

pro sound

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January 2019



JAY BLANKENBERG

TAKE ME TO THE PILOTS—Vocalist/multi-instrumentalist Tyler Joseph and drummer Josh Dun, better known as Twenty One Pilots, have been traveling the world since October on their Bandito Tour. Seen here on the show's B stage, the duo is working with VER Tour Sound, carrying a massive Meyer Sound LEO system. For more on the production, see the Live Sound Showcase on page 38.

Pro Audio Education to Expand at NAMM

BY STEVE HARVEY

ANAHEIM, CA—The NAMM Show has long been the MI world's top event, but in recent years, the four-day convention held annually in late January has become increasingly important to the pro audio industry as well. That was readily evident in 2018 with the debut of a two-story exhibition build-

ing devoted almost entirely to live sound and recording; at the same time, NAMM supersized its educational sessions by introducing the AES@NAMM collaboration.

The 2019 convention later this month, then, finds NAMM bolstering its educational offerings even further. While attendees may head to Anaheim aim-

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Reinventing *Remain in Light*

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2015 Producer of the Year Grammy-winner Jeff Bhasker reveals the production process behind Angelique Kidjo's first English-language album, a cover of Talking Heads' iconic *Remain in Light*.



Pro Audio Answers Podcasting's Call

BY CLIVE YOUNG

When podcasting emerged in the early 2000s,

the format often felt like a gawky kid brother to talk radio—a domain of programming with limited reach and even more limited appeal to

mainstream listeners. Those days are gone. According to Edison Research, 64 percent of Americans have heard of podcasts, 44 percent—which is to say 124 million people—have listened to at least one, and 32 percent of Americans between the ages of 25 and 54 now listen to them every month.

An oft overlooked key to podcasting success is sound quality, and the pro audio marketplace has moved to address the format's needs as podcasting has taken

off. "Personally, as a fan of many podcasts across several genres ... the poor sound quality of some shows bothered me," said Dan Hughley, market manager for Focusrite. "This is what convinced me that more podcasters need to be concerned and educated about their audio quality production, and that excites me to address this market." Focusrite has been doing just that; Hughley cites a number of podcasts that now use Focusrite interfaces,

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The Dead's Wall of Sound Lives

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In 1974, the Grateful Dead toured with a short-lived, 75-ton P.A. system—the Wall of Sound—that became the stuff of legend. Last month, tribute act Dead On Live and live sound provider Asbury Audio teamed up to re-create it for one night only.



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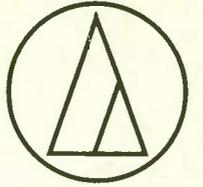
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RCF Group Acquires DPA Microphones

BY CLIVE YOUNG

NEW YORK, NY—The pro audio industry was caught off guard in mid-December with the surprise announcement that Denmark-based DPA Microphones had entered into an agreement to be acquired by RCF Group. However, as the microphone manufacturer's CEO told *Pro Sound News*, the road ahead will see the company engage in business as usual, even as it initiates some ambitious plans.

"DPA will continue as an independent company owned by RCF Group," confirmed Kalle Hvidt Nielsen, CEO of DPA. That hands-off approach echoes the arrangement going forward for RCF's other major purchase of 2018: U.S. loudspeaker manufacturer Eastern Acoustic Works. EAW's president, TJ Smith, told *PSN* back in October that RCF has decided to essentially let his company forge its own path.

DPA was sold by private equity firm The Riverside Company, which purchased the microphone manufacturer in late 2013. Since then, DPA

has expanded product offerings like its CORE by DPA technology, while building out its sales, distribution and operations and increasing its management team.

Key to that effort, Riverside brought in Nielsen to lead DPA, who in turn made changes in how the company operates. According to the CEO, the share of sales coming from new products is up from less than 5 percent to more than 40 percent today, and all major areas in the business have been professionalized and streamlined.

Much as the deal marked RCF's second acquisition of 2018, it also was Riverside's second pro audio sale, having sold Blue Microphones to Logitech back in July for roughly \$117 million in cash.

With the leeway to head where it feels the market is calling, DPA will stay the course for now, according to Nielsen: "The brand will stay the same, the quality will stay the same, the sound will stay the same. We will continue with our current focus and strategy."

Accordingly, customers shouldn't expect to be affected by the transition to RCF ownership, although U.S. customers will see at least one change. As Nielsen noted, DPA will be "reinforcing our strong sales team in the U.S."

That kind of reinforcement may



Kalle Hvidt Nielsen, CEO of DPA Microphones, noted that his company will continue to operate independently.



With RCF Group's acquisition of DPA, Arturo Vicari, CEO, said that RCF will be able to offer the complete audio chain from mics to speakers

well lay the groundwork for other strategies down the road, as he added, "Under the new ownership, we plan to expand DPA's brand position in all segments."

Sold by more than 2,000 dealers worldwide, DPA is already well-established on the international pro audio market, but becoming part of RCF Group may well help expand its reach as the parent company's products are distributed in 120 countries.

Also, while DPA is being treated as an autonomous entity, that doesn't mean it's going to ignore the potential synergies available to it as part of a larger pro audio conglomerate.

"I believe close cooperation with the other companies in the RCF group will help us accelerate our ambitious plans," said Nielsen.

That observation falls in line with a comment from Arturo Vicari, CEO of RCF Group, who pointed out in a statement, "We can now offer the complete audio chain, from microphones to speakers for the satisfaction of professionals around the world."

RCF Group
www.rcf.it

DPA Microphones
www.dpamicrophones.com

briefs

QSC Opens Training Center

BOULDER, CO—QSC (www.qsc.com) has opened a training center in Boulder, CO, aiming to provide a hands-on learning environment to train integrators, programmers, consultants and end users. The center currently offers courses focused on the Q-SYS Platform, including Q-SYS Level 2 and Q-SYS Control 201; sessions for other QSC products are expected to be rolled out next year. All QSC online and classroom training is offered to students free of charge.

K-array USA Launches

BOSTON, MA—Italian loudspeaker manufacturer K-array (www.k-array.com) has launched a North American subsidiary, K-array USA. While the company has previously been distributed in the U.S., the N.A. subsidiary will allow the Italian manufacturer to directly oversee sales, marketing and service operations here. Located in a new facility in the greater Boston area, K-array USA is headed by Rusty Waite, the company's global business development director.



d&b audiotechnik Creates China Subsidiary

HONG KONG—d&b audiotechnik has opened a subsidiary in China in a bid to further its presence in the APAC region.

d&b audiotechnik and its previous partner in China, d&b China, are realigning their partnership by establishing a new entity named d&b audiotechnik Greater China Ltd., which is based in Hong Kong. "The Chinese market is strong and I believe this move from d&b comes at just the right time to leverage this positive growth," said Daniel Chan, who will lead the new d&b subsidiary.

The foundation of a subsidiary of d&b audiotechnik Greater China Ltd. with offices in Beijing, Guangzhou and Shanghai is also underway. More than 40 employees from the previous partner, based in Hong Kong, Beijing, Guangzhou and Shanghai, will join the new cooperation.

d&b audiotechnik Greater China Group will be responsible for sales,

marketing, service and support for sales partners and customers in greater China.

Daniel Chan has a long association with d&b and the Chinese market; he takes on the title of managing director (CEO) of d&b audiotechnik Greater China Ltd. Freddie To, also from the previous partner, will join the Advisory Board alongside an external market expert, who will be announced shortly, and Amnon Harman, CEO of the d&b audiotechnik Group. d&b audiotechnik holds the majority interest in the new cooperation; Chan and To will be co-owners. d&b has nine subsidiaries worldwide; d&b audiotechnik Greater China Ltd. will be the third in Asia, joining Japan and Singapore.

Harman commented, "This move represents a significant deepening of commitment of d&b to China as a globally important growth market. The establishment of this new d&b subsidiary is an exciting move for us.



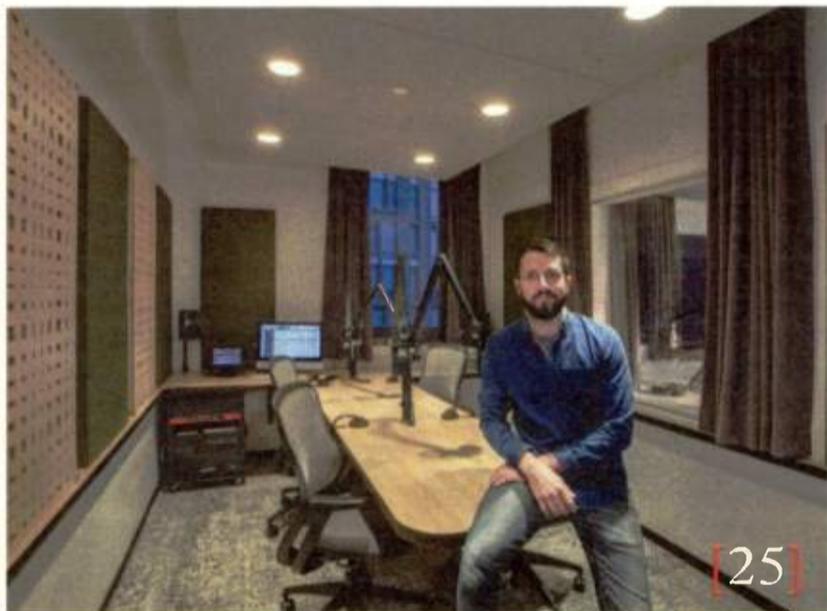
Creating d&b audiotechnik Greater China Ltd. are its managing director, Daniel Chan (left), and CEO of the d&b audiotechnik Group, Amnon Harman.

We will be able to serve our Chinese sales partners and customers more directly with the best solutions for their professional audio needs in installation and mobile applications. The co-owners and co-workers who will be joining the d&b global team bring in tremendous expertise around d&b systems, audio technology solutions and the Chinese market. I am thrilled at the prospects of expanding our business in China with this fabulous team."

d&b audiotechnik
www.dbaudio.com



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Coming Down with Acquisition Fever

In the world of pro audio, there's been a new holiday tradition in recent times, and the only words that come to mind to describe it are "acquisition fever."

Maybe it's the need to finish a deal before the end of the fiscal year, or even just the desire to close the calendar on a high note, but any way you slice it, December has become the month when PSN winds up reporting every few days about one corporate entity purchasing another. In December 2017, Highlander Partners bought Biamp Systems, Listen nabbed ExXothermic's Audio Everywhere brand, and DPA acquired Sound Network. Page through this issue and you'll discover that a year later, in December 2018, L-Acoustics brought in HGP, Solotech netted SSE Audio Group, DiGiCo subsumed KLANG:technologies, BTI Studios picked up Berliner Synchron and DPA was bought by RCF Group.

Increasingly, however, acquisition fever is not just a seasonal thing. In truth, acquisitions were everywhere in the pro audio field in 2018, regardless of whether they were between manufacturers, distributors, tour/event production companies or other entities.

2018 kicked off with a surprise announcement at the NAMM Show in January that Radial Engineering was now part of Ultimate Support, and things snowballed from there.

SSL was sold to console conglomerate

Audiotonix. B&C Speakers got Eighteen Sound and Ciare, while Williams Sound purchased Pointmaker and Guitar Center expanded its business solutions group by buying AVDG. Logitech acquired Blue Microphones, and RapcoHorizon lassoed in Lava Cable. Presumed dead, Cakewalk was saved by BandLab. Loud Technologies sold off a trio of major brands, with Ampeg going to Yamaha, EAW going to RCF Group and Martin Audio going independent via a management buyout. Sound Devices bought Audio Ltd. in the UK, while Riedel bought Archwave and R&D Hub. On the live sound side, VER was purchased by PRG, and SSE Audio Group bought Capital Sound prior to its own acquisition in December. At a price of \$170 million, DCC's acquisition of MI and pro audio distributor Jam Industries was likely the most expensive deal of the year. And even *Pro Sound News* was acquired, when our parent company NewBay Media was purchased by Future last spring.

Change can often be a bit unnerving, but while seeing parts of the industry roll up can create a sense of unease, acquisitions can also bring new players and approaches into the industry. Likewise, they can breathe new life into brands on the brink—a fact exemplified by BandLab's purchase of Cakewalk last spring. In many cases, the decision to enter into an acquisition isn't about dire neces-

sity, but rather to gain the resources to vault a company to the next level, whether it wants to make inroads into consumer audio, invest in R&D or enact other plans.

Regardless of these changes, pro audio remains an industry that's still small in many ways, with an entrepreneurial spirit at its heart, as I've often noted here—and the consolidation of different players won't change that. In fact, some recent acquisitions counted on that independent mindset; RCF Group's pair of 2018 purchases—EAW and DPA—hinged on the expectation that the companies would continue to chart their own courses.

Whether they're big or small or part of a larger corporate entity, many pro audio businesses have the potential to radically change the industry. A key example can be found in this issue's View from the Top profile of Christian Heil, founder of L-Acoustics, who spent more than a decade running his 10-employee boutique loudspeaker company until his seemingly esoteric idea—the line array—caught on in the latter half of the 1990s. The rest is history.

All that acquisition and consolidation is arguably a sign of a healthy industry. Pro audio's corporate landscape may keep changing, but that also means our industry remains ever agile, shifting with the times and technologies to keep moving forward.

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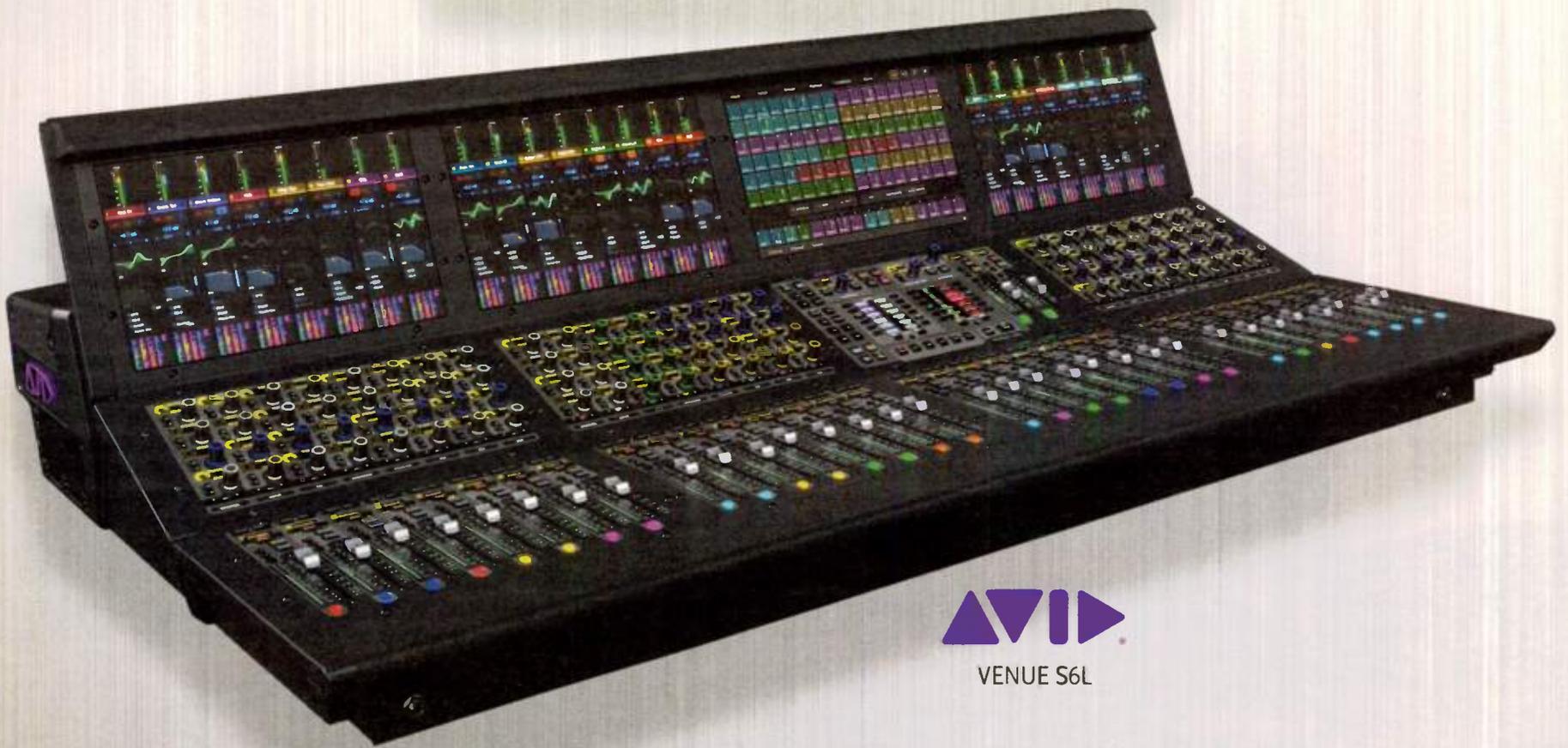
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Solotech Acquires UK's SSE Audio Group

BY CLIVE YOUNG

MONTREAL, CANADA—North American live production provider Solotech has acquired UK-based SSE Audio Group, one of the largest sound companies serving the European market.

The move comes just months after SSE did some acquiring of its own, having subsumed London-based SR provider Capital Sound in July 2018. That was only the latest of SSE's purchases, as it also bought London sound reinforcement company Cane-green in 2008, and Manchester-based audio provider Wigwam in 2013.

Characterizing the acquisition as the most important in Solotech's history, Martin Tremblay, president and CEO of Solotech, said that he expects the deal, in the works since the summer, to generate growth opportunities and operational synergies, as well as expand services available to clients.

Founded more than 40 years ago, Solotech currently has about 1,200 employees across its 13 locations in Canada, the United States and Europe. While it provides video, lighting, rigging, soft goods and control/collaboration systems for productions, Solotech is likely best known for providing live sound over the years for artists including Arcade Fire, Celine Dion, Bruce Springsteen, Justin Timberlake, Leonard Cohen, Michael Bublé and Cirque du Soleil.

More than 150 people currently work for SSE and its various divisions. Under terms of the acquisition, John Penn, who founded SSE Audio in 1976, will continue to head the group in the UK, and SSE Audio, Capital Sound, Wigwam and Sigma Products will all continue as separate brands.

Underlining the international synergy that the acquisition creates for both parties, Penn noted, "Our cli-

ents will continue to benefit from the excellent reputation of our brands, but over time, they will also eventually have access to a broader service offering on both sides of the Atlantic, as Solotech offers a complete range of audiovisual and entertainment technology services."

Tremblay highlighted those services as well, stating, "The transaction will enable us to definitively pursue our expansion strategy in the European market and consolidate our unique position as a global player offering full-service sales, rentals and integration of audiovisual technologies."

While the two companies have worked together in the past—Tremblay noted, "Solotech and SSE have worked together for years. We share a passion for innovation, quality and people."—it's not the first time SSE has reached across the Atlantic. In recent years, it has had a working partnership with Escondido, CA-based Sound Image, as the two companies founded United Audio Companies

in 2015, a venture that allowed them to co-supply audio for international productions such as 2018's Imagine Dragons world tour.

Tremblay told *Pro Sound News*, "As far as we are concerned, we want that collaboration to continue."

Pierre Boivin, chairman of Solotech's board, said in a statement that he expected the move to help the company make the most of predicted industry growth, citing recent InfoComm market forecasts: "The audiovisual industry offers excellent prospects for growth, which should increase by 4.3 percent per year to \$53.4 billion U.S. in 2022, compared to \$43.1 billion U.S. in 2017. Music tours should generate growth of 10 percent per year by 2022. This transaction will enable us to take full advantage of opportunities that open up to us."

Solotech
www.solotech.com

SSE Audio Group
www.sseaudiogroup.com

L-Acoustics Buys HGP

MARCOUSSIS, FRANCE—French loudspeaker manufacturer L-Acoustics has acquired both HGP, an Amboise, France-based precision sheet metal manufacturer, and its sister powder coating company, API (not to be confused with U.S.-based console manufacturer API Audio).

L-Acoustics already used HGP's services for precision sheet metal manufacturing of rigging and internal loudspeaker components. For Bertrand Bounoure, president and commercial director of HGP, the acquisition "constitutes a natural extension of a decade-long, successful supplier-client relationship between two growing companies with shared interests and objectives. We are delighted to pool our resources and abilities."

Hervé Guillaume, managing di-

rector of L-Acoustics, noted the move would help augment the company's R&D and production capabilities, while Jérôme Dolou, purchasing director at L-Acoustics, said that bringing HGP in-house would aid "quality, dependability, logistical excellence and, above all, foster a highly nimble approach to rapid prototyping."

