory right to 45 percent of the performance royalties collected from non-interactive, digital music services. Subject to their contract with the artist, producers often collect royalties from that 45 percent because they were not included in the 1995 law for a statutory right."

For sound recordings older than 1995, the AMP Act establishes a procedure for producers and engineers to seek permission from featured artists or their heirs to receive appropriate royalty payments.



## Yorkville Reps Ready to Roll with HK Audio

TORONTO, CANADA—Andreas Mayerl, HK Audio's head of market development, recently traveled to Toronto to hold the first HK Audio training session for Yorkville Sound U.S. sales reps. HK Audio joined Yorkville Sound's family of distributed lines for North America in late June.

Mayerl discussed various HK Audio brands, including the Lucas, Elements and Linear 3 lines, and the event drew reps from across the United States and Canada.

Larry Bell, key accounts manager based out of Texas, made the trek to Niagara Falls. "When I heard Andreas was going to be in town to talk about HK Audio, I knew I had to be there," Bell said. "The HK Audio brands are unique and they perfectly complement our Yorkville line."

Darren Butt, Yorkville Sound's pro audio product specialist, drove in with Canada national sales manager

Ray Wilson from the company's Pickering, Ontario, office while on a brief stop in between cross-Canada training dates.

Jeff Cowling, Yorkville Sound's vice president of sales and marketing, noted, "This kind of enthusiasm, knowledge and sheer electricity in the air at



the rep force level always creates raving fans out of end users. We can't wait to share what we have learned with our valued dealers."

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## Alcons Rocks Trondheim

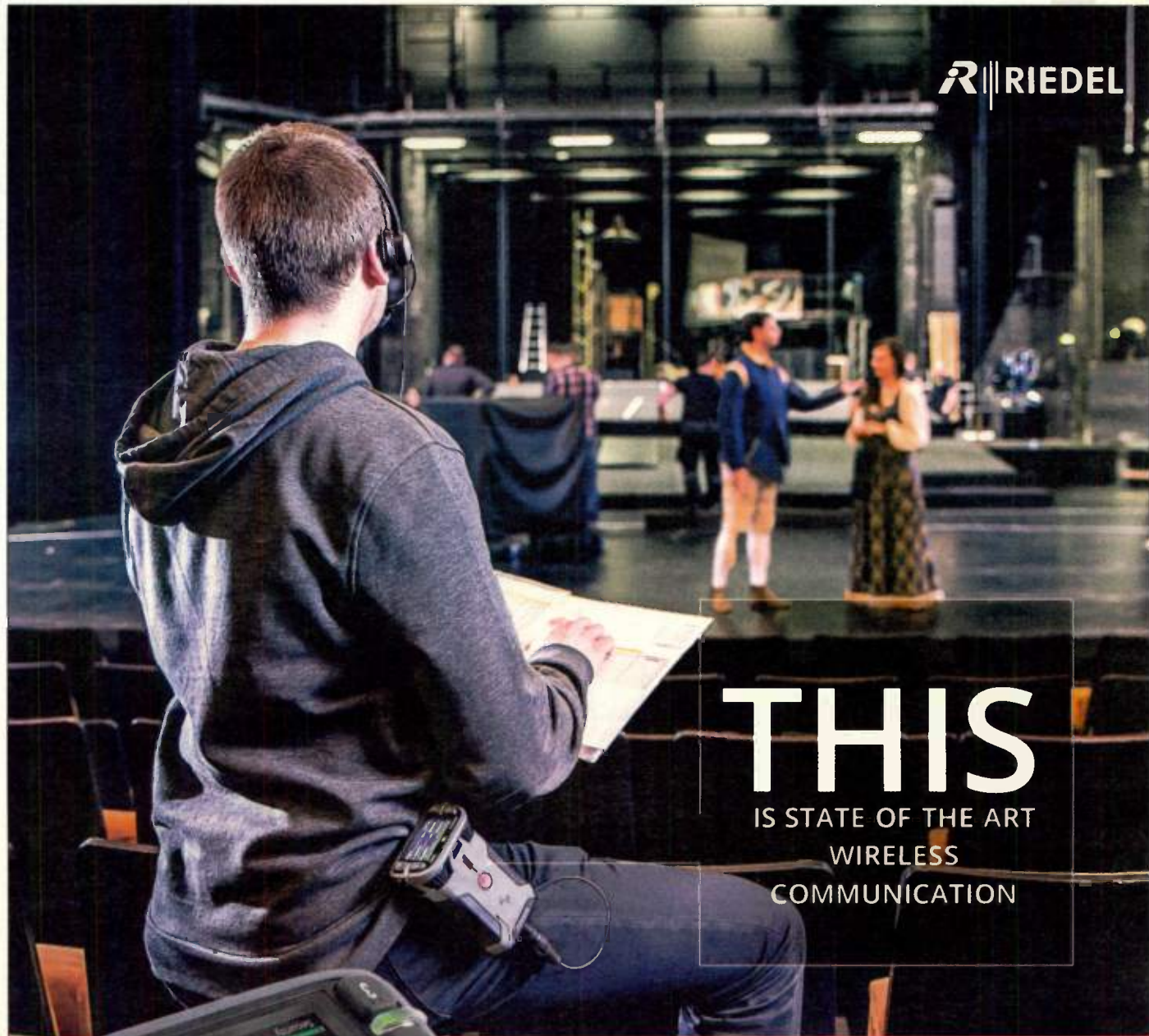
TRONDHEIM, NORWAY—Trondheim Rocks, headlined by Iron Maiden and Volbeat, was held on the grounds of the city's Dahl brewery. Audio provider Trondheim Lyd covered 19,000 fans with a sizable Alcons Audio LR28 P.A.

The main stage system had hangs of 20 Alcons LR28 larger format line array modules each, with 32 BC543 cardioid subwoofers and 39 LR18 compact mid-sized line array modules for inner, outer and side fills. A half-dozen VR12 mid-sized monitors were used for front fill, with an additional four RR12 point source array modules for vocal front fills for Iron Maiden only. Pairs of VR8 compact versatile monitors and BF151 compact subwoofers provided near fills for the FOH mix position.

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# soundRECORDING IIII

## TSS Gets Immersive En Route to Outer Space

BY STEVE HARVEY

LOS ANGELES, CA—British band The Tornadoes ushered music fans into the Space Age with “Telstar,” named for the first communications satellite to be launched. Many decades later, Los Angeles electronica duo Test Shot Starfish (TSS) is heralding the new era of interplanetary travel with *Music for Space*, an album of “thinking man’s techno” that is being mixed for immersive headphone listening with producer Robert Margouleff and partner and collaborator Aaron “Zeus” Zepeda.

“Telstar” topped the charts in 1962, which was also the year that the U.S. exploded a high-altitude nuclear bomb over the Pacific Ocean designated Starfish Prime—from which Kyle Schember and Ryan Stuit took their band’s name. The pair, sound designers and musicians who joined forces in 1999, are working with Margouleff and Zeus to mix the 14-song project, their sophomore release, using Hear360’s immersive audio tools.

Here’s another date: 1971. That’s the year that Margouleff and Malcolm Cecil released the first of two albums by Tonto’s Expanding Head Band, their pioneering synthesizer

music ensemble. The project caught the attention of Stevie Wonder, leading to a long, multi-album collaboration that saw the pair awarded engineering Grammys for *Innervisions*.

“We think of music in terms of architecture,” says Margouleff—meaning, what physical environment, be it a small club, large hall or a church, the music will be played in. “But with electronica, there is no live space. The sound unfolds inside your head. It’s not a report of a real event, of people playing instruments on a stage.”

He continues, “What these guys are doing is what I was doing with Tonto’s Expanding Head Band: creating these marvelous soundscapes. The recording is the performance. All the instruments come from vibrating electrons. There is no more architecture; we have left the real world behind. They’re making music for space travelers.”

In 2005, Schember and Stuit founded Subtractive, an integrated production company that, among other things, produces the webstream of Elon Musk’s SpaceX launches. SpaceX is still six years shy of realizing Musk’s vision of sending the first manned mission to Mars; meanwhile, TSS’s music plays behind the webcast of every Falcon 9 rocket launch.



Electronica duo Test Shot Starfish—Kyle Schember (back left) and Ryan Stuit (back right)—are working with producer Robert Margouleff (front right) and partner Aaron “Zeus” Zepeda (front right) to create an immersive version of their new album, *Music for Space*.

While technology has been a constraint on music—the capacity of a 78 rpm record led to the three-minute

single, for instance—more recent advances have released those shackles.

(continued on page 24)

## Master Class Looks Back, Encourages Next Generation of Engineers

BY STEVE HARVEY

TARZANA, CA—“We’re here to talk about our companions, our peers, who we worked with, and remember what they did and keep their memories alive, and share the knowledge of how we operate, work together and make music,” said Chris Lord-Alge, addressing the students assembled in the kitchen of his Mix L.A. recording studio on a Saturday morning in late September.

The Csaba Petocz Master Class, now in its second year, was created by Audio-Technica, the Recording, Radio and Film Connection (RRFC), and specialized marketing and public relations agency Clyne Media to honor the legacy of the late producer and engineer Csaba Petocz. Recording Connection admissions staff selected the six Csaba Petocz Master Class Scholarship recipients attending the daylong event.

One student, Dawnette Scolari,



The second annual Csaba Petocz Master Class was led by Chris Lord-Alge (seated, right), seen here with students and representatives from Audio-Technica, RRFC and Clyne Media, in his Mix L.A. recording studio.

a 2017 RRFC graduate, commented, “I am here today because I believe that you never stop learning. You could’ve already finished your courses, but opportunities like this are once in a lifetime. [Chris Lord-

Alge] is hands down one of the mix masters of the century, and I don’t think that not coming to something like this was an option.”

As Lord-Alge noted, the path to becoming a working engineer has

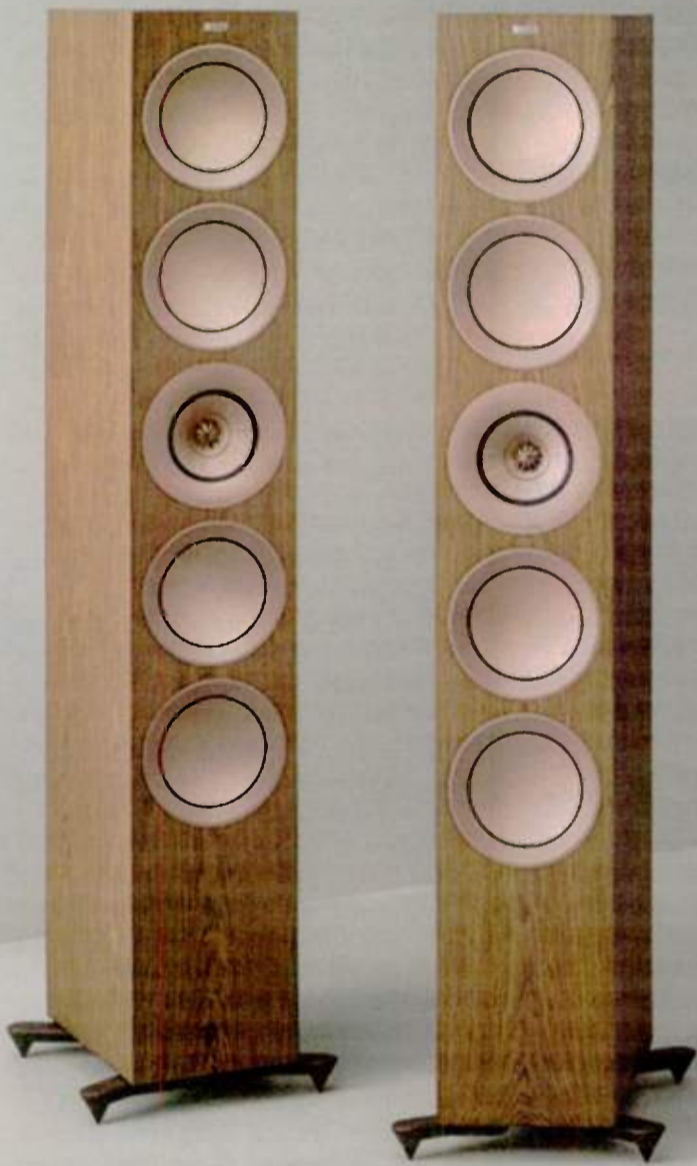
changed since he started out 40 years ago. “All of you are in a world where there is now zero mentorship,” he said. To help redress that situation, Lord-Alge spent the day sharing a wealth of recording and mixing knowledge, as well as invaluable advice on handling the business side of the studio life, including how to manage relationships with collaborators, clients and record labels.

Leading the students into his mix room, Lord-Alge continued, “The main thing we’re going to discuss today is how you can fit into this world and what’s going to make it work. And how can you learn from me and translate my thoughts from my friend and companion, Csaba.”

Petocz, a three-time Grammy nominee with 37 Number One records and 32 platinum or multi-platinum albums to his credit, worked with some of the top names in the industry, including Metallica, Larry Carlton, John Michael Montgomery, Alanis Morissette, Aretha Franklin and Elvis Costello. He succumbed to cancer in July 2015.

Lord-Alge, a five-time Grammy Award-winning mixer who has worked with the likes of Green Day,

(continued on page 23)



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## Oktaven Caters to Other Music

BY STEVE HARVEY

MOUNT VERNON, NY—"For nine years now, we've been staying very busy and growing—and almost entirely on art music, not stuff with any commercial appeal. It's a little disturbing and perverse, but somehow it has worked out," laughs Ryan Streber, engineer and co-owner, with studio manager and visual artist Jessica Slaven, of Oktaven Audio.

Indeed, the studio has been successful enough that Streber very recently installed an API Legacy AXS console in Oktaven's 415-square-foot main control room. The 48-channel frame, with onboard patchbay, is fully wired, but fitted with 32 in-line modules with 24 212 mic preamps, 18 550a EQs and four 560 EQs.

"One of the cool things about this new API is that they've gone back to the 500 Series EQ slots," says Streber. "I'm in the process of trying a bunch of 500 Series modules. I may wind up with more API modules, or maybe Rupert Neve Designs 551s. I'm polling visiting engineers to see what they'd prefer."

The API replaces a venerable Studer 903 broadcast desk, now relocated to a multi-use B room, purchased on eBay after it was used extensively at New York's Metropolitan Opera. It served him well, says Streber, but imminent tech work would have cost more than it was worth.

"We've also been doing more big-band stuff where we needed a lot of inputs and flexibility for cue mixes and headphone sends. The other problem was that we were getting more freelance engineers coming in being faced with this rare, quirky old Studer," he says.

"I wanted to get something new, reliable, nicely laid out and intuitive, but with a ton of features, and with a warranty. After looking for a while, it came down to API being the only game in town that fit the bill for a large-format analog console that could do everything. No one is really making a traditional, all-discrete analog board that has 12 auxes and can do the things we need to do here comfortably."

Oktaven—the name is a tribute to Johannes Brahms, who in his later years compiled a notebook known as *Oktaven und Quinten* (*Octaves and Fifths*)—records primarily classical, jazz and related music. "We focus on things that involve piano or need some space," says Streber, a Juilliard-trained composer. The centerpiece of the studio is a 1987 Hamburg Steinway D 9-foot concert grand piano. A late-1950s New York



Oktaven Audio recently installed an API Legacy AXS console, used for mixing every note played in the 42-by-30-foot live room (below).



Steinway D is also available.

Streber, who is also a location sound engineer, and Slaven originally had a smaller space in the adjacent city of Yonkers, just outside New York City. "There's a perennial problem in New York, which is that—in addition to all of the bigger rooms closing down—there are tons of smaller studios, but a real absence of studios with nice pianos, especially a 9-foot Steinway," he says.

The Yonkers space was only temporary, however, and when the expected eviction notice came, they found an industrial space just a quarter-mile north of the Bronx border. "We're just outside of New York City, but it's nicely accessible by mass transit and easy to drive to," says Streber.

"Westchester County has so much crazy wealth, but it's one of

the areas where, if you look hard enough, you can find decently priced, affordable spaces where you can live and work. For us, it's the only way we could make it work."

They called in Francis Manzella to design the facility. "He was great. We've had unanimously positive feedback from musicians and engineers about the sound of the room. It's a simple room, a big rectangle, but the proportions are good and it's lively without being too much so," he says of the 42-by-30-foot live room, which has a 13-foot ceiling.

The API is paired with Burl converters and an Avid Pro Tools HDX system. There are two Studer A800 Mk III 24-track machines available, but the cost of tape puts them beyond most of his clients' budgets, Streber reports.

"A really wonderful jazz engi-

neer who works here regularly said, 'You've got an API console, Burl converters and Barefoot monitors. You're the most rock 'n' roll classical studio I've ever come across.' But all these things are designed to sound good, and have high headroom and low noise. It's big and open-sounding."

Streber has accumulated an enviable collection of outboard gear over the years, but the preamps have seen little use since he installed the API. "I was so used to outboard preamps going straight into Pro Tools with the console on the back end—that's how I had worked for the longest time—but for the sessions over the last month, I've relied on the API for everything," he says. "It's nice to have that workflow. It's so much faster and more comfortable."

Oktaven has built an impressive equipment collection on a budget. "We are a studio that has to pay the bills by doing music that basically has no market value. All the stuff we work on is paid for either directly by the artist or crowdfunding or grants. The average album we work on has a pretty small budget, so we're walking a fine line between trying to be realistic and friendly to the artists, but keeping the quality as high as we can and also somehow keeping the lights on," he says.

Many of Streber's tube mics are modern clones, some by the likes of Wunder and Flea. "My most used mics here are M49 clones that I built from kits and mods and parts. All have the same ingredients, based around Thiersch capsules and AMI transformers and power supplies. They look a little different, but their sound is consistent. They sound good on everything and get used all the time—but we also have old RCAs, which are built like tanks."

For big band work and soloists, a variety of iso rooms—including the B mix/edit room—and soundlocks are available, complete with video tielines. "I use really simple HD-SDI cameras and monitors with direct connections, so there's almost no latency, and the quality is great. So many of the folks we work with play in Broadway pit bands, where so much now is over video, with click, so it's a common thing."

Streber has no complaints about working in such a niche market. "There's an abundance of integrity and interesting music, and people doing great stuff that they really believe in. We work on so much different but terrific music. That's why we do it, at the end of the day."

Oktaven Audio  
www.oktavenaudio.com

# A Labor of Love Supreme: Saving John Coltrane's Home Studio

BY CLIVE YOUNG

DIX HILLS, NY—The now-crumbling suburban home where jazz saxophonist John Coltrane created some of his most enduring works, including *A Love Supreme*, was named a National Treasure on October 9, 2018, by the National Trust for Historic Preservation. The designation acknowledged not only the importance of the Dix Hills, NY, house in cultural and African-American history, but also the ongoing efforts of local preservationists determined to save the landmark from the brink of collapse after decades of neglect.

“The bricks on this home are literally coming off the walls, and the house inside is gutted,” said Ron Stein, president of The Friends of the Coltrane Home in Dix Hills. While the group was part of a grassroots movement that saved the home from demolition in 2005, the last 13 years have been spent trying to keep the house standing while saving everything possible from the mold-infested interior. A new roof and freshly planted flowers now make the exterior presentable, but the insides remain a far cry from the home that Coltrane and his wife, noted jazz pianist/harpist Alice McLeod, lived in throughout the mid-1960s

Built in 1952, the 2,700-square-foot house is nestled on a 3.4-acre plot in a leafy neighborhood an hour outside of New York City. There, the Coltranes forged a creative refuge for themselves and their children. In the inspirational setting, the saxophonist wrote “Living Space” on his 1965 album, *Crescent*, about their herringbone-patterned wood-paneled living room adorned with a brick fireplace and circular stained-glass window. A year earlier, he composed the album considered his masterwork, *A Love Supreme*, in a spare bedroom on the second floor.

And it was there that the couple designed and began building a professional studio in the basement with extensive soundproofing, a glass-walled control room and, out of necessity, an entrance through the garage where Coltrane kept his prized white Jaguar XKE. It was a studio that would eventually host other jazz greats like drummer Ben Riley, bassists Cecil McBee and Charlie Hayden, and saxophonists Joe Henderson and Pharaoh Sanders. It was a studio that Coltrane himself would not live to see completed.