It's not the first time L-Acoustics has acquired former component suppliers. In 2007, L-Acoustics acquired Simea in eastern France, a carpentry and cabinetry manufacturer that specialized in loudspeaker enclosures. More recently, in 2016, L-Acoustics acquired German amplifier manufacturer CAMCO.

L-Acoustics
www.l-acoustics.com



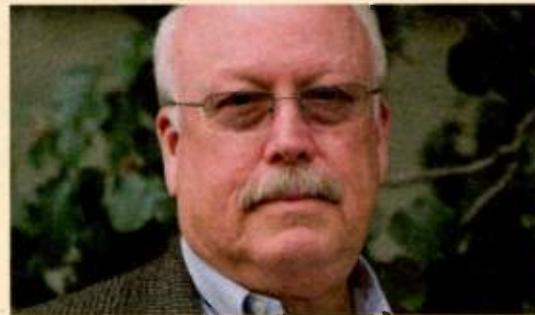
Kara loudspeakers roll down the assembly line inside the L-Acoustics manufacturing plant in Marcoussis, France.

MPSE to Honor Flick

STUDIO CITY, CA—The Motion Picture Sound Editors will honor supervising sound editor Stephen H. Flick with its 2018 MPSE Career Achievement Award at the 66th Annual MPSE Golden Reel Awards ceremony on Feb. 17, 2019, in Los Angeles.

An audio veteran of 40 years and more than 150 films, Flick won Academy Awards for Sound Editing in 1988 and 1995 for *Robocop* and *Speed*, respectively. "Stephen is a true innovator and the epitome of the sound artist," said MPSE president Tom McCarthy. "He creates sound that blends organically with picture and brings the film's world and story to life."

Flick comes from a background in music, puppetry and college theater. He began his career in motion picture sound in the late '70s and earned one of his first credits as sound supervisor on the 1982 horror-thriller *Poltergeist*, which also brought him his first Academy Award nomination. He has a total of five Oscar nominations, with others coming for *Die Hard* and



Stephen H. Flick will receive the 2018 MPSE Career Achievement Award at the MPSE Golden Reel Awards in February.

Total Recall.

Additionally, he has three Emmy Awards (for *Deadwood*, *Bury My Heart at Wounded Knee* and *John Adams*) and a BAFTA for *Speed*. The MPSE has previously honored him with two Golden Reel Awards, among five nominations. Flick is currently a professor of the Practice of Cinematic Arts at USC's School of Cinematic Arts. He also plays jazz saxophone and flute in a number of traditional and contemporary ensembles.

"I have been fortunate to have spent my career doing work that I am passionate about," said Flick. "It is an honor and a privilege to be recognized by my friends and colleagues in the MPSE."

Motion Picture Sound Editors
www.mpse.org

“Stairway to Heaven” Desk Sold at Auction

BY STEVE HARVEY

LONDON, UK—Less than two years after auctioning the EMI mixing desk used to record Pink Floyd’s *Dark Side of the Moon*, Bonhams returned to the used console market on Dec. 11 as it auctioned off the Helios board that recorded Led Zeppelin’s “Stairway to Heaven” for £112,500—roughly \$142,313.

Given the low auction price—as compared to the Pink Floyd desk, which brought in \$1.8 million, far above the pre-auction \$700,000 estimate—there’s some speculation that the desk will continue to be used somewhere, as opposed to becoming a museum piece like the EMI desk, which became part of an exhibition at London’s V&A soon after its sale.

Possibly hurting the console’s auction was the fact that it is actually a hybrid desk, constructed out of two separate Helios boards. The amalgamated unit was constructed by Elvis Costello and Squeeze’s Chris Difford in 1996.

The HeliosCentric console comprises 38 channels of Helios Type 69 mic/EQ modules with 24 bus routing, four echo sends, two foldback sends, switchable separate pre- and post-EQ insert sends and returns, and an additional six mono line inputs. It features 24-channel monitoring with six group outs and four mono headphone sends. It includes eight onboard signal processors: four mono A&D 760 compressors and four mono Helios 5056 EQs.

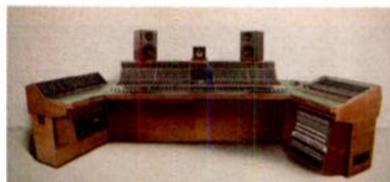
The console is a combination of two desks: one from Island Records’ Basing Street Studio 2 in London and the other from Space Studios at Hook End Manor, the Oxfordshire home studio of Ten Years After’s Alvin Lee. Basing Street Studios used the console from 1970 until 1974, when it was decommissioned; it remained in storage until 1996. Lee’s custom desk, commissioned in 1973, was later moved to his Wheeler End Studios in Buckinghamshire, where it was in use until the early 1990s.

The Basing Street console was used by Led Zeppelin to record its fourth album, which includes “Stairway to Heaven,” and by Bob Marley & The Wailers to record the *Burnin’* and *Catch a Fire* albums. Jimi Hendrix, Cat Stevens, Eric Clapton, Sly Stone, Jimmy Cliff, Harry Nilsson, Jeff Beck, Humble Pie, Mott The Hoople, David Bowie, Free, the Rolling Stones, Steve Winwood and numerous others also recorded through the desk.

Lee’s projects recorded through

his Helios console included the album *On the Road to Freedom*, a collaboration with the Thames Valley Gang that included George Harrison, Ron Wood, Joe Brown, Steve Winwood, Tim Hinckley, Boz Burrell, Jim Capaldi and Mick Fleetwood.

At HeliosCentric Studios, the amalgamated desks saw action with



The Helios board that recorded Led Zeppelin’s “Stairway to Heaven” sold at auction for £112,500—roughly \$142,313.

Paul Weller, who recorded his *Helioscentric* album through it, Supergrass, Sia, Keane, Athlete, The Feeling, KT Tunstall, Turin Brakes, Squeeze, Paolo Nutini, Dido, Gary Barlow, David Gray, Royworld, Toploader, Marti Pellow and the Pet Shop Boys. Bonhams
www.bonhams.com

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Production GRAMMY Nominations Announced

BY STEVE HARVEY

LOS ANGELES, CA—The Recording Academy has announced the nominations for its 61st Annual GRAMMY Awards, including production, engineering, mixing, remixing and mastering acknowledgements.

Leading the production pack is mastering engineer Mike Bozzi, with five nominations for his work with Kendrick Lamar, Childish Gambino and Post Malone. Manny Marroquin, engineer/mixer on albums by Post Malone, Chromeo and Charlie Puth, received four nominations. Mastering engineer Dave Kutch got three nods for his contributions to projects by H.E.R., Janelle Monáe and Charlie Puth.

This year's nominees were selected from more than 21,000 submissions across 84 categories. The final round of GRAMMY voting ends Jan. 9, 2019. The Recording Academy will present the GRAMMY Awards on Sunday, Feb. 10, 2019, live from Los Angeles' Staples Center. The ceremony will be broadcast on CBS at 8 p.m. ET.

This year's production nominees are:

RECORD OF THE YEAR

Award to the Artist and to the Producer(s), Recording Engineer(s) and/or Mixer(s) and mastering engineer(s), if other than the artist.

- "I Like It"
Cardi B, Bad Bunny & J Balvin
Invisible, JWhiteDidIt, Craig Kallman & Tainy, producers; Leslie Brathwaite & Evan LaRay, engineers/mixers; Colin Leonard, mastering engineer
- "The Joke"
Brandi Carlile
Dave Cobb & Shooter Jennings, producers; Tom Elmhirst & Eddie Spear, engineers/mixers; Pete Lyman, mastering engineer
- "This Is America"
Childish Gambino
Donald Glover & Ludwig Göransson, producers; Derek "Mixed-ByAli" Ali & Riley Mackin, engineers/mixers; Mike Bozzi, mastering engineer
- "God's Plan"
Drake
Boi-1Da, Cardo & Young Exclusive, producers; Noel Cadastre, Noel "Gadget" Campbell & Noah Shebib, engineers/mixers; Chris Athens, mastering engineer
- "Shallow"
Lady Gaga & Bradley Cooper
Lady Gaga & Benjamin Rice, pro-



THERE'S MORE ▶ See additional production category nominees online at prosoundnews.com.

ducers; Tom Elmhirst, engineer/mixer; Randy Merrill, mastering engineer

- "All the Stars"
Kendrick Lamar & SZA
Al Shux & Sounwave, producers; Sam Ricci & Matt Schaeffer, engineers/mixers; Mike Bozzi, mastering engineer
- "Rockstar"
Post Malone Featuring 21 Savage
Louis Bell & Tank God, producers; Louis Bell & Manny Marroquin, engineers/mixers; Mike Bozzi, mastering engineer
- "The Middle"
Zedd, Maren Morris & Grey
Grey, Monsters & Strangerz & Zedd, producers; Grey, Tom Morris, Ryan Shanahan & Zedd, engineers/mixers; Mike Marsh, mastering engineer

ALBUM OF THE YEAR

Award to Artist(s) and to Featured Artist(s), Songwriter(s) of new material, Producer(s), Recording Engineer(s), Mixer(s) and Mastering Engineer(s) credited with at least 33% playing time of the album, if other than Artist.

- *Invasion of Privacy*
Cardi B
Leslie Brathwaite & Evan LaRay, engineers/mixers; Belcalis Almanzar & Jordan Thorpe, songwriters; Colin Leonard, mastering engineer
- *By The Way, I Forgive You*
Brandi Carlile
Dave Cobb & Shooter Jennings, producers; Dave Cobb & Eddie Spear, engineers/mixers; Brandi Carlile, Phil Hanseroth & Tim Hanseroth, songwriters; Pete Lyman, mastering engineer
- *Scorpion*
Drake
Noel Cadastre, Noel "Gadget" Campbell & Noah Shebib, engineers/mixers; Aubrey Graham & Noah Shebib, songwriters;

Chris Athens, mastering engineer

- *H.E.R.*
H.E.R.
Darhyl "Hey DJ" Camper Jr, H.E.R. & Jeff Robinson, producers; Miki Tsutsumi, engineer/mixer; Darhyl Camper Jr & H.E.R., songwriters; Dave Kutch, mastering engineer
- *Beerbongs & Bentleys*
Post Malone
Louis Bell & Post Malone, producers; Louis Bell & Manny Marroquin, engineers/mixers; Louis Bell & Austin Post, songwriters; Mike Bozzi, mastering engineer
- *Dirty Computer*
Janelle Monáe
Chuck Lightning & Janelle Monáe Robinson & Nate "Rocket" Wonder, producers; Mick Guzauski, Janelle Monáe Robinson & Nate "Rocket" Wonder, engineers/mixers; Nathaniel Irvin III, Charles Joseph II, Taylor Parks & Janelle Monáe Robinson, songwriters; Dave Kutch, mastering engineer
- *Golden Hour*
Kacey Musgraves
Ian Fitchuk, Kacey Musgraves & Daniel Tashian, producers; Craig Alvin & Shawn Everett, engineers/mixers; Ian Fitchuk, Kacey Musgraves & Daniel Tashian, songwriters; Greg Calbi & Steve Fallone, mastering engineers
- *Black Panther: The Album, Music From and Inspired By* (Various Artists)
Kendrick Lamar, featured artist; Kendrick Duckworth & Sounwave, producers; Matt Schaeffer, engineer/mixer; Kendrick Duckworth & Mark Spears, songwriters; Mike Bozzi, mastering engineer

BEST ENGINEERED ALBUM, NON-CLASSICAL

An Engineer's Award. (Artists names appear in parentheses.)

- *All The Things That I Did and All*

the Things That I Didn't Do
Ryan Freeland & Kenneth Patten-gale, engineers; Kim Rosen, mastering engineer
(The Milk Carton Kids)

- *Colors*
Julian Burg, Serban Ghenea, David "Elevator" Greenbaum, John Hanes, Beck Hansen, Greg Kurstin, Florian Lagatta, Cole M.G.N., Alex Pasco, Jesse Shatkin, Darrell Thorp & Cassidy Turbin, engineers; Chris Bellman, Tom Coyne, Emily Lazar & Randy Merrill, mastering engineers
(Beck)
- *Earthtones*
Robbie Lackritz, engineer; Philip Shaw Bova, mastering engineer
(Bahamas)
- *Head Over Heels*
Nathaniel Alford, Jason Evigan, Chris Galland, Tom Gardner, Patrick "P-Thugg" Gemayel, Serban Ghenea, John Hanes, Tony Hoffer, Derek Keota, Ian Kirkpatrick, David Macklovitch, Amber Mark, Manny Marroquin, Vaughn Oliver, Chris "TEK" O'Ryan, Morgan Taylor Reid & Gian Stone, engineers; Chris Gehringer & Michelle Mancini, mastering engineers
(Chromeo)
- *Voicenotes*
Manny Marroquin & Charlie Puth, engineers; Dave Kutch, mastering engineer
(Charlie Puth)

PRODUCER OF THE YEAR, NON-CLASSICAL

A Producer's Award.

- Boi-1da
- Larry Klein
- Linda Perry
- Kanye West
- Pharrell Williams

Recording Academy GRAMMY Awards
www.grammy.com

NAMM Names TECnology Hall of Fame Inductees

ANAHEIM, CA—The TECnology Hall of Fame (THOF) has announced the eight culturally significant audio inventions to be inducted during the 2019 NAMM Show.

The inventions span the 1940s through today and will be officially named during a ceremony held at the 2019 NAMM Show in Anaheim, CA, on Saturday, Jan. 26. The event will be presented by the NAMM Museum of Making Music and hosted by veteran pro audio journalist George Petersen.

The eight TECnology Hall of Fame inductees for 2019 include: the anechoic audio test chamber (Leo Beranek, 1943), beyerdynamic M160 ribbon microphone (1957), Bell Labs' electret microphone patent (1964), Robert Moog's 1964 Modular Moog Synthesizer, iZ Technology's RADAR (24-track disk recorder, 1991), Meyer Sound Labs Source Independent Measurement (SIM) system (1991), Millennia Media HV-3 microphone preamplifier (1992), and the JBL Professional VerTec line array live sound system (2000).

"Each of these innovations has made a major contribution to how sound is created and reproduced—even years after their debut," says TEC HOF director George Petersen. "In fact, all of these technologies are still in use every day. For example, the patent for the electret microphone by Bell Labs' Gerhard Sessler/James West not only paved the way for affordable studio microphones used by musicians on stage and in studios, but that same technology is still employed in every one of the nearly five billion cell phones on the planet."

Inductees to the TECnology Hall of Fame are selected by more than 50 recognized audio experts that include authors, educators, engineers and other professionals. Innovations must be at least 10 years old to be considered. Past honorees have ranged from the early Edison cylinder recorders to early microphone and sound system designs, to early-evolution tape recording devices, and products tied to key developments in digital audio workstations and software plug-ins.

Each inductee represents significant milestones and fascinating histories. The late Robert Moog is a household name for his music synthesizer development. His Modular Moog quickly became adopted by The Beatles, The Monkees, the Rolling Stones, Keith Emerson, and Wendy Carlos' landmark *Switched on Bach*

album.

Other inductees share long legacies. JBL's VerTec sound system was first used to provide sound for the 2000 Democratic National Convention, tested before a worldwide audience. Millennia Media's HV-3 was created by John LaGrou, a classical music engineer who was dissatisfied enough with the audio quality of commercial microphone processing to decide simply to create his own.

Petersen adds, "Perhaps more surprising: all of these products are still in production as working tools—a testament to their relevance." Every brand, with the exception of Leo Beranek and Bell Labs, will be seen as exhibitors at the NAMM Show."

The TECnology Hall of Fame ceremony will be held in the Hilton Anaheim, Room A5, Level 4, from 4 to 6 p.m. on Saturday, Jan. 26, 2019. Seating will be on a first-come, first-served basis to all credentialed NAMM Show attendees. Following the ceremony, the NAMM TEC Awards will be held in the Hilton Anaheim's Pacific Ballroom. The show will be hosted by comedian Demetri Martin and begins with a VIP-only reception at 6 p.m., followed by the awards ceremony at 7 p.m. Tickets may be purchased on site or in advance.

National Association of Music Merchants
www.namm.org

DiGiCo Acquires KLANG:technologies

CHESSINGTON, UK—UK live sound console manufacturer DiGiCo has acquired Aachen, Germany-based KLANG:technologies, a manufacturer of immersive IEM technologies.

The acquisition brings KLANG under the umbrella of Audiotonix, which also owns Allen & Heath, Calrec, DiGiGrid, Solid State Logic and DiGiCo. In the United States, DiGiCo and KLANG already have a certain level of synergy, as both brands have been distributed here by Farmingdale, NY-Group One for a number of years, along with Calrec.

"We have been working in the background with KLANG for some months on increasing our level of integration," revealed Austin Freshwater, general manager of DiGiCo. "Over that time, it was clear the ethos of the development teams was similar, with a lot of shared common goals."

For the German manufacturer, joining DiGiCo will allow it to expand the reach of its work. "Being part of the Audiotonix family will allow our R&D team to bring more of our ideas to life," said Roman Scharer, CEO of KLANG. "We can already anticipate that 2019 is going to be a busy year for us, and we will continue to excite our users with in-

novati

To are to ing the technology. DiGiCo's offerings. Freshwater mused, "Combining the control of the KLANG system into the DiGiCo work surface will allow immersive in-ear monitoring and 3D personal monitoring to be a part of an engineer's natural workflow, and that's just the beginning for us and the KLANG team."

The joining of DiGiCo and KLANG is a clean fit, according to James Gordon, CEO of Audiotonix, who noted, "When the opportunity arose for them to join Audiotonix, we were keen to make it happen. We have always stressed that with our M&A, we would look at each brand's requirements and help support them with their aspirations. On that basis, KLANG will become a key part of DiGiCo's future, as they combine forces to improve the listening world of artists and monitor engineers alike."

DiGiCo
www.DiGiCo.biz

KLANG:technologies
www.KLANG.com

Group One
www.g1limited.com

Latin GRAMMY Production Winners

LAS VEGAS, NV—The 19th annual Latin GRAMMY Awards, broadcast live by Univision from Las Vegas on Nov. 15, recognized the recording, mixing and mastering engineers behind some of the year's biggest hits.

The awards recognize Spanish- and Portuguese-language artists in 49 categories and are voted on by Recording Academy members in over 40 countries. This year, nominations in the four top categories, including Record of the Year and Album of the Year, were increased from five to 10 for the first time.

Two winners in the categories recognizing engineering talent also won in other categories. Jorge Drexler, a Uruguayan musician, actor and doctor, also picked up two songwriting awards, including Song of the Year for "Telefonía" and

Best Singer-Songwriter Album for *Salvavidas De Hielo*. Puerto Rico-born Mexican music megastar Luis Miguel also won in the Best Ranchero/Mariachi Album category for *¡México Por Siempre!*

Producer of the Year went to Venezuelan trumpeter Linda Briceño.

This year's engineering, mixing and mastering Latin GRAMMY winners are:

RECORD OF THE YEAR

"Telefonía"

Jorge Drexler

Carles Campi Campón & Jorge Drexler, producers

Carles Campi Campón & Ernesto García, recording engineers

Matias Cella, mixer

Fred Kevorkian, mastering engineer

Track from: *Salvavidas De Hielo*

[Warner Music Spain]

ALBUM OF THE YEAR

¡México Por Siempre!

Luis Miguel

Luis Miguel & David Reitzas, album producers

David Reitzas & Jess Sutcliffe, album recording engineers

David Reitzas, album mixer

José Alfredo Jiménez, songwriter

Eric Boulanger & David Reitzas, album mastering engineers

[Warner Music México, S.A. de C.V.]

BEST ENGINEERED ALBUM

50 Años Tocando Para Ti

Rafa Sardina, engineer

Rafa Sardina, mixer

Eric Boulanger, mastering engineer

[Orquesta Filarmónica De Bogotá]

Recording Academy

www.grammy.com

INTERNATIONAL IIII

Readies 2019 Live Sound Course

REGGIO EMILIA, ITALY—Using a distance learning/low-residence format, Italian loudspeaker manufacturer RCF is teaming up with the University of Modena and Reggio Emilia for its 2019 sound engineering course this spring to an international audience. The course will be taught in English. The first six weeks of the class will be presented via e-learning methods; participants will then convene for one week in May at the RCF Audio Academy in Reggio Emilia, Italy.

The course's goal is to provide audio engineers with knowledge of technologies related to sound, transducers and speaker systems, exploring their applications in the professional market. The course will progress from the basics of electroacoustic components like transducers, amplifiers and digital processors to the design of a complete audio project based on a real-world case study. An international reference



RCF's sound engineering course in Modena, Italy.

project carried out by RCF engineers will act as a study guideline to be used during the course.

The learning topics are grouped into four modules: environmental acoustics in open air and inner spaces, transducers and speaker systems, electronics, and sound system design.