Coltrane's death in 1967 from liver cancer left Alice to become a single



John Coltrane composed *A Love Supreme* in his Dix Hills home, but in the decades after his death, the house nearly collapsed due to severe neglect.



Prior to being gutted due to rampant mold, the basement studio had separate live and control rooms; tape machines lived where an industrial dehumidifier sits today.

mother looking after four children while launching her own substantial solo career. Using the completed basement studio, the pianist went on to self-produce record five albums at the home before moving to California and ultimately selling the house in 1973 without ever meeting the next owner.

Throughout the decades that followed, the house passed through owners and was rented out to college students annually for 20 years. Eventually sold to a local developer, it was then boarded up, earmarked for demolition to be replaced with three separate houses across the property. Ironically, because the landlords were generally absent, the interior didn't change much. The kitchen and its appliances were never updated. The rooms, colored to identify with various Hindu chakras, stayed the same colors as Alice originally painted them. (The master bedroom's carpet—purple, the highest chakra—also remains surprisingly well intact.) As Stein pointed out, “The home is almost a snapshot of the home that the Coltranes lived in so many years ago.”

Today, the house remains closed to the public and most of its interior has been removed. “We had to take ev-

erything that was porous off the walls because the mold was so rampant,” said Stein. “We carefully documented every single square inch of this house, and the plan is to rebuild most of it the way it was, but taking advantage of modern building technologies.”

That plan includes the Coltrane Studio: “The studio will be rebuilt and we will make it a working studio,” said Stein. “Everyone who plays or records here will do so knowing that some of the greatest musicians of the late '60s and early '70s spent a lot of time in this recording studio.”

Plans for the space are ambitious and that means the recording technology used will be up-to-date rather than period authentic. “We're not going to have the same Ampex [tape] decks that were in here,” said Stein before catching himself. “Well, we will have them, but they won't be working. We're going to have [period] consoles; we've tracked some down, and one of them is the original one. They'll be here, but they probably won't be used. We'll probably use digital because it costs a fortune to do analog—but people have been advocating for analog's use.”

For now, there's the more immediate concern of getting the control room and live room area back to a state where one could even think of recording there; at this point, it's all a single, amorphous space with an industrial dehumidifier gently chugging away where the tape machines used to sit.

“All the acoustic tiling had to come out,” said Stein. “Those white walls are gone, but they will be replaced. That's actually easy and we'll do it with proper soundproofing so that we can do stuff in here and not completely contaminate what's going on elsewhere.”

What's going on elsewhere in the

building, and the surrounding area, will be big, according to Stein. “The Coltrane family came together with us in 2006. It was an amazing experience because it was in October and Alice passed just a few months later in January of 2007, but the vision that came out of that centered around one word: Inspiration. Alice said at that time, “This place should inspire people of all ages and backgrounds to participate in the joy of making music and the creative process.””

Taking her words as its mission, the Friends group now harbors a larger goal to become a creative beacon for the surrounding region and the world. “You have to look outward,” said Stein. “It's only a house, it's only 2,700 square feet, so our real work as much as it will be inside the house, will be outside the house in the community, reaching into schools.

“One of the goals of our education program is really to focus on girls and young women, using Alice as a model to get them to engage, get them to be comfortable improvising, comfortable creating, not necessarily behind a microphone and really allow them to become singular forces,” said Stein. “We would be talking about Alice McLeod were it not for John Coltrane—people don't realize. You're under the shadow of somebody as big as John and then you give over your life to making some music, but basically being the single mother of four kids. You kind of have to give up a lot of yourself in that process. But Alice was one of the preeminent piano players of her time—she replaced McCoy Tyner in Coltrane's classic quartet and she also became, using the gift of the harp to her, one of the world's greatest jazz harpists ever and an amazing Wurlitzer player. To this day, Carlos Santana talks about her Wurlitzer playing, as does John McLaughlin. She was on Carlos's album, *Illuminations*, and she just blew everyone away. Alice is so important now, because we are talking about women and empowering girls and young women, and Alice is one of the few women who made it on the bandstand, not behind the microphone.”

When completed, the studio will be used as an interactive and creative space for students and musicians young and old. “We're going to bring it back to life in a big way,” said Stein, looking around the gutted space. “I actually think that the recording studio will be the most-used part of this house going forward.”

Friends of the Coltrane Home in Dix Hills  
www.thecoltranehome.org

National Trust for Historic Preservation  
www.savingplaces.org



**ARTIST:** AMY RAY  
**ALBUM:** HOLLER  
**LABEL:** DAMON RECONDS/  
 COMPASS RECORDS  
**PERSONNEL:**  
**Produced by:** Brian Speiser  
**Engineered by:** Bobby Tis  
**Mix Engineer:** Trina Shoemaker  
**Studio:** Echo Mountain (Asheville, NC)  
**Mastered by:** Adam Ayan at Gateway Mastering Studios (Portland, ME)  
**EQUIPMENT NOTES:** Neve 8068, ADAM P11A, George Augspurger custom monitors, Studer A800 Mk III 24-track, Avid Pro Tools



**ARTIST:** EX-POETS  
**ALBUM:** TOO MUCH FUTURE  
**LABEL:** TEXT ME RECORDS  
**PERSONNEL:**  
**Produced by:** Jordan Brooks, Colin Killalea  
**Engineered by:** Robin Macmillan  
**Mix Engineers:** Elliot Scheiner, Matt Scheiner, Jim Orso  
**Studio:** Faraway Sound (Brooklyn, NY)  
**Mastered by:** Joe Lambert at Joe Lambert Mastering (Jersey City, NJ)  
**EQUIPMENT NOTES:** Yamaha NS-10s, Apple Logic Pro



**ARTIST:** AMOS LEE  
**ALBUM:** MY NEW MOON  
**LABEL:** DUALTONE RECORDS  
**PERSONNEL:**  
**Produced by:** Tony Berg  
**Engineered by:** David Boucher, Joseph Lorge and Tony Berg  
**Mix Engineer:** Tchad Blake

at Full Mongrel (Wales, UK)  
**Studio:** Zeitgeist Studio (Los Angeles, CA)  
**Mastered by:** Bob Ludwig at Gateway Mastering (Portland, ME)  
**EQUIPMENT NOTES:** Vintage API, Yamaha NS-10s with Velodyne F1000B subwoofer, Avid Pro Tools with Apogee Symphony I/O II



**ARTIST:** SEXTILE  
**ALBUM:** 3  
**LABEL:** FELTE  
**PERSONNEL:**  
**Produced by:** Brady Keehn, Melissa Scaduto  
**Engineered by:** Brady Keehn  
**Studio:** Home studio  
**Mastered by:** Rafael Anton Irisarri at Black Knoll Studio (Hudson Valley, NY)  
**EQUIPMENT NOTES:** Steinberg UR824, KRK Rokit 8 (Gen 2), Ableton Live



**ARTIST:** LINKS  
**ALBUM:** RIDGE ROAD  
**LABEL:** WESTWOOD RECORDINGS  
**PERSONNEL:**  
**Produced by:** Tony Day, Georgia Murray  
**Engineered by:** Tony Day, Georgia Murray, David Parfit, additional mixing by Stuart Schenk  
**Studios:** Home Studio (Huntington Beach, CA), Electric City Sound (Victoria, BC), Universal Music Publishing Group's Studio A (Santa Monica, CA)  
**Mastered by:** Brock Macfarlane at CPS Mastering (Vancouver, BC)  
**EQUIPMENT NOTES:** Universal Audio Apollo 8, Speck Electronics LiLo, Avid Artist Mix, Genelec 1038A/Yamaha NS-10M, KRK Rokkit 8 G3 monitors, Avid Pro Tools 12, Steinberg Cubase 9.5



**ARTIST:** ROYAL TUSK  
**ALBUM:** TUSK II  
**LABEL:** ENTERTAINMENT ONE  
**PERSONNEL:**  
**Produced by:** Eric Ratz  
**Engineered by:** Eric Ratz, Quinn Cyrankiewicz, Justin "Flash" Madill, Ryan Jones, Chris Snow  
**Studio:** Vespa Studios (Toronto, ON)  
**Mastered by:** Harry Hess at H-Bomb Mastering (Toronto, ON)  
**EQUIPMENT NOTES:** SSL 4K console with Apogee converters, Yamaha NS-10 monitors, Avid Pro Tools DAW



**ARTIST:** WHSTLE  
**ALBUM:** QUAKES  
**LABEL:** SELF-RELEASED  
**PERSONNEL:**  
**Produced by:** WHSTLE, Ryan Johnson, Anthony Brant  
**Engineered by:** WHSTLE, Ryan Johnson; Anthony Brant; Saydi Driggers, Ryan Johnson  
**Studios:** Home Studio (Tempe, AZ), The Nest (Phoenix, AZ)  
**Mastered by:** Jon Weil at Fuzzywallz Mastering  
**EQUIPMENT NOTES:** Universal Audio Console, Avid Artist Mix, Genelec 8330A, Event 20/20, Equator D5, Avid Pro Tools



**ARTIST:** GONZO & INNA VISION  
**ALBUM:** CURRICULAR STYLE  
**LABEL:** ROOTS MUSICIAN RECORDS  
**PERSONNEL:**  
**Produced by:** Gonzo, Inna Vision, E.N Young, Rick Haze

**Engineered by:** Gonzo, E.N Young  
**Studios:** Greenline Studios (Hawthorne, CA), Imperial Sound Recording Studio (Imperial Beach, CA)  
**Mastered by:** E.N Young at Imperial Sound Recording Studio  
**EQUIPMENT NOTES:** Apollo Pre, 6-inch Yamaha H55, Propellerhead Reason, Avid Pro Tools



**ARTIST:** HALEY  
**ALBUM:** PLEASURELAND  
**LABEL:** MEMPHIS INDUSTRIES  
**PERSONNEL:**  
**Produced by:** Haley McCallum  
**Engineered by:** Zach Hollander at Pearl Studio (Minneapolis, MN)  
**Mix Engineer:** Shuta Shinoda at Hackney Road Studios (London, UK)  
**Studio:** Home studio (Saint Paul, MN)  
**Mastered by:** Huntley Miller at HM Mastering (Minneapolis, MN)  
**EQUIPMENT NOTES:** Cadac E series console, Neve 1073, API 512C, Genelec 1031a, ATC SCM100 and SCM12Pro, Avid Pro Tools



**ARTIST:** ACE FREHLEY  
**ALBUM:** SPACEMAN  
**LABEL:** ENTERTAINMENT ONE  
**PERSONNEL:**  
**Produced by:** Ace Frehley, Alex Salzman, Warren Huart  
**Engineered by:** Alex Salzman, Warren Huart  
**Studio:** Ace in the Hole  
**Mastered by:** Adam Ayan at Gateway Mastering Studios (Portland, ME)  
**EQUIPMENT NOTES:** SSL 4000 console; Avid Pro Tools HD; ADAM A8X monitors

### Dream Theater Tracks with Rupert

NEW YORK, NY—When prog metal band Dream Theater recorded its new album in a barn, the portable rig included 24 channels of Rupert Neve Designs' (www.rupertneve.com) new RMP-D8 Dante-connected mic preamplifiers, a Portico 5024 quad mic preamp, four Sheldford Channels and Rupert Neve Signature Series microphones from sE Electronics.

### Méchaly Taken with PMC

BIGGLESWADE, UK—French composer Nathaniel Méchaly, best known for his work on Liam Neeson's Taken movie trilogy, has installed a pair of PMC (www.pmc-speakers.com) 1B25 XBD-A monitors in his SSL C300HD-equipped studio in Paris to serve as his primary stereo monitors and the main channels of his 5.1 surround system.

### TASCAM Captures Performances

LOS ANGELES, CA—Shows at Grand Performances, a free outdoor concert series in downtown L.A., are captured for posterity by technical manager Gilberto Morales and FOH engineer Toby Tittle on a Dante-networked TASCAM (www.tascam.com) DA-6400 64-channel digital recorder.

### No Passive Resistance

TORONTO, CANADA—Producer/engineer Brian Moncarz, who works out of his own studio, Rattlebox North, in Toronto, Canada, has been using a Manley (www.manley.com) Massive Passive EQ on virtually all of his work. Past collaborations have included the likes of Our Lady Peace, Fantastic Negrito, Bleeker, Circa Survive, The Trews, the Tea Party and Secret Broadcast.

# Can Recording Studios Live in the Cloud?



BY CRAIG ANDERTON

Cloud computing has taken over the business world, as more companies rely on Microsoft Azure, Amazon Web Services and others. It's easy to understand why: The basics of computing services, like storage, servers, analytics, applications and databases, are all in the cloud, and you connect there via the internet when you want to use those services.

Numerous attempts have been made to create online collaboration sites (remember Rocket Network?), but none of them gained traction. However, that was before technology reached the level of maturity we enjoy today. Once again, companies are forming around the idea of cloud-based online studios and collaboration.

Avid offers several different cloud plans ranging from an Artist version (10 GB, \$5/month) to a studio version (80 GB, \$25/month). These are mostly so that people can collaborate on projects, as opposed to having the tools themselves in the cloud. However, other companies are pushing the envelope and offer cloud-based DAWs—with varying degrees of sophistication and pricing

plans—where you can transfer tracks for yourself or others to access from anywhere. Probably the most developed is Ohm Studio (it uses a combination of cloud- and local-based attributes), but there's also SkyTracks, Soundation Studio, UJAM, BandLab, AudioTool, Splice, Dropin, AudioSauna, Soundtrack and others. Some are Flash-based, some run in a browser and others are apps you access directly—and may be mobile-friendly as well.

While these may seem like toys compared to a pro studio, some are fairly powerful toys indeed, with built-in instruments and plug-ins. Ohm Studio can even wrap your VST plug-ins. Also, most sites play up the collaborative element. This can be as basic as finding other musicians for a project, or being more like a social media site.

For pro audio at the moment, online DAWs are not going to replace your terabytes of storage, fast processing, rendering with video, gigabyte orchestral libraries and the like. However, technology has a habit of becoming increasingly powerful, and given the issues surrounding the desktop market (we don't know exactly what Apple has in mind for 2019, and currently Microsoft seems more interested in its cloud services than Windows), we may all be hanging out in the clouds sooner

than we think.

Of course, the cloud isn't the ideal solution for everyone. As just one example, when Sony Pictures was first considering using an external cloud service, the cost of bandwidth to deal with the massive amounts of data generated every day was problematic. Bandwidth continues to get less expensive, but still, huge companies will have to decide whether to use commercial cloud services, or build their own.

As for pro audio, it's likely that any transition to the cloud will be incremental. For now, cloud storage is the main attraction. At least in theory, the data is more secure than it would be if stored locally, and you can access files from anywhere. I doubt anyone will miss the days of shipping 24-track reels of tape around.

The next step is specialized services. To some extent, we already have that with EastWest's ComposerCloud and Roland Cloud, where the cloud integrates with your local setup. However, Roland expects to create instruments that could exist only if hosted in the cloud. Perhaps another step is having the cloud equivalent of Studio Instrument Rentals, where you could rent time on specific plug-ins when you need "just that one sound" and don't want to commit to

a purchase.

To graduate a complete studio to the cloud isn't trivial. Singapore-level bandwidth is the exception, not the rule, which impacts transferring and storing large amounts of data. Servers go down, and the internet isn't secure from hackers, so you'd still need a plan B—ultimately you're the only person you can trust with your data.

There could be major advantages. You'd always be using the latest version of an online DAW, and there would be no compatibility issues with collaborators. Backup would be automatic. As to cost, although it may not be less expensive to run an online studio—those monthly subscription charges add up—you'd potentially have access to more instruments, sounds and plug-ins than you could ever purchase. And if the cloud studio eliminates piracy, virtual gear costs could come down even further.

Maybe the future isn't so bright that you have to wear shades ... but you might want to check out the price on prescription sunglasses to go along with your regular pair.

Craig Anderton's new book series, *The Musician's Guide to Home Recording*, is now available from Hal Leonard in soft-cover, and at Reverb.com as a series of ebooks. Visit [craiganderton.com](http://craiganderton.com) for more news.

## Master Class

(continued from page 18)

Keith Urban, Rise Against, Pink and Carrie Underwood, has long maintained a busy work schedule. "I've mixed over 20,000 songs—500 songs a year for 40 years—and I've worked on 25,000," he said.

Lord-Alge hustled hard in his early years: "When I started out, I was so cocky. I've worked with people 10 times more qualified than me and they never get the gig. Why? Because I wanted it more than they did. The confidence level is everything, walking into a room and not knowing what to do, but knowing you can convince them that you know what you're doing."

The control room at Mix L.A., which started life as Can-Am Recorders until Lord-Alge purchased it because the site was only two miles from his home, is decidedly old school. "This is not the norm anymore. You could call this a vintage studio. This is all I know; when

I grew up, this is what a studio was."

During his early years in New York City, Lord-Alge worked at Unique Recording, Electric Lady, the Hit Factory and the Power Station—but as he noted, "A lot of these temples of sound have gone away." These days, people set up facilities in their garage or spare bedroom, but wherever the studio is, he said, "You have to make a workplace that shows other people you mean business. How you convey yourself is everything."

Mix L.A.'s Vincent van Haaff-designed control room is all business, with a wall of equipment racks ranged in a semi-circle behind the console. "It's all used," said Lord-Alge. "Does every song need all of it? No; some songs get almost none of it."

Each piece is a flavor, he continued. "Each one specializes in certain sounds and they become the one to use on certain instruments all the time. Certain things are great on vocals, so they're used on vocals all the time."

Ultimately, he stressed, "The song

dictates what you do. Your job is to serve the music, serve the artist, and make their dream come true through what you visualize and hear in your head. That means there are no rules."

For years, Lord-Alge mixed from 48-track digital tape after transferring the Pro Tools sessions. A couple of years ago, he took the tape machine out of his workflow, but he hasn't really warmed to the workstation. "You've got to hear the music, not look at the music. A lot of people are watching the screen and not listening. How about turning the screen off once in a while?"

A DAW is a tape machine with which the mixer can manipulate the audio, he continued. "It's a multi-track you can edit, modify, use plug-ins. But to use it as a work surface to mix from," he said, is unnatural to him. (Lord-Alge used a saltier image.)

"I can't mix with a mouse because I can't play a piano one finger at a time," he said. "So my console of choice is SSL. I've been in front of one of these since they came out in 1985. Music creation is not based on

modern equipment. For me, this is the best tool ever invented for mixing and producing. It has a fader, mute, EQ, compressor, gate, matrixing, six sends, inserts. For an analog console, what else do you need? And the automation is really simple."

That's not to say Lord-Alge avoids using plug-ins; indeed, he has developed his own line of signature plug-ins. "I use a lot of plug-ins. When I paint a picture, I use pencil, crayons, chalk, magic marker, whatever I hear in my head."

His approach to mixing is also traditional. "I do my mixes in one pass. As soon as I want to change something, I back up. I constantly stop and start and inch my way to the finish line, because I want to hear it complete as I go. I don't want a work in progress."

But for all the talk of gear, "The tools you use aren't important; the result is," said Lord-Alge.

Audio-Technica  
[www.audio-technica.com](http://www.audio-technica.com)

Recording, Radio and Film Connection  
[www.recordingconnection.com](http://www.recordingconnection.com)

"I'm starting to mix Test Shot Starfish in headphone surround for VR. It really brings home the whole concept of allowing you to occupy the same space as the music. It's not the music in front of you, where you're standing there looking at an event; you're inside the space."

Robert Margouleff

## Immersive

(continued from page 18)

"Some of the information that we couldn't store in the past was spatial relationships," says Margouleff, who was in the surround sound vanguard.

In the early '70s, Margouleff and Cecil worked with designer Tom Hidley to build a custom quadrophonic room for Stevie Wonder at the Record Plant in Hollywood. "People were experimenting with putting quad onto vinyl. I'd put the Fender Rhodes in the back and clavinet in the front, the congas on the left and the rhythm guitar on the right, and Stevie sat in the middle of the room and was immersed in that space. That's the reason those records sound like that.

"But we couldn't mix like that. The first mix I ever tried in surround was 'Superstition.' It didn't work. We could record onto 4-track, but we couldn't play it back properly—there was too much crosstalk," he says.

Years later, Margouleff is revisiting that space. He has evangelized Hear360's immersive audio products, which have been developed for virtual reality productions. Whereas a TV show or video is viewed in the third



person, with the director telling the camera where to look, he says, "VR is an interesting concept, because it's always in the first person; you're always looking with your eyes into the scene."

With that in mind, he says, "I'm starting to mix Test Shot Starfish in

headphone surround for VR. It really brings home the whole concept of allowing you to occupy the same space as the music. It's not the music in front of you, where you're standing there looking at an event; you're inside the space. We're able to take this electronica and truly be able to

let it unfold inside your head, so it's completely immersive. Working with Hear360 and their incredible software, I've been able to define a point of view for the music."

*Music for Space* can be previewed on the web and was officially released in early October. There are also plans for the immersive mixes to be available on vinyl. "We can put totally spatial, immersive, ambient audio on vinyl. The stylus sees it as stereo, but your headphones control the crosstalk," Margouleff reports.

"I've done it already. I took it over to Warner Bros. a couple of years ago—they thought I was out of my mind. But we're now at a place where we can bring this to the masses and do it in a really simple way."

Margouleff has been working on the album with Zeus at their home, mixing alongside Schember and Stuit. "Aaron is a superb musician and understands Ableton and Pro Tools. He and I both perform musically on these tracks; we're not just the mixer and producer," he says.

Indeed, that was the original idea behind TONTO—The Original New Timbral Orchestra, a multitimbral polyphonic analog synthesizer comprising components from a multiplicity of manufacturers. "The concept was that other people would come in and play. And, with TONTO, three people would play one instrument," he says.

"That's what makes this so very interesting to me. I have returned to where I started with Tonto."

Test Shot Starfish have embraced the idea that space is the place: "They celebrate the geeks of this world, engineers, creatives, mathematicians, scientists, the people who are really thinking about space travel and Elon's vision of getting beyond our planet.

"The important things are the intensity, the coloration, the sensibility of the orchestration, the ability to bring a sense of the universe, to leave the planet and write stuff that relates to our quest to be a multi-planetary species. That's the high purpose of what they are doing.

"It's another way of thinking about the world and a philosophy of life. This record, for me, encompasses that feeling."

Hear360  
hear360.io

Test Shot Starfish  
www.testshotstarfish.com

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briefs

### Before Noon Post Gets RedNet

LOS ANGELES, CA—Peter Cole has invested heavily in Dante infrastructure at his one-man audio post-production facility, Before Noon Post, which is currently working on season three of the Netflix animated sitcom *F is for Family*. His new gear includes Focusrite's ([www.focusrite.com](http://www.focusrite.com)) RedNet A16R, RedNet X2P, RedNet AM2 and Red 4Pre Dante-networked devices.

### SSL Fits betevé to a T

BARCELONA, SPAIN—Spain's publicly-owned local broadcaster betevé, which serves metropolitan Barcelona with TV channels, radio and an online presence, has invested in two Dante-networked Solid State Logic ([www.solidstatelogic.com](http://www.solidstatelogic.com)) System T 5300 32-fader broadcast audio production consoles for its main TV studios 1 and 2, which respectively handle news and general production.

### Killer Tracks Tours the Moon

SANTA MONICA, CA—Killer Tracks ([www.killertracks.com](http://www.killertracks.com)) supported the otherworldly soundscape of *Tour of the Moon in 4K*, a new video from NASA's Lunar Reconnaissance Orbiter mission, providing "Never Looking Back" a track from the company's library composed by Frederik Wiedmann and Joel Goodman

### SourceAudio Offers Whitelisting

LOS ANGELES, CA—SourceAudio ([www.sourceaudio.com](http://www.sourceaudio.com)) is offering a new licensing scheme intended to avoid issues of music copyright infringement or third-party take-downs on YouTube. YouTube Content ID powered by SourceAudio ensures that music publishers can maximize their ad revenue, or turn off ads/whitelist channels for clients who have legitimately licensed a song for YouTube through its whitelisting and reporting tools.

# Sugar Studios Expands to Streamline

BY STEVE HARVEY

LOS ANGELES, CA—Sugar Studios LA recently cut the ribbon on its expanded facilities in the Art Deco-era Wiltern Theater Tower in L.A.'s Koreatown, unveiling a dual-purpose 25-seat Dolby Atmos mix stage and 4K color DI theater on the building's penthouse floor. The addition also houses a 15-workstation bullpen for VFX and editing, and an adjacent balcony offering panoramic views of the city.

Sugar began as a sizzle and trailer company before morphing into a production and post facility with a focus on features. The vision behind the company, says senior producer Chris Harrington, was to extend collaborative filmmaking through the post process to the final product.

"There's this energy that happens on the set between the director, director of photography, production designer. Suddenly the project wraps, and everybody goes in separate directions. We thought, why can't we bring that same collaborative energy into the post process, where they have everything under one roof and



PHOTOS BY DAVID GOGGIN

Among Sugar Studios' new additions at the Wiltern Tower is an 800-square-foot penthouse stage, designed for 7.1/5.1 as well as Dolby Atmos Home Theater mixing.

your data isn't in five different places around town?

"The whole concept here is for us to get involved in the development stage," continues Harrington, "because if a director knows that this is where he or she is bringing their data, and they know they don't have to go anywhere else, there's peace of mind. Ultimately, it's about creating a better, more seamless process."

Sugar began six years ago on the

ninth floor of the building, where company founder, CEO and creative director Jijo Reed moved into one room. "It was him, a laptop and no clients," says Harrington. "But there were other offices on this floor and every time a lease came up, Jijo took it."

Harrington had previously worked elsewhere with Reed on a project and after building an international film  
*(continued on page 26)*

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## PMA2018 Explores Getting Paid, AI

BY STEVE HARVEY

HOLLYWOOD, CA—"The more composers work with live musicians, the richer the texture of the music that can be licensed through a library," advised Dominic Houston, head of the music team at Netflix, during his business keynote presentation at this year's Production Music Conference (PMC2018) in late September.

The annual event, hosted by the Production Music Association, the leading advocacy group—with over 670 members—for the \$1-billion-a-year global industry, is now in its fifth year. PMC2018 addressed a broad swath of issues related to production music, focusing not only on business issues, such as best practices for securing placements and, equally importantly, getting paid, but also how to maximize composition and production quality.

Houston, who related that he got into funk in the mid-1980s after spying Parliament's *Uncut Funk—The Bomb* album art (George Clinton, in sheepskin chaps, shouldering a boombox and surfing on two dolphins) in his brother's collection,

dropped some significant numbers on the crowd. Netflix has hundreds of series in development, and there can be 150 pieces of music requiring sync licensing for each TV series or film, he said. Houston's 25-member team must handle all that paperwork: "People won't get paid on time if we don't stay on top of it."

publisher. Aiding in that process, "We recently partnered with Trevanna Tracks; it's an end-to-end project management tool," he shared.

Music library publishers employ a variety of tools to track broadcast use of their music, including fingerprinting and watermarking. Audio watermarking is metadata embed-

"The old clichés about library music are long gone."  
*Dominic Houston, Netflix*

Much of that music is original, of course, but production music does get used, especially on the marketing side, he explained. "I think there's a consensus that the [production music] industry has really changed in the last five to 10 years; the quality of the music available has improved dramatically. The old clichés about library music are long gone."

Netflix is challenged by scale, Houston continued, and leverages technology to smooth the process for all stakeholders: the music supervisor, the Netflix team and the library

ded in the audio file from its creation, spread throughout the audio spectrum, explained SourceAudio's Hunter Williams on a panel entitled "The State of Audio Recognition and Monitoring Technology." Fingerprinting analyzes the "DNA" of the audio file after the fact, creating a reference to that pattern, he added; it's not embedded. Both methods have pros and cons, he said.

Current automatic content recognition (ACR) platforms include BMAT, Sound Mouse, Tunesat, pro  
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## Sugar Studios

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company in Canada, returned to L.A. and joined him at Sugar, where senior feature editor Paul Buhl was already onboard. “The three of us had been dying to get movies made somehow,” says Buhl.

Fast-forward a few years and Sugar has just released its first feature, a drama with a Latin music and dance backdrop entitled *Shine*, into 600 theaters, with Netflix hosting worldwide streaming. The team at Sugar is also executive producing *Westerly*, a documentary—six years in the making—about a womanizing ’70s-era Australian pro surfer who later underwent gender reassignment surgery.

“Filmmakers are always looking for a better way to make pictures,” says Harrington. “I’ve been doing this for 25 years as a filmmaker. I realized, post-production is where you spend most of your time. I need to figure out what post is all about, learn about it from a technical standpoint as a producer. It’s invaluable if I can understand that; I can be of better service and make better pictures. And that evolved into this.”

To move Sugar closer to that one-stop collaborative vision, the new 800-square-foot penthouse stage was designed for 7.1/5.1 as well as Dolby Atmos Home Theater mixing, which is becoming the standard deliverable format for Netflix and other streamers. L.A. facility integrator Audio In-



Teaming up to create Sugar Studios’ new additions were (l-r): Jim Pace, president, AID; Jijo Reed, CEO and creative director, Sugar Studios; Chris Harrington, senior producer; and Paul Buhl, senior feature editor.

tervisual Design (AID) collaborated with Sugar Studios on the design, construction, acoustics, equipment selection, programming and management of the project, which took nine months from planning to completion.

“The acoustics were done by Sound Kinetics in Colorado, who we’ve worked very closely with on a number of projects,” says AID president Jim Pace. “This is primarily a Harman room,” he adds, pointing out the JBL speakers, including M2 and 7 Series reference monitors, as well as Crown amplification and Intonato speaker programming and processing. On the picture side, the room is outfitted with a Barco DP4K-P projector, a 16-by-9-foot screen and Blackmagic Design’s DaVinci Resolve system for color grading.

“There are USB chargers in the seats; it’s all about creature comforts for the creatives,” says Pace. “And

we’ve tapped into the Crestron program to control the lights, projector, the Apple TV and Blu-ray player.”

One of the biggest challenges was building out the concrete shell of the penthouse floor in a 1930s building with strict fire safety regulations and small elevators. Kaiser Comm Construction supervised the build, Pace reports. “People had to carry things up 12 flights of stairs,” he says.

The new Dolby Atmos stage is also equipped with a Slate Media Technology Raven Z3C touchscreen system running Pro Tools. Senior audio producer Bret Mazur explains, “I have a relationship with Slate; we discussed it and thought it would be a great opportunity to start implementing it into the post workflow. They have amazing analog modeling software. The surface is awesome; it looks cool and it works well. And you get to interact hands-on with Pro Tools.”

Mazur, a multi-platinum producer with 18 million record sales to his name, has used the Raven a lot for music production, he says, and has another Slate touchscreen system in his audio post and scoring suite on the ninth floor, which houses a Whisper Room for vocals and voiceovers. Going forward, Mazur will use a dedicated 14-by-20-foot area on the new Atmos stage for ADR and loop group recording, he says.

A greenscreen cyclorama stage on the ninth floor, between Buhl’s cutting room and senior colorist Bruce Bolden’s suite, is also central to Sugar’s service offerings, says Harrington. Filmmakers often miss inserts and transitions during production, he says. “So we can come in here and do them; you’d be amazed what you can do on this little cyc stage.”

Sugar’s presence in the Wiltern Theater Tower is rounded out with two private and self-contained edit bays on the fourth floor, complete with a kitchen. Sugar recently completed a complete package of post services for QC Entertainment’s *The Oath*, starring Ike Barinholtz and Tiffany Haddish, which was edited in the fourth-floor bays.

Things are going so well that the Sugar team is already considering further expansion. “There’s space opening up on the 11th floor that we’re interested in,” Harrington reveals. “And it’s already divided into edit bays.”

Sugar Studios LA  
www.sugarstudiosla.com

## PMA2018

(continued from page 25)

Tunes, Digimarc, Audible Magic, ACRCloud and Sound Aware. Artificial intelligence is improving the accuracy of automatic content recognition, reported BMAT’s Inigo Ugarte-buru.

The ACR process still relies on broadcasters supplying cue sheets listing the music used, but challenges remain—for instance, detections can get matched to the wrong TV episode, and the use of stems, loops and beats can confuse things. Turner’s Shane Sanders noted that 16 hours a day of CNN’s programming is live. “The production staff doesn’t generate cue sheets for that on a daily basis; budgets are tight,” he said. Sound Mouse has been “an incredibly helpful solution,” he noted, generating dynamic cue sheets with video references for Turner and the performing rights organizations.

Reporting data varies significantly

from one country to the next, said Paul Sims of proTunes. “There are 168 pieces of metadata that you need to collect,” he said.

BMAT handles 60 million tracks and monitors thousands of TV and radio stations worldwide for usage. Retitling—where multiple libraries offer the same track with different titles—is rampant and could lead to reporting errors. But, said Ugarte-buru, “It can be analyzed and solved; there are ways of identifying which of those works are considered hybrid.”

A panel on AI-generated music went well beyond the preview in *PSN*’s October issue. Indeed, Mick Kiely of AI music platform Xhail broke some news at the event.

“We have a major corporate client who commissioned a branding track. We’ve created a platform so that now, when they create video—and they make maybe 250 internal educational videos every year—they can, in real time, create a new version of that brand identity. We’ve been able to extract the DNA that is their brand and can produce unlimited music that is

associated with that brand. That’s a new direction for us,” said Kiely.

Asked by moderator Andrew Gross where his platform was weakest currently, Drew Silverstein of Amper Music responded, “We’re really good at a cappella vocals and big choirs. One of the challenges is doing singer/songwriter-style vocals. That’s difficult for Amper to do convincingly—unless you want something to sound processed.”

Gregory D. Lapidus, who has been focused on intellectual property issues in the music industry for about 30 years, weighed in on the questions of copyright in AI-generated music. “AI has the potential to augment human ability,” he said. “I don’t think it’s anything to be afraid of.”

Copyright attaches when an original work of authorship is fixed in a tangible medium, he continued. In the case of AI-created music, the central issue is that of originality.

AI software is created by someone and they program certain parameters, and some AI music software introduces randomness to give the im-

pression of originality, he said. “But I don’t think AI is creating original works of authorship. I think that the people programming the software are the ones creating the original works of authorship,” said Lapidus.

AI means that the future of music will be very different, said Silverstein. But the value of human-created music is the artistic collaboration of people making art together, he stressed. “That will never go away. [Director Steven] Spielberg is not going to use Amper when he can work with [composer John] Williams.” But Amper does enable artists to be more creative, productive and successful, he said, comparing it to the pre- and post-Pro Tools worlds.

From the audience, composer Gil Talmi commented, “The words ‘moral compass’ come to mind. It’s not a question of, Should we be doing this or not, but Should we do it from a place of mindfulness? The technology can take over before we know what happens.”

Production Music Association  
www.pmamusic.com

innovations: the manufacturer's view

# Rethinking Spatial Audio Reproduction

## HOLOPLOT WAVE FIELD SYNTHESIS TECHNOLOGY

BY OLE SCHNIEDERS

The history of our technology is a journey of searching for the true reproduction of sound.

Back when Helmut Oellers, our ideation father and head of R&D, spent his days solving acoustical issues in planetariums, he started to look for an improved audio reproduction solution that would be superior to conventional approaches. The goal: Achieving correct localization and reproduction of the original signal for everyone in the audience, thereby creating a truly genuine immersive audio experience.

It all started with the fact that the classical audio reproduction procedures we are all so familiar with are not truly reproducing the original sound. Until today, the status quo in audio reproduction, whether for so-called "immersive" environments or not, is based on the use of phantom sources. These phantom sources are an artificial perception of the source location in our brain—psychoacoustic effects caused by level- and time differences at which signals arrive at both our ears. In these cases, all attributes of the original source, direct sound, first reflections and timbre, are captured in one signal and subdivided between the speakers (e.g., stereo). Therefore, none of the important first strong reflections, which the human auditory system uses for localization, are reconstructed at their correct starting point. Hence, the replicated sound sources are unreal, do not exist like this in nature and do not share the same behavior with the original signal.

Because they are illusory, phantom sources create an unstable image and localization, and their effect can only be achieved in a small area of the audience (the sweet spot). Once a listener is outside this area or changes his perspective, the imaging and localization are distorted and incorrect. The illusion no longer works and the listener is able to clearly identify the speaker as the source of all audio.

In practice, this might seem less of a prominent problem when an acoustical image is only replicated on the frontal horizontal listening plane for a fixed listener position. However, with the industry and consumers demanding more immersive, intriguing and

realistic experiences, this is seldom the case in current projects. The desire to create spatial audio is today clearly on the rise, and for Holoplot, which started in 2011, this was already the ignition spark.

Helmut's—and hence Holoplot's—approach to finding a better solution started off with wave field synthesis (WFS) as a basis of design. WFS is a spatial audio reproduction procedure that does not depend on psychoacoustic phantom sources. Instead, it creates a physical copy of the original wavefront, using a high number of smaller elementary waves according to the Huygens-Fresnel prin-

the proven theoretical concept, previous classical WFS systems did not attain big commercial success. The reasons were often rooted in their environmental and processing requirements. Classical WFS systems mostly prescribed a circular array of speakers around the listener, ideally dry room acoustics and often a significant amount of processing power. Hence their application was limited to very specific immersive installations, with a broader application not being feasible. With our developments, we took on the challenge to fill that gap and create a flexible and practical product. Perhaps unsurpris-

through targeted reflections to create the desired sound field. This is in stark contrast to classical WFS approaches and support a system that is much more scalable and applicable. With various algorithmic and computational adaptations, the processing requirements can also be reduced. The combination of proprietary hardware and software finally gives us significantly more control by letting us create more efficient audio wavefronts, leading to very precise two-axis beamforming; this results in a very constant level over distance and multi-content capabilities, which make it appropriate for uses beyond the typical WFS applications.

Together with the team, we defined our scope for the future by taking a new perspective on the product's capabilities and identifying its potential for other applications aside from immersive audio. As we demonstrated in test installations at the Frankfurt Central Station, control over the wavefront propagation leads to excellent audio quality results in even the acoustically worst environments. In this case, that meant Speech Transmission Index (STI) values above 0.8 on 175m distance with only -7 dB over the whole plane. Raising the bar for speech intelligibility and quality in general, though, is a topic for all applications, not just the most challenging environments.

In February 2018, we released our first product series, called Orion. The focus of this series is mainly on speech and creative applications. The capabilities it offers to planners, audio engineers and creatives are vast, as they get access and control over audio that they haven't had before. Whether it's creating an incredible homogenous soundfield over a large area, delivering best speech intelligibility, distributing multi-contents in a single space or building an incredible immersive installation, Holoplot can be a very powerful, flexible and easy-to-use solution.

We are proud of our innovation and will continue developing more to really change how audio is reproduced and eventually experienced. Ole Schnieders is the marketing manager at Holoplot.

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Holoplot's Orion Series

ciple. This allows for the re-creation of all sound sources and their reflections at their correct location. The realization of this principle delivers several advantages: First, the sweet spot is eliminated and localization of sound sources is correct and stable, independent of the listener's relation to the source. Second, virtual sources can be synthesized in the room, close to the listeners. Therewith, proximity, a so far non-available parameter in audio reproduction, has been introduced and delivers incredible effects. Third, and contrary to conventional procedures, direct waves, reflections and reverberation can be processed in separate unique signals and, thus, can be treated independently from each other. This gives incredible new flexibility to the creation of sound experiences.

During the development of a wave field synthesis system, we were able to learn from past attempts to design a commercial WFS system. Despite

ingly, the development process for such a research dependent product is non-linear, scattered with side steps, loops and setbacks. When trying to pave completely new paths, choosing the right one is a challenging task and often non-obvious.

When I joined Holoplot full-time in 2016, after having been involved for several years, the company was still in the prototype phase with a rather open target market. The product concept has been based on a fully modular, two-dimensional matrix system consisting of our own proprietary speaker modules, processing core and software. Depending on the application, our speaker modules can be combined into single or multiple wall structures. The system works mostly centrally from a single or a few points of origin, meaning it does not require distribution of many speakers around a space. Similar to reality, it can often actively use the playback room

## THE METALLIANCE REPORT: JBL 7 Series Studio Monitors

BY CHUCK AINLAY

This being the second in our series of monthly reviews for *Pro Sound News* (last month, Frank Filipetti reviewed Audio Technica 5000 series microphones), I thought it only fitting that this one be a speaker review. The microphone must capture a sound and turn it into a corresponding electrical impulse that we record and mess with, while the speaker, in turn, must take those amplified electrical impulses and create a faithful reproduction of the recorded sound. In this review, I'll talk about the innovative technology of JBL's 7 Series studio monitors and explain how it creates never-heard-before performance from a small speaker. The 7 Series range consists of the previously released LSR-708i and 705i passive speakers, as well as the newly released LSR-708p and 705p self-powered speakers. My experience is mostly with the 708p, but my characterization is true of the entire line.