The course will be taught by professor Emilio Lorenzani of the Department of Science and Methods for Engineering at the University of Modena and Reggio Emilia. The six-week e-learning portion of the course

begins Feb. 28, 2019. Students will then travel to the RCF Audio Academy in Reggio Emilia, Italy, for one week of in-person instruction, May 20-24.

The registration deadline is Feb. 7, 2019. As part of its sponsorship, RCF will cover the course's participation fee, but students will have to pay the university's enrollment fee of 750 euros. Lodging will be available to participants during the week in Italy.

RCF USA
www.rcf-usa.com

Steve 'n' Seagulls Fly

LONDON, UK—Perhaps best-known in the United States for its viral hit cover of AC/DC's "Thunderstruck," Finnish bluegrass act Steve 'n' Seagulls recently had, perhaps appropriately, an Allen & Heath dLive Wings system in tow for a tour of the United Kingdom.

The band's setup comprised a dLive C1500 surface (fitted with a Waves V3 card, used for multitrack recording, virtual soundchecks and running plugins during live shows), an IP8 remote controller and a CDM32 MixRack.

FOH engineer Antti Laitila explained, "Steve 'n' Seagulls tour around the world all the time. I'd heard a lot of great things about the dLive series from my colleagues, so I decided to give it a try."

The single-surface setup is used to handle both FOH and the musicians' IEM mixes. The IP8 is connected to the surface, providing an additional bank of eight faders for further hands-on control, while the CDM32 is situated on stage for all-analog I/O.

dLive's processing and engine were another factor in the overall decision to use the system, Laitila adds. "Steve 'n' Seagulls have a large variety of instruments and four vocals, so trying to fit everything together can be a bit challenging. The Dyn8 multiband dynamic processor is my favorite tool when controlling the dynamics of a blazing banjo or thunderous accordion."

After six tour dates with a demo setup, Laitila and the band decided to purchase the full system. Laitila commented, "After a few shows in different types of venues, I made the decision to purchase the system, and I couldn't be happier."

Allen & Heath
www.allen-heath.com



Steve 'n' Seagulls recently played Lutakko in Jyväskylä, Finland, using its own Allen & Heath dLive at FOH.

BTI Studios Acquires Berliner Synchron

LONDON, UK—Global media localization company BTI Studios has acquired 100 percent of the share capital of Berliner Synchron from Munich based S&L Medien Gruppe, increasing BTI's offering to 63 recording studios across 24 facilities spanning Europe, the United States and Asia.

Berliner Synchron was founded in 1949 as the first professional dubbing studio in Germany. Since then, it has dubbed more than 8,000 titles into German. The Berliner Synchron deal follows BTI's acquisition of Dutch dubbing studio Creative Sounds in

October 2018.

Björn Lifvergren, BTI Studios founder and leader of the M&A team, commented on the deal, "The acquisition of Berliner Synchron is an important cornerstone in the geographic expansion of BTI Studios. It fits well into our strategy to establish presence in all key dubbing territories. Berliner Synchron has everything we are looking for in a dubbing company: a professional team with great management in state-of-the-art studios."

Maria Theresia Seidlein, owner of S&L Media Gruppe, stated, "We are confident that BTI Studios is the

right owner to take Berliner Synchron onward. BTI's international standing will boost the market position of Berliner Synchron and the future prospects of its employees."

In 2016, Berliner Synchron moved into brand-new, purpose-built studios in the EUREF Campus in Berlin. Co-CEOs Dr. Martina Berninger and Marcus Dröscher will continue to lead the German studio and, together with their team, bring their knowledge in the German dubbing market to BTI Studios.

BTI Studios
www.btistudios.com

Monitor City Moves with Adamson

MELBOURNE, AUSTRALIA—Australian production/install company Monitor City has purchased a sizable Adamson Systems Engineering E-Series and S-Series audio system.

Monitor City's Adamson system is built around the flagship E-Series, with a complement of E12 three-way, full-range line array enclosures and E119 subwoofers. Rounding out the package are the compact S10 two-way, full-range line array enclosures. Adamson's touring E-Racks, each equipped with three Lab.gruppen PLM+ series amplifiers featuring Lake processing and Dante audio networking functionality, drive the



Monitor City's Matt Dufty (left) and Adrian Barnard with their new Adamson system.

system.

Monitor City co-founders Adrian Barnard and Matt Dufty plan for the system to handle festival work in the upcoming summer months; it can

then be split into multiple systems as needed. "It fits well with the way we do things and will definitely help us."

Barnard and Dufty founded Monitor City in 2006. The company now services a broad range of clients, from major festivals like Falls Music & Arts and the Unify Gathering to local government, corporate and theater applications. "Our company culture is one in which everyone is involved and contributes," said Dufty. "We care that when you're at a gig, it sounds fantastic. Anything less than that is not good enough."

Adamson Systems Engineering
www.adamsonsystems.com

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The eight TECnology Hall of Fame inductees for 2019 include: the anechoic audio test chamber (Leo Beranek, 1943), beyerdynamic M160 ribbon microphone (1957), Bell Labs' electret microphone patent (1964), Robert Moog's 1964 Modular Moog Synthesizer, iZ Technology's RADAR (24-track disk recorder, 1991), Meyer Sound Labs Source Independent Measurement (SIM) system (1991), Millennia Media HV-3 microphone preamplifier (1992), and the JBL Professional VerTec line array live sound system (2000).

"Each of these innovations has made a major contribution to how sound is created and reproduced—even years after their debut," says TEC HOF director George Petersen. "In fact, all of these technologies are still in use every day. For example, the patent for the electret microphone by Bell Labs' Gerhard Sessler/James West not only paved the way for affordable studio microphones used by musicians on stage and in studios, but that same technology is still employed in every one of the nearly five billion cell phones on the planet."

Inductees to the TECnology Hall of Fame are selected by more than 50 recognized audio experts that include authors, educators, engineers and other professionals. Innovations must be at least 10 years old to be considered. Past honorees have ranged from the early Edison cylinder recorders to early microphone and sound system designs, to early-evolution tape recording devices, and products tied to key developments in digital audio workstations and software plug-ins.

Each inductee represents significant milestones and fascinating histories. The late Robert Moog is a household name for his music synthesizer development. His Modular Moog quickly became adopted by The Beatles, The Monkees, the Rolling Stones, Keith Emerson, and Wendy Carlos' landmark *Switched on Bach*

album.

Other inductees share long legacies. JBL's VerTec sound system was first used to provide sound for the 2000 Democratic National Convention, tested before a worldwide audience. Millennia Media's HV-3 was created by John LaGrou, a classical music engineer who was dissatisfied enough with the audio quality of commercial microphone processing to decide simply to create his own.

Petersen adds, "Perhaps more surprising: all of these products are still in production as working tools—a testament to their relevance." Every brand, with the exception of Leo Beranek and Bell Labs, will be seen as exhibitors at the NAMM Show."

The TECnology Hall of Fame ceremony will be held in the Hilton Anaheim, Room A5, Level 4, from 4 to 6 p.m. on Saturday, Jan. 26, 2019. Seating will be on a first-come, first-served basis to all credentialed NAMM Show attendees. Following the ceremony, the NAMM TEC Awards will be held in the Hilton Anaheim's Pacific Ballroom. The show will be hosted by comedian Demetri Martin and begins with a VIP-only reception at 6 p.m., followed by the awards ceremony at 7 p.m. Tickets may be purchased on site or in advance.

National Association of Music Merchants
www.namm.org

DiGiCo Acquires KLANG:technologies

CHESSINGTON, UK—UK live sound console manufacturer DiGiCo has acquired Aachen, Germany-based KLANG:technologies, a manufacturer of immersive IEM technologies.

The acquisition brings KLANG under the umbrella of Audiotonix, which also owns Allen & Heath, Calrec, DiGiGrid, Solid State Logic and DiGiCo. In the United States, DiGiCo and KLANG already have a certain level of synergy, as both brands have been distributed here by Farmingdale, NY-Group One for a number of years, along with Calrec.

"We have been working in the background with KLANG for some months on increasing our level of integration," revealed Austin Freshwater, general manager of DiGiCo. "Over that time, it was clear the ethos of the development teams was similar, with a lot of shared common goals."

For the German manufacturer, joining DiGiCo will allow it to expand the reach of its work. "Being part of the Audiotonix family will allow our R&D team to bring more of our ideas to life," said Roman Scharer, CEO of KLANG. "We can already anticipate that 2019 is going to be a busy year for us, and we will continue to excite our users with in-

novative and sustainable solutions."

To that end, immediate plans are to continue integrating the technology into DiGiCo's offerings. Freshwater mused, "Combining the control of the KLANG system into the DiGiCo work surface will allow immersive in-ear monitoring and 3D personal monitoring to be a part of an engineer's natural workflow, and that's just the beginning for us and the KLANG team."

The joining of DiGiCo and KLANG is a clean fit, according to James Gordon, CEO of Audiotonix, who noted, "When the opportunity arose for them to join Audiotonix, we were keen to make it happen. We have always stressed that with our M&A, we would look at each brand's requirements and help support them with their aspirations. On that basis, KLANG will become a key part of DiGiCo's future, as they combine forces to improve the listening world of artists and monitor engineers alike."

DiGiCo
www.DiGiCo.biz

KLANG:technologies
www.KLANG.com

Group One
www.g1limited.com

Latin GRAMMY Production Winners

LAS VEGAS, NV—The 19th annual Latin GRAMMY Awards, broadcast live by Univision from Las Vegas on Nov. 15, recognized the recording, mixing and mastering engineers behind some of the year's biggest hits.

The awards recognize Spanish- and Portuguese-language artists in 49 categories and are voted on by Recording Academy members in over 40 countries. This year, nominations in the four top categories, including Record of the Year and Album of the Year, were increased from five to 10 for the first time.

Two winners in the categories recognizing engineering talent also won in other categories. Jorge Drexler, a Uruguayan musician, actor and doctor, also picked up two songwriting awards, including Song of the Year for "Telefonía" and

Best Singer-Songwriter Album for *Salvavidas De Hielo*. Puerto Rico-born Mexican music megastar Luis Miguel also won in the Best Ranchero/Mariachi Album category for *¡México Por Siempre!*

Producer of the Year went to Venezuelan trumpeter Linda Briceño.

This year's engineering, mixing and mastering Latin GRAMMY winners are:

RECORD OF THE YEAR

"Telefonía"

Jorge Drexler

Carles Campi Campón & Jorge Drexler, producers

Carles Campi Campón & Ernesto García, recording engineers

Matias Cella, mixer

Fred Kevorkian, mastering engineer

Track from: *Salvavidas De Hielo*

[Warner Music Spain]

ALBUM OF THE YEAR

¡México Por Siempre!

Luis Miguel

Luis Miguel & David Reitzas, album producers

David Reitzas & Jess Sutcliffe, album recording engineers

David Reitzas, album mixer

José Alfredo Jiménez, songwriter

Eric Boulanger & David Reitzas, album mastering engineers

[Warner Music México, S.A. de C.V.]

BEST ENGINEERED ALBUM

50 Años Tocando Para Ti

Rafa Sardina, engineer

Rafa Sardina, mixer

Eric Boulanger, mastering engineer

[Orquesta Filarmónica De Bogotá]

Recording Academy

www.grammy.com

RCF Readies 2019 Live Sound Course

REGGIO EMILIA, ITALY—Using a distance learning/low-residence format, Italian loudspeaker manufacturer RCF is teaming up with the University of Modena and Reggio Emilia for its 2019 sound engineering course this spring to an international audience. The course will be taught in English. The first six weeks of the class will be presented via e-learning methods; participants will then convene for one week in May at the RCF Audio Academy in Reggio Emilia, Italy.

The course's goal is to provide audio engineers with knowledge of technologies related to sound, transducers and speaker systems, exploring their applications in the professional market. The course will progress from the basics of electro-acoustic components like transducers, amplifiers and digital processors to the design of a complete audio project based on a real-world case study. An international reference



RCF's sound engineering course in Modena, Italy.

project carried out by RCF engineers will act as a study guideline to be used during the course.

The learning topics are grouped into four modules: environmental acoustics in open air and inner spaces, transducers and speaker systems, electronics, and sound system design.

The course will be taught by professor Emilio Lorenzani of the Department of Science and Methods for Engineering at the University of Modena and Reggio Emilia. The six-week e-learning portion of the course

begins Feb. 28, 2019. Students will then travel to the RCF Audio Academy in Reggio Emilia, Italy, for one week of in-person instruction, May 20-24.

The registration deadline is Feb. 7, 2019. As part of its sponsorship, RCF will cover the course's participation fee, but students will have to pay the university's enrollment fee of 750 euros. Lodging will be available to participants during the week in Italy.

RCF USA
www.rcf-usa.com

BTI Studios Acquires Berliner Synchron

LONDON, UK—Global media localization company BTI Studios has acquired 100 percent of the share capital of Berliner Synchron from Munich based S&L Medien Gruppe, increasing BTI's offering to 63 recording studios across 24 facilities spanning Europe, the United States and Asia.

Berliner Synchron was founded in 1949 as the first professional dubbing studio in Germany. Since then, it has dubbed more than 8,000 titles into German. The Berliner Synchron deal follows BTI's acquisition of Dutch dubbing studio Creative Sounds in

October 2018.

Björn Lifvergren, BTI Studios founder and leader of the M&A team, commented on the deal, "The acquisition of Berliner Synchron is an important cornerstone in the geographic expansion of BTI Studios. It fits well into our strategy to establish presence in all key dubbing territories. Berliner Synchron has everything we are looking for in a dubbing company: a professional team with great management in state-of-the-art studios."

Maria Theresia Seidlein, owner of S&L Media Gruppe, stated, "We are confident that BTI Studios is the

right owner to take Berliner Synchron onward. BTI's international standing will boost the market position of Berliner Synchron and the future prospects of its employees."

In 2016, Berliner Synchron moved into brand-new, purpose-built studios in the EUREF Campus in Berlin. Co-CEOs Dr. Martina Berninger and Marcus Dröscher will continue to lead the German studio and, together with their team, bring their knowledge in the German dubbing market to BTI Studios.

BTI Studios
www.btistudios.com

Monitor City Moves with Adamson

MELBOURNE, AUSTRALIA—Australian production/install company Monitor City has purchased a sizable Adamson Systems Engineering E-Series and S-Series audio system.

Monitor City's Adamson system is built around the flagship E-Series, with a complement of E12 three-way, full-range line array enclosures and E119 subwoofers. Rounding out the package are the compact S10 two-way, full-range line array enclosures. Adamson's touring E-Racks, each equipped with three Lab.gruppen PLM+ series amplifiers featuring Lake processing and Dante audio networking functionality, drive the



Monitor City's Matt Dufty (left) and Adrian Barnard with their new Adamson system.

system.

Monitor City co-founders Adrian Barnard and Matt Dufty plan for the system to handle festival work in the upcoming summer months; it can

then be split into multiple systems as needed. "It fits well with the way we do things and will definitely help us."

Barnard and Dufty founded Monitor City in 2006. The company now services a broad range of clients, from major festivals like Falls Music & Arts and the Unify Gathering to local government, corporate and theater applications. "Our company culture is one in which everyone is involved and contributes," said Dufty. "We care that when you're at a gig, it sounds fantastic. Anything less than that is not good enough."

Adamson Systems Engineering
www.adamsonsystems.com

Steve 'n' Seagulls Fly

LONDON, UK—Perhaps best-known in the United States for its viral hit cover of AC/DC's "Thunderstruck," Finnish bluegrass act Steve 'n' Seagulls recently had, perhaps appropriately, an Allen & Heath dLive Wings system in tow for a tour of the United Kingdom.

The band's setup comprised a dLive C1500 surface (fitted with a Waves V3 card, used for multitrack recording, virtual soundchecks and running plugins during live shows), an IP8 remote controller and a CDM32 MixRack.

FOH engineer Antti Laitila explained, "Steve 'n' Seagulls tour around the world all the time. I'd heard a lot of great things about the dLive series from my colleagues, so I decided to give it a try."

The single-surface setup is used to handle both FOH and the musicians' IEM mixes. The IP8 is connected to the surface, providing an additional bank of eight faders for further hands-on control, while the CDM32 is situated on stage for all-analog I/O.

dLive's processing and engine were another factor in the overall decision to use the system, Laitila adds. "Steve 'n' Seagulls have a large variety of instruments and four vocals, so trying to fit everything together can be a bit challenging. The Dyn8 multiband dynamic processor is my favorite tool when controlling the dynamics of a blazing banjo or thunderous accordion."

After six tour dates with a demo setup, Laitila and the band decided to purchase the full system. Laitila commented, "After a few shows in different types of venues, I made the decision to purchase the system, and I couldn't be happier."

Allen & Heath
www.allen-heath.com



Steve 'n' Seagulls recently played Lutakko in Jyväskylä, Finland, using its own Allen & Heath dLive at FOH.

Festivals Flow with Bose

NEW YORK, NY—Annual festivals have been a key part of the U.S. concert market since the turn of the millennium, but they're just as crucial business drivers elsewhere in the world—so it's notable that events as far flung as Rock al Parque in Bogotá, Colombia; Siren Festival in Vasto, Italy; the Hermosa Beach Summer Concert Series in California; and the Medusa Sunbeach Festival in Cullera, Spain, are all turning to the same line array system.

The 24th edition of Rock al Parque, held at the Simon Bolivar Metropolitan Park in Bogotá, Colombia, had production company Iluminacion Jaime Dussan use its ShowMatch DeltaQ line array loudspeaker system to cover up to 15,000 concert-goers at the Lago Stage. Eighteen bands were served across genres including metal, ska, hard rock, acid jazz and reggae. Juan Camilo Fernandez, support sound engineer, noted, "At Rock al Parque, ShowMatch was pushed to the limit, handling very high levels of sound pressure, but the

end result was excellent, always above the noise of the crowd and with good, full dynamic range."

Rental partner Sonique Live supported all six stages at the Siren Festival 2018 in Vasto, Italy. Four stages, including one on a beach, featured Bose Professional ShowMatch DeltaQ line arrays. F1 Flexible Array loudspeaker systems covered a garden setting, and six L1 portable P.A.s were on hand for acoustic and vocal presentations in a local church. More than 30 artists performed over two days, including headliner Nic Cester.

All the way over at California's Hermosa Beach, the 2018 Hermosa Beach Summer Concert Series was bigger than ever, garnering crowds of more than 10,000 attendees. Cerritos, CA-based Total Production Group spec'ed the ShowMatch system from Bose Professional, and TPG partner Steve McAllister remarked, "Because it's a free show with an undefined venue boundary, we never know how far back the audience will sit, which is a challenge.



Production company Iluminacion Jaime Dussan used a Bose ShowMatch DeltaQ line array for the Rock al Parque festival in Bogotá, Colombia.

We anticipated 300 feet, but at some shows the audience stretched back more than 500 feet from the stage. Not only was the Bose rig solid throughout the 300-foot range, it carried past the 500-foot mark with clear, intelligible sound."

Last but not least, Cullera, Spain's Medusa Sunbeach recently present-

ed its fifth annual electronic music festival to a 300,000-strong crowd. Madrid-based rental company Delta Sound Spain was appointed to provide audio for the Little Bird stage, which hosted 33 DJs throughout the festival.

Bose Corp.
<https://pro.bose.com>

PSNE 2018 Award Winners Announced

LONDON, UK—Pro Sound News Europe held its annual Pro Sound Awards on Nov. 22, at London's Steel Yard. d&b audiotechnik, Sennheiser, Chris Marsh and Abbey Road were among the big winners on a night that also saw grime icon and Glastonbury 2019 headliner Stormzy make a surprise appearance to present Fraser T Smith with the Best Producer Award.

Now in its sixth year, the Pro Sound Awards in 2018 took on a new complexion, with a raft of new product and people-focused awards introduced to recognize innovative work taking place across the industry.

Taking home the inaugural Breakthrough FOH Engineer Award was burgeoning theater sound specialist Heather Knott. Rising studio star Lauren Deakin Davies took home the event's first-ever Breakthrough Studio Engineer Award, having worked on numerous records with a host of acclaimed artists.

Marta Salogni received the new Best Studio Engineer Award, following a string of projects with several internationally revered artists, while touring veteran Chris Marsh picked up this year's Best FOH Engineer accolade. Abbey Road took home the Best Studio Award.

On the product front, d&b audiotechnik scooped the Best Live



The Best Producer Award was presented to Fraser T Smith (right) by surprise guest Stormzy (center), seen here with PSN Europe editor Danfel Gumble (left).

Loudspeaker Award for its GSL range, as well as the Best Immersive Sound Project for *Starlight Express*; Sennheiser emerged victorious in the Best Live Microphone category for its Digital 6000 series; and Unity Audio's Mini Rock series won this year's Best Studio Monitor Award.