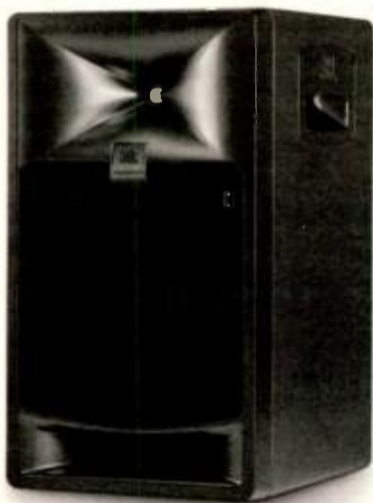
It was at the 2015 AES convention in Los Angeles that I first heard the 708i. JBL had set up a private listening environment at the Grammy Museum's theater near the convention center, where it was demoing its flagship studio monitors, the M2, as well as introducing a new smaller speaker based on the same design. We first heard some beautiful high-res playback through the M2s, and then we were treated to the same music played through a pair of much smaller speakers. The SPL and bottom end that were generated was unbelievable—so much so that I had to ask if they were using a subwoofer (they weren't), and then subsequently ask them to unplug the M2 mains, just to be certain that all I was hearing was the small speakers. I'd never heard anything like that out of such a small speaker.

The initial offering of the 7 Series was a passive speaker intended for multichannel post-production use, designed using an external amp and digital crossovers to make it cost-effective. For my purposes, a self-powered speaker was more appropriate, but I had to wait for it to be released.

I had the same experience when I first unpacked the 708p powered speakers and listened in my stu-



Chuck Ainlay with the JBL LSR-708p studio monitors in his home studio



JBL LSR-708p studio monitor

dio's control room. I was tracking an acoustic band with an upright bass. I had been struggling with the inconsistencies of the bass notes and was thinking that I needed to change mic position. Once I put up the JBLs, all of that evened out, and yet the presentation was what I was used to from my tried-and-true nearfield speakers.

I've now had the 708s in near constant use in my home studio. Although the speaker is equipped with DSP for the crossover, there are also 12 bands of room EQ plus eight additional bands of user EQ that I've never felt the need to mess with. I instantly felt comfortable with these speakers right out of the box and have received nothing but praise from my clients for the mixes I've done using them. I tried moving them around a bit, initially having them on speaker

stands in a nearfield configuration, but I settled on a more midfield spacing.

The one thing that completely blew me away when I started using the 708s was the lack of distortion in the top end. I've never heard anything like it from a traditional speaker that utilizes a dome tweeter.

I'm the kind of guy who's always searching for the speaker that's going to make my mixes better. My philosophy has always been that if you can't hear it properly, you can't mix it properly. Besides the lack of distortion, imaging and depth of field are phenomenal—there's a dead solid phantom center when you are seated at the mix position, but you can sit off to one side and still hear the complete stereo mix without any coloration.

The other thing I really like is the AES input. It will accept up to 192 kHz and allows me to feed the speakers directly from the AES out of my UA Apollo 16, which I use at my home studio for A-D and D-A conversion. This allows me to bypass the additional conversion getting into the speaker. That being said, in an analog environment, the speaker does the required conversion to digital at 96 kHz before the digital crossover and EQ. That is how JBL is able to create such an extended frequency response and seamless crossover transition.

If you like to listen loud, like I do from time to time, these speakers can fill the room. Dual power amps in each speaker of 250 watts for the HF and 250 watts for the LF, an over spec'd dual voice coil woofer, and the

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HF compression driver make that all possible.

Yikes, did I say compression driver? I know what you are thinking—as was I. Compression drivers are harsh and beamy? Not so with the 7 series. Basically, JBL miniaturized the wave guide and driver technology used in its flagship studio monitor, the M2, to create such outstanding performance.

There's so much new technology involved that it's way beyond the scope of this review to explain it all, but suffice it to say, it's very impressive. All these components are beautifully installed in a low resonant cabinet with built-in handles and mounting positions on the top, bottom and rear for easy, permanent installation.

With four Grammys, two CMAs and 10 ACM awards, producer/engineer Chuck Ainlay has recorded and/or mixed well over 300 albums, including work with legendary and current country artists such as George Strait, Taylor Swift, Miranda Lambert, Lee Ann Womack, Steve Earle, Lyle Lovett, Emmylou Harris and the Dixie Chicks. Chuck has placed his distinctive production and engineering stamp on projects with mainstream pop artists such as Dire Straits and the near entirety of Mark Knopfler's solo career, as well as Peter Dinklage, Lionel Richie, James Taylor, Jewel, Bob Seger, Pentatonix and Sheryl Crow. His work in immersive audio has resulted in groundbreaking projects such as the 25th anniversary remix of Peter Dinklage's *Frampton Comes Alive* and the Grammy Award-winning 20th anniversary remix of the Dire Straits album *Brothers in Arms*.

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"The SPL and bottom end that were generated was unbelievable—so much so that I had to ask if they were using a subwoofer (they weren't), and then subsequently ask them to unplug the M2 mains, just to be certain that all I was hearing was the small speakers."

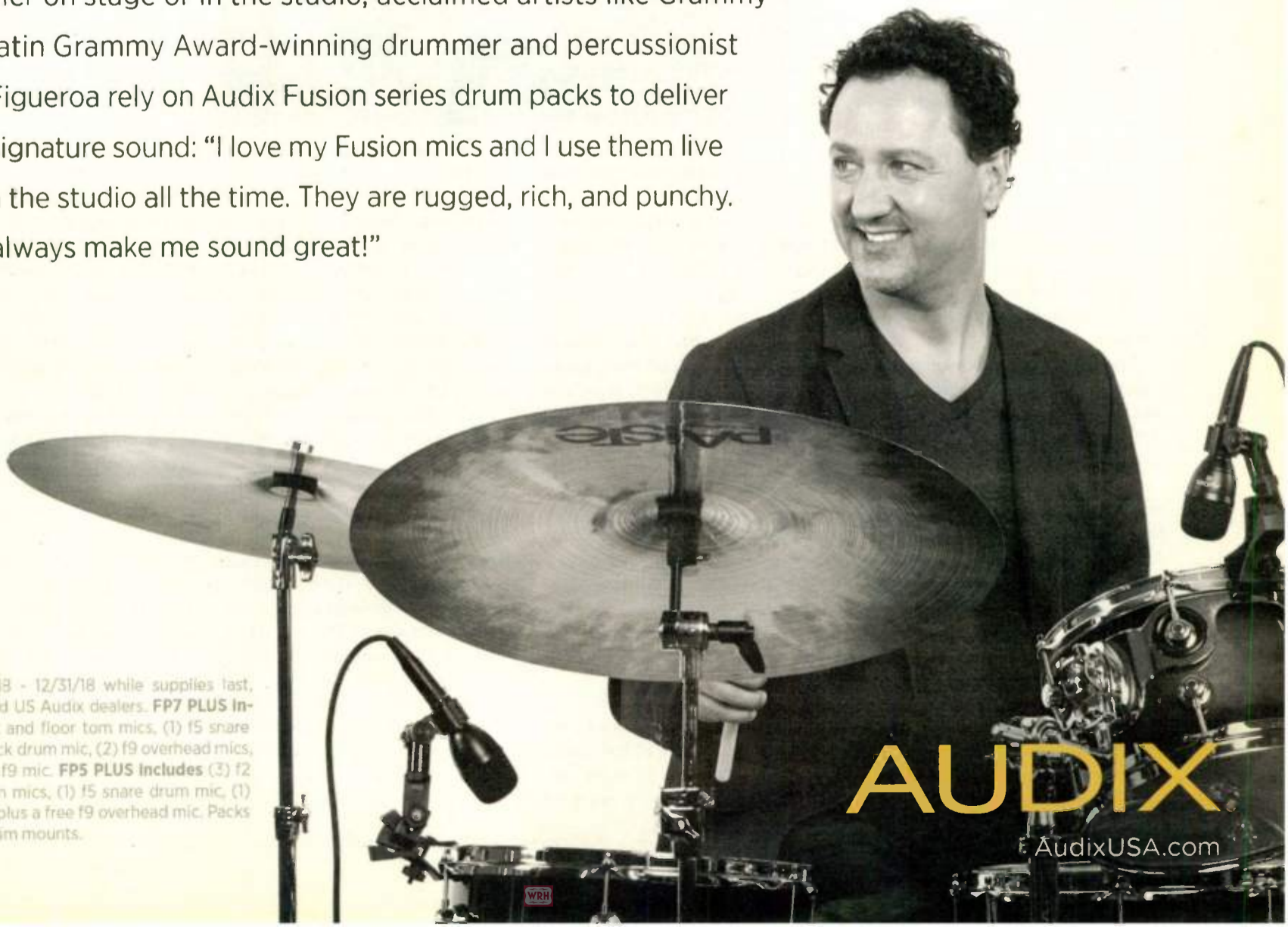
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## EHRLUND EHR-M CONDENSER MICROPHONE

I'm not sure why I was so surprised to learn of Ehrlund Microphones' signature use of triangular diaphragms in their microphones; after all, rectangular ones are quite popular these days, and a ribbon mic's ribbon is indeed a rectangular strip. We know that circular diaphragms have the most resonant properties (i.e., a drum head), so it stands to reason that a triangular one would have less resonance and therefore a different response. In my tests with the Ehrlund EHR-M, I found the mic to perform just a little differently than the norm for a cardioid LDC—a difference that was minimal in some cases and impactful in others.

Swedish manufacturer Ehrlund has a line of six mics and a number of transducer contact pickups, all with a triangular form factor that reportedly harnesses the fine detail that is captured by a smaller area of pickup (toward the points of the triangle), as well as the fullness and high-output/low-noise of a larger area (think the center of the triangle).

This capsule design and its associated electronics (transformerless and a low phantom-power draw of only 2 mA) makes for some impressive specs: Frequency response from 7 Hz to 87 kHz (!); self-noise less than 7 dBA; max SPL of 125 dB; and reportedly exhibiting the same frequency response at any operating impedance. The mic's body is aircraft-grade aluminum (fairly lightweight at 340 grams), with a nickel-plated, stainless steel mesh windscreen, but there is no pad, filter or pattern switch of any kind.

The EHR-M does not come with a shockmount, but has a stand-mount with a lever for positioning. No windscreen or storage case is provided, although a protective sock is included.

I first threw the EHR-M into a session on drum room and then a thin male vocalist later that day. The drum room response was nicely articulated, with fast and exacting high-end response coupled with a lack of "slow decay" or fullness in the bottom end—more of a quick, natural and reference kind of thing. The vocalist was similar, with an emphasis on clean and accurate transients and no additional fullness or chesty thickness added, except for a little proximity effect that was easily controllable.



I've had a rash of non-traditional drummers coming in with cajons, snares and cymbals as of late, and I found the EHR-M to be quite useful with such kits.

Although those qualities remained with other applications, the deeper I dug in with the EHR-M, the more surprises I found.

While I was expecting the EHR-M to offer a tighter-than-cardioid pattern, it was indeed truly cardioid (with a little bump of sensitivity on the butt-end not unlike a typical hypercardioid pattern), but a little smoother off-axis than to be expected. I also found the mic to be insensitive to distance—that is to say, it was consistent whether in-close or across the room. Get close enough with a vocalist and some very usable proximity effect was there, too. (I found this cutting VOs with a deep voiced, baritone, male voice actor who can get too thick.)

I've had a rash of non-traditional drummers coming in with cajons, snares and cymbals as of late, and I found the EHR-M to be quite useful with such kits. I got wonderfully

natural snare sounds from a position about 16 inches away and really nice cajon slaps, too, with super-sweet transients and a complete lack of hype or harshness. That said, the 125 dB SPL handling was not enough for a loud rock drummer; the mic's response blew out and was unusable in this case. (Same thing in my attempts as center overhead, right over a banging drummer.)

However, tests with acoustic guitar, vocals and hand percussion (tambo, agogo, maracas, vibraslap, claps) were all winners. I always got great results with acoustic guitar that seemed to mitigate my constant inner debate over LDC vs. SDCs. I got accurate, realistic and uncolored results in both the body and neck-meets-body positions. Percussion tracks with agogo, tambo and shaker showed off the EHR-M's crisp top-end, which doesn't distort, grabs transients with ease and both cuts



BY ROB TAVAGLIONE

Rob Tavaglione owns and operates Charlotte's Catalyst Recording and has been a longtime studio contributor. [twitter.com/robtavaglione](https://twitter.com/robtavaglione)

and sits in a crowded mix quite well. Vocals seemed to be a mixed bag with the EHR-M, as it doesn't provide any fullness to weak or thin voices, but boy does it capture truth and detail on full and powerful voices. In fact, I was stuck replacing a single bad vocal line cut with a conventional LDC with an EHR-M replacement line and I got them to (almost) match, but only after considerable EQ to the EHR-M tone.

Conversely, I found the EHR-M to be a perfect choice for baritone sax. As part of a four-piece group horn tracking session, I found ample rejection of the other horns at 90 and 270 degrees off-axis (and with a pleasant tone to the bleed), fantastic capture of all the honky and "brappy" detail and a "deep and full, yet lean" bass response that was much more accurate and resonance-free than typical LDCs.

Once I got used to its strengths and limitations, I did not find anything not to like about the EHR-M. In fact, I was wishing for a pair for drum overhead (with moderate drummers), orchestral and piano applications where I think the EHR-M could excel. I was also wishing for multiple patterns, too, but those uses would be ideally served but Ehrlund's EHR-T, a "double-M" with two capsules and two outputs (which allows you to create any polar pattern you desire in post).

The EHR-M is not inexpensive at a cost of about \$1,699 street, and that doesn't include a foam windscreen, shockmount, storage case or accessories. However, it is a mic with a uniquely pure, transparent and accurate response that is hard to achieve with any other mic I've ever tried. If you're looking for a microphone that behaves quite the opposite of your typical slow/transient-taming/bottom-end-making/top-end-coloring passive ribbon mic, then this EHR-M might just become your secret weapon transducer.

Ehrlund  
<https://ehrlund.se>

## AURALEX MUDGUARD V2 MICROPHONE ISOLATION SHIELD

The consensus is already there: Microphone isolation shields are really helpful in mitigating bad acoustic recording environments, reducing leakage and helping track sweeter vocals. I've also been using the Mudguard v2 around the studio for various apps when the need presents itself—taking the room out of vocals, tracking ultra-dry in-your-face acoustic instruments and sometimes making my drum kit ambience mics a little less ambient.

The Mudguard v2 uses a non-perforated plastic shell (16" x 10" x 14" WDT) lined with Auralex's 1.25-inch Studiofoam wedge foam. It mounts to your mic stand with a steel L-bracket, which, along with the supplied fittings, will fit most mics, but not really tall ones. The mic should be positioned about 5.5 inches from the shield's rear to ensure both a natural sound and reasonable isolation. The sides of the shell are not concave but convex, which reportedly focuses reflected sound away from the mic, not channeling sound toward the center (like most designs on the market), which can cause phase smearing and coloration.

I also use another mic shield, the Primacoustic VoxGuard, and thought that some direct comparisons could

be informative, especially since the Mudguard uses basically the same materials and has the same relative size (unlike more expensive models with metal construction and venting designs, like the sE Electronics Reflexion Filter). I set out to test three factors of importance to consumers: Can these shields reduce noisy DAWs effectively? Which shield produces the best vocal sound? And which one attenuates leakage the most?

For testing, I used a Neumann TLM 103, which I chose for its cardioid pattern, ample off-axis response and side-address design, as end-address mics don't fit ideally in either shield tested. With a reference-clean AMS-Neve 4081 mic pre-amp, I did a series of tests with the only difference being the shield used.

Background Noise: One can only imagine how many vocals are cut in control rooms today, so the ability to reject some hard drive clicking, transformer hum and fan noise is a big



The Mudguard v2 earns its price for helping block out room noise, reduce leakage and achieve the most natural sounding frequency balance, especially for vocals.

reason for these shields. I set up my mic just a few feet from my isobox (with its four built-in fans), which houses the computer, and cracked the door to allow more noise out, like in a noisy one-room project studio. Both shields removed a significant amount

of the DAW noise—not all of it, but enough to be noticeable and worthwhile. The Primacoustic shield got the noise floor 3 dB quieter, but the Mudguard attenuated high frequencies a little more for darker leakage.

Acoustic Guitar: I played my Taylor acoustic in three positions relative to the shields—on-axis, 180 degrees off-axis and 90 edges off-axis. When on-axis, I got a slightly more natural sound from the Mudguard, as the VoxGuard tone had a low-mid emphasis, slightly dulled, and the Mudguard sounded like it wasn't there, just neutral. Both rejected the guitar's sound well at 180 degrees, with the Vox-

Guard attenuating a little more overall, about 3 dB more. At 90 degrees off-axis, both offered only moderate attenuation in equal amounts.

Drums: Another popular use of these mic shields is as a hi-hat isolation shield. (continued on page 33)

## BEYERDYNAMIC FOX USB MICROPHONE

In my travels and reviews, I've always found USB mics to be incredibly convenient, if not really all that great sounding. Since these mics are often used by novices making their first forays into pro audio, they have to possess a very user-friendly feature set and still capture worthy audio across a pretty wide set of circumstances. beyerdynamic seems to have carefully straddled that elusive line between consumer convenience and pro performance with its FOX portable USB microphone.

The FOX is a large-diaphragm, pressure gradient condenser mic using the new(ish) USB-C connection and recording up to 96 kHz with 24-bits. FOX connects directly to your recording device digitally with plug-and-play convenience, as in no drivers required (iOS, Mac or Windows). Acting as a DAW "interface," one monitors the recording via FOX's built-in headphone amp, 1/8-inch mini-plug headphone jack, and volume control; selecting DAW

playback, direct zero-latency monitoring from the mic or a continuously variable blend of the two. A backlit mute button (a "cough button" for live broadcasters) flashes when the mic is muted.

The rear of the mic has the USB connection and a single control, a

high- or low-sensitivity switch. A perforated-plastic pop filter clips directly onto the mic 1.25 inches from the diaphragm. The mic can be stand-mounted or attached to the provided desktop stand, a thin plastic foot and tilting joint that securely screws to the mic. Self-noise is -107 dB FS (A-weighted), with the rather important maximum SPL hard to exactly determine, as it is rated at 130 dB broadband and 97.5 dB at 1 kHz.

I hooked the FOX up to my MacBook Pro with the supplied 3-foot USB cable and noticed what a nice woven-braid cable it was and found USB-C to be convenient with its "no wrong way" connection. I selected FOX for system input and output, and once in my session (with MOTU's Digital Performer 9.52), I was able to record at 96 kHz with 64 sample latency, as 32 samples wasn't achievable without dropouts and freezes. In order to not have to fiddle with the mic's controls too much, I monitored a 50/50

blend between DAW playback and live sound directly off the mic, with the DAW set to not pass input signal through, only playback.

I set up in my living room just like a singer/songwriter (with my Taylor acoustic) or a podcaster might, with the FOX set for high gain. At about 1.5 feet out, the sound was a little roomy and with just enough level; at 6 inches away, some moderate proximity effect kicked in for a fuller sound and decent levels. At 3 inches out, my headphones started to noticeably distort (although the signal recorded to DAW was actually ok). When right up at the pop filter, the cans were blown out but the recorded signal was actually ok. Plosives began to be an issue when closer than 6 inches out, but the mic took level surprisingly well, capturing my loud singing and yells without distortion up until about 6 inches out. A little tasteful DSP seemed to be taming dynamics, the tonal balance was reasonably flat, and a nice blend was found between guitar and voice.