A number of special achievement awards were announced prior to the event. These included the Campaign Award, which went to Red Bull Studios' "Normal Not Novelty" initia-

tive; the Best Producer Award, presented to Fraser T Smith by surprise guest Stormzy; Outstanding Contribution, received by L-Acoustics founder and line array pioneer Christian Heil; and Company of the Year, received by Genelec, which celebrated its 40th anniversary in 2018.

The full list of winners:

- **Best Live Loudspeaker**
d&b audiotechnik - GSL
- **Best Live Microphone**
Sennheiser - Digital 6000

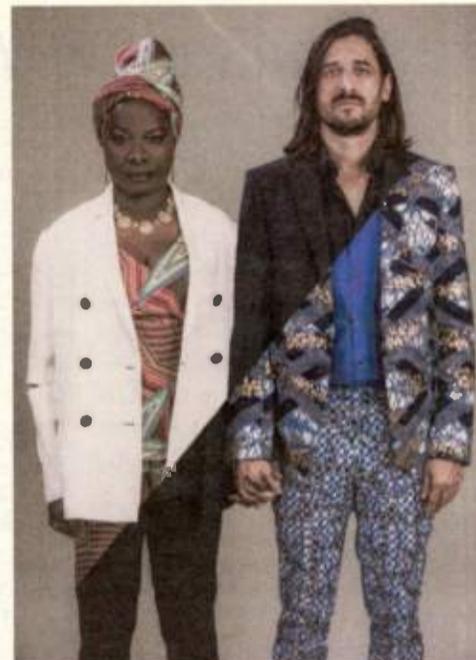
- **Best Live Sound Production**
Meyer Sound - Ed Sheeran + (Divide) tour
- **Best FOH Engineer**
Chris Marsh
- **Breakthrough FOH Engineer**
Heather Knott
- **Best Studio**
Abbey Road
- **Best Studio Monitor**
Unity Audio - Mini Rock Monitor
- **Best Studio Microphone**
Neumann - U 67
- **Breakthrough Studio Engineer**
Lauren Deakin Davies
- **Best Studio Engineer**
Marta Salogni
- **Best Mixing Console**
Solid State Logic - L100
- **Best Installation Project**
Delta Live - BBC Proms 2018
- **Best Immersive Sound Project**
d&b audiotechnik - *Starlight Express*
- **Campaign Award**
Red Bull Studios - Normal Not Novelty
- **Best Producer**
Fraser T Smith
- **Company of the Year**
Genelec
- **Outstanding Contribution**
Christian Heil

Reinventing *Remain in Light*

BY STEVE HARVEY

LOS ANGELES, CA—Benin-born singer-songwriter Angélique Kidjo has re-created *Remain in Light*, Talking Heads' landmark Fela Kuti-inspired album from 1980, bringing in musicians including drummer Tony Allen, one of the godfathers of Afrobeat, and members of Brooklyn's Antibalas, itself modeled after Kuti's Africa 70 band. The cultural references are head-spinning. Helping make sense of everything was Jeff Bhasker, a Grammy Award-winner for his work with Mark Ronson, Kanye West, Fun and Jay-Z, and 2016's Producer of the Year.

Bringing in authentic voices was all part of taking Talking Heads' influences, "inverting them, and showing how that album influenced Angélique, and taking it back to the roots. It was one of the only ways to compete with the original," says Bhasker, whose production and writing credits



SEBASTIAN KRIZ

Singer-songwriter Angélique Kidjo collaborated with producer Jeff Bhasker for her reinterpretation of Talking Heads' 1980 album, *Remain in Light*.

also include Bruno Mars, Drake, Rihanna, Ed Sheeran and many others. The album is Kidjo's first English-language release.

Talking Heads have cited Nigerian musician and activist Fela Kuti as one of the principal influences on the album's cross-genre, polyrhythmic grooves—an unfinished outtake on the album's 2006 remastered reissue is even entitled "Fela's Riff"—so

Allen's contributions helped bring things full circle, comments Bhasker. "It was helpful to have the actual person who influenced them on our album. To have one of the innovators of Afrobeat music on the album was a total blessing."

Kidjo worked up the new arrangements with her husband, musician/engineer Jean Hebrail, at their homes in Brooklyn and Paris. They and the

musicians, including guitarists Lionel Loueke and Dominic James, percussionist Magatte Sow and bass player Rody Cereyon, traveled to Bhasker's home-based L.A. facility, Green Oak, where multiple rooms are wired for tracking. Blood Orange and Ezra Koenig of Vampire Weekend are also featured on the album.

Allen, in his late 70s, recorded his
(continued on page 24)

The Way It's Done

BY STEVE HARVEY

LOS ANGELES, CA—Take a sharp turn off Mulholland Drive and down a steep driveway and you'll find yourself at Waystation, the studio that multi-Grammy-winning engineer, mixer and producer Dave Way built at his house in 2002, the year his daughter was born. Way once had a commercial studio, but Waystation is a prime example of how records are made now; Waystation is where he worked with blues-rockers 7Horse on *Superfecta*, the band's fourth album, released in December.

Twenty-six years ago, it was hard to escape "Dizz Knee Land," the debut single from L.A. alternative band dada. In 2011, dada's bassist-turned-guitarist/vocalist Phil Leavitt and drummer/vocalist Joie Calio formed riffing rock duo 7Horse and enlisted Way, who had mixed a dada EP in 2006, to work on their first album. They have worked together ever since.

For the first three albums, the



Dave Way has worked with countless top artists at his facility, The Waystation.

duo would track at various studios, then head to Waystation for overdubs and mixing, reports Way, who has worked with seemingly everyone—Michael Jackson, Paul McCartney, Mick Jagger, Pink, Shakira, Fiona Apple and on and on. "What was great about not having a bass player was that the bass drum could be huge," he says.

"Their MO before was to have a few riffs, go into a studio and write. This time, they did a proper sit-down at Phil's house and made some rough demos, just the two of them," says Way.

On this record, 7Horse brought in multi-instrumentalist Brian Whalen, formerly of Dwight Yoakum's band. "We still cut the tracks with

Joie and Phil together, but [we did it] knowing we were going to have more layers on top," with Whalen overdubbing at Waystation, says Way. "It was a good opportunity for me to get more involved with them from the beginning. I helped them choose the best songs and we worked on the arrangements and the forms."

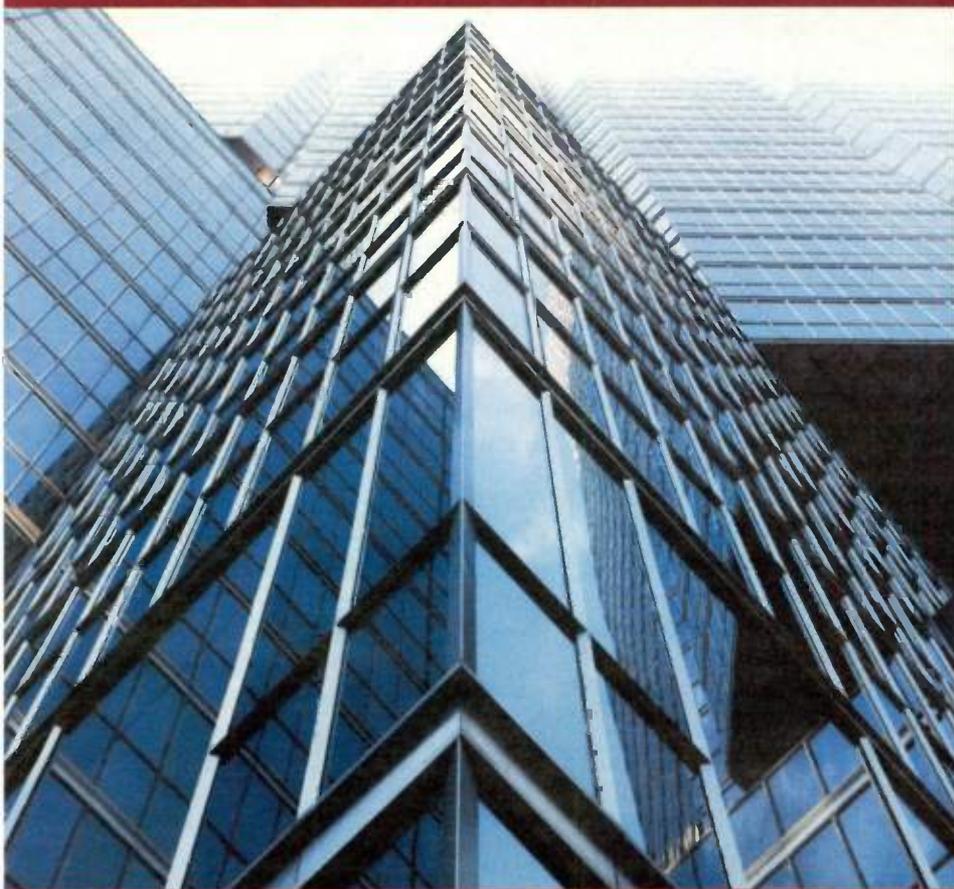
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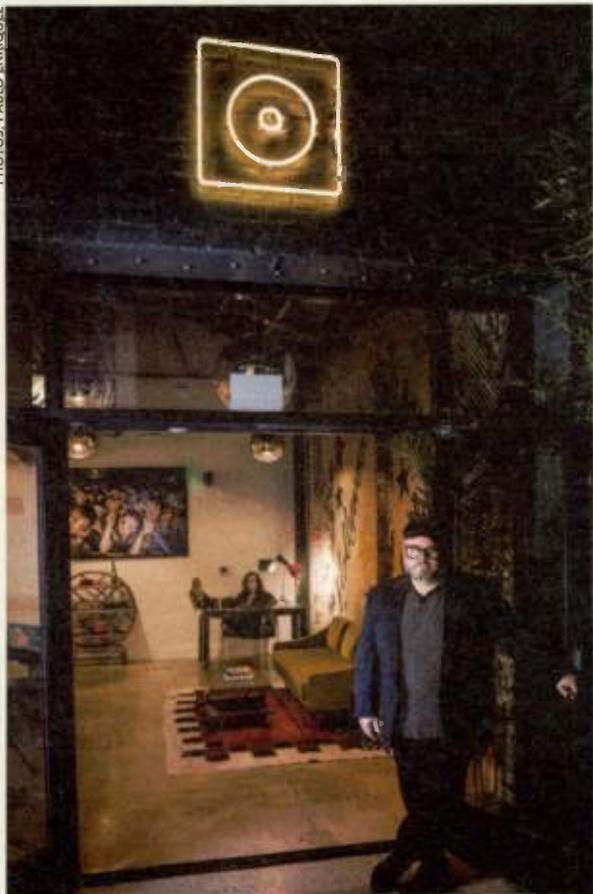
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Gold Diggers Reinvents the Destination Studio

PHOTOS: PABLO ENRIQUEZ



Left: Gold Diggers co-founder Dave Trumfio (foreground) and chief engineer Eric Gorman have outfitted the studios with a variety of 500 Series gear. Right: A brand-new 32-channel, dual-input API 2448 console stands at the center of Studio 1.

BY STEVE HARVEY

HOLLYWOOD, CA—Gold Diggers, a storied location on historic Route 66—now Santa Monica Boulevard—in East Hollywood has reopened as a boutique hotel, club and music recording facility masterminded by Dave Neupert, a partner in various Los Angeles nightlife venues, and Dave Trumfio of Kingsize Soundlabs. The studio complex, located in a former movie soundstage directly behind what Neupert has labeled the “Bed and Beverage,” offers nine production spaces, from small writing rooms to its flagship Studio 1, which is outfitted with the first API 2448 analog console to come off the manufacturer’s production line.

The complex has a storied past. The main building was constructed in 1924 as a tavern and inn for Route 66 travelers, but its last incarnation was as a seedy dive bar—Gold Diggers, from which the entire venture takes its name—featuring exotic dancers. Meanwhile, the 6,000-sq.-ft. bow-truss building out back was originally a dance school before becoming pulp film director Ed Wood’s soundstage, then Shamrock Studios, where, legend has it, The Doors and Jimi Hendrix rehearsed. In the 1980s, it was home to hair metal bands, including Guns N’ Roses precursor Hollywood Rose.

Today, Gold Diggers’ slogan sums up the synergy the partners hope to cultivate: “Drink. Sleep. Record.” Artists can stay at the hotel for a few weeks, roll out of bed

and into the studio and, if the mood takes them, even do a live show at the 150-capacity club.

The club was the first part of the campus to reopen—a necessity to keep the liquor license active. Trumfio helped design the audio capabilities, which includes Roxul Rockboard 80 acoustic treatment and a corner stage with a QSC P.A. system. “I love the corner loading with drums,” he says. A DJ/sound booth located in the former walk-in refrigerator offers a Midas 32R digital console feeding a Pro Tools rig. Recent performances have included Fields, Luna and Sofi Tukker.

“The plan is to record and video the shows for branded content,” he says. “With some of our partners, we’re looking to put records out and create unique content.”

The music-inspired Gold Diggers Hotel occupies two floors above the club and offers 11 rooms, many of them apartment-like mini suites, some with views of the Hollywood Sign and Griffith Observatory. Parquet Courts band member A. Savage created the artwork in the rooms and hallways.

“Justin Gage—Aquarium Drunkard—has been helping curate the vinyl in every room,” each of which includes an Audio-Technica turntable, says Trumfio. “And when you check in, you get our vinyl compilation, *Gold Diggers Vol. 1*.”

With Gold Diggers Sound’s nine production spaces, Trumfio has now built more than 40 rooms in his native Chicago and L.A., where he has been a resident since the late ’90s. “I’ve gone for the splayed walls in past rooms, but my favorite rooms

are just rectangles that I treat. With this building, I’m dealing with maximizing the space and I have to deal with soundproofing between rooms, so the shared walls are really thick and there’s a lot of air between them.”

The rooms, many with an adjoining iso booth, serve as small writing spaces, “audio offices” or music production rooms of varying sizes and capabilities. A central patch enables any space to be linked via analog to any other with Dante networking. That network also transports video, additionally available, including to the club and for the HearBack monitor systems.

“Any of the rooms can be booked as a self-contained room,” says Trumfio, “or with the Sound Stage,” a tracking space running the width of the building. The brick-walled space’s theater curtains enable it to become a black box—there’s a pull-down screen and projector—or alter the acoustics.

Studio baffles have been designed to double as a modular stage. The concept is for the Sound Stage to also host special events, from writing camps to band showcases. “We’ve already hosted listening parties with Spotify and Apple Music,” Trumfio reports, and other major

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Last Year Meets Next Year



BY CRAIG ANDERTON

Although modern pro audio depends on the world of computers, we have no leverage over that world—all we can do is go along for the ride that’s dictated by consumers and multinationals. In some ways, 2018 showed signs of being a turning point; the direction the industry takes in 2019 may very well solidify those changes, and affect us in the process.

The Big Two stumbled in 2018. Microsoft’s October software update exposed the soft underbelly of rolling updates: accidental file deletions, Apple iCloud syncing issues, file association glitches and driver compatibility problems. Although the haters couldn’t wait to pile on, consider these stats: Windows 10 has to work with 175 million application versions, 16 million unique hardware/driver combinations, and 700 million active Windows 10 devices. Is there any way those staggering numbers can’t cause issues? I don’t think so.

Apple’s haters had a field day, too, like the alleged failure rate on the MacBook Pro’s “butterfly” keyboard (which some people despised anyway), the iPad Pro’s Smart Connector problems, the HomePod’s estimated 4 to 6 percent market share (compared to Amazon Echo’s 23 percent and Amazon Dot’s 21 percent), MacBook Pro thermal prob-

lems that caused speed throttling, and an underwhelming Mac Mini update.

To their credit, both Microsoft and Apple moved quickly on damage control to rectify various errors. But with today’s hardware/software combinations resembling a house of cards, you can only increase complexity and variability for so long before that house of cards starts to collapse under its own weight.

Is there a solution for pro audio?

needs (not unlike the way cars used to be before they became appliances, where you’d get under the hood to tweak the timing and the valves). But that led to a crazy quilt of different amounts of memory, graphics capabilities, hard disk types and capacity, and so on. If hardware choices become limited, life becomes much easier for software developers. And if we already have pre-configured powerful machines that do what we need, we won’t need to

The possible end game is that we’ll use expensive, powerful closed computers for two to four years at a time, and then move on to another next-gen expensive, powerful appliance. Although potentially paying around \$5,000 for a new computer every few years (along with backup media, cloud storage, and software) isn’t cheap, that’s still a lot less than the days of 2” reel-to-reel. In return, you (hopefully) will get hardware/software stability and ultra-high performance, which so far has been elusive. When you depend on a computer for your business, both are paramount.

While Apple’s nebulous announcements about an upcoming modular desktop computer sound promising, these may end up being relevant to only a very select group of users—perhaps filmmakers of feature-length movies. After all, with Thunderbolt/USB-C poised to dominate over time (like it or not), the all-in-one machines will be nearly as expandable as the desktops of yesteryear. Combine expandability, hardware reliability and rock-solid software, and you have the answer to pro audio’s prayers. Let’s hope that’s how things play out ... rather than having to do our sessions on smartphones.

Craig Anderton’s new book series, *The Musician’s Guide to Home Recording*, is now available from Hal Leonard in softcover, and Reverb.com as a series of eBooks. Please visit www.craiganderton.com for more news.

2018 laid the groundwork for what might be the dominant computer experience of the future for pros.

2018 laid the groundwork for what might be the dominant computer experience of the future for pros. Despite the stumbles mentioned above, both Microsoft and Apple produced some superb hardware pitched at media creators: Microsoft’s Surface Studio 2 tablet gives Apple’s iPad Pro a run for its money, and the high-end iMac Pro is basically the best Mac Pro yet, disguised as an all-in-one computer. (And to replace your laptop, there’s Microsoft’s Surface 6, currently the best 2-in-1 going.) These machines have three things in common: high price, elevated performance, and the feel of an appliance.

One reason for the desktop computer’s popularity with pros is that we could modify them to suit our

crack open the case (or so the argument goes).

Concurrently, on the software front, it’s twilight time for the Big Updates. Adobe, Cockos and Cakewalk went to a model of smaller, more frequent updates some time ago, and now Avid is doing the same with Pro Tools. Rolling updates have their pros and cons, but overall offer more advantages by being able to move more quickly when faced with hardware and operating system changes. Although some programs (like Studio One and Cubase) have split the difference by doing “big” updates but then rolling out additional significant “point” updates, even that’s a change from how software used to be developed.

Gold Diggers

(continued from page 20)

content companies and record labels are interested in the space.

The flagship control room, Studio 1, looks directly into the Sound Stage. Trumfio took delivery of the room’s 32-channel, dual-input API 2448 console at the recent AES Convention, a sale facilitated by Vintage King’s Jeffrey Ehrenberg.

As Trumfio commented when the desk was unveiled at the convention, “We were looking for a good rock ’n’ roll console and API, of course, is a great rock ’n’ roll console.” Gold Diggers starts taking bookings in January, but has already hosted a shakedown session or two, including drum tracking through the API for One Republic’s next record, he says.

“One cool thing is that API is the

king of the 500 Series, so we’ve also put 500 Series capabilities in the other rooms,” says Trumfio, and floating lunchboxes are additionally available. The API desk is fully outfitted with 500 Series modules. “I just want to have the greatest hits in classics and modern classics,” he says.

Indeed, every production space is an Aladdin’s Cave of boutique and more mainstream gear, including items such as Heritage Audio’s MCM8 II 500 Series rack loaded with Trident, SSL and API EQ modules and pairs of BAE 1073s. There are pieces from Tree Audio, Overstayer Audio, Spectra and others.

Studio 3, outfitted as more of a modern pop hybrid space, offers eight channels of 1081 in Geoff Tanner’s Aurora Audio GT4-8 box, plus units from Undertone Audio and others. The room’s SSL console is equipped with yet more 500 Series modules: “That’s one of the reasons

why I went with the SSL XL-Desk,” says Trumfio.

Eric Gorman, formerly at New York’s Magic Shop, has relocated to become chief engineer at Gold Diggers. Gorman has also relocated his former facility’s B room, including the venerable Neotek console.

A wide choice of monitoring is available facility-wide. Studio 4, a writing room, offers new ADAM A77Xs, plus a pair of classic Tannoy 6.5s and a Bryston 3B amp. Studio 5 is a mirror image. “We wanted to create a home studio-away-from-home for traveling producers and writers,” says Trumfio. Other control rooms variously feature ATC, Focal, Genlec, ProAc and Yamaha models.

Despite all that variety, Trumfio partnered with several manufacturers to standardize on certain equipment choices. Pro Tools HDX is available throughout and many rooms include UAD Apollo or Satellite interfaces.

“We did a big purchase from Vintage King, and a first-of-its-kind enterprise deal with Reverb. We set up an account and funded it, and we were able to find a lot of cool deals for gear, instruments and older effects.” Also on the instrument side, he adds, “We just did an artist deal with Fender, and Earthquaker, Moog, Elektron and Native Instruments did something with us.”

Trumfio has been promoting Gold Diggers’ drink-sleep-record concept worldwide to labels and content companies. “We want to do partnerships to bring in artists from England, Australia, Asia. And they can put them up at the hotel.”

Already, he says, “A couple of English labels want to come and take over the campus for a few days. We’re really excited about that, that we can fill the rooms for a week.”

Gold Diggers
www.gold-diggers.com



ARTIST: ASTRONOID
ALBUM: ASTRONOID
LABEL: BLOOD MUSIC
PERSONNEL:
Produced by: Astronoid
Engineered by: Brett Boland, Daniel Schwartz
Studios: Futura Productions (Roslindale, MA), home studios (Dover and Raymond, NH)
Mastered by: Magnus Lindberg at Magnus Lindberg Productions (Stockholm, Sweden)
EQUIPMENT NOTES: ADAM Audio A7X monitors with Yamaha HS8S subwoofer, Dynaudio BM5 mkIII monitors with BM9S II subwoofer, Avid Pro Tools 12



ARTIST: LOST COUSINS
ALBUM: IN SCENERY
LABEL: PHEROMONE RECORDINGS
PERSONNEL:
Produced by: Lost Cousins, Dylan Frankland
Engineered by: Dylan Frankland
Mix Engineer: Jace Lasek at Breakglass Studios (Montreal, QC)
Studio: Candle Recording (Toronto, ON)
Mastered by: Brian Lucey at Magic Garden Mastering (Los Angeles, CA)
EQUIPMENT NOTES: Studer 24-channel console, Dynaudio BM6A monitors, Yamaha NS-10M monitors, Avid Pro Tools 12, Apple Logic Pro



ARTIST: RITA WILSON
ALBUM: BIGGER PICTURE
LABEL: SING IT LOUD

PERSONNEL:
Produced by: Fred Mollin, Rita Wilson
Engineered by: Jesse String
Mix Engineer: "Teenage" Dave Salley
Studios: Village Studios (West Los Angeles, CA), Sing It Loud Studios (Pacific Palisades, CA)
Mastered by: Greg Calbi at Sterling Sound (New York, NY)
EQUIPMENT NOTES: Neve 800 series, Digidesign control surfaces, Barefoot Sound monitors, Dynaudio LYD 48 monitors, Avid Pro Tools



ARTIST: FEELS
ALBUM: POST EARTH
LABEL: WICHITA RECORDS
PERSONNEL:
Produced by: FEELS
Engineered by: Tim Green
Studio: Louder Studios (Grass Valley, CA)
Mastered by: Howie Weinberg at Howie Weinberg Mastering (Los Angeles, CA)
EQUIPMENT NOTES: Trident 65 console, KRK 9000B studio monitors, Cockos Reaper



ARTIST: FAILURE
ALBUM: IN THE FUTURE
YOUR BODY WILL BE THE FURTHEST THING FROM YOUR MIND
LABEL: FAILURE RECORDS
PERSONNEL:
Produced by: Failure
Engineered by: Ken Andrews
Studios: Red Swan Studios (Los Angeles, CA), NRG Studios (North Hollywood, CA)
Mastered by: Ken Andrews at Red Swan Studios
EQUIPMENT NOTES: AMS Neve console, Genelec 1031A studio monitors,

Avid Pro Tools



ARTIST: PJ MORTON
ALBUM: CHRISTMAS WITH PJ MORTON
LABEL: MORTON RECORDS
PERSONNEL:
Produced by: PJ Morton
Engineered by: Mack Major, Reggie Nicholas
Mix Engineer: Ben Kane
Studios: Parlor Studios (New Orleans, LA), Morton Records Studios (New Orleans, LA), Electric Garden (Brooklyn, NY)
Mastered by: Will Quinnell at Sterling Sound (Edgewater, NJ)
EQUIPMENT NOTES: Neve 8078 console, Barefoot Sound MasterStack 12 monitors, Yamaha NS-10 monitors, Avid Pro Tools



ARTIST: VALLEYHEART
ALBUM: EVERYONE I'VE EVER LOVED
LABEL: RISE RECORDS
PERSONNEL:
Produced by: Kevin Billingslea, Kevin Klein
Engineered by: Kevin Billingslea
Studios: The Halo Studio (Windham, ME), home studio (Salem, MA)
Mastered by: TW Walsh at his home studio
EQUIPMENT NOTES: Avid Artist Mix, ADAM Audio S3A monitors, Mackie HR824 monitors, Avantone MixCubes, Avid Pro Tools 12, Apple Logic Pro X



ARTIST: MARK FELDMAN'S LEVELS
ALBUM: THE SYBIL EP
LABEL: MUTANT CAT

RECORDS

PERSONNEL:
Produced by: Mark Feldman
Engineered by: Drew Guido
Studios: Degraw Sound (Brooklyn, NY), Virtue and Vice Studios (Brooklyn, NY), Oz Noy's home studio (New York, NY), Adam Klipple's home studio (Brooklyn, NY)
Mastered by: Tom Hutten at Bionic Mastering (Chester, VT)
EQUIPMENT NOTES: Trident Series 24 console, Neve 8026 console, Yamaha NS-10 monitors, JBL LSR6328P monitors



ARTIST: COLD WEATHER COMPANY
ALBUM: FIND LIGHT
LABEL: INDEPENDENT
PERSONNEL:
Produced by: Pat Noon, Jeff Petescia, Brian Curry, Steve Shimchic
Engineered by: Pat Noon
Studio: EightSixteen/Trax East Recording Studio (South River, NJ)
Mastered by: Alan Douches at West West Side Music (Cornwall on Hudson, NY)
EQUIPMENT NOTES: Sytek Audio Systems Neotek Élite console, KRK V8 monitors, Focal Twin6 Be monitors, Avid Pro Tools



ARTISTS: OTMARO RUIZ, JIMMY BRANLY, JIMMY HASLIP
ALBUM: ELEMENTS
LABEL: BLUE CANOE RECORDS
PERSONNEL:
Produced by: Jimmy Branly, Otmaro Ruiz, Jimmy Haslip
Engineered by: Jimmy Branly
Studio: JBranly Studios (Burbank, CA)
Mastered by: Rich Breen at Dogmatic Sound (Burbank, CA)
EQUIPMENT NOTES: Avid Pro Tools

Hornsby Mixes Hart Release

LONDON, UK—Singer-songwriter Beth Hart's latest album, *Live at the Royal Albert Hall*, released in November 2018, was recorded by Mark Hornsby, senior producer and engineer at Sweetwater Studios (www.sweetwaterstudios.com), who mixed it in stereo and surround in Sweetwater's Studio B on an SSL AWS 948 Delta console and ATC SCM45A Pro monitors.

Genelec Immerses College

ORLANDO, FL—The Sound & Music Technology program at Valencia College in Orlando, FL, houses one of the only Dolby Atmos-certified facilities in pro audio education, where Studio A (the flagship room) and Studio B offer 7.1.4 arrays incorporating seven Genelec (www.genelec.com) 8350As for the LCR and surround arrays, plus four Genelec 8340As as the height arrays.

Auralex Goes to Steve's House

FRANKLIN, TN—After four decades engineering and mixing hits for artists from John Lennon to Taylor Swift, Steve Marcantonio set up his personal Steve's Music House in Franklin, TN, where he's treated his control room with products from Auralex Acoustics (www.auralex.com), including ProPannels, ProClouds, DST-LENRD bass traps and SonoFlat Studiofoam panels.

Mixing It Up at The Dairy

LONDON, UK—UK mix engineer Dean James Barratt has added an SSL (www.solidstatelogs.com) AWS 924 SuperAnalog.2e hybrid console to his room at The Dairy Studios in Brixton, London.

Weird Al Yankovic's Guitarist Is No Slacker

LOS ANGELES, CA—While known for his decades of work holding down the guitar spot in Weird Al Yankovic's band, Jim "Kimo" West is no slacker ... and yet he's all about the slack—as in slack key guitar, the unique finger-style acoustic guitar genre that originated in Hawaii. West has carved out a career in the field, and is a recent winner of the Hawaii Music Awards, a Na Hoku Hanohano (the Hawaiian "Grammy") nominee, and a two-time winner of the L.A. Treasures Award for his contributions toward the perpetuation of *ki ho'alu*.

His solo releases are all self-recorded. "I've been doing all my own recording as long as I've played guitar," says West, "and the instrument, the player and the microphones are equally important. I've always loved great mics—and especially Telefunken—that I could never afford but would always drool over seeing

in studios when I'd go in for sessions."

With that in mind, West recently acquired a Telefunken ELA M 260 Stereo Set, which features two matched microphones and a custom dual power supply capable of powering both microphones. "I was at a Weird Al session a few years ago and the engineer was using a pair of Telefunken M 260 mics on different instruments, and I really thought they sounded great," West says. "I've always loved the idea of tubes in the chain somewhere, especially for acoustic guitar, because it adds a really nice harmonic richness. And then I saw that Telefunken was making these new small-diameter condenser tube mics. I recently redid my studio with some new computers and new interfaces and gear, and



Jim West in his private studio with a matched pair of Telefunken ELA M 260s

"Acoustic guitar is a complex instrument, and you have to be very careful of boominess," West says. "Sometimes it can just sound too big, so mic placement is really important. You want to make sure you stay away from the sound hole. There's something about small-diaphragm condenser mics that makes them really responsive. I like all the little nuances, and

I thought it was time to get a pair of new mics. These 260s were my first choice, and they really sound spectacular."

In West's slack key guitar career, he didn't concentrate on learning the standard riffs and songs, but instead developed his own slack key vocabulary, which now defines his approach to the genre.

things really pop out with a small-diameter condenser. With the shape of the 260 plus the tube, there's a richness there. These mics sound really, really natural."

Jim "Kimo" West
www.mokumaluhia.com

Telefunken Elektroakustik
www.telefunken-elektroakustik.com

Reworking a Career to Keep Working in Audio

BIRMINGHAM, AL—Atlanta-based sound mixer Nicholas L. Minter has been juggling the demands of recording for both TV and film, with a slate of projects that includes *Saints and Sinners 3*, *Mile 22*, *Rapture* and *Top Gear*. That he's working in film and television might be a surprise, as he started his career as a music recording engineer and a music composer for videogames.

rounding himself with gear that can handle whatever a project may demand.

His big break as a sound engineer came after one of his projects, *Horror Hotel*, did well on Hulu. "When I started earning money, I began renting Lectrosonics equipment, which opened the door to other gigs," he says. When his career took off in 2013, he adds, "I was finally able to invest in my career and bought my first basic sound kit, which included three Lectrosonics SQMV transmitters and three UCR 411a receivers."

Reality TV productions such as *T.I. & Tiny: The Friends & Family Hustle* present a different set of challenges, he continues. "We have to stay out of the shots and make sure the frequencies are right. I use the Lectro IFB so the producers have the ability to go between both sound bags. It's convenient and flexible for the producers to follow the story while we're recording dialogue on separate sides of a location."

This year he worked on three feature films in Birmingham, all produced by Mary C. Russell and Scott LaStaiti, starring the likes of Julianne Hough, Aaron Eckhart and Elizabeth Reaser.

Lectrosonics
www.lectrosonics.com

Furman Powers Producer/Mixer Michael James

CARLSBAD, CA—Producer and mix engineer Michael James has worked with a long list of artists, in addition to carving out a separate career for himself as a guitarist of note. Having produced or mixed hits for bands including New Radicals, Hole, Edwin McCain, Chicago



and Robben Ford, he's built his own mix space in recent years, and powered it with Furman.

and Robben Ford, he's built his own mix space in recent years, and powered it with Furman.

"The foundation and lifeline of my studio is clean, reliable power," James explains. "It's an often-overlooked part of the equation, but it's absolutely critical to what I do." Accordingly, his go-to equipment includes the Furman F1000-UPS and IT-Reference 20i with Power Factor technology.

"I have a few very essential pieces of equipment that answer my clean, reliable power call, and the first is the Furman F1000 UPS. It's a battery backup and a critical component to have if you're working with intellectual property," James says. "At any given moment, I may have millions of dollars of intellectual property on my hard drives that I can't take risks with.

I love it because it is super-clean power that gives me an additional 10 dB of headroom, allowing me to hear more low-level detail like reverb tails or really emotional vocal phrases," James emphasizes.

Furman gear comes into play on his own guitar work as well; he uses his older Furman Power Factor PRO, particularly when he's working with guitar and bass amplifiers. "Guitar amps, especially vintage ones, can be susceptible to current swings, which explains why one day an amp sounds great and the next day it doesn't sound so good," he says. "The Power Factor PRO always keeps that sound in the sweet spot, so when you adjust your tone with this on, it's going to sound the same all the time."

Furman
www.furmansound.com



Nicholas L. Minter on location with Lectrosonics

"What I love about sound is that it's constantly changing," says Minter, who holds several degrees, including a BFA in interactive design and game development and a BFA and MFA in sound design.

Key to Minter's career trajectory has been the foresight to keep investing in himself, whether through education or by sur-

Remain in Light

(continued from page 18)

contributions in France, where he lives. “I didn’t want him to have to travel to L.A. just to do a couple of tracks,” Bhasker explains. “His drum tracks were recorded amazingly. It was almost like a change in the electricity; you can hear it on ‘Houses in Motion’—it really puts his drums front and center.”

Green Oak is equipped with Avid Pro Tools 12 and a Trident B Range console typically manned by Ryan Nasci, Bhasker’s in-house engineer since 2017’s Harry Styles project. Working with Ronson on his *Uptown Special* project “gave me the jones to work on consoles,” says Bhasker, who believes that the desk, which once resided in Greece, may also have been used at London’s Sarm Studios.

Bhasker previously had an in-the-box writing studio. At Green Oak, “The console is mainly used for front-end to go into the box; I rarely mix on it. But I did a project where we did the reverse—we had someone’s tracks done in Cubase and mixed them on the console. I’m just

trying to experiment with different ways of working. Each project warrants a different thing,” he says.

He’s looking forward to doing a project with his recent acquisition, an 8-track Scully tape machine: “I’d like to do a project exclusively using the console and tape. I’m not some sort of purist; it’s fun to see how the process alters the sound of the music.”

Kidjo’s album was the first project to benefit from his facility’s natural room reverb, he reports. “It was really cool to use the space in that way. And it was great to go from Harry Styles’ rock ‘n’ roll band-type production into this. It was a continuation of using live instruments and making an album in more of a traditional way than the way albums are typically made today,” he adds.

Many of the tracks feature African chants, and where David Byrne originally spoke his lyrics—“And you may find yourself, living in a shotgun shack”—Kidjo instead sings them. “She really homed in on the opportunities to make it her own. She so elegantly set the tone for the project and Africanized the album from the get-go,” says Bhasker.

It’s not unusual for African percussion instruments to include bits

of metal and other materials that generate overtones and resonances. Recording instruments such as the djembe, calabash and balafon, he says, “is not just about learning microphone technique, but learning about the instrument itself and what it’s meant to sound like. It was so interesting, almost like a buzzing thing, almost this distortion that’s built into the drums.”

Green Oak offers a good complement of mics, including Neumann U 87 and U 67 models, a Sony C-800 and Shure 57s and 58s, which work fine on African percussion. Bhasker singles out his AEA R88 ribbon mic for particular praise: “It’s a great microphone; it sounds sick.”

The outboard gear selection is equally classic, including a pair of 1176s, some dbx 160s, Tube-Techs and LA-2As—“About 10 channels, enough to accommodate tracking a drum kit properly,” he says.

The finished tracks went to Michael Brauer for mixing. “Angélique had worked with him before, and I think it was a really good call,” says Bhasker. “He brought a nice understanding of her sound to it. I love the way his mixes added an extra stage to the album. I couldn’t be happier with

how it turned out.”

Remain in Light, released during the Reagan presidency, offers commentary that resonates in today’s “fake news” era—“Facts are never what they seem to be,” from “Crosseyed and Painless”—but if anything, this project bridges political divides, says Bhasker.

“It’s part of a larger metaphor for listening to each other and taking the best of each other’s cultures and receiving it, at a time when we’re so polarized politically, and everyone is in their bubble. I really love the idea of it being this mixture and being part of this conversation and tradition of comingling.”

As new releases were being proposed for Grammy Award consideration in November, Bhasker learned that the project, released on his Kravenworks label, had been moved from the World Music to the Alternative category. “I’m happy because it really puts her at a new level. Even though it’s a world music adaptation, I feel very honored that they consider us as being a more contemporary category. But it’s so ironic—‘world’ should mean the whole world!”

Jeff Bhasker

www.jeffbhasker.com

Waystation

(continued from page 18)

Way once co-owned The Pass Studios, purchased from Larrabee Studios owner Kevin Mills in 2005 and previously known as Andorra, but he rarely worked there. When he and his partners sold the studio, Way expanded his home mix facility, building out an adjacent room as a tracking space with several small iso rooms and bringing some of his gear over from The Pass, including a cue system, EMT plate reverb and a tape machine.

There are instruments everywhere at Waystation—two pianos, a Wurlitzer, a Hammond C3, guitars, basses and a drum kit occupy the live room, with more in a shed outside. “People don’t have to worry about bringing a lot of gear,” says Way. “Most of the colors we need to cover are here.”

When Way built Waystation, he tried to emulate his regular haunts and installed an SSL 6000E. “It was my favorite console, but the record business started changing very quickly after that and budgets started coming down,” he says.

He found himself working increasingly in Pro Tools, so he moved the console out—it was followed more recently by his Studer 24-track machine,

then his A80 2-track—replaced by much-needed additional seating. An SSL Matrix currently sits at the center of his setup, which includes racks of tracking and mixing hardware.

“I have no regrets; I love working the way I do now, and the Matrix is a good part of it,” he says. “It’s everything I need in the analog world. When I first got it, I used it more as a summing mixer, using all 16 channels.

“When I’m recording, I try to get the mojo from the microphones, with a compressor and an EQ, and make it sound like a record from the beginning.”

Dave Way

Now I go into two or four channels with different EQs or compressors for that last analog stage. But sometimes I’m completely in-the-box.”

Way has plug-ins galore, “But when I’m recording, I try to get the mojo from the microphones, with a compressor and an EQ, and make it sound like a record from the beginning.”

Two racks behind him are crammed with tracking gear. For drums and vocals, he favors his Inward Connections MP820 sidecar, configured with four compressors and four mic preamps. “I’ve had these for 18 years; they’re just fantastic,” he says.

Ampex Model 350 mic preamps modified by Inward’s founder Steve Firlotte work well on a variety of things: “I use them occasionally for vocals, but a lot for drums. And I love to use them for a DI guitar, to get a Motown sound.”

He adds, “Another one of my favorite gear makers is Tim de Paravicini’s EAR. He and Firlotte are two of the best guys out there making gear.”

Way has a pair of EAR 660 tube compressor/limiters that he brought back from England after working with them at David Gilmour’s Astoria Studio. “They’ve been in use every day since,” he says. A tube EAR 825Q stereo EQ sits in his desk: “I’d say that’s one of the best sounding EQs ever made.”

Way also has two channels of Motown passive EQ, originally from Hitsville in Detroit. “They’re so vibey and great. I use those on bass and vocals, occasionally on guitar or snare,” he reports.

Additional units from API, Calrec, Empirical Labs, Focusrite and UA,

plus Telefunken V72s, Neve 1081s, 2253s and 33609s, and LA-2As fill out the racks. For mixing, says Way, “My staple bus compressor is still the Smart. But I also like this Rockruepel tube compressor, which is German. It’s a vari-mu, sweet sounding.”

Way’s newest piece, at just six months old, is the stereo Monheim Channel Strip, which features two EQ sections per channel. “You can get a lot of different colors out of it by the way you drive the transformers,” he says.

Way likes monitors—he has vintage NS10s and newer ProAc speakers on his desk, and plenty more in storage—and enjoys changing them out now and then, so he was receptive when KRK product manager Rich Renken sent over a pair of the company’s new V8 nearfields.

“I was working with 7Horse; we had been tracking the night before. I only have one set of cables for active monitors, so I took down my ATC 25s and spent the day listening to the KRKs. I liked them, and the band liked them,” says Way.

“I got them dialed in, started mixing on them and immediately felt I was getting there faster—and having fun doing it. I’ve been very happy with them. I feel I can ‘look’ into the mix more. And 7Horse’s was the first album I mixed on them.”