I was able to go straight into some overdubs of voice, guitar and percussion with this setup very easily, with only adjustments to mic gain and the DAW/mic headphone balance. I found the tilt mechanism to be nice and snug, too; once in place, the mic

(continued on page 33)



beyerdynamic seems to have carefully straddled the elusive line between consumer convenience and pro performance with its FOX portable USB microphone.

## SONARWORKS REFERENCE 4 MONITORING CORRECTION SOFTWARE

I had the opportunity to review Sonarworks' Reference 3 system back in February 2016, and the same operational principles are found here in Reference 4. To be sure, Sonarworks has made improvements under the hood to improve on its detection/correction algorithm(s), but Reference 4 (Mac or Windows) now also includes the company's similar monitoring-correction solution for headphones. This makes multiple-reference-point monitoring possible, all of it more accurate than normal, in a single, neatly-contained package. Indeed, such acoustics-defying room correction comes at the price of convenience, but the benefits gained are proportional to the depth of your room's problems and therefore can be pivotal.

In a nutshell, the Sonarworks Measure app does a measurement of your room's response with a series of frequency sweeps, clicks and bleeps that determine your phantom center and left/right frequency response, as measured from a set of 37 positions (whether via a Sonarworks-provided measurement mic, as tested here, or a similar one with the necessary performance graphs available). Once analyzed, Reference 4 allows a saving of that data and its recalling pulls up an inverse convolution-based EQ curve that flattens the room's response within reportedly 0.9 dB.

The concept for headphone correction is quite similar, except now Sonarworks provides the ready-to-go response curves for any of 100 sets of headphones—you simply select the preset that engages the inversely corrective response. In theory, one could now do mix comparisons between multiple monitor sets, as well as multiple headphone sets, all easily recallable and switchable within Reference 4—and such “corrected into flatness” response could be used at multiple studios sharing a project, or by multiple band members collaborating, or be applied to the rooms we're visiting with a brief 15 minutes (in my experience) of setup time for analysis.

Another aspect of Reference 4 that aids the above is the new Systemwide app. If normally v4 is applied as a plug-in inserted at the end of your mix bus, or just before the L/R output to your D/A converters, Systemwide can be utilized for your computer's overall audio output, aiding in convenience.

Reference Studio Edition 4 is available as an upgrade from Reference 3 for \$39, as an upgrade from

the Headphone Edition for \$169, as a download for \$249, and bundled with the XREF measurement mic for \$299. Additional bundles with pro-grade headphones are also available now.

Don't let the analysis process scare you away from this system, as it's easy, not that tiresome and seemingly more accurate than with Reference 3. You'll get the hang of it quickly and you should expect to repeat the process, as you'll be initially disturbed with the non-linearities of your room's response and will surely rearrange objects, or room EQ, or add acoustic materials to get the room naturally closer to flat before correc-

tion. Advanced tips: hold the mic, don't use a stand; hold the mic away from your reflecting/diffracting belly; and eliminate ambient noise, a noisy preamp, heavy breathing or anything else that can disrupt accuracy. (Version 4 will warn you if you get a corrupted measurement.)

for live tracking with greater CPU load and less filter accuracy); Limit Controls allows setting of minimum and maximum frequency values for processing (subwoofer protection, if you will); Listening Spot allows for adjustment of your sweet spot (like when you move over a bit for a client) and even a Dry/Wet control for those cynics who insist on some parallel blending of the original pre- Reference 4 signal.

Just as with Reference 3, I found 4 to be helpful in cleaning up my monitoring accuracy, with less profound room modes and assistance in filling up nulls. I did not perceive any loss of dynamics, punch or signal quality



Sonarworks Reference 4 Systemwide enabled, with Bass Boost and Tilt engaged to show curve shaping abilities

tion. Advanced tips: hold the mic, don't use a stand; hold the mic away from your reflecting/diffracting belly; and eliminate ambient noise, a noisy preamp, heavy breathing or anything else that can disrupt accuracy. (Version 4 will warn you if you get a corrupted measurement.)

Once you've analyzed the room and saved the preset, you can instantiate the Reference 4 plug-in to correct the room's response, with a number of user-controllable variables. Overall EQ balance can be tilted in that linear/fulcrum-fashion that many find very pleasant sounding; Bass Boost can be applied; a specific Target Curve can be selected for atypical playback environs (i.e. SMPTE's X-Curve for theaters); and headroom can be preserved via Safe Headroom (attenuation no greater than the greatest deviation of your room's curve). Also, mono monitoring is present for the phase checker in all of us; latency can be controlled via two modes (with Linear mode about 50 milliseconds and excellent phase accuracy; nearly Zero Latency mode

and found Reference 4 to sound just a slight touch more smooth and natural than Reference 3 was.

I engaged Reference 4 Systemwide on my system outputs and found that to be helpful, too, as it maintained the corrected sound as I played back web audio and reference mixes from my computer. However, when analog summing/mixing Systemwide won't process the active mix output, so I instantiated Reference 4 on my stereo mix channel and monitored with a little latency (no problem when mixing, unlike tracking). Once routed in this manner, I had to be sure to disengage the Reference 4 plug-in if I were to do a render/bounce for clients, or else the bounce would have Reference 4's inverse room EQ curve applied to it! No worries about the chance of double processing with Reference 4 as a plug-in and Systemwide on, too, as you can have a warning message come up and automatic Systemwide disarmament. I did notice very occasional and brief audio dropouts when mixing via the plug-in (with a large buffer of 1,024 samples)

that did not affect the recorded mix signal.

When mixing, the ready availability of the Headphones version was super helpful. My personal mix method involves full-range mains, limited-range Avantone cubes and flat-ish Audio-Technica cans, so I was able to make comparisons quickly with increased confidence. My main gripe is that I had to scroll through a long list of headphone profiles each time I switched headphone models, as a “favorites” list would be nice.

On a day with no session, I did a bunch of test recording, mixing and mastering work all in-the-box and simply kept Reference 4 on the whole time (via Systemwide, or as a plug). Checking references, switching from monitors to cans, bouncing from project to project was all easier with v4's help and I quickly readjusted to my room's “new acoustics” readily. I did have to use the Zero Latency mode for overdubs and suffer a little DAW latency, but switched back to Linear mode for mixing and mastering.

However, my usual workflow is based on analog summing and there's no reasonable way to use v4 during tracking or overdubbing in this scenario. It seemed too distracting and jarring, using v4 only for mixing until I began to use Bass Boost and Tilt more liberally. I found that a click or two of each control allowed my Reference 4 corrected system to sound more like the familiar balance of my system, just without the troublesome bumps and notches in the midrange that Reference 4 corrects (and a room EQ simply cannot), allowing me to switch Reference 4 on for mixing and not be disturbed by a whole new frequency balance, just a corrected one absent of the usual distracting quirks.

Switching between headphones and monitors is one-click easy with-in v4, but the results of the headphone correction were not as consistent from model to model as I would like. I had five pairs of cans that were on the Reference 4 list (from Fostex, AKG, Audio-Technica and Status Audio) and those the furthest from flat improved dramatically, making their un-corrected response seem almost comical. But, even once corrected, I still found myself needing some Bass Boost and Tilt to tune in the ideal frequency balance from each set. Conversely, my more flat-ish phones didn't seem to gain much from Reference 4 correction; my A-T ATH-M40X's sounded better (and flatter) without Reference 4 correction! Perhaps I should send my personal pair in to Sonarworks for exact

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## beyerdynamic

(continued from page 31)

stayed in place. The plastic foot/tilt is easily removable and the large flat-head screw is made to be removable with a coin as a screwdriver.

The high/low gain switch is easy to flip as it's the only control on the mic's rear, so I flipped it and found the mic to handle loud levels better than expected, with only 97.5 dB of SPL handling. My yells were now translated cleanly right up until I was nearly touching the pop filter and even then, they only barely distorted. Despite what had to be some serious DSP level containment, the sound actually held together well. I was hoping that FOX could handle band practice SPL, but I'm afraid that didn't work out; placed in the center of the room, 3 feet off the floor on a small table, my recording of just drum kit was slightly squared-off and clipped and it only got worse with bass, guitar, vocals and so on.

Fit and finish were excellent on the whole package (the mic itself feels heavy for its small size, and sturdy), even though I have some durability qualms that can't be answered just yet. That plastic desktop stand is stable enough, but it seems like it might not hold up to backpack-abuse and doesn't do much to prevent bumps and thumps. Likewise, the pop filter works pretty well, stopping plosives up until about 4 or 5 inches out, but it is also thin and seems like its snap-

on clip might snap off; only time will tell.

As much as I liked FOX's frequency balance, sensitivity and cleanliness, I did find myself wishing for more headphone amp gain, as the amp seemed to clip before the mic does. For that matter, two levels of mic gain seemed not quite sufficient, as continuous variability would be preferred. And finally, singer/songwriters can be content with cardioid-only directionality, but omni, stereo or figure-8 patterns would be quite valuable for podcasters/interviewers and their guests/subjects (although the requisite second or third diaphragm would make for a more expensive mic, perhaps a "deluxe" model).

At \$179 (direct), FOX is mid-priced in the USB mic market, but a better performer than most. In this sphere, the Blue Yeti is the most popular amongst podcasters for its multiple polar patterns, loud headphone amp and continuously variable gain, but it is large, heavy and only records up to 48k at 16-bit. Many lower-priced USB models don't offer the direct monitoring, the "interface" features or, frankly, the sound quality. In comparison, the FOX's strengths appear to be its portability, convenience and very high sound quality, making it the wise choice for singer/songwriters (but not bands), for solo pod/broadcasters (but not groups) and for those who demand high-fidelity even if it costs a little more.

beyerdynamic  
www.beyerdynamic.com

## Auralex

(continued from page 31)

tor, as well as focusing distant mics and isolating outside kick mics. With hi-hat, I found the wider VoxGuard kept more hi-hat sound out of the room, but that the sound captured from the hat was a little clearer and crisper via the Mudguard. As far as isolating kick goes, the VoxGuard kept a little more hat, snare and floor tom out of the kick mic, but neither did much to stop the huge bass content of the floor tom from getting through, filtering out mostly highs and some mids. The VoxGuard blocked out a little more snare, but both blocked out quite a bit of hi-hat equally. Both did enough to negate the need for a "kick tunnel" of stands/blankets.

Vocals: In a nicely treated tracking room, you don't need a mic shield to get a good vocal sound, and both models tested were able to remove any hint of such a nice room and

achieve that totally stark, dry, NPR-like sound. In an untreated and way-too-lively stairwell, both did an effective job of reducing the natural reverb's audibility and greatly improving the results to the point of usability. But the Mudguard sounded better, with a more natural tone, absent any muddiness (as the name suggests) and with a little more clarity.

All things considered, I'd say that the Mudguard v2 earns its \$149 price for helping block out room noise, reduce leakage and achieve the most natural sounding frequency balance, especially for vocals. For that matter, the Primacoustic VoxGuard did an even better job of reducing leakage and likewise reduced room noise, too, even if it didn't quite have the flat response or clarity of the Mudguard. It deserves mention that both could help achieve isolation when miking an electric guitar cabinet, but there are models specifically for that purpose now.

Auralex  
www.auralex.com

## Sonarworks

(continued from page 32)

calibration (not averaged response), which they say ensures ideal performance.

Corrective measures such as Reference 4 may not be needed in purpose-built rooms that have the advantage of proper design and cooperation with the laws of physics. For the rest of us squeezing audio production into bedrooms, basements, hotel rooms and temporary control rooms, the quick fix of Reference 4 is an ample, if complicated, solution.

If you work in-the-box and you have a troublesome room, then I highly recommend Reference 4 for its narrow-bandwidth frequency correction abilities, even though you'll need more than just Reference 4 to do pro-level work. A pair of headphones that are on the

v4 list, some room EQ and some proper acoustic treatments will be needed as well. This recommendation becomes mandatory if you collaborate with others who also work in less than ideal rooms.

Version 4 may be harder to work into your flow if analog is still part of your process, but even then, I advise looking into it for its ability to bring the worlds of monitors and headphones closer together, and to better inform your decisions. Switching Reference 4 on and off can be distracting, but with careful tuning of your room and careful tuning of Reference 4's response, you can not only improve your room's balance through illuminating analysis and then actual acoustical corrections, but also use Reference 4 to smooth out trouble spots beyond the scope of acoustic treatments or room modification.

Sonarworks  
www.sonarworks.com



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## Alcons Audio CRMS-LFE18 LFE Subwoofer

Alcons Audio's CRMS-LFE18 is a large-format reference subwoofer system for use in post-production facilities and mastering suites, high-end mix/screening rooms, recording studios and similar installations. A direct-radiating 18-inch transducer mounted in the internally-stiffened, sealed cabinet reportedly enables an in-room response below 10 Hz, providing a fast impulse response intended to match the transient response of the Alcons pro-ribbon systems. The 18-inch woofer was developed to have a large motor structure with dual 3-inch voice coils. For full system performance, the CRMS-LFE18 is meant to be driven and controlled by the ALC amplified loudspeaker controller. Integrated factory presets in the drive processor of the ALC provide optimization settings, as well as VHIR processing for phase-matching with an Alcons pro-ribbon system. Additionally, signal integrity-sensing pre-wiring automatically ensures complete cable/connector compensation between the CRMS-LFE18 and ALC, increasing response accuracy and reducing both linear and nonlinear distortion, regardless of cable length and system impedance.



## API 2448 Analog Console

During the AES Convention in October, API Audio president Larry Droppa revealed the company's 2448 recording and mixing console in dramatic fashion. Customers are already taking delivery of the 2448, with eight consoles sold prior to AES. Intended as a middle ground between API's 1608 and AXS consoles, the 2448 is a compact, dual-signal-path analog recording console. Available in 24-, 32- and 40-channel frame sizes, the 2448 typically sports 24 channels for multitrack recording and 56 channels for mixing. Features include dual inputs on each channel, four stereo returns and, optionally, API's cross-platform Final Touch fader automation system.



## Mackie's New Headphones and Earphones

Mackie has introduced the MC Series Professional Headphones and CR-Buds Series High-Performance Earphones lines, which will ship in November. The MC Series includes the MC-150 and MC-250, which both sport 50mm transducers and closed-back designs tuned for studio monitoring, mixing and personal listening. Both models have ultra-soft ear pads and headbands, detachable cables, and come with a carry bag. The CR-Buds Series includes CR-Buds and CR-Buds+ models. CR-Buds features a high-performance dynamic driver and an in-line mic with play/pause/answer button. CR-Buds+ offers dual dynamic drivers to provide smooth response, as well as a "pro in-ear monitor-inspired" over-ear design and a choice of foam and silicone tips. Both CR-Buds models have tangle-free cables and come with multiple ear tip sizes.



## PreSonus Studio 24 USB-C Portable Interface

The Studio 24 2x2 USB-C bus-powered audio/MIDI interface is now available, with a street price of \$149.95. Able to record up to 24-bit, 192 kHz audio, the unit is intended for home recording, musicians on the move, guitarists, podcasters and live streaming projects. The interface is equipped with PreSonus XMAX-L solid-state preamps and high-end converters, set within a compact enclosure designed to withstand the rigors of travel. It comes with PreSonus' Studio One Artist music production software for Mac and Windows and the Studio Magic Plug-in Suite. Studio 24 features two front-panel combo mic/instrument/line inputs with +48V phantom power for condenser mics. A mixer knob blends analog input and computer playback for low-latency direct monitoring; LED meters indicate input and output levels. MIDI I/O enables connection to a keyboard, sound module, or control surface. USB-C-to-C and USB-C-to-A cables are included.



## firstlook

### Audio-Technica Mic/Headphone Bundles

Audio-Technica has developed four turnkey microphone/headphone bundles intended for podcasters, streamers and the like. Two bundles feature USB outputs to directly connect with computers, and two feature XLR outputs to connect with professional mixers or digital interfaces. Each bundle features a microphone with mount, ATH-M20x professional monitor headphones and a newly developed custom boom arm with desk mount. The boom arms are pre-threaded with the appropriate USB or XLR microphone cable compatible with the included microphone. The AT2005USBPK bundle includes an AT2005USB cardioid dynamic USB/XLR mic, while the AT2020PK bundle includes an AT2020 cardioid condenser microphone. An AT2020USB+ cardioid condenser USB microphone is at the heart of the AT2020USB+PK bundle, and the AT2035PK bundle includes an AT2035 cardioid condenser mic.



## Roland VT-4 Voice Transformer

Roland has unveiled the VT-4 Voice Transformer, an effects processor for manipulating voices. Aimed at podcasters, streamers, singers and the like, the unit offers effects such as harmony, vocoding, pitch shifting, hard tuning, ambience and more, all able to be used sparingly or with brute force. The battery-powered unit offers direct control over both pitch and format, providing a variety of male/female gender characteristics, electronic timbres, robot voices and more. Each effect has a selection of one-touch variations for quick access to different vocoder characteristics, various lo-fi effects, multi-part harmonies, and various reverbs and delays. Effects can also be chained, and users can create and set their own presets. When teamed with a MIDI keyboard, users can control the Auto-Pitch, harmony and vocoder engines within the VT-4 with notes and chords.



## Solid State Logic Fusion Coloration Processor

Fusion is an analog 2U outboard processor intended for use in hybrid studios. The unit sports five analog coloration processors that can be used discretely or combined to create tonal character, weight and space to mix bus or stereo stems, with the detail, warmth and finesse that only real analog circuits can provide. The processors include Vintage Drive, which produces harmonic saturation and soft compression by overloading an analog circuit; SSL Violet EQ, a minimum phase shift, two-band shelving EQ; a High Frequency Compressor for taming brittle, high-frequency fizz; a Stereo Image enhancer for widening and spatial manipulation of the stereo field; and a custom SSL Transformer circuit, which provides low-frequency saturation along with a high-frequency phase shift. Fusion will be available worldwide in November.



## Useful Arts SFP-30 Preamplifier

Released at AES, Useful Arts Audio's SFP-30 microphone preamplifier aims to replicate the sound of the company's SFP-60 two-channel tube microphone preamp, but at a lower price. Inside the tabletop design of the SFP-30 is a one-channel Class-A mic tube preamp with a variable control for second-order harmonic distortion. Peter Swann, founder of Useful Arts Audio, designed the SFP-30 with different gain stages to utilize the tubes for accentuating harmonics. As a result, the preamp includes a "color" control for "artistic" distortion. The SFP-30 also uses a massive inductor, providing a reported maximum headroom of more than 55 dB of useable gain.



## Allen & Heath Waves Card for SQ Mixers

The Allen & Heath sQ Waves card lets any SQ mixer with a 64x64 96 kHz or 48 kHz interface connect to a Waves SoundGrid network using the I/O port, allowing engineers to access Waves plug-in processing, multitrack recording (at 96 kHz or 48 kHz), virtual soundcheck and audio distribution applications. Waves SoundGrid is an Audio-over-Ethernet protocol developed by Waves for real-time professional audio applications. The card also enables the use of existing Waves plug-ins at a low latency, using standard Gigabit Ethernet networks rather than a USB connection.



## Apogee Symphony I/O MK II Dante Option Card

Apogee's Symphony I/O MK II flagship audio interface will soon be able to connect with Audinate Dante networks thanks to the announcement of a new Dante network option card. The card uses Audinate's Dante Brooklyn II module, which features plug-and-play media networking for up to 32 bidirectional channels at 96 kHz and 16 bidirectional channels up to 192k. The Symphony MK II system can be configured with a number of custom options ranging from 8 to 32 analog I/O channels. Symphony MK II with Dante allows up to 32 channels with Pro Tools and redundant Dante connectivity, and now it will work with any other Dante-powered device. The Symphony MKII Dante option card is expected to ship in early 2019.



## DPA Updates d:screet, d:fine Subminiature Mic Lines

DPA Microphones has announced the d:screet Core 6060 and 6061 subminiature microphones and the d:fine Core 6066 subminiature headset microphone—all of which are 3mm in diameter, making them the company's smallest capsules ever. Two millimeters smaller than DPA's existing 4000 series of miniature microphone products, DPA says the new capsules have a lower noise floor and can handle higher SPLs. In terms of technical specifications, all three 6000 series capsules are omnidirectional and have a frequency range of 20 Hz to 20 kHz. The d:screet 6060 lavalier has a



noise floor of 24 dB(A), while the d:screet 6061 lavalier and d:fine 6066 set have noise floors of 26 dB(A). All three capsules are available in black beige; more colors will be added at a later date. The models are expected to ship in November.