Dave Way

www.daveway.com

briefs

Six Trucks, Six Calrecs

MADISON, WI—Rush Media in Madison, WI, has rolled out a fleet of six custom-built OB trucks, each equipped with Calrec Audio's (www.calrec.com) Hydra2-networked Brio36 digital audio console, eight camera control units, two 8-channel replay servers, two graphics generators, a 36-input switcher, a 48-port communication frame and a main truck router with full audio capabilities.

Loading Up on Sanken Shotguns

NEW YORK, NY—Location sound mixer and location recording engineer Mielle Ezra, whose feature film and documentary credits include *Dark Exorcism*, *April Flower*, *Between the Shades* and *Long Goodbye*, has purchased two Sanken (www.sankenmicrophones.com) CSR-2 shotgun microphones for her production sound work from Gotham Sound.

DPA's Capture Impossible Action

ALLERØD, DENMARK—Oscar and BAFTA Award-winning production sound mixer Chris Munro used DPA (www.dpamicrophones.com) d:screet 4060 and 4061 mics to record dialogue and sound effects on set for *Mission: Impossible—Fallout*, the sixth in the series, and used DPA's dimension 5100 mobile surround microphone to capture 5.1 ambiences into his Zoom F8 recorder.

SMPTE 2018 A Success

LOS ANGELES, CA—The SMPTE (www.smpete.org) 2018 Annual Technical Conference & Exhibition (SMPTE 2018) and the SMPTE 2018 Symposium, held October 23-25 at L.A.'s Westin Bonaventure Hotel & Suites, were, according to the organization, a hit, with 78 technical presentations selected from 156 paper proposals, advanced technology exhibitions, award ceremonies, and more.

Inside the Audio of *Doctor Who*

BY KEVIN HILTON

UNITED KINGDOM—The classic BBC sci-fi series *Doctor Who* first appeared in 1963 and was rebooted in 2005, but the most recent season marks the first time the title character has been played by a woman (Jodie Whittaker). The season also marked a change in leadership, with Chris Chibnall serving as lead writer and executive producer.

Sound designer/editor Harry Barnes oversees the audio team and sets the overall aural style of *Doctor Who*. Barnes joined the show in 2014, replacing original sound effects editor Paul Jefferies, who retired.

“During the handover, Paul showed me all the historic effects for villains such as the Daleks and the Cybermen, and everything he had created since,” Barnes says.

With the new season, Barnes says he had the opportunity to put more of his own designs into the show. The most significant of these were the interior sounds for the Doctor's ship, the TARDIS.

“I've done a lot of film work, and I thought the interior sound could be more cinematic,” Barnes says.



The Doctor (Jodie Whittaker) inside her TARDIS, which is difficult to record in because it's made of wood.

“It's a lot heavier than it was, but I remembered what Paul said to me—that the TARDIS responds to what is going on inside it. I've kept true to that, but added more guttural elements. When the Doctor first walks into the TARDIS, there is a low-end boom throughout the scene, with treatments of the original effect and treated breathing. I wanted to make it more living, and think of what the TARDIS' role is in each scene.”

Barnes uses Avid Pro Tools Ultimate software on a Mac Pro running an HD native card, all linked to a Digidesign (Avid) 192 I/O interface. Monitoring is through five Genelec 8040A loudspeakers—without a subwoofer—and a Blue Sky Bass Management Controller.

For the new season, the Doctor had three travelling companions, and a larger cast posed some problems for (continued on page 27)

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Gimlet Media's New Podcast Studios Serve Up a Cocktail of Content

BY STEVE HARVEY

BROOKLYN, NY—A report by the New York City Mayor's Office of Media and Entertainment noted that the city's top podcast networks increased their workforces by 33 percent between 2015 and early 2017. One major contributor to that growth is Gimlet Media, which opened a new production facility in Brooklyn in August 2018 that was designed by Walters-Stork Design Group (WSDG), with integration by Chicago-based Sound, Production & Lighting (SPL) in coordination with Gimlet's technical director, Austin Thompson.

“When I started at Gimlet, we were 35 people,” says Thompson, who was hired in May 2016, having previously worked as a freelancer in Chicago, including with SPL. “By the time we moved into this facility, we were 120.”

Gimlet Media was founded in Brooklyn in mid-2014 by Matt Lieber and Alex Blumberg, the latter's name familiar to NPR listeners as the producer of *This American Life* and other shows. Driven by the popularity

feet—to new production facilities.

“It was challenging putting the programming into the square footage,” says Romina Larregina, partner, director of production, WSDG. “We didn't have as much room as we thought for everything they wanted to put in there—12 podcast studios, a recording studio, a conference room, a lounge—but we did it, and without compromising the isolation between studios, the shape of the rooms or the size required to meet the ADA [Americans with Disabilities Act] code.”

Blumberg and Lieber have both stated that they want Gimlet to become “the HBO of audio.” Thompson elaborates, “We're trying to build this catalog of high-quality content that people can connect with. You need high audio quality, so lis- (continued on page 27)



Gimlet's technical director, Austin Thompson, worked with WSDG to coordinate the creation of the new podcast production facility in Brooklyn.

of the company's podcasts, including *StartUp*, *Reply All* and *Homecoming*, Gimlet soon outgrew its old facility and relocated to downtown Brooklyn, allocating roughly 15 percent of the usable space—about 3,000 square

CHERYL FLEMING PHOTOGRAPHY

Capturing *A Star Is Born* at Coachella

BY STEVE HARVEY

CULVER CITY, CA—Actor and first-time director Bradley Cooper's remake of *A Star Is Born* is a music-driven experience; the film opens and—bam!—the audience is right there on stage as Cooper's character and his band rip through "Black Eyes" in front of a festival crowd. The crowd is real and the vocals are live, but it was hard work and preparation, not movie magic, that ensured authenticity.

Lady Gaga, Cooper's costar in the film, does everything live, reported production sound mixer Steve Morrow during a presentation in the Composer's Lounge at a *Mix* magazine event in mid-October. Morrow was joined on the interview couch by re-recording mixer Dean Zupanic and music mixer Nick Baxter. "She doesn't lip-sync," Morrow said, and when she signed on to the project, "she challenged Bradley to do the same thing."

Some of those opening shots were filmed at the Stagecoach Festival, others at Coachella, which is held on the same site in Indio, CA, and in the UK at the Glastonbury Festival. The challenge at all those events was that the movie crew and performers had only minutes to grab those shots while festival stage crews were changing over bands.

"There's about 15 or 20 minutes while they switch out the equipment. We got eight minutes of that before Willie Nelson went on [at Stagecoach]," said Morrow. The band in the movie had already recorded the songs, eight of which were written by Nelson's son, Lukas Nelson, so the relevant tracks were patched to their monitors. All available mics—not just the vocals—were also captured to the production recorder.

"The vocals were always live, the band was occasionally live," said Baxter. "We knew going in that if we did band and vocals live, when we got into the editing room it would be a hot mess no matter how great the musicians were."

Baxter handled on-set playback for *La La Land* and brought that experience to this production. "We had earpieces so the band could play along and sing live," he said.

"We had really good pre-records heading in, so we were concentrating on getting clean vocals. Luckily, the band on screen is the band that played in the studio, so they knew the songs."

Baxter continued, noting that at Stagecoach, "we had a mic on everything live, just in case something hap-



The *Mix* magazine Sound for Film & Television event provided a platform for the audio team of *A Star Is Born* to discuss the film's recording and mix process.

pened. And on the first sequence, we used live drums—because we didn't have time to mute them. And they matched the audience mics and had some cool reflections."

In any case, at each live shoot, he said, "We did impulse responses at every venue, which was a big part of getting it to feel live and place elements in the space afterward. Coachella's main stage was one of my favorites—the delay was so extreme."

Kris Kristofferson, who starred in the previous version of *A Star Is Born*, gave permission for Cooper to jump onstage before his set for some solo footage at Glastonbury. "We

solo. "We broke out the guitar riff and amplified it. That pumped the crowd up."

Morrow and Baxter typically captured 60 tracks during band shoots, which they delivered to Jason Ruder, the supervising music editor, who was also always on set. "It's invaluable to be on the set," said Baxter. "When you know about the details that were captured, you can grab them and pull them into the mix. Maybe the bass was great from a live take, or there was a guitar moment that was awesome."

Baxter delivered the music in 5.1 and 7.1 to the mix stage, he said. "It

authentic and real. Putting the audience where the camera is really paid off with Atmos."

Dolby Atmos also offers enhanced clarity for the music tracks, said Baxter. "The big advantages are that the surrounds are full-frequency and you can pull the music just off the screen, so it has its own speakers and isn't fighting with the crowd or dialogue in the way that it normally would [in 7.1]."

There were quiet moments, too, such as Lady Gaga's a cappella performance in a pivotal parking lot scene. "On a film that doesn't have a ton of money, you don't shut down the street," said Morrow. "You have traffic. It's a quiet, intimate scene, so you do the best you can. That's why we had four mics for two people: two booms, two radio mics. The radio mic sounds great in a wide [shot], but for her singing, it needed to be boom—and your hand is on that gain knob."

Unusually, Baxter's work tailed off with the production. "The unique part for me was how little interaction there was with them in post-production. Normally there's re-recording to fix stuff, but we had so much incredible material from set, we didn't re-record any of their vocals."

That was due in no small part to Cooper's attention to every detail, said Zupanic. "The commitment came from the top down."

"They make you feel like they want you there," Morrow agreed. "You're there for a reason, and it's not just to make their movie. It's a family of people making a movie together."

"It's invaluable to be on the set. When you know about the details that were captured, you can grab them and pull them into the mix."

Nick Baxter

originally had 10 minutes to shoot and had three songs we wanted to do," Morrow recalled. "Forty seconds before we went on, they said, 'We're running long; you have three minutes.' We decided on the spot to just play 30 seconds of the part of each song we wanted in the film."

The live shots were filmed 18 months before the film's release, which meant there was a risk that someone would pull out a phone, record it and share it. "We didn't amplify it for the crowds," said Morrow, except for Cooper's "Black Eyes"

gives the re-recording mixers more freedom."

The film is notable for its use of Dolby Atmos, but that wasn't in the original plan. "The final mix started as a 7.1 and we were going to upmix it to Atmos," said Zupanic. "We started the process of making it Atmos and Bradley was blown away by what Atmos could do, so we remixed the movie and downmixed it to 7.1."

"The movie is shot from the stage as if you are part of the band," Morrow noted. "You're on this stage and the sound reflects that. It feels au-

Doctor Who

(continued from page 25)

production mixer Deian Humphreys.

From his arrival on *Doctor Who* in 2012, during the time of the eleventh Doctor (Matt Smith), Humphreys miked every speaking actor in a scene. "I started with a Sound Devices 788 recorder," he says, "which allowed me to mix eight mics and have ISOs. This season, I saw the biggest change was having three companions. With the people they bump into through the stories, that meant the track count was getting bigger and we needed more ISO tracks."

On shoots, Humphreys has two mic booms, each with a Schoeps SuperCMIT shotgun. These have a two-channel output: a processed SuperCMIT signal on channel 1 and an unprocessed (CMIT) signal on channel 2. "I record both, which means one mic takes up two ISOs," he explains. "That meant the four main characters took up eight channels before they met anyone else." More capacity has been added by Humphreys using two 788s—one solely for 10 radio mics (Audio Limited TX2040s with Sanken COS-11

capsules), which feeds into the main recorder taking the outputs of two booms, plant mics and any other inputs. Humphreys tries to get all the dialogue from the booms, which are swung by Tam Shoring and Chris Goding, with the radio mics as "safety blankets."

In this way, Humphreys ensures that dialogue editor Darran Clement has as much material as possible from the shoot to work with. Clement started out on *Who* during tenth Doctor David Tennant's tenure, as did Matthew Cox, who handles ADR and creature sound effects.

Cox says there is a balance between making a voice sound otherworldly and being intelligible: "It's more difficult processing dialogue because you have to understand the words. The script calls for something that can be understood, but it must be convincing enough so we know it's some kind of alien." When it comes to monsters that growl or hiss, Cox says he either gets a crowd actor to make noises or does it himself.

Based at BBC Cardiff, Cox uses a range of plug-in processors to achieve different effects required. "We've probably got more plug-ins than we need, but that gives us a lot of tools to play with," he says. "I'm

really liking Krotos Dehumaniser. We also use pitch shifting, vocoders and delays. For robots and computers, I go back to the Waves Doubler, and their MondoMod is good for growling creatures."

Cox comments that the intention is to keep ADR, in terms of replacing lines, to a minimum. "Deian does an amazing job, and maybe 85 percent of the show uses production sound," he says. "But because this is science fiction and sometimes scenes are shot in the center of Cardiff, we have to get rid of any extraneous background noise. The TARDIS can also be quite difficult to record in because it's made of wood. There's also a need for exposition sometimes, so lines are added during scenes when an actor is facing away from the camera."

Most of the audio team has gotten used to creating sounds for things that do not exist in reality. In contrast, this is re-recording mixer Howard Bargroff's debut season of *Doctor Who* and his first foray into science fiction. Bargroff says Chibnall and co-executive producer, Matt Strevens, took him to dinner to discuss the show. "They said it was getting a new aspect ratio, which is more like feature films but looks amazing on mobile devices. To go with this, the brief was to make

the sound as big as humanly possible. Big screen, big sound."

Pre-mixing is at Bargroff's Sonorouspost room within Goldcrest's Soho audio facility. This is done in a single Pro Tools HDX2/Mac Pro system, despite there being what Bargroff describes as a "pretty healthy track count," including approximately 500 voices. "It's close to maxing out the machine," he says. The final mix takes place in Cardiff, also on HDX.

Bargroff's monitoring system is a PMC twenty.22 rig, but he also uses a Samsung TV screen with integral loudspeaker to ensure the mix sounds right for television. *Doctor Who* has been mixed in 5.1 since the early days of the revived series, although it has not always been transmitted in the format. Surround has featured on DVD releases and cinema screenings of selected episodes. Bargroff says the series is mixed for 5.1 and stereo, plus matrixed Lt-Rt. At this point, there are no plans for further binaural or immersive audio episodes.

Either way, sound is still with the Doctor, even in space.

Avid

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Gimlet Media

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teners aren't distracted by noises or bad edits, and great music."

To that end, the 12 podcast studios, variously accommodating one to six people, and the music recording facility, with a 375-square-foot live room and separate control room, are outfitted with high-end equipment such as Avid Pro Tools; Neumann BCM 705 microphones; Neumann KH 80, 120 and 310 monitors; Focusrite RedNet mic preamps; and Genelec 8010 speakers. Yet operational controls are kept to a minimum, an approach driven by economics and expediency.

"The podcast workflow is just different enough from broadcast," says Thompson. "We don't have to deal with live-to-air and we don't have a program mix; everything is edited after the fact and mixed by a team of audio engineers, so the most advantageous thing for us is not to burden payroll with an engineer in every room, sitting and watching levels. We thought, if we could make a system that is intuitive to a radio producer who graduated from journalism school two months ago, then they can

come in and do what they're good at, which is interviewing people."

The facility is on a QSC Q-SYS backbone, an unusual choice for this type of venue, but one based on Thompson's research and trials performed at Gimlet's previous location. "I'm not frustrated by menus and trying to get devices to talk to each other," he says.

Q-SYS works intuitively, he continues. "There's a visual element to it. I can EQ the way I'm used to, with a graphic interface, instead of drop-down menus and typing in numbers."

Almost all audio transport is over AES67. "I've got devices from 20 manufacturers hooked up [via AES67] and they are all working just fine," he reports, including 15 Focusrite RedNet MP8R eight-channel mic pre and A/D converters in the 13 studios. Q-SYS outputs a Dante stream back to the iMac hosting Pro Tools in each room.

Local headphone distribution, ensuring low latency, is via QSC Q-SYS converters, with a handful of Focusrite RedNet AM2 stereo units enabling anyone on the floor to patch into the network where necessary. Studio A, the music recording facility, uses analog Redco Little Red Cue Boxes on a single stereo monitor feed.

The graphic interface running

each studio has been stripped back for ease of operation, says Thompson. "You have the number of inputs in the room with no ancillary knobs or buttons. There are microphones, a couple of remote sources and two phone lines in each room. Then they have a couple of faders for listening back after the interview."

The phone lines interface directly with Q-SYS via SIP: "There's a button on the iPad for phones; you dial out and it's instantly hooked in."

Nearly every room has an outside window. "I was adamant about having daylight in the studios," says Thompson.

"All the studios have a secondary skin and a secondary window," says Larregina. "We installed an acoustic lid in all of these smaller studios and they have double-wall construction. But the recording studio, where we knew the studio and the control room would have subs and drum sets, is fully isolated." The wall separating Studio A's live room and control room is triple-walled, she says, enabling them to be used simultaneously for tracking and podcast recording.

"You can plug a laptop into a network jack, pull up Dante Controller, route some microphones into your laptop and track yourself," says Thompson.

"Several of our audio engineers are musicians and composers, so we saw an opportunity to differentiate ourselves by writing custom music," he continues, hence the recording facilities. Finding and licensing appropriate production music is a chore, he says, so now about 60 percent, and sometimes more, of the music on any show is created in-house.

Gimlet Media also maintains a facility in San Francisco and is planning a small room in Minneapolis, Thompson reports. "We're now designing small- and medium-scale isolated installs that we can put in," using QSC's smaller Q-SYS Core units and its newer LAN streaming capabilities.

"We're trying to do what radio stations have done for years with point-to-point connections," he says of using the public internet instead of expensive or complex broadcast gear. "Because we're not live-to-air, we can deal with an issue every now and then."

Walters-Storyk Design Group

www.wsdg.com

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innovations: the manufacturer's view

The Best of Both Worlds

PRESONUS CDL12 LOUDSPEAKER

BY WESLEY SMITH

During 2017, Hugh Sarvis, the director of loudspeaker design for PreSonus Audio Electronics, teamed up with legendary loudspeaker designer Don Keele to begin work on a new loudspeaker concept: constant directivity. After presenting their research at the 143rd AES Convention in New York, Sarvis used this whitepaper as the blueprint for the patent-pending PreSonus CDL12 loudspeaker.

The CDL12 combines the best attributes of point source and line array technology, resulting in a system with 120° horizontal dispersion that is scalable up to 120° of vertical coverage with just six compact enclosures. The consistent center radiation delivers clear, articulate speech intelligibility and natural music reproduction. Before we discuss constant directivity and the unique approach that went into designing the PreSonus CDL12, we should explain what “constant directivity” means as it relates to loudspeakers.

With any loudspeaker design, there will be changes in frequency response when the user is listening on-axis, within the loudspeaker’s nominal coverage area, as compared to when they are listening off-axis, outside of it. “Directivity” describes the directionality of a sound source and is closely related to how a loudspeaker’s frequency response changes both inside and outside of its designed coverage region.

A loudspeaker with constant directivity provides coverage that is consistent in both the horizontal and vertical planes, both in frequency response and SPL. PreSonus CDL12 loudspeakers deliver on this promise by combining the best attributes of line array and point source designs.

In order to understand how unique the CDL12 design is, let’s take a closer look at both traditional approaches, where they excel and where they fall short.

A line array is created by suspending multiple speakers in a straight or curved vertical contour. This allows a line array to cover a greater depth of field with the same SPL because



The PreSonus CDL12 loudspeaker

the arrayed enclosures create a line source (as opposed to a single point source). A very tall, true line source will suffer from half as much propagation loss as a point source.

As stated by the inverse square law, the SPL of a point source will decrease at a rate of 6 dB per doubling of distance when measured in a free field. This is because sound radiates in an omnidirectional pattern, expanding out both vertically and horizontally. Because of this, the sound pressure level of a point source

reduces rather quickly as the sound spreads out—like ripples in a pond disturbed by a pebble—only sound waves radiate out in three dimensions.

By contrast, a line source radiates in a nearly cylindrical pattern that spreads rather wide in the horizontal plane, but quite narrow and controlled in the vertical. The propagating sound waves don’t disperse as quickly and therefore maintain a more consistent sound pressure level throughout the space. In other words, if the array is designed properly, the SPL near the front of the audience will be approximately the same as the level at the rear.

All that sounds great ... but it does have limitations. While line arrays are great at creating an equal sound pressure level from the front of the audience to the back, they often don’t do a great job at creating the same frequency response at varying distances in the listening field. Most line arrays sound most consistent at distances much greater compared to height of the array. This places listeners in the far field, where diffraction and the natural interference between multiple sound sources settles down,

and sound radiation is much more uniform.

Maybe conventional line arrays aren’t always the solution. This brings us to the traditional point source approach. The advantage of well-designed point source systems is that they provide excellent pattern control in both the horizontal and vertical planes. Unfortunately, while the frequency response remains consistent wherever the listener is within the coverage zone, the SPL will not be consistent from the front of the room to the rear because of propagation loss.