## QSC CP Series Loudspeakers

QSC's CP Series of powered loudspeakers are provided in a lightweight, compact form factor and are intended for portable and installed applications. The CP Series consists of two 2-way models: the CP8 and CP12. Both feature a 1,000-watt Class-D power module, one-touch preset DSP contours for common sound reinforcement applications, and line, mic/line and 3.5mm stereo inputs. Each can be pole-mounted, used as a floor monitor, or deployed in a fixed or temporary installation. Available accessories include carrying tote, outdoor cover and quick-connect yoke mount. The CP Series is currently available worldwide.



## Yamaha Rivage v2.5

The v2.5 firmware update for Yamaha's Rivage PM digital mixing system adds a Theatre Mode designed for plays, musicals and other theatrical productions. Theatre Mode facilitates scene and costume changes, with four banks that can be used to store different EQ and dynamics settings for individual performers. Rather than storing EQ and dynamics settings in the console's "scenes," only the bank number is stored in Theatre Mode so that any adjustments made will apply to all scenes that use the same bank. The bank-changing feature is useful when multiple actors are cast in the same role or when a substitute must be used, allowing mix changes to accommodate different casts, for example. The v2.5 update also supports the Audinate Dante Domain Manager, providing further sound system security and scalability when a Rivage PM system is used at the core of a Dante audio network.



## Sennheiser SK 6212 Bodypack

For use in broadcast, theater, musical and live audio applications, the SK 6212 mini-bodypack transmitter for the Digital 6000 wireless microphone system will ship in early 2019. The SK 6212 uses the proprietary Sennheiser audio codec of Digital 6000 and Digital 9000, and is said to be intermodulation-free. Sporting rounded corners and edges, the mini-bodypack is 63mm x 47mm x 20mm and weighs about a quarter of a pound with battery. The removable BA 62 lithium-polymer battery is said to provide power up to 12 hours. The engineer has full control over the mini-transmitter via an OLED display and function buttons. As with all Digital 6000 transmitters, the SK 6212 can be IR-synced. The SK 6212 is compatible with the 6000 series receivers, as well as the receiver of the Digital 9000 series when in Long Range Mode.



## Samson Stage 412 Wireless Mic System

Intended for use in environments including house of worship, education and presentation, Samson's Stage 412 wireless handheld microphone system comes with four handheld dynamic microphones that transmit to a single receiver up to 200 feet away. Each handheld features a Samson Q6 dynamic mic element. The system's frequency-agile design offers four channels with six operating frequencies per channel across a 173-198 MHz frequency range. As it operates in the VHF frequency spectrum, the Stage 412 is unaffected by the FCC 600 MHz transition. The metal SR412 receiver sports a back panel with four 1/4" outputs, as well as three balanced XLR outputs, allowing connection to a mixer or powered P.A. speaker. The 1/4" outputs send each channel separately, while the XLR outs are dedicated to send single-output mixes of channels A/B, channels C/D and all four.



## firstlook

### 64 Audio N8 In-Ear Monitor

Created in collaboration with Nathan East, 64 Audio's special edition N8 ("Nate") customizable in-ear monitor features a hybrid design with a 9mm dynamic driver for the lows and eight balanced armature drivers for the midrange and highs. Intended for musicians and audiophiles, the N8 contains patent-pending technologies from 64 Audio including tia, apex and LID. tia (Tubeless In-ear Audio) eschews traditional tubes and dampers, while apex (Air Pressure Exchange) is a pneumatically interactive vent that is said to reduce listening fatigue by releasing sound pressure that is inherent in other earphone designs. 3D Fit is 64 Audio's proprietary 3D shell printing process used to create a personalized fit. N8 monitors are customizable and are hand-built from ear impressions. They are designed to work with a wide range of personal audio devices, as well as all hardwired and wireless monitor systems.



There's more information on all the products featured at [prosoundnetwork.com/nov2018](http://prosoundnetwork.com/nov2018).



## Event Safety Summit Ready to Roll

BY CLIVE YOUNG

LITITZ, PA—The Event Safety Alliance was founded in 2011 in the wake of numerous weather-related accidents at outdoor concerts that summer, culminating tragically with the death of five concert-goers when a grandstand collapsed on hundreds of people at the Indiana State Fair. Since then, the ESA has worked proactively to educate the live event and touring industry, most notably through its annual Event Safety Summit. The fifth edition takes place later this month, November 28-30, at the Rock Lititz facility in Lititz, PA, and will include more than 20 presentations, workshops, forums and activities for attendees.

Who should attend? As Jim Digby, executive director/founder of the ESA, tells it, the answer is basically anyone involved in the execution of a production. “The event in Indiana caused an awakening of sorts in the industry, a realization that we can’t have people come to entertainment events and have this kind of outcome,” he said. “Yes, we can’t fix the weather, but many blamed what happened in Indiana on weather when in fact what really happened was the lack of an actionable plan—and that’s something we can fix.”

The summit was instigated by



Jim Digby

weather-related events, but it has expanded in the intervening years to include topics such as crowd mechanics and terrorism. “We have broadened the base dialogue of the conference to be not just structural,” said Digby. “Now we’re including many of the things that have happened over the last five or six years as talking points. They provide a learning opportunity. We can offer the industry at large more comprehensive ways to do business and show how insurers can work with us to get the protections that we need to avoid incidents.”

Not every topic is about reacting to outside forces; some have to do



Scott Carroll

with paving the way for an artist’s creative vision. “The summit in years past has dissected topics like the use of drones as part of a live event,” said Scott Carroll, executive vice president of Take1 Insurance, a presenting sponsor. “The ESA does a great job of bringing in experts to discuss things, which we then put through the lens of safety; that has been a phenomenal awakening to a deeper dive on subjects that might not have gotten the attention without the summit.”

This year’s theme, “Designing for Safety: Planning, Creativity and the Art of Problem Solving,” will explore *(continued on page 43)*

## briefs

## Reflections on a Renovation

ST. ANTHONY, MN—After the Church of St. Charles Borromeo, a massive house of worship built in 1959, renovated recently, it needed a new audio system to clean up the now-more-reflective space. Metro Sound & Lighting installed two Renkus-Heinz ([www.renkus-heinz.com](http://www.renkus-heinz.com)) ICONYX Gen 5 IC32-RN digitally steerable line array loudspeakers at the front of the church to serve as the main sound system, and a further IC Live Gen5-series ICL-F-RN digitally steered array in the back, facing toward parishioners from behind in order to supplement the choir.

## Grooving at Garden Grove

SOUTHWICK, MA—Paddle Out Productions recently provided audio for the Garden Grove Festival on the premises of the Westfield River Brewing Company in Southwick, MA. Covering the 1,900 music fans in attendance was a Martin Audio ([www.martin-audio.com](http://www.martin-audio.com)) system based around a WPM system. At InfoComm 2018, Paddle Out purchased 16 WPM and two iKON 81 amplifiers, eight CDD-LIVE 12 and four CSX-LIVE 118. All of that was supplemented with rented Martin Audio SX218 subs that were soon bought.

## Revival Center’s Audio Revived

SEATTLE, WA—Seattle Revival Center, a non-denominational house of worship, recently updated its sanctuary with a new sound system. One Pro Audio Video Lighting of Bellevue, WA, installed DAS ([www.dasaudio.com](http://www.dasaudio.com)) Event-208A line array elements for front hangs, supported by two DAS Event-218A subwoofers. On stage are four DAS Action M12A stage monitors.

## Esports Via EAW

SANTA FE SPRINGS, CA—Goodman Audio Services recently purchased an EAW ([www.eaw.com](http://www.eaw.com)) Adaptive line array system and has since been putting it to work for sizable corporate and public events—including a recent esports event at Brooklyn’s Barclays Center in New York that required 52 Anna modules and 12 Otto subs to create a left-right system with three delay arrays that blanketed the space.

## Xcaret Mexico Updates Theater System

PLAYA DEL CARMEN, MEXICO—Xcaret México is a resort and amusement park handling 10,000 guests per day in peak season. As a ‘nature park,’ the site offers visitors the chance to explore underground rivers through caves, tunnels, and scenery across more than 50 attractions.

But key to a visit to Xcaret México is to see some of the productions at its hotel entertainment venue, the Teatro del Rio, which presents productions of traditional dance and music as well as a horse exhibition, the enigmatic Papantla Dance of the Flyers ceremony, and pre-Hispanic performances, which call visitors at dusk with their impressive drums. Ensuring that all visitors can properly enjoy them, the busy venue recently upgraded its audio system—a move that included creating an FOH position centered around an Allen & Heath dLive system.

Due to the layout and distance between the stage and FOH, any Cat 5 run was impractical. As such, the installation included two dLive DM48



The venue’s control center consists of three IP8 remote controllers and a touch-enabled computer running dLive Director.

MixRacks, one positioned under the stage and the second in a control room at FOH.

Supplied by Representaciones de Audio, the MixRacks are equipped with Dante cards and connected via two underground fiber-optic links. dLive’s scene management system en-

ables changes on stage, while all signals are then processed and mixed locally with matrix outputs sent over Dante to the DM48 at FOH, where they are patched to a speaker processor.

The venue’s sound engineer, Diego Andrade, welcomed the update, *(continued on page 43)*



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FOH engineer Michel Colin and system designer Ben Phillips pause during load-in at Brooklyn's Barclays Center in mid-October.

## Going International with Phil Collins

BY CLIVE YOUNG

**BROOKLYN, NY**—Phil Collins has been touring on and off for the last 18 months, covering Europe and South America with his Not Dead Yet tour. Named after his 2016 autobiography, the production spent October crossing North America on a sold-out 15-show arena run, with audio provided by 3G Productions (Miami/Las Vegas/Los Angeles).

Given the star's presence on the international stage, it's only fitting that the audio team behind him was likewise drawn from around the world. Frenchman Michel Colin manned the FOH desk, much as he has for every Collins gig for the last 18 years, including the 2007-08 Genesis reunion tour.

"It has changed over time," said Colin, pausing during load-in on the floor of the Barclays Center in Brooklyn. "For me, the biggest difference is that I started on an analog console, the Midas XL4, which was fantastic, sounded amazing, but we had a lot of racks with dbx compressors. Around 2005, I started using an XL4 MIDI-lined with a Yamaha DM2000 and also with all the effects. For Genesis, we used an Avid Venue [D-Show], and now this S6L-32D is the next level—a continuation, but better. It is clever

and user-friendly; I don't have to think for hours to know how to do something."

The show had 68 channels coming off the stage—quite reasonable these days when you consider Collins was backed nightly by 14 musicians, with multiple backing vocalists, horns, percussionists and guitars, as well as bass, keyboards and drums. It may be easier to create that "big '80s sound" with the help of a big band on stage, but as a result, Colin faced a different issue at the FOH desk. "The challenge for me is to mix so you hear everybody, not only the voice and the bass drum," said Colin. "If you can see someone, you should be able to hear him—even the little shaker when everyone is playing loud."

Helping make that happen was a string of snapshots for every tune on the 23-song setlist—a necessity

given the size of the band. "Now during the show I can make the mix—push the voice a bit, the trumpet, EQ a bit," said Colin, who typically used stock Avid plug-ins like D-Verb, and Sony Oxford plug-ins on vocals. "My only external stuff is the TC System 6000, because it has plenty of options of interest—especially the old AMS 'Non-Lin' reverb, which is part of his drum sound."

That drum sound was crucial for a Phil Collins show (you're mentally hearing the fill in "In the Air Tonight" right now, aren't you?), so Colin leaned on the subs to ensure everyone was well aware of it: "I try to mix close to an album, but we are in an arena and the sub pressure is more important for a live show—you need to feel the drums on your body. If you listen back with headphones, I think it sounds very close to the album, but we push some."

Helping push was system designer Ben Phillips, a New Zealander, who oversaw a Waves Audio-based recording rig modified for looking after all audio en route to the P.A. "When we went through South America, we weren't carrying a P.A.," Phillips explained. "We were picking up lots of local ones that were sounding a bit different and a bit funky in their own way. Some of them were very good, some were interesting. Quite often we experienced times where there wasn't the infrastructure to bus multiple consoles together, so we had to come up with a solution—and we happened to have a bit of kit lying about in the form of a few Waves products, server and some interfaces. We cobbled that together, and then finally put it together properly where there's a fully redundant Waves server package. Everything's redundant in there with UPSs and two computers, again for bussing and additional support consoles. We bring in all the preshow music and any video content through it, so Michel doesn't have to bother; he can leave his desk locked and walk away. Also, I can do some tweaking—not of the mix but some of the nasty frequencies that might jump out and you have to tame them. It has filled the bill quite well."

*(continued on page 40)*

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**FUTURE**

## Phil Collins

(continued from page 38)

For the North American run, the tour carried a massive L-Acoustics K1/K2 rig provided by 3G Productions. Neil Rosenstock, an American, not to mention audio crew chief, looked after 175 boxes nightly, 150 of them flown. “The main P.A. stays almost the same every day,” he said. “Delays, too; it’s pretty much the same configuration unless there’s something in the way. Then we might do a center cluster and then a left and a right.”

The main P.A. typically consisted of 12 K1s, four K2s and eight K1SBs per side, with outfills hung the same, minus one K1SB. Hangs of a dozen K2s were used for the 270-degree fills on each side, and two flown center sub clusters consisted of endfire KS28s, each eight deep. Center fill duties were handled by a half-dozen KARAs, and delays were all K2s, hung in four clusters of six.

The amplifiers powering all that were perfect for a Phil Collins tour because they, too, were in the air tonight. Flown with the P.A. to save floor space and reduce cable lengths, 60 LA12s were used for the main P.A., subs, KARA outfills and 270-degree hangs, while a dozen LA8s were flown with the delays. Back down on the ground, LA8s and LA12Xs variously powered a

dozen SB18 subs, frontfills such as four ARC-IIs per side and four KARAs on SB18s; and four X8s for spot fills.

Getting all that hung was no simple job. “We start marking the floor at 7, and the first audio points don’t show up until 10 a.m.,” said Rosenstock. “There’s 120 points, and 55 of them are audio. We don’t start hanging audio until 10:30 or 11, so it’s not horrible. We don’t have a soundcheck and our goal has been to shoot for 2 p.m. We’re out, whole production, in two and a half hours.”

Despite all that firepower—or perhaps because of it—the show didn’t need to get that loud in order for everyone to hear it clearly. “It’s not very loud, actually,” said Rosenstock. “We’re coasting at 94 to 98 dB A-weighted, on average, peaking at 102 maybe.”

The stage, too, was rather quiet despite the presence of 15 musicians. Swiss monitor engineer Alain Schneebeli, who has mixed Collins’ monitors for 25 years now, looked after 32 mixes nightly on his Avid S6L console. With the exception of two L-Acoustics wedges for bassist Leland Sklar and a sub behind drummer Nicholas Collins, the rest of those mixes were sent to Shure PSM-1000 systems and a variety of earbuds.

“For Phil, myself, Nicholas and some others, we have JH Audio,” said Schneebeli, “while the horn players play with Westone. Richie

[“Gajate” Garcia, percussion] has some generics, depending, and everyone else has Future Sonics.” As might be expected, most of the band had typical “everything, but me a little louder” mixes. “With Phil, it depends on the song,” he said. “He has a lot of his own voice, a lot of reverb, a lot of treble, thin stuff.”

The North American leg

wrapped up just before Halloween, but there’s one more night—11 of them, actually—ahead for the production. A run through Oceania, winding up in New Zealand, awaits in early 2019, so for now, the tour, like its name suggests, is not dead yet.

3G Productions  
https://3glp.com

### VITALstats

#### Phil Collins

3G Productions (Miami, FL)

#### FOH Engineer:

Michel Colin

#### Monitor Engineer:

Alain Schneebeli

#### Crew Chief:

Neil Rosenstock

#### Systems Designer:

Ben Phillips

#### Monitor Tech:

Jim Brightenfield

#### RF Tech:

Josh Driscoll

#### Fly Team:

Bill Blackstone, James Wizner

#### FOH Console:

Avid S6L-32D

#### Monitor Console:

Avid S6L-32D

#### House Speakers:

L-Acoustics K1, K2, K1SB, KS28, KARA, SB18, ARC-II, X8

#### Monitor Speakers:

L-Acoustics

#### Personal Monitors:

Shure PSM-1000; JH Audio; Future Sonics; Westone

#### House Amplifiers:

L-Acoustics LA8, LA12

#### Monitor Amplifiers:

L-Acoustics

#### FOH Equipment/Plug-Ins:

TC Electronic System 6000; Stock, Sony Oxford Plug-Ins; Waves server

#### Monitor Equipment/Plug-Ins:

Stock, Sony Oxford Plug-Ins

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# Backing Lindsey Buckingham on Stage

BURBANK, CA—Lindsey Buckingham may be in the news these days as he sues his former Fleetwood Mac bandmates for his ouster earlier this year, but that situation hasn't prevented him from hitting the road in support of his latest solo collection, *Solo Anthology: The Best of Lindsey Buckingham*, released in early October. The production finds the guitarist backed by a number of musicians, including keyboardist Brett Tuggle, and even Buckingham himself, thanks to various guitar parts he pre-recorded himself.

Tuggle explained, "He's doing stuff where he triggers little clips as he plays, so that we don't need another guitar player—so that it's his own playing accompanying him. Those tracks are now coming back through a pair of QSC K10.2s, which sit right on either side of his high-end boutique guitar amps. It has made all the difference in terms of us being able to pull off a theater tour with minimum personnel."

As it turns out, it was Tuggle himself who brought QSC to Buckingham's attention: "I turned Lindsey on to the K.2 Series a couple of weeks ago at rehearsal. They turned out to be the total answer for his situation."

And Tuggle, too, has some QSC boxes on hand over in keyboard world, opting for K10.2 loudspeakers. "The K.2 Series takes the sound to the next level, with even more headroom. I put my Korg Kronos 88LS keyboard and a Roland VG-99 guitar synth through them. I also love the routing flexibility on the K.2s and the ability to save and recall scenes for things like EQ and crossover points right on the little display that's on the back."

Tuggle has been a fixture in the L.A. music scene for decades—as a guitarist and keyboardist, he toured with Rick Springfield and David Lee Roth in the 1980s, co-writing Roth's 1988 hit "Just Like Paradise." He has played with Jimmy Page, Steve Lukather and Da-



Lindsey Buckingham tours in support of his latest solo effort.

vid Coverdale, and others—the list of others would include Fleetwood Mac, for which he's played keys

since the '90s.

Still, he's not above playing local gigs, and for those, the QSCs come

in handy. "The K10.2s are so portable. I pop them into those fitted carrying cases they make, and they're the perfect keyboard monitors," he says. "The K.2s weigh almost nothing, so I always bring two so I can play in stereo. I also have the Touch-Mix-16 digital mixer from QSC, which is killer as the core of P.A. for rehearsals and small-venue gigs. But again, if I'm just showing up as the keyboard player, the inputs on the K10.2 mean I don't always need it."

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(L-R) James Berry and monitor tech Chris Bellamy at the tour's two DiGiCo SD7 monitor desks for the artists, with Jimmy Corbin in the background at his two band SD7s

## All Hands on Desk for Beyoncé and Jay-Z's On the Run II

CLEVELAND, OH—On the Run II, Beyoncé and Jay-Z's four-month, 48-date world stadium tour, is a massive undertaking by any definition. It's the kind of show where Eighth Day Sound (Highland Heights, OH) had to ensure there were seven DiGiCo SD7 consoles on hand—two at FOH, four in monitorworld, and one backstage used for rehearsals and writing sessions—supplemented by an SD12 used just for dressing room vocal rehearsals.

Jason Kirschnick, international operations officer and global project manager at Eighth Day Sound, pointed out, "The wireless and in-ear counts are enormous. Stephen [Curtin, FOH engineer] uses a lot of subgroups to keep and manage all of the stage inputs on a single SD7, with the second SD7 on the same fiber loop and with the sessions loaded and ready there as a spare. No other desk could touch what the SD7s are doing here."

The Eighth Day Sound crew is currently running just over 100 channels of wireless units, including comms, said artist monitor engineer James "Cowboy" Berry: "I'm only driving 16 stereo outputs from my desk for vocals—plus a sidefill and wedge mix downstage just as a safety—but I think that Jimmy [Corbin, band monitors engineer] only has two outputs left on his desk, which means he's well into 30 stereo mixes."