But what if a loudspeaker system could provide consistent SPL and

consistent frequency response throughout the audience area?

This is where the PreSonus CDL12 comes in. Rather than relying on a single horn like a point-source loudspeaker, or multiple horns like a line array, the CDL12 is equipped with eight 2-inch drivers aligned in a segmented constant-curvature arc to create a single high-frequency array. The center of each 2-inch driver is carefully located on a constant-curvature contour so that they are equidistant from one another as well as from a central common curvature center. This creates a pseudo point-source array while avoiding traditional compression driver problems. This also allows the CDL12 to be crossed over at a much lower frequency, improving on the point-source listening experience by placing the crossover point at 420 Hz, well below the vocal range.

The CDL12’s high-frequency array is then centered in front of a 12-inch woofer, forming essentially a point-source configuration. Because the output of the low-frequency driver travels from the same acoustic axis as the high-frequency driver array, the pattern always effectively radiates from the center of the CDL12, whether using a single CDL12 or six.

When arrayed together, CDL12 loudspeakers form a true constant-curvature line source that allows sound to propagate from the center of the system so that the frequency response and SPL are consistent throughout the coverage area of the CDL12 system. Because the high-frequency array and 12-inch woofer are on the same acoustic axis, every frequency radiated by the system originates from a common central point and thus creates a near- and far-field response behavior that mimics the behavior of a true point source. With consistent, scalable coverage, frequency response and SPL, the CDL12 is a unique design approach that provides articulate, natural sound reproduction for a wide variety of applications and venue sizes.

Wesley Smith is documentation manager for PreSonus Audio Electronics.

PreSonus CDL12 AES White Paper
www.PreSonus.com/products/CDL12

What if a loudspeaker system could provide consistent SPL and consistent frequency response throughout the audience area?

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THE METALLIANCE REPORT: Emotions in the Mix

BY AL SCHMITT

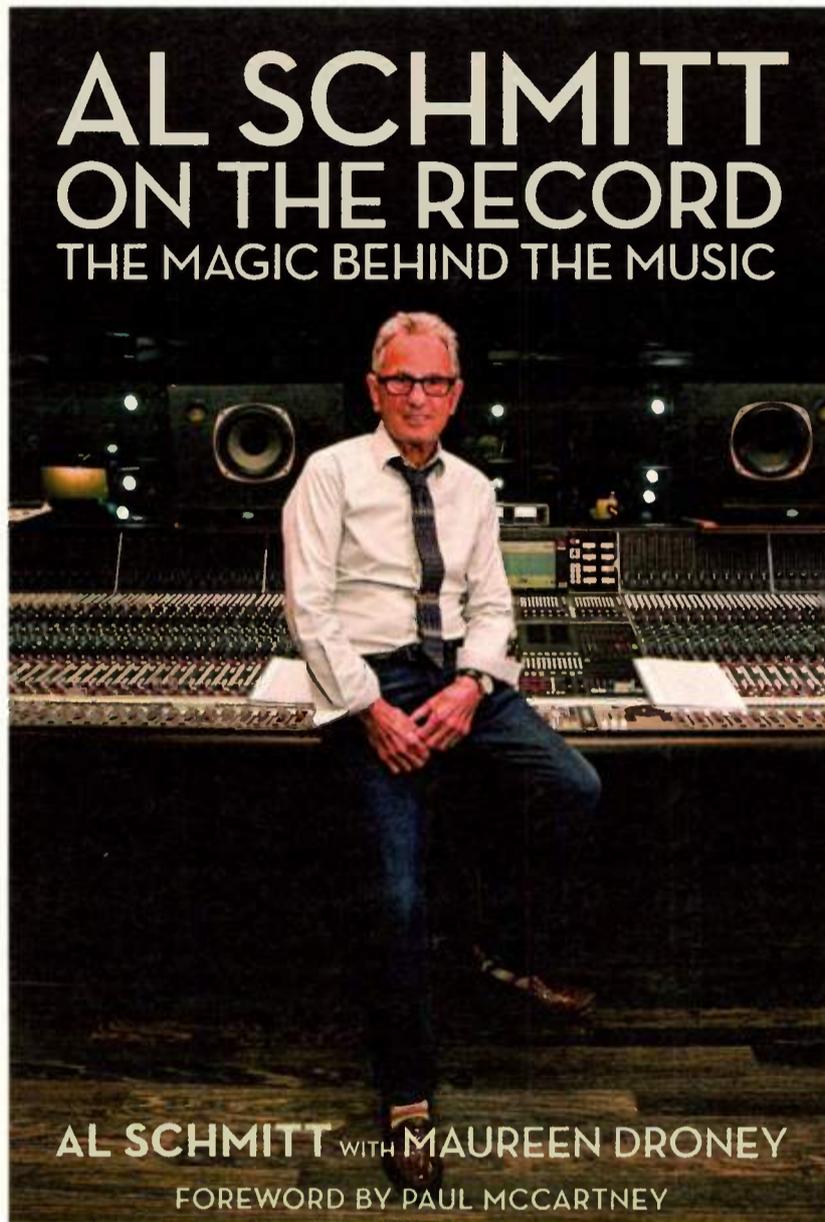
One of the main reasons the METAlliance came together was to share its members' hard-earned knowledge and insights about recording. That educational mission takes many forms, such as the group's trademark "In Session" events and this column, for instance. Founding member Al Schmitt took that charge even further recently with the publication of his memoir, *Al Schmitt on the Record: The Magic Behind the Music*. While the book offers technical tips, it shares a broader, more fully rounded view of what life's like for a top engineer as he recounts his career, shares stories of the highs and lows along the way, discusses his longtime practice of meditation and much more. (Look for a review in an upcoming issue of PSN.)

Recently Al discussed the emotional relationship he has with a mix. "The emotion starts to build when I enter the control room and grows as I piece the mix together," he said. "It usually reaches its peak when I'm finished mixing." You can find more of his thoughts on the process in the chapter "Mixing: Philosophically and Pragmatically," including the passage excerpted here:

I tried mixing "in the box" with Pro Tools. It sounded good, but then I tried the same mix on an analog console and it sounded better to me, so now I stick with an analog board.

We mix to Pro Tools at 192 kHz 24-bit; that's what we deliver to mastering. We started mixing at 192 a long time ago. Doug Sax, who was my mastering engineer for many, many years, got a converter for me that was made by Josh Florian of JCF Audio, who was also working for Doug at the time. It sounded great and that's what we still use. We spent several years mixing to both analog and digital and comparing them. Digital kept getting better and better, and finally we decided we liked the 192 mixes the best. Now that's all we use. We record at 192 most of the time as well. For mixing, we come out of Pro Tools into the console, and out of the console it gets captured back to 192 on a Tascam DV-RA1000HD hard disk recorder using the JCF Audio converter.

Some engineers say that they mix by colors—they relate frequencies to colors and create their mixes like they're painting. I recall working with Joni Mitchell and having her ask for "more green" or "more blue." There may be a bit of that sensibility for me in how I'm feeling about the sound,



Al Schmitt's new memoir.

but I don't see colors. What I'm going by is how I feel when I put all the parts in place. I keep working with all the elements until I feel comfortable with what I have.

We joke about this all the time. Engineer Niko Bolas says I mix with my heart. He's right. That's true in the sense that I mix with my emotions. I just keep trying things until a little bell goes off in my head that says, "That's it." And that's where the mix will stay. It's just a matter of how it affects me emotionally.

I start from the bottom up, get the bass and kick where I want them, then add the overheads to where I like them. It's like building a house.

When I mix these days, I have a three-band Tube-Tech SMC 2B compressor on the stereo output of my mixes, and sometimes I'll use it to compress the overall output a little. Again, pretty much, as always with me and compressors, I just tap it. With the three bands, I can compress a little on the low end, maybe less in the middle, and still less on the top. I

play with it until I like it. I also usually use an NTI [Night Technologies Inc.] EQ3 that has something called an Air Band, to add just a little shimmer at the top. I'll also use the Sub Band on the NTI to give a little boost to the low end—one step of low frequency around 40 or 50 cycles.

To decide when the mix is done, I usually go away from it for a little bit and then come back with fresh ears. Occasionally I may leave the mix up overnight. I did that on Natalie Cole's "Unforgettable." I was mixing at Schnee Studio in Los Angeles, working with David Reitzas as my assistant, and we were struggling to get a great mix. We couldn't seem to grasp it and I was starting to worry that they would take the mix away from me and give it to somebody else to do.

I went home, and when I came back in the morning, I asked Dave what he was hearing from the people involved. He told me the mix was still in my hands, so we went back to work, zeroed in, and an hour later we had

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The METAlliance—Al Schmitt, Chuck Ainlay, Ed Cherney, Elliot Scheiner, Frank Filipetti and George Massenburg, along with the late Phil Ramone—has the dual goals of mentoring through our "In Session" events, and conveying to audio professionals and semi-professionals our choices for the highest quality hardware and software by shining a light on products worthy of consideration through a certification process and product reviews in this column. Our mission is to promote the highest quality in the art and science of recording music.

the mix. We played it for everyone and they loved it. We just needed a night away and for me to know that it was up to me to do it. That's another record you should listen to. It sounds really beautiful and I'm very proud of it.

Generally, though, I mix fast. I don't need to take a lot of time. If I'm mixing tracks that I've recorded, I can do three, four, sometimes five in a day. Because when I'm recording, I'm already figuring out where I'm going to put things in the mix. I'm thinking way ahead, about the sound, the panning—and what the mix is going to sound like overall—the whole time that I'm recording.

It's a great feeling to be done with a mix and to know that it's good. I'm a happy guy then. I know we can send it to anybody and that we'll be cool. But I don't think there is such a thing as a perfect-sounding record. I've made records that won Grammys and made a lot of money, but I'll hear those records two years later on the radio and I'll always think I could have done them better. I don't think I've ever made a record I was 100 percent happy with. But I don't know if too many other people would say they have, either!

Al Schmitt has mixed and recorded more than 150 Gold and Platinum records, and won 20 Grammy and two Latin Grammy Awards for engineering albums by such artists as Steely Dan, Toto, Natalie Cole, Quincy Jones, Diana Krall, Luis Miguel, Ray Charles, Chick Corea, DeeDee Bridgewater and Paul McCartney. In addition to being the first engineer to be honored with a star on the Hollywood Walk of Fame, he has worked with the likes of Frank Sinatra, Barbra Streisand, Neil Young, Bob Dylan, Usher and Dr. Dre; has been inducted into the TEC Hall of Fame; was honored with a NARAS Lifetime Achievement Award; and co-founded METAlliance.

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Okay, I'll admit to some bias here. The NAMM issue (and show!) is my personal favorite of the year to write for, but that's probably because the guitar plays such an important part in my everyday work. Aside from guitar gear, though, there are always a lot of interesting pieces of recording/production software and hardware to be seen and heard at the NAMM show. I'll report on much of it when I see it at the show, but some tools, including the collection that follows, are pieces that have found their way into my daily workflow. Let's get to it...

FRYETTE POWER LOAD

For those who need to record their amp heads but can't shake the floors or bother the neighbors, the Power Load from Fryette is a useful tool. This Variable Reactive Load Cab + Mic Emulation box lets you plug that head into it and simulate the sound and feel of a miked-up cabinet.

It's simple to use but remarkably versatile. On the front panel, you've got large amp-style knobs for Level, Lo Mid and Hi Mid Contour and Emphasis. There are also switches for Edge/Bright/Flat, Deep/Warm/Flat, 180/0 phase, In/Out and Air/Bite. That's all there is to it. Plug your 4/8/16-ohm amp/head (up to 200 watts) into the rear panel Amp In, run the Direct Out (XLR or 1/4-inch) to your DAW and listen. From there, you can adjust both your amp and the settings on the Power Load to find what you're looking for.

I have a few different heads I use for direct recording. I plugged my Mesa Boogie MK IV, Orange Micro Terror and Orange Micro Dark into the Power Load to test them out. Since I do a lot of mobile ses-



Fryette Power Load

sions, I found that pairing the Power Load with a small head like the Micro Dark lets me get real amp tones with a remarkably small footprint. The best way to get your sound happening is to make adjustments to

both the amp and the Power Load, and think of them as a single unit. To get a thicker tone, for example, I would tweak the amp first, then flip up the Deep switch and adjust the Low Mid Contour on the



BY RICH TOZZOLI

Rich Tozzoli is an award-winning, Grammy-nominated producer, engineer and composer for programming such as FOX NFL, Pawn Stars, Duck Dynasty and Oprah & Deepak Chopra. richtozzoli.com

Power Load.

Via the rear-panel headphone jack and stereo effects loop, Fryette Power Load lets you crank your amp up and get some practice time in at all hours of the night. Note that there's also XLR and 1/4-inch transformer-isolated direct-only outputs on the rear, as well as an aux input and Cab Thru for additional connectivity.

What I like about the Power Load is that it lets me achieve real amp tones without having to mic up a cabinet. Is it the same as miking up a cabinet? No, but it's close, and for what it delivers at "all-hour" levels, it's great. I can get funky clean, blues or searing rock tones from my amps in my home production studio without bothering neighbors.

Fryette
www.fryette.com

EVENTIDE H9 HOTSAWZ SYNTH ALGORITHM

One of the great things about the Eventide H9 is that it's a piece of hardware that can be infinitely expanded and updated through software releases. Since the H9 is a staple in my production world, I always look forward to new algorithms that can help me create with it. HotSawz takes the H9 into a different world with its pitch-tracking, monophonic synth engine, which offers six stackable sawtooth oscillators, three modulation sources and four assignable destinations.

Modulation sources include LFO, Envelope Follower and ADS Gate, and the assignable destinations include Filter Cutoff, Volume, Pitch and Oscillator Depth. As with most new releases, the best way to get an idea of what it does is to plug it in

and scroll through the presets. The names—including Analog-ish Lead, Faux Horns, Funky Sauce and Hot Bass—give you some idea of where you're headed. The sounds track surprisingly well (with guitar), and you can create some cool synth lines.

I control my H9s from either the desktop software on my Mac or the very useful Bluetooth app. I found it useful to adjust the All Mix knob, which is the wet/dry, in order to find the right blend between the source and waveform sounds. From there, you can tweak your attacks, osc depth, resonance and so on to dial it in. Hot Saws allows users to bring a little synth action to the table. It's a very cool addition to the H9 arsenal.

Eventide
www.eventideaudio.com



Eventide H9 HotSawz Synth Algorithm

UNIVERSAL AUDIO UAD LEXICON 480L PLUG-IN

Finally! When I saw that this plug-in was coming out, I couldn't wait to get it into a session. Having used the hardware unit for many years, I knew what it was capable of. Even though it was originally released in 1986, there is still something special about the good old '480. Of course, UA did it right, modeling the new release after an all-original "Golden Unit" and using the quirky, fader-driven LARC (Lexicon Alphanumeric Remote Control) as the interface. However, the 480L plug-in offers an enhanced parameter display and additional software-only workflow enhancements that make it an instant classic.

It's important to understand that this is not just a reverb—it's a multi-effects unit. Aside from the reverb, it features all the releases from the unit's final software version, 4.10, which includes Reverse, Doubling, Chorus and Tremolo. The Banks include Halls, Rooms, Wild Spaces, Plates, Effects, Twin Delays, Random Hall, Random Spaces, Ambience and Post Ambience. There's also a great collection of presets from a host of folks including Richard Chycki, Jack-knife Lee and Spike Stent.

I've always loved the 480's plates, and to me, these sound spot-on, especially on vocals. But I like to customize my reverbs and have found it useful to pull all the faders on the remote down to zero, then start pushing

them up one at a time. When you grab a fader and move it, the display will let you know (at the bottom of the window) what parameter that is. In just a few minutes you can create some superb original sounds and save them as your own presets. I made one setting that had a full 56 seconds of reverb (for extremely long pad swells). In general,

what I like about the 480L are the same things I liked about the original: its depth, warmth, clarity and a bit of edge.

Universal Audio
www.uaudio.com



KEELEY EDDIE HEINZELMAN VOT VERB O TREM PEDALS

Nashville guitarist Eddie Heinzelman and the custom shop at Robert Keeley Electronics worked together to create a pair of boutique pedals: the VoT Verb o Trem and the VoT Reverb and Tremolo Workstation.

The smaller Verb o Trem is a Reverb Tremolo combo pedal featuring Spring and Plate reverb, as well as three kinds of Tremolos. The two different spring sounds and their decay can be dialed in with the Reverb knob, then you've got Rate and Depth for the speed and modulations, and a Level knob. The switch in the middle lets you go between R+T (Reverb and Tremolo), MACK (Pitch Vibrato and Reverb) and HAR, which is the harmonic mode (Harmonic Tremolo into a Plate Reverb). But the flexibility of the pedal lets you just turn the Reverb knob down if you don't want to hear it, or turn down the Rate and Depth if you don't want to hear that. Or you can mix and match your desired settings.

The VoT Workstation kicks up the flexibility with eight reverb and eight modulation types. There are independent foot-switchable sections and Select knobs for the Reverb and Mod, as well as a Tap switch for tapping out your tempo. This is great for quickly turning each section on or off with a simple press of the foot, or changing tempos to get the pedal in sync with

your song. For additional controls on top, there is Level for each, then Rate, Decay, Morph, Reverb Morph, Mod Morph and Effect Blend. As you might imagine, there's a huge number of sounds to be had from these controls.

I like that it's a stereo output pedal, and the rear of the pedal features IN/EXP/TAP/STEREO/MONO 1/4-inch jacks, as well as the 9V AC plug.

There's a useful list printed on the front of the pedal, with Reverb Modes and Modulation Modes 1-8 and their associated settings. I found myself often turning to this—for example, if I wanted a Slapback Harmonic Tremolo, I set the Reverb Mode knob on 8 (Slapback) and Modulation Mode knob on 3 (Harmonic Trem).

Both of the pedals deliver on several fronts. They offer up great-sounding reverb, tremolo and vibrato, with tone and playability. I've found that many Tremolo/Vibrato pedals and reverbs can get lost in your sound and become useless, and I'm picky about that because I own and play a '66 Magnatone M10 with real vibrato and some old '60s Gibson amps with great verb/trem.

There is a warmth and depth to these pedals that makes them sound like actual analog tubes—a quality



Keeley Eddie Heinzelman VoT Verb o Trem Workstation

I assume is due to the care taken in the design and engineering stages. I found that these are quite flexible as well; they can be used as creative sound design tools or in a more classic, pure approach. The Verb o Trem is, of course, the simpler of the two; the Workstation brings more flexibility for those who need it. Each is a worthy pedal with a rich sonic vibe that's equally at home in the studio or on the stage.

You can hear audio examples of me variously playing with the VoT Reverb only, Workstation Plate reverb only, and Workstation Spring reverb and Pitch Vibrato at www.soundcloud.com/prosoundnews or in the online version of this review.

Keeley
www.robertkeeley.com

MCDSP EC-300 ECHO COLLECTION PLUG-IN

Like reverbs, I tend to use a lot of echoes and delays. The EC-300 is a box (or three) of them that's full of character and tone. The three delay types—Magnetic, Digital and Analog—can be accessed at the bottom of the plug-in. Each has its own color and associated set of controls.

Without going into all the gory details, I'll touch on what makes this box a little bit different. Aside from capabilities including bit-crushing, saturation and modulation, there are more than 75 synthetic impulse models available on the digital delay. These are what I use most. You can modulate the delay to make audio sound like it's coming from cellphones, earbuds, toys, televisions, radios and more. There is a certain midrange resonance to these settings that helps the delay create unique sounds that stand out in a mix (if you want them to).

There are other handy features that help craft unique sounds. For



McDSP EC-300 Echo Collection Plug-In

example, Analog Delay offers Stereo Width and Offset, as well as Modulation and Dynamics sections. Master Tap Tempo, Groove offset, Single, Dual and Ping Pong Delays Modes are available, as well as De-

lay Character types for each model. Overall, it's a tone-shaping, sonically modulating dream delay that I use on virtually every session.

McDSP
www.mcdsp.com

Sennheiser EW 500 G4 Wireless Vocal Microphone

Sennheiser's EW 500 G4 offers a professional-quality microphone and receiver at an obtainable price point. The 500 series can handle up to 32 channels; this is a feature that becomes increasingly critical as frequencies become less available.

The EW 500 G4 receiver can be paired with the SK500 G4 body pack or the SKM500 G4 handheld; the handheld allows the option of three capsule configurations: e 935, e 945 and e 965. Setup is fast with these units—scan for available frequencies, sync your mic and you're ready to go. The 500 Series also offers an Ethernet connection for Wireless Systems Manager if you are coordinating multiple channels in one setup. The handheld has a nice, balanced feel to it, and I have found that the shape of the grille encourages the talent speak directly into the front of the microphone rather than into the side of it.

For this review, I used the Aw+ frequency range of 470–558 MHz. The first application was a block party, using the handheld microphone for announcements. I used the quarter-wave antennas that shipped with the mic, since I was not shooting a long distance. The microphone's capacity for feedback rejection was impressive. I was using the 935 capsule (cardioid dynamic), which worked well, but there is an option to swap them out and have the flexibility to upgrade and configure components of the system without having to buy into a whole next-level professional system.

The next few uses were for events at Winston-Salem's RJ Reynolds Auditorium. The Sennheiser G4 935 blended in beautifully with our G3s and Shure ULX handhelds. We have 24 wireless receivers, all pulling frequencies in the upper 400s to upper 500s range. I was able to tie in the receiver to our existing RF distribution cascade for stable antenna connection.

The last use was for the Winston-Salem Symphony, for its Christmas Spectacular Cirque de la Symphonie performance. I had the conductor use the handheld and was able to really push the gain to get his volume up to fill the acoustically challenging large room, finding that the natural EQ curve on it is desirable in a low-mid sounding room such as ours.

With the added channel count, and the updated housing and interchangeable capsule option, the 500 series is a solid investment for a venue like mine. I was not given a wireless body pack to try out, but the body packs have a similar housing to the G3s. The G4 offers flexibility at

an affordable price and is a great option for venues such as mine, where we need a couple of dozen microphones that will sound clean and accurate, but that won't cost us our entire annual budget. The EW 500 system gets two thumbs up from me.

Sennheiser
www.sennheiser.com

BY LIZ MAY

Liz May is a live sound mixer, producer/engineer, educator and schooled pianist now serving as Product on Manager of Reynolds Auditorium in Winston-Salem NC. twitter.com/soundlizzard



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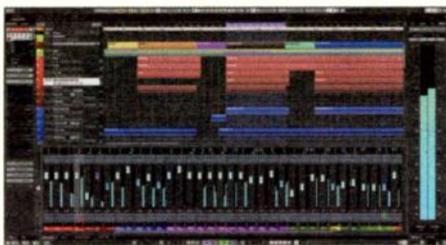
UV RESISTANT IP65 RATED

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Steinberg Cubase v10

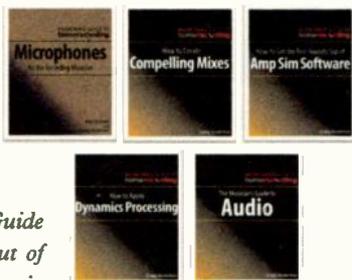
Steinberg has released the latest version of its long-running DAW with the v10 introductions of Cubase Pro, Artist and Elements. Cubase Pro 10 remains the flagship of the series, while Cubase Artist 10 is a slimmer edition, offering the same core technologies as Cubase Pro alongside a number of dedicated production tools. Aimed at novice users, Cubase Elements 10 is an introductory version of the program.



As part of Cubase Pro 10, VariAudio 3 provides pitch correction, introducing enhancements for editing micro pitch levels and adjusting formant shifts. MixConsole Snapshots, which allows users to save and recall a current mix, can be used to compare alternate mixes of a project. A new Pro 10 offering is Audio Alignment, which allows users to align stacked recordings so that vocal and other tracks are in sync. Smaller additions include AAF import/export, improved editing to picture, and inclusion of the Steinberg Virtual Reality production suite.

Craig Anderton Home Recording Books

Industry legend and *Pro Sound News* columnist/blogger Craig Anderton has added five new titles to his new book series, *The Musicians Guide to Home Recording*. Building on the initial three books, the series is adding *How to Apply Dynamics Processing*; *Microphones for the Recording Musician*; *How to Create Compelling Mixes*; *The Musician's Guide to Audio*; and *How to Get the Best Sounds Out of Amp Sim Software*. Each volume in the series is available in print and digital formats, as well as via Groove3's Digital Print Library, and, for institutional use, via the Digital Print Library with Elements|ED on a site license basis.



RØDECaster Pro Podcast Production Studio

Australian pro audio manufacturer RØDE Microphones has shipped the RØDECaster Pro integrated podcast production studio. While Røde released its first podcast product, the Podcaster USB mic, in 2004, the new unit finds the company broadening its reach with an all-in-one console/recorder approach. The unit includes four Class A, servo-biased inputs able to power studio condenser microphones as well as conventional dynamic microphones. The unit also offers inputs via Bluetooth, a 3.5mm port for a phone or device, and a USB port. Also onboard are eight color-coded programmable pads that can trigger jingles and sound effects. These can be programmed within the RØDECaster Pro or via computer. A central touchscreen provides control of all settings, including EQ presets, compression, a de-esser, high-pass filter, ducking and noise-gating. Processing within the unit is provided via APHEX Exciter and Big Bottom processing. RØDECaster Pro sports four headphone outputs and a stereo speaker out, each with independent volume controls. Users can record to a microSD card internally or to a computer via USB; the unit can record to both outputs simultaneously.



TASCAM TH-07 Headphones

TASCAM's aim with TH-07 high-definition headphones is to duplicate the audio quality of nearfield monitors; they are intended for mixing and monitoring applications. The TH-07s employ custom 50 mm drivers and reportedly offer a 10 Hz to 30 kHz frequency response and sensitivity of 100 dB (± 3 dB). The closed-back headphones sport a circumaural design and leather earcups that fit snugly the ear. The earcups can be rotated and angled for maximum flexibility and



firstlook

PreSonus Quantum 4848 Audio Interface

PreSonus is shipping the Quantum 4848 24-bit, 192 kHz Thunderbolt audio interface, which comes with a slew of additional software. The 1U rackmount unit sports A/D converters with 120 dB dynamic range on every input and output and offers 32 channels of DB25 line-level I/O. An additional 16 channels of ADAT Optical I/O are available to add Lightpipe-equipped digital gear or extend analog I/O to 48x48 by connecting two PreSonus DigiMax DP88 A/D/A converters with recallable XMAX Class A preamps and line-level inputs.

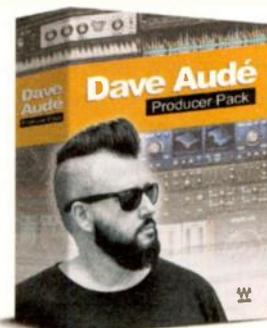


The unit comes with the company's Studio One Professional recording, mixing and mastering software, as well as the Pipeline plug-in, which allows users to insert hardware processors into a Studio One session with automatic latency compensation, and the Studio Magic Plug-in Suite. Front-panel level meters can be switched between input and output monitoring. For applications requiring more than 48 channels, up to 4 Quantum 4848 interfaces can be stacked via Thunderbolt to create a 192x192 system. Alternatively, the Quantum 4848 can be stacked with any Quantum-series interface to add recallable XMAX mic preamps, SPDIF I/O and MIDI I/O.

one-ear monitoring. The TASCAM TH-07 comes with two detachable cables: one coiled and shorter for short-distance work, with a 1/8-inch connector; the other straight and longer (approximately 8.5 feet), with a multiconnector that accommodates both 1/8-inch and 1/4-inch jacks.

Waves Dave Audé Producer Pack

The Dave Audé Producer Pack from Waves consists of eight plug-ins picked by Grammy Award-winning producer Dave Audé (Sting, Rihanna, Selena Gomez; Lady Gaga): Codex Wavetable Synth, Sibilance, Smack Attack, OneKnob Pumper, Electric Grand 80 Piano, Electric 88 Piano, Electric 200 Piano, and Bass Slapper. The bundle offers a variety of virtual instruments, effects and mixing tools, with five synth, piano and bass instruments, and plug-ins for automatic kick/bass sidechaining, vocal de-essing and drum shaping.



Propellerhead Reason Quad Note Generator Rack Extension

The Quad Note Generator Player Rack Extension for Reason helps create bass lines, leads lines or other musical phrases to fit music based on scale and preferences for rhythm and variation. The plug-in can be used as a starting point for songwriting, or to rework a track in progress. If desired, users can record the Quad Note Generator performance into Reason's main sequencer for final editing. With the freeze function, users can also create phrases that are part repetitive and part improvisational in nature. Quad Note Generator features four separate note generators that can create musical melodies and patterns. Users can control variations for note and rhythm, and the plug-in comes with a variety of patches to get them started.



There's more information on all the products featured at prosoundnetwork.com/jan2019.

▶ firstlook

Audio-Technica Mic Bundles

Audio-Technica has released four drum mic bundles and a vocal mic bundle for use in both recording and live sound. The PRO-DRUM4 bundle includes a PRO 25ax Hypercardioid Dynamic Microphone for kick, a PRO 63 Cardioid Dynamic Microphone for snare, and two PRO 23 Cardioid Dynamic Microphone for toms, along with two drum mounts and a carrying case. The PRO-DRUM7 bundle includes a PRO 25ax, a PRO 63, three PRO 23s and two AT2021 Cardioid Condenser Microphones for overhead/cymbals, along with three mounts and a carrying case.



ATM-DRUM7 bundle

Stepping up a notch, the Artist-Series drum mic bundles—ATM-DRUM4 and ATM-DRUM7—are aimed toward pros and touring drummers. The ATM-DRUM4 includes one each of ATM250 and ATM650 Hypercardioid Dynamic Microphones for kick/snare, and two ATM450 Cardioid Condenser Microphones for overhead/cymbals, and a carrying case. The ATM-DRUM7 bundle includes an ATM250, an ATM650, three ATM230 Hypercardioid Dynamic Microphones for toms and two ATM450s, along with three drum mounts and a carrying case.

For vocalists, the vocal mic bundle ATM510PK offers three ATM510 Cardioid Dynamic Handheld Microphones.

Alteros Direct-to-Fiber Extension

Alteros now offers a Direct-to-Fiber extension for the Alteros GTX 6.5 GHz Ultra Wide Band digital wireless microphone system. The standard GTX system allows up to 32 GTX32 transceivers to each be connected to a 3U GTX3224 control unit with up to 1,000 feet of Cat 5 cable, creating a L.A.W.N. (local area wireless microphone network) system to communicate bidirectionally with up to 24 GTX24 wireless microphone transmitters—24 microphone channels and 24 talkback channels with an additional eight group channels. With the introduction of this GTX3224F control unit version, 16 rear-panel Cat 5 transceiver ports are replaced with six fiber ports. Fiber connections measured in miles instead of feet can connect the control unit to up to six GTX-FX8 8-port fiber breakout nodes for remote Cat 5 connection to the network and power for up to 48 GTX32 transceivers (up to 16 GTX32s can be connected directly to the GTX3224F by Cat 5 for a total capability of 64). The Alteros GTX system operates in interference-free spectrum using true-digital, UWB pulse signals and MESH and network technology.



BroaMan Updates Route66

The Route66 AutoRouter with Optocore technology, an auto-patchbay solution for theater sound designers, has been updated with support for Yamaha TWINLANe and Avid AVB network cards. The unit has long offered auto-routing and an intelligent fiber patch bay powered by Optocore, making it applicable for installations with multiple connection points and mobile stage boxes, as well as live events and broadcast. Initially compatible with standalone Optocore networks and DiGiCo fiber loops, BroaMan has announced that the same functionality is now available for Yamaha TWINLANe cards, which support single- and multi-mode optical fiber, and Avid AVB network cards, aiding the design of theater sound systems that would use those brands' consoles and Route66. A Route66 AutoRouter creates a redundant star out of ring topology and closes the loop automatically between active devices and mobile stageboxes. There is no longer the need to patch cables manually, as the system is always redundant. The device can be equipped with up to 40 duplex LC sockets, allowing up to 20 different connections from different locations, devices or device groups.



Yorkville Sound EF10, EF12, EF15

Yorkville Sound has added to its Elite family of pro audio loudspeakers with the introduction of three new passive speakers: the EF10, EF12 and EF15. Designed for use in installations and venues, the speakers are passive versions of the EF10P, EF12P and EF15P, which were released in 2017. "A lot of our customers were looking for Elite-level performance in a passive speaker for use with existing power amps," said Jeff Cowling, Yorkville Sound's vice president of sales and marketing.



PWS ECOFLEX 10

Professional Wireless Systems has introduced ECOFLEX 10 low-loss coaxial cable assemblies for wireless audio applications on tour. Manufactured and trademarked by SSB-Electronic in Germany, the cable reportedly yields a foaming rate of more than 70 percent, resulting in low attenuation. The 10.2 mm thick cable offers a stranded, oxygen-free copper center conductor; it also sports double shielding, which is constructed of overlapping copper foil plus an additional tight woven copper braid, reportedly achieving a screening efficiency of > 90 dB @ 1 GHz. The copper foil has an applied PE coating that prevents foil cracking due to short radius bends. The black PVC sheath of ECOFLEX 10 is UV-stabilized.



ECOFLEX 10 is terminated with BNC connectors and sold in standard lengths of 25, 50, 75, 100 and 150 feet. The connectors are reinforced with heavy-duty adhesive-lined shrink tube to enhance durability. TNC and N-Type connectors are available on request. Untermated cable is available in 500- and 1,000-foot spools.

Yamaha YAI-1

Yamaha Unified Communications has released the Yamaha YAI-1 Wireless Microphone Conference Ensemble, a preconfigured USB audio system intended for boardrooms and large conference rooms utilizing UC applications. Designed to be ready to install, the system comprises an eight-channel Executive Elite wireless microphone package; two VXL1-16P Power over Ethernet (PoE), Dante-enabled speaker arrays with wall volume controller; a preconfigured digital signal processor; a five-port PoE switch; and Dante AVIO USB adapter and cabling. Once set up, the Yamaha YAI-1 Conference Ensemble connects to an organization's chosen UC platform through a USB cable. The system features acoustic echo cancellation algorithms and dynamic microphone mixing technology; a pair of 16-element PoE powered line array speakers deliver audio and a wireless microphone system tackles audio capture. The system is available in two microphone options: an eight-gooseneck microphone package for boardrooms, or seven tabletop microphones and one wearable microphone for presentation flexibility in conference rooms.



Lectrosonics Updates Duet Firmware

The v2.0 firmware update for Lectrosonics' Duet digital wireless monitor IEM/IFB system includes new features, reportedly improved audio quality, front-panel setup shortcuts, a volume lock and additional flexibility in setting the audio gain and limiter functions. With the update, users can now do a front-panel IR sync operation and similarly turn the RF transmission on/off without accessing the menus. M2R receiver audio setup now includes an option for negative gain on the limiter screen, allowing adjustment to the maximum gain available. The limiter screen now also features a meter showing the amount of gain reduction acting on the signal. Additionally, there is now also a "threshold off" setting, which allows users to bypass the limiter altogether for a more dynamic audio response. And since many users are employing the Duet system as an IFB solution for broadcast facilities, mono earphones may be used with the receiver.



Bringing the Wall of Sound Back to Life

BY CLIVE YOUNG

PORT CHESTER, NY—When is a jam band not quite a jam band? When it's playing meticulously transcribed, note-for-note re-creations of legendary shows by the most popular jam band ever, the Grateful Dead. That's what New Jersey-based tribute act Dead On Live does on stage regularly for rapturous audiences, but in December, the group took it to the next level by performing at the Capitol Theatre in Port Chester, NY, through a re-creation of the Grateful Dead's legendary Wall of Sound audio system.

Founded in 2010, Dead On Live is the musical brainchild of Marc Muller. No stranger to exacting live performance—he was in Shania Twain's live band for 10 years, working with Mutt Lange, to name just one gig—Muller writes musical notation for entire albums and concerts and then performs them on stage with seasoned pit musicians from the New York scene.

Still, when fellow Deadhead Jason Dermer of Asbury Audio (Asbury Park, NJ) suggested a few years ago



Tribute act Dead On Live teamed with Asbury Audio to replicate the legendary Wall of Sound concert audio system for a show in December.

that they attempt the Wall of Sound, Muller was taken aback.

"I thought he was crazy—but maybe he is—but so am I!" he laughed. "Who else transcribes the Grateful Dead note for note? So two crazy guys got together and put this thing on stage." In fact, while Dead On Live performs regularly, the show marked only the second time the tribute act has staged the Wall, the first time being a Halloween show in 2014.

For a band with as much history surrounding it as the Grateful Dead, the short-lived Wall of Sound still stands out as a unique chapter in the band's mythology—the end result of a collaboration between an audio team that wanted to create a massive, distortion-free sound system and a band that was well-heeled and laissez faire enough to fund the 75-ton experiment.

(continued on page 42)

Surviving My Bloody Valentine

CHICAGO, IL—It's no secret that veteran UK shoegaze act My Bloody Valentine is one of the loudest groups out there, hitting 110 dB nightly and occasionally sailing past 120. "It's sort of a trademark for the band, and definitely part of my job description," said the band's FOH engineer, Philip J. Harvey, also known for his work mixing Lorde. While everyone from the band to the fans knows what they're in for—earplugs get handed out with tickets—the sheer volume nonetheless puts the engineer in danger's way with the potential of doing long-term damage to his own hearing.

"I'm out there every night and definitely at risk," Harvey acceded. "When I started with them, [bandleader] Kevin Shields was very clear on his expectations. Basically, I have to work in a punishingly loud environment, day in and day out. To conserve my hearing, I

had to do something."

While he used custom earplugs for a while, he found they attenuated the high end too much, and he was



FOH engineer Philip J. Harvey works around MBV's demanding levels.

also faced with a loss of transients. This past summer, he moved to Sensaphonics 3D AARO in-ears, which use embedded microphones to enable the user to control the blend of ambi-

ent and direct sound, while providing broadband isolation with custom silicone earpieces.

On tour, Harvey starts his days by setting up the P.A. system, tuning the room, and doing line check. He usually puts in his 3D AARO about halfway through soundcheck, and works without them for the first few songs of the show. During the concert, he connects the 3D to the pre-fader listen monitor send on his Midas XL4 console, which allows him to check individual mix elements just as he would with conventional headphones.

"Obviously, I would prefer to work with my naked ears, so that's how I start, but once things are dialed in, the mics are definitely accurate enough to mix with. With My Bloody Valentine, the 3D is the perfect tool for a difficult job."

Sensaphonics
www.sensaphonics.com

briefs

Festival Freedom

LONDON, UK—UK punk act Frank Carter and the Rattlesnakes has been using a Shure (www.shure.com) Axient Digital wireless microphone to lessen the possibility of dropouts when playing festivals, as the lead singer has developed the habit of going deep into the crowd. A longtime Shure fan, Carter has an SM58 tattooed on his leg.

Mixing the Latin Grammys

LAS VEGAS, NV—Firehouse Productions supplied two DiGiCo (www.digico.biz) SD7 desks for front-of-house music and production, and two SD10 consoles for monitors, along with eight SD-Racks when Univision broadcast the 19th Annual Latin Grammy Awards Show live from the MGM Grand Garden Arena in Las Vegas.

Metal in Mexico City

MEXICO CITY, MEXICO—When Papa Roach and Good Charlotte played the open-air gardens of the Arena Ciudad de Mexico in Mexico City, Loto Audio provided a Funktion-One (www.funktion-one.com) Vero P.A. with hangs of three V60, two V315 and two V90 per side, plus an asymmetric configuration of eight V221 bass enclosures and four V132 sub-bass enclosures. Two F1201 speakers provided front fill.

Allen & Hozier

EUROPE—Hozier continued his world tour this past fall, with FOH engineer Steve Pattison mixing on an Allen & Heath (www.allen-heath.com) dLive system. The setup included a dLive S7000 surface with both Waves and Dante cards for virtual soundcheck and live multitrack recording. Additionally, a dLive DM64 MixRack fitted with a superMADI card was used to feed broadcast multitrack during festival shows.

Shinoda Tour Rolls with DAS

MIAMI, FL—On Linkin Park co-founder Mike Shinoda's current solo tour, monitor engineer Kevin "Tater" McCarthy has been stageside, mixing for in-ear monitors and a selection of DAS (www.dasaudio.com) stage monitors and subwoofers. "For the setup, I use one Event-121A powered subwoofer on each side of the stage to enhance the low end and give the stage some feel and body," McCarthy said. "The Road 12As are used for cue monitors."

Mixing Moby with the L.A. Phil

BY STEVE HARVEY

LOS ANGELES, CA—The L.A. Philharmonic, conducted by Gustavo Dudamel, launched its 100th season at the beginning of October with L.A. Fest, “a genre-spanning exploration of the sounds of the city that has inspired it for the last 100 years,” featuring the work of native and transplanted musical artists. The 11-day program at the Walt Disney Concert Hall included an evening with Moby, performing for the first time with an orchestra as he played some of his hits in a set that concluded with surprise special guest: Los Angeles mayor Eric Garcetti on piano.

The concert hall, part of the four-venue Music Center in downtown