The SD7 consoles are connected to an Optocore fiber loop—a double loop in the case of the monitor consoles, two of which are dedicated to the band members and two more to the artist on stage, with one for each task assigned as the primary console and a second as a spillover deck for ancillary inputs such as talkback and audience mic inputs. Curtin estimated the show is 160 total inputs, down from 175 when the tour first took shape. "We were able to reduce the number of inputs slightly, which helps," he said, "but it's a high channel count, and the SD7s make all the difference."

"With the SD7, we were able to utilize a second HMA Optical Loop, doubling the available I/O in the fiber network and allowing us to add not one but two additional record systems capable of handling all 160 channels, plus an additional 16 audience mics," said Curtin. "More important to us was the additional 504 inputs or outputs, along with the 504 on loop 1 to the system, which on this show is critical. That's enabled me to keep everything on just one primary console, which streamlines the workflow considerably."

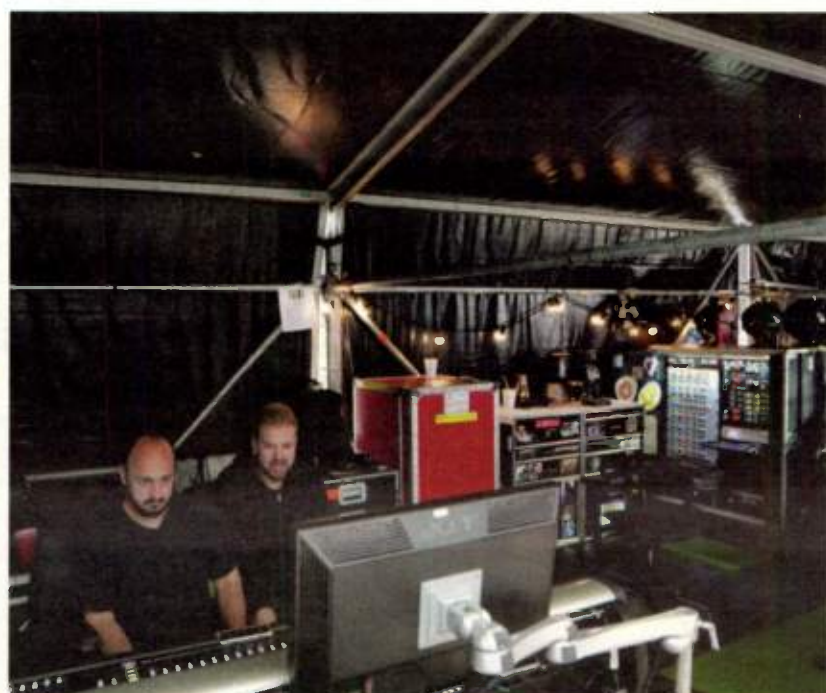
The logistics for On the Run II are, by necessity, massive. It is a setup that can visit only the biggest of stadiums because "it definitely won't fit anywhere else. But the SD7s can handle it all. When the SD7's Quantum 7 processing update becomes available, we'll technically be able to handle even bigger productions, but I'm not sure that we should tell them," Berry joked.

Eighth Day Sound  
[www.8thdaysound.com](http://www.8thdaysound.com)

DiGiCo  
[www.DiGiCo.biz](http://www.DiGiCo.biz)



(L-R) Artist monitor engineer James Berry, FOH engineer Stephen Curtin, and band monitor engineer Jimmy Corbin at the On the Run II tour's primary DiGiCo SD7 FOH mixing console



(L-R) Jimmy Corbin and stage patch specialist Nils Knecht at the band SD7 consoles in monitorworld on the Eighth Day Sound-supplied On the Run II tour

## Safety Summit

(continued from page 36)

the importance of developing safety and operational plans, while answering the needs of production designers.

“We have to be part and parcel in allowing that creative energy to continue to flow,” said Digby, “even when it’s ‘How do I set that car on fire on stage with the artist on top of it, and do so safely so that the artist can have the creative vision?’”

Letting a creative energy flow leads to communication that benefits everyone, and that’s been a key result of every summit to date, said Carroll. “The summits have broken the barriers that we didn’t know were there. Insurance companies now can communicate with the production people who have the duty of care at the live events, who are making the calls. The barriers have been broken down so we’re all the in the same room at the same table, having a real dialogue.”

Among the 20 presentations this year will be “Exhausted, Under Pressure and Out of Time,” examining the effects of stress on decision-making; “What’s Throng with this Situation?” looking at crowd psychology; “Left Hanging: Fall Rescue Planning,” covering grid crew safety and rescue plans; and “Sunny with a Chance of Lightning,” discussing the need for professional meteorologists in production.

That last one hits home for Digby—and was in fact what spurred the director of touring and produc-

“Weather on your phone is not a solution when you have 10,000 people in front of your stage.”

*Jim Digby, Event Safety Alliance*

tion for artists Linkin Park to found the ESA. “Weather on your phone is not a solution when you have 10,000 people in front of your stage,” he said, “but I’ll raise my hand and say guilty,

because before Indiana in 2011, that was me. I called up AccuWeather on my phone and that’s how I protected my staff and artists and the audience. Indiana could have been me—I didn’t

have any better plan in place.”

While one might expect the Event Safety Summit to be three days of wagging fingers and the squelching of intriguing ideas, Digby averred that the event is in fact almost entirely the opposite: “It’s about finding pathways to help the creative spirit continue, but for it to be able to do so with safety at the forefront.”

Event Safety Alliance

[www.eventsafetyalliance.org](http://www.eventsafetyalliance.org)

## Xcaret

(continued from page 36)

noting, “dLive is...user-friendly but at the same time can be configured to the smallest detail. With the Dante option card, the system can grow and compliment itself. It’s definitely a high-end system.”

Additionally, the control center consists of three IP8 remote controllers and a touch-enabled computer running dLive Director, all connected through a PoE Ethernet switch. The strip layout on the IP8 controllers follows the scene automation, so that relevant faders are always presented to the operator.

The Head of Audio at Xcaret México, Eduardo Urbina, added that the system “caters for the specific needs of running our show at the Hotel Xcaret México.”

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ACT / STATISTICS	CREW	EQUIPMENT
<b>1 TAYLOR SWIFT   EIGHTH DAY SOUND</b>	David Payne (be); Jordan Kolenc (Swift me/cc); Scott Wasilk (Band me); Dan Bluhm (se); Eoin Collins (mtech); Chase Usry (ae); Ike Zimbel (rf coordinator); Turner Pollari (rf tech); Andy Dudash (rf comms); Liam Von Elbe (lead pa tech); Sam Balk, Mike Vultaggio, JP Kearney (pa tech)	HC: DiGiCo SD7; MC: (2) DiGiCo SD7; HS: d&b audiotechnik J Series Array Processed, J-Sub, B22, V8 front fills; IEM: Shure PSM 1000, Wisycom MTK952; HA: d&b audiotechnik D80; HARDWIRED MICS: Telefunken; Shure; Sennheiser; WIRELESS MICS: Sennheiser Digital 9000, 6000; Shure Axient Digital; FOH EQUIPMENT: Neve Portico, Masterbuss; Lexicon PCM 92; Bricasti M7; Waves; Soundcraft Realtime Rack; MONITOR EQUIPMENT: Eventide Eclipse; TC Electronic System 6000; SPL TD4; Waves; Soundcraft Realtime Rack; OTHER: Radial JS2, JS3, J Rak 4, Tonebone Mix Blender
<b>2 BEYONCE / JAY-Z   EIGHTH DAY SOUND</b>	Stephen Curtin (he); James Berry, James Corbin (me); Arno Vortman (se); Chris Bellamy (ae); Greg Horning, Clinton Reynolds, Emily Valentine, Peter Mesaros, Dan Buckley, Nills Knecht, Dom Thorne (techs)	HC: DiGiCo SD7; MC: DiGiCo SD7; HS: d&b audiotechnik J Series; MS: d&b audiotechnik; IEM: Shure PSM 1000; HA: d&b audiotechnik D80; MA: d&b audiotechnik D80; HARDWIRED MICS: Sennheiser; Shure; DPA; WIRELESS MICS: Sennheiser 9000, 6000; FOH EQUIPMENT: Bricasti M7; Yamaha SPX2000; Neve Portico; Sonic Farm Creamliner; MONITOR EQUIPMENT: Wes Audio; Klang; OTHER: Radial SGI, Twin Iso, SW8
<b>3 ED SHEERAN   MAJOR TOM</b>	Chris Marsh (he/me/pm); Charlie Albon (s tech); David White (ae); Brian Thorene, Parker Vandenberg, Dave Poynter, Adam Wells (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
<b>4 JOURNEY / DEF LEPPARD   BRITANNIA ROW / SOUND IMAGE / VER TOUR SOUND</b>	JOURNEY: Keith (Meaux) Windhorst (he); Maxie Williams (me); Jonathan Winkler (cc/se); Shannon Fitzpatrick (m tech); James Ellison, Mark Leeper (pa techs); DEF LEPPARD: Ronan McHugh (be); Ted Bible (me); Chris Houston (cc); Brooks Jackson (se)	HC: Avid S6L; DiGiCo SD5; MC: Avid S6L; DiGiCo SD5; HS: L-Acoustics K1, K2, Kara, K1-SB, KS-28, Arcs, Kara; MS: Sound Image MA 212, MA 112; Vue Audiotechnik h-15, s-25; Meyer Sound; IEM: Shure PSM 1000; JH Audio; HA: L-Acoustics LA12X; MA: Crown 3500HD; HARDWIRED MICS: AKG, Shure; Audio-Technica; Palmer; Radial JDX48; WIRELESS MICS: Shure AD4D, AD-2 with 58A capsules; FOH EQUIPMENT: Waves; Empirical Labs Distressors; MONITOR EQUIPMENT: Waves
<b>5 LUKE BRYAN   CLAIR</b>	Frank Sgambellone (be); Seth Kendall (me); Jim "Fish" Miller (cc/se); James Anderson Hall, Dustin Ponczek, Rachel Hope Stuemke, John Weldon (crew)	HC: Yamaha RIVAGE PM10; MC: DiGiCo SD5; HS: Clair Cohesion CO12, CP218, CP6; MS: Clair CM-22, CP118; IEM: Shure PSM 1000; WIRELESS MICS: Shure Axient with SM58 capsules; FOH EQUIPMENT: TC Electronic 2290; Neve Portico, Neve 5045; API 2500; OTHER: Radial Radial J48, SGI
<b>6 DRAKE   EIGHTH DAY SOUND</b>	Chris Fisher (he); Demetrius Moore (be); Sean Sturge (me); Noah Gary (mtech); Joey Armada, Chan Howard, Charlie Southward, Nathiel Stutz, Sean Tingle (tech)	HC: DiGiCo SD7; MC: DiGiCo SD5; HS: Adamson E15; E12; S10 E119; MS: d&b audiotechnik J8, B22; IEM: Sennheiser; HA: Lab.gruppen; MA: d&b audiotechnik; HARDWIRED MICS: Sennheiser; Shure; Radial SW8; WIRELESS MICS: Sennheiser; FOH EQUIPMENT: Eventide H3000; TC Electronic 2290; MONITOR EQUIPMENT: Waves
<b>7 SHANIA TWAIN   EIGHTH DAY SOUND</b>	Sean Sullivan (be); Connie Fernstrum (me); Wayne Hall (se); Nathan Fenchak, Elmar Dizon, Drew Marvar, Mark Phillips (tech)	HC: Avid S6L-32D; MC: DiGiCo SD5; HS: d&b audiotechnik J8, J12, J Sub, J Infra, V8, Y10; MS: d&b audiotechnik M4; IEM: Shure; HA: d&b audiotechnik; MA: d&b audiotechnik; HARDWIRED MICS: Sennheiser; Shure; Heil; Radial SW8; WIRELESS MICS: Shure Axient Digital; FOH EQUIPMENT: Waves; MONITOR EQUIPMENT: Waves
<b>8 BILLY JOEL   CLAIR GLOBAL</b>	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
<b>9 SHAKIRA   CLAIR GLOBAL</b>	Tim Colvard (be); Ed Dracoules (me); Tom Cossovich (cc/se); Roger Neiderberger (stage e); Sarah Blakey, David Enderle (techs)	HC: DiGiCo SD7; MC: Avid S6L; HS: Cohesion CO-12, CO-10, CO-8 Frontfill, CP-218 Sub-lows; MS: Clair 12AM, R-4III, ML-18HP; IEM: Shure PSM-1000; HA: Lab.gruppen; MA: Lab.gruppen FP2400Q; HARDWIRED MICS: Shure Beta 58, Beta 98, Beta 98AMP, Beta 52a, Beta 91a, SM57, PG58; AKG C414B; DPA 4099; Sennheiser e945; Audio-Technica AT4050; Radial DI; WIRELESS MICS: Sennheiser 5200, 9000 series; FOH EQUIPMENT: Avalon VT737-SP; Eventide H3000; Yamaha SPX2000; dbx120a, Lexicon 960L; Aphex 622
<b>10 JEFF LYNNE'S ELO   SKAN PA HIRE</b>	Gary Bradshaw (he); Steve Lutley (me); Liam Tucker (cc/ff); Joachim Dewulf (se/ah); Davey Williamson (ae); Onno Ooms, Finlay Watt (tech)	HC: DiGiCo SD7; MC: DiGiCo SD7; HS: d&b audiotechnik GSL; MS: d&b audiotechnik M4; IEM: Sennheiser 2000 Series; HA: d&b audiotechnik D80; MA: d&b audiotechnik D80; HARDWIRED MICS: Sennheiser; Shure; AKG; WIRELESS MICS: Sennheiser SKM5235; FOH EQUIPMENT: 112Ch., 96 KHz Reaper multi-track system; Waves; MONITOR EQUIPMENT: 112Ch., 96 KHz Reaper multi-track system

**LEGEND:** (he) house engineer. (ah) 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.



**Peter James**  
Shure

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

**A:** I'm the vice president of global sales for pro audio. I lead our sales team across the most developed regions of the world to advance Shure's position in key markets where our reputation and notoriety is already prominent.

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

**A:** I started my career in the industry 30 years ago, so experience is a good part of the preparation. More recently, since 2012, I've been a central figure in helping develop successful sales strategies that reflect the different market requirements for retail, integrated systems and pro audio in both the UK and Europe. It may be easy to trade in the EEA with operational consistency and efficiency, but to really succeed, it's essential to understand the culture of each country, respect differences and be willing to adapt.

**Q:** What new marketing initiatives are we likely to see from the company?

**A:** As a private company, we cannot reveal too much detail about the future, but I'm happy to say that we'll remain customer-centric in all our actions, and our marketing initiatives will support that completely.

**Q:** What are your short- and long-term goals?

**A:** Short-term, I want to better understand the cultural nuances crucial to our success in major markets and find a sweet spot of alignment that enables us to have global consistency in supporting all our customers equally. It's an important initiative, one that the entire global sales team is focused on, as we shift from a regional to global business structure. Long-term, I want to achieve the same relative level of success in all corners of the world.

**Q:** What is the greatest challenge you face?

**A:** Getting enough sleep, possibly, or finding a solution to jet lag—there's a fair amount of travel in my new role. Sleep deprivation aside, the greatest challenge is achieving that strategic harmony that traverses geographic, cultural and economic differences. Given our rich history of innovation, industry-leading product portfolio and the uniquely positive and collaborative culture set down by our founder, S.N. Shure, I don't see this being as challenging as it sounds, but it's certainly not something achieved with the stroke of a pen or a powerful speech.



Janet Tufo

Neutrik USA has promoted **Janet Tufo** to the newly created position of marketing director, with responsibility for all marketing and brand activities in the U.S. market. She reports to Peter Milbery, president of Neutrik USA. Tufo joined the company in 2013 as office coordinator, having previously managed marketing and operations for a family business, and was promoted to marketing and communications manager.

d&b audiotechnik has announced appointments to two management roles, with industry veteran **Marc**



Michael Weirich (left), Marc Lopez

**Lopez** joining as vice president of marketing Americas and **Michael Weirich** being promoted to vice president of education and application support Americas. Lopez, based in Orange County, CA, now leads d&b's U.S.-based marketing team and is responsible for marketing activities in North, Central and South America. He brings to d&b more than 20 years of experience working with Yamaha Corporation of America in applications support, product management, R&D and, for more than a decade, marketing management. Until recently, he served as the director of marketing for Yamaha, where he had established initiatives including consultant development programs, education programs, major events and digital campaigns.

Weirich has served for more than four years as the d&b support team manager. Prior to that, he worked as general manager for Specialized Audio Visual Inc. in Clifton Park, NY. Weirich is responsible for building a territory EAS organization and developing the team.

Radial Engineering has hired **Craig "Hutch" Hutchison** as a senior design engineer to develop new



Craig "Hutch" Hutchison

products. Starting as an FOH engineer for the Guess Who and Burton Cummings, he became chief engineer at Electric Lady Studios in New York. Later, at Manley Labs, he was chief designer, responsible for numerous well-known products. Recruited to join Rupert Neve Designs, he spent five years there, and has also consulted and designed for companies such as Fredenstein, Adamson, SSL, A-Designs, Waves and BAE.



Andrew Duafala

Apogee Electronics has named **Andrew Duafala** director of sales. Duafala has a range of experience in sales in the professional audio market, and most recently he was the national sales director at IK Multimedia. Over the years, he's also worked with brands such as Emu, Euphonix, Stanton Group, Gibson, GoPro and IK Multimedia.



Chad DeFranco

Renkus-Heinz has named **Chad DeFranco** as its new loudspeaker systems engineer. DeFranco grew up in the audio industry, having mixed front-of-house and worked with sound systems since he was 11 years old. He went on to found DeFranco Productions, where he designed and installed sound reinforcement systems and more. Recently, he served as an audio system and acoustic engineer at Pure Groove Systems.



Steve Mate

Yamaha Professional Audio has appointed **Steve Mate** district manager for commercial audio and Nexo sales. He will cover northern/central CA, AZ, NV, OR and UT as part of the continued expansion of the Yamaha Commercial Audio sales team. Mate previously held positions at Bogen/Apogee, TOA and Genesis Integration. He has also earned accreditation as a NICET

Certified Engineering Technologist (CT) and holds Audinate Dante Level 3 certification.



Giles Martin

Producer, composer and arranger **Giles Martin** has been named to a newly-created position as head of audio and sound for Universal Music Group (UMG). He will be based in Abbey Road Studios in London, where he will lead UMG's adoption of emerging audio formats and consumer technologies, as well as examine new audio technologies and potential partnerships with manufacturers and technology companies.



Phil Myers

**Phil Myers** has joined Lawo as senior director of IP systems. In this newly created role, Myers will coordinate the IP product portfolio and core technology development across the Lawo business, and will support the advisory board with strategic and technology direction. He previously held the role of IP product manager for SAM (Snell Advanced Media) and Grass Valley, a Belden Brand. Additionally, Myers has held technical product management and head of technology positions at Pinnacle Systems (now part of Avid Technology), Sony and CVP.



Rick Woida

Powersoft has appointed **Rick Woida** to the position of application engineer for the U.S. and Canada. In this role, Woida will provide end-user support for the entire Powersoft product line and will assist with everything from system design to specifying correct amplifiers for specific installations, while providing application support. Prior to joining the Powersoft team, Woida worked as an application engineer at Adamson Systems Engineering for two years, where he was in charge of technical support and training for the U.S. market. He also owns an audio consulting design company, Summation Audio, which focuses on the fields of sound reinforcement and acoustical engineering.



TJ Smith, president, Eastern Acoustic Works

## Coming Around Full Circle

TJ SMITH, PRESIDENT, EASTERN ACOUSTIC WORKS

BY CLIVE YOUNG

Eastern Acoustic Works started out in 1978 as a scrappy independent loudspeaker manufacturer that became known over time for strong products and equally strong customer support. Like any company, EAW has gone through changes in the intervening years, but this past summer, after nearly two decades of being owned by various financial institutions, the company was sold to pro audio manufacturer RCF Group, based in Italy. RCF, in turn, has decided to essentially let EAW forge its own path, putting the Whitinsville, MA, manufacturer in a position not unlike where it was 40 years ago: Once again it's an independent company with big ideas and a plan to make them happen.

The similarities are readily apparent to EAW president TJ Smith: "Sitting here at the beginning of this new chapter, the awesomeness of the opportunity and the potential is not lost on anyone at EAW. Not many brands get this opportunity and we are energized to be a part of it."

Like many in the business, Smith was attracted to pro audio at a young age, getting his start as a kid by mixing his church's praise band on an old Peavey Mark III console. The music minister soon bought him a copy of the *Sound Reinforcement Handbook*, cementing Smith's audio interests for good. After graduating college with a degree in engineering, he joined Crown Audio as an amplifier design engineer and worked his way up through the ranks, earning an MBA along the way, until leaving Harman in 2016 and joining EAW as its president. Smith soon found he was leading a company that wanted to return to its roots; the question was how to get there.

"In the beginning, EAW was a

small startup that was hyper-focused on solving its customers' audio problems and creating great loudspeakers in the process," he explained. "From this mentality, it saw great success and grew exponentially. It was then purchased by a financial institution in 2000, and the focus changed somewhere after that. I wasn't here, so it's not fair to try and pinpoint the who's and whys, but no one argues that things changed. When I got here in 2016, I found people trying to get the company back to the early mentality that brought so much success, but they were unsure of how that looked under the existing ownership and market conditions."

In October 2017, Transom Capital Group purchased EAW's parent company, Loud Technologies (now Loud Audio), and began shedding brands from its portfolio earlier this year. Corporate acquisitions are always nerve-racking, but to Smith, the sale of EAW had the potential to be a change for the better. Transom and RCF began talks in April this

year ("It was one of the hardest-to-keep secrets I have ever had.") and finalized the deal in early September.

Broad changes often come in the wake of an acquisition, but for EAW, the first move was a structural shift, made in order to build a foundation for what comes next. "We've demolished the silos and department mentality that makes it difficult to deal with a company," said Smith, noting that the pre-existing team is still essentially in place. "RCF saw the people here as one of the greatest assets and reasons to invest. Knowing that RCF valued the team we had built provided the greatest professional satisfaction and peace with the transaction that I could have asked for."

As if to underline RCF's hands-off approach, EAW is still located in the same place it's been since the late 1980s—a historic Whitinsville complex built in 1847 called The Shop. Smith characterizes the 32-member staff as a "tightknit team committed to getting the job done," adding that "everyone here knows that their job is

helping our partners be successful. It is, by far, the most fiercely loyal and fun team I have ever been on. My role here is to fuel and empower that environment. If anyone feels anxious, it is because they don't want to let the team and our customers down."

While relishing its newfound independence, the company is now dedicated to making up for lost time. "We've covered more ground in the quest to make EAW a better company to do business with in the past few weeks than we could have over years' worth of time in the past," said Smith. "Our primary initiatives now are filling out our product portfolio and expanding our partner base in regions and markets where we are weak. Behind the scenes, we are building the systems and processes necessary to run an independent business, but our focus there is to make that invisible to the customer."

One thing that Smith wants customers to see, however, is that EAW is there for them: "We are working hard to improve our customer support. Customers should be able to contact us and get a response immediately, especially if it is an emergency. For spare parts, we are working to provide less than 24 hours from order to shipment for key parts. Finally, we want to personalize the experience of dealing with EAW. We want you to call 'Nancy' or 'Steve,' not 'customer service.' To some, this may look like a small thing, but I think it's a big deal to our customers."

With investment from RCF, EAW is also now rebuilding its R&D department, looking to update parts of the company's product portfolio that Smith himself says "have been neglected for far too long. A massive revival of the EAW portfolio is in full motion as we speak."

Of course, EAW already has some flagship products in place, and Smith wants to raise awareness of them: "We are working hard to tell our story better and become a more approachable company. Product lines like Adaptive—Anya, Anna, Otto—make big claims and stand to disrupt the market. It is up to EAW to help the world understand what it is and prove that the technology belongs at the table."

While he readily admits that there are many brands at that table ("It is important to understand that everyone makes good products.") Smith sees EAW's technologies and revitalized customer service as decisive factors in its favor. All of that, he said, stems from the commitment of EAW's staff. "That's one thing I love about being here: People want to see this brand win."

Eastern Acoustic Works  
www.eaw.com

## Building Momentum for Your Brand

By 2001, we had replaced the Radial JDI's aluminum channel with the bookend design that is the hallmark of Radial's many direct boxes and interfaces. We had also purchased a brilliant circuit design from a fellow in Toronto for the Radial J48 active DI. What made it unique was that it employed a switching power supply that both increased the dynamic range and enabled the ground lift switch to work without reverting to a battery. (As we all know, batteries go dead at the most inopportune time.)

With the J48 ready to hit the market, we had tests done at Bryan Adams' famous Warehouse Studio using their Audio Precision system that compared the J48 to other well-known brands. This resulted in a document called the Blue Report that essentially compared DI boxes under various conditions covering all types of distortion factors. People tend to believe the written word, so a test report is a powerful sales tool. With the Blue Report in hand, making a sales presentation that convinced the customer our product was better was straightforward.

One day, while visiting Clair Brothers, I did my sales pitch to Stan Horine, the buyer. After going through it and showing him the Blue Report, he said: "Your boxes

look great!" I replied, "Fantastic. How many can I ship you?" He said, "None." I retorted, "None? Our DI boxes have less distortion, greater headroom and they will make your P.A. systems sound better. Why none?" He said, "Peter, we are a rental company. If someone asks for your products, we will order them in."

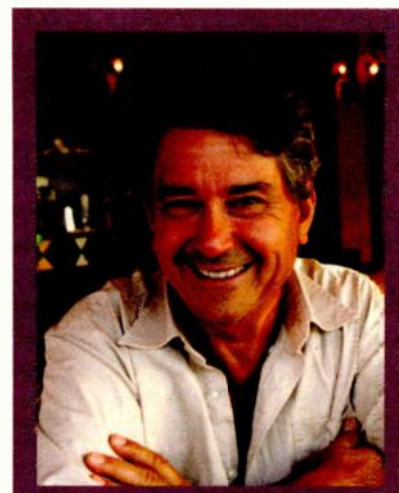
The Aha Moment was clear: We had to create demand.

As Radial was relatively unknown, we began our "mission" by going to the rehearsal spaces in Nashville and lending them direct boxes for their clients while rehearsing for concert tours. Once things got going, we then began to target other popular rehearsal spaces around the U.S. We then teamed up with retailers like Tour Supply to close the loop. Not only did Radial quickly find its way onto riders, but we began to gain backstage access when concerts came through Vancouver; this gave us the opportunity to speak with the techs where we would arrange loaners. As techs move from one show to another, it wasn't too long before Radial found its way onto even more riders and in some cases, open discussions for endorsements.

A few years later, while reading Malcolm Gladwell's *The Tipping Point*, I discovered that what we were doing was essentially what he was

professing as the best way to increase product acceptance in the market. By convincing market leaders—in our case, audio engineers and guitar techs—that our product was offered a better solution, they became advocates for our products and continued to use them when future opportunities arose. Further, once trust was established, they would call us with suggestions for fixes or new product ideas.

As momentum grew, we created a list of clients for our website and then printed a laundry list of the most notable artists in our 'Thank You' ads. These would be published in various trade magazines in January and February issues, and served to both thank the artist for their support while creating the sense of their being part of a winning team. It also served as a reminder for tour managers to ensure Radial was on the rider. This added to the momentum as more and more new artists took on Radial. It was always fun to scan the Centerstage chart in *Pro Sound News* to see how many acts had our gear on their stage. Most often, eight out of 10 would list Radial and in most cases, the missing two simply did not list accessories. I recently read *Shoe Dog* by Nike's CEO Phil Knight, and he often sites being excited when he would see athletes sporting a pair of



BY PETER JANIS

Peter Janis, former CEO of Radial Engineering, is a 40-year veteran of the music industry. Exit Plan, his consulting firm, assists business owners on building their companies and preparing them for eventual sale

his shoes. I can totally relate.

I also recall getting a call from Jack Boessneck, operations manager at Eighth Day Sound. Jack said, "Peter, we have a problem." Of course, I had no idea what the problem could be, so I put on my best game-face and replied, "What is it? What can I do to help?" He said: "I have hundreds of your competitors' direct boxes in stock, but nobody wants to rent them. They are all asking for Radial." I said: "Easy, put them on eBay." Jack ordered another 100 direct boxes and has been a huge supporter ever since.



## AES Wrap-Up

(continued from page 1)

vention was held in the same place two years running, and likewise, the event was again co-located with the adjacent NAB Show New York. Not everything was the same as 2017, however—among the more than 300 brands presenting on the exhibition floor were 37 new exhibitors, some coming back after considerable hiatuses, like Universal Audio, attending its first AES in a decade. Other new or returning exhibitors included brands such as Dell, Sound Devices, Universal Audio, Apogee, Riedel, Zoom, Meyer Sound, Wisycom, Western Electric, Roland, MAGIX and others. Greeting them were nearly 14,000 registrants, who packed the exhibition hall, checking out the latest and greatest gear on display.

Nonetheless, the society's remit is audio education, and in that regard, too, the convention was a success, providing an opportunity to discover new ideas and solutions at panels, paper presentations, special events,

workshops and more, regardless of whether they were about recording, live sound, game sound, archiving or another topic entirely. The specialized education tracks ran the gamut, with offerings that might be considered profession-specific, but which still drew audiences from across the industry. A perfect example was "Preserving the Archives of Major Recording Artists," a panel led by Archiving and Restoration track chair Jessica Thompson, which saw various panelists discuss their work preserving the oeuvres of artists such as Prince and Neil Young in front of a packed house.

There were other instances in which the industry came together as a whole, such as the annual Richard C. Heyser Memorial Lecture, which was presented this year by John Meyer, co-founder of Meyer Sound. Crowds packed the opening ceremonies, too, to see friends and colleagues receive awards and honors for their contributions to the AES over the years. There, keynote speaker Thomas Dolby drew on his work as the Homewood Professor of the Arts at Johns Hopkins University in Baltimore, MD, to discuss a

broad cross-section of adaptive/non-linear music and audio technologies and their applications, both current and theoretical for the future. While Dolby's remarks generally looked toward the future, he finished the talk with a glance back at the track that made him a household name in the early '80s, performing an upbeat rendition of "She Blinded Me with Science" that got hundreds of jaded audio professionals on their feet.

That moment largely matched the vibe of the entire convention—it was a serious, educational event, but fun was never too far away. A panel by the studio engineer "supergroup" METAlliance saw the likes of Chuck Ainlay and Frank Filipetti cracking jokes as they discussed the organization's upcoming "In Session" event in January. Legendary engineer Al Schmitt, owner of 20-plus Grammys for his work, held three book signings for his new autobiography/how-to tome, only to run out of books on multiple days. Artist turned multi-platinum producer/engineer Prince Charles Alexander held court with a fascinating panel tracing how hip-hop has always embraced cutting-edge re-

ording technologies, and used plenty of block-rocking examples to underscore his point. Re-recording mixer Tom Fleischman talked about the demands and inspirations that led to his best moments working on the HBO series *Boardwalk Empire*.

All this barely scratches the surface, however. The show's many sound reinforcement offerings ranged from multiple events about current-day RF administration, to a panel featuring the audio team behind the hit Broadway musical *The Band's Visit*. And for those who just wanted to enjoy a deep artistic discussion unencumbered by any cognizant thought, there was a candid on-stage and in-character panel with Derek Smalls ("formerly of the band formerly known as Spinal Tap"), who talked up his new solo album with witty producer/mixer CJ Vanston.

With this year's convention now behind us, it's time to look ahead—to next year's convention, to be held in New York for an unprecedented third year in a row, on October 16-19, 2019. Mark your calendars!

AES  
www.aes.org

40 Years  
(continued from page 1)

Cohen had sound reinforcement covered, but Gallo needed someone to write about the record production business. “To my great fortune, after we published the first issue, this young guy, Marty Porter, walked into my office at the recommendation of a mutual friend. By the second issue, I had hired Marty to do the general writing,” he says. “And Marty was a tremendous news writer.”

From the get-go, unlike its features-focused rivals, which at that time included *dB the Sound Engineering Magazine*, *Mix*, *Modern Recording* and *Recording Engineer/Producer*, *PSN* focused on the news—heck, it’s right there in the title. It also covered not only the tools and technologies, but also business issues.

“The thing that *Pro Sound News* has always done better than any other title is address the business side as well as the production side,” says Frank Wells, *PSN* editor from 2000 through 2015. “We not only wanted to know what cool new tool somebody bought and what it would do,



The first issue of *Pro Sound News*, dated November 3, 1978

partly because of a deliberate philosophy instituted by Paul, and carried forward, that what made AES and the convention healthy also made the audio industry healthy,” says Wells, who was elected AES president in 2013.

There was a lot of news to write about over the decades, as the pro audio industry was buffeted by recessions in the early '80s, early '90s and 2008, and the after-effects of the September 11, 2001, terrorist attacks. Looming over it all was the digital

transformation. “Also around 1978, the post-production business got a boost, Porter continues. “Bob Lifton, who owned Regent Sound, figured out a way to sync an audio recorder with video through SMPTE time-code. Audio-for-video post was becoming a reality. That helped explode the business.”

Personal computers were becoming commercially available by 1978, too, creating a platform for the later explosion in digital audio workstations. DAWs would eventually allow anyone to work on audio projects anywhere, but it was another product that initially challenged the hegemony of the big commercial production facilities and enabled the proliferation of home studios.

“The ADAT recorder was introduced at the NAMM Show in 1991 for \$3,995,” says Debra Pagan, *PSN* editor between 1989 and 1995. “That was huge; its capability to record more audio tracks at a comparatively low cost contributed to the rise of the project studio.” The proliferation of affordable, high-quality audio products and smaller mixing consoles further fueled the home studio market, she says. “The personal production facility changed the face of the studio industry.”

The latter half of the '90s saw a similar shift in sound reinforcement, as live sound equipment became more powerful even as it shrank in size, allowing tours to fit far more gear into far less truck space. Line arrays and early IEMs had been around for years, but were considered arcane, boutique items at best. L-Acoustics and Future Sonics’ championing of the respective categories created groundswells of demand that the industry as a whole soon met. Likewise, live engineers were resistant to initial digital consoles like the early offerings of French audio company Innovason (eventually acquired by Lawo in 2008), but relented when Yamaha, later followed by other major console manufacturers, entered the category in 1999.

“The industry was changing,” says Gallo. “It was becoming more and more critical that you found out what others in your community were doing. They had to keep reading about the changes, and that’s why *Pro Sound News* became so successful. The people in the business—the recording and live sound communities—were, and still are, just the finest people in the world. They wanted to communicate, and they use *Pro Sound News* as a medium of communication.”

“It was becoming more and more critical that you found out what others in your community were doing. They had to keep reading about the changes, and that’s why *Pro Sound News* became so successful.”

Paul Gallo, founder

we also wanted to know how it could help them work smarter and more efficiently, attract and keep more clients, and get more business so they could stay competitive. *Pro Sound News* carries that forward to this day.”

From the first issue, *PSN* has always maintained close ties with the Audio Engineering Society. “The first issue was published to coincide with the 61st AES Convention in New York,” Gallo reports. “In 1989, Donald Plunkett, the executive director of AES, and I agreed to start publishing the *AES Daily* [a daily newspaper handed out at the convention], which *Pro Sound News* is still doing today. It gave us the ability to reach everybody in the industry.”

“*Pro Sound News* has always been the best friend in publishing that AES had, partly because of those ties and

transformation. In that first issue, Gallo recalls, “Glenn Phoenix [owner, Westlake Audio] said, ‘We have to be a little concerned about the introduction of new digital products.’ That was 1978.”

When *PSN* launched, SSL and Neve were only just entering the U.S. market, which was dominated by MCI, Ampex, 3M, Sound Workshop and other homegrown brands—but digital gear was already here.

“Tom Stockham had Soundstream, the first digital recording system, doing a lot of classical recordings, and it became apparent that digital recording was going to be the way forward,” says Porter, who subsequently became *PSN*’s editor, then group senior vice president and publishing director, through 2004.

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# Raw & Ready

BY JACQUES SONYIEUX

Adam Hood is perhaps best known for writing songs for artists such as Miranda Lambert, Lee Ann Womack or Brent Cobb, in addition to his almost nonstop series of live performances—which began when he was just 16 and still continue to this day. Hood's new album *Somewhere in Between* sees him capturing his own songs in stripped-down production construct, enabling his natural storytelling abilities to truly come to life. *Pro Sound News* spoke to Hood about "recording live" at Nashville's Sound Emporium Studios.

## ON PASSING THE TORCH

For me, it feels like such a rare occasion when somebody else wants to record my song, so I kind of lose my attachment to it, to be honest. In 2014, I put out a record with a song on it called "He Did," a song I wrote for my father. I have a pretty significant attachment to that song, and other songs I've written for my kids. In a situation where an artist finds my material, there is usually a story about why they want to record it. If someone comes to me and says, "Hey, I love this tune and want to put it on my record," it means a lot. It is kind of like passing the torch. The whole point is the relativity of the material, I guess, and that is what you hope for as a songwriter. So when artists come to me and say, "Man, you wrote this song and I can really relate to it," it is a high compliment.

## ON WORKING AT SOUND EMPORIUM

I did a lot more writing and playing

live before I ever went into the studio. The recording process is not effortless for me, but I feel like I get a little better at it and closer to the process each time. I knew the history of the Sound Emporium, and this time we chose to record in room B. The vibe is all around when you walk through the front door, but once you get to that B room, things seem to get real organic. There is mojo in there, and that studio really lives up to its reputation. I've been to a few studios, but Sound Emporium is truly a comfortable environment to work in.

## ON KEEPING IT RAW

It was a conscious decision to make the record feel as live as possible. We recorded the entire album in two days, leaving one additional day for overdubs. Usually we don't keep scratch vocals, especially me, but in this case we kept a lot of the scratch vocals—and some of these performances ended up being the best takes



PHOTO BY ALISSE GARFEN

Adam Hood's new album is *Somewhere in Between*.

of the pile. We felt that, and it didn't really make sense to go back and do a whole lot of vocal overdubs. As far as guitar parts, I think I played maybe two. This was a conscious decision because I typically play [as a] three-piece when we are on the road, just for the sake of efficiency. On this record, I ultimately wanted two things to happen: First, I wanted to make a record that I could reproduce as a three- or four-piece: electric guitar, bass and drums. The other thing was that I wanted [guitarist] Pat

at your disposal online—and it wasn't always that way. As a budding artist, it took a while for me to get up the nerve to write, and then to play those songs in front of people. If I didn't have constant encouragement around me, I would be doing something else for sure.

## ON OVERPRODUCING

Every other record we've made has been in sixth gear. It's been a five- or six-piece band and a full production in the studio, having an army of mu-

"This time I went into the project deliberately divorcing myself from the temptation of overproducing because I didn't want to make that kind of record."

Adam Hood

McLaughlin in there. I don't write all my good songs with Pat, but every song that Pat and I write is great, and we have a cool relationship. I wanted him to play and sing with me and just build the band around that. We did it all live, and it was really fun and a cool process.

## ON WORKING-CLASS ROOTS

I began playing in front of people in church at 14, and got a little gig playing in front of people on the weekends at about 16. About six months into that, my parents bought me a P.A. system. I had really supportive parents and a community of friends, family and people around me. Regardless of your background, you can second-guess yourself a lot because it is such a competitive market. Now, in my view, the industry has really leveled the playing field. The tools make and release a record are remarkably accessible, especially compared to how it used to be. Now, you have all the resources, you have affordable equipment and talented people

behind you—and it is awesome. But I just cannot reproduce it live, and it ends up becoming a weight on your shoulders. We would go out and play a bunch of shows in Fort Worth or something, and one of the songs would come on the radio and I would listen to it and think, "We don't do it like that," and the struggle eventually became burdensome to me. Now, coming out of the gate with the guys on the new record, my first thought is, "Wow, this sounds just like the record." That is such a good feeling. This time I went into the project deliberately divorcing myself from the temptation of overproducing because I didn't want to make that kind of record. Granted, on the next record, we might get strings and horns and make a Ray Charles record, I don't know. But for this time, I wanted to get away from it.

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

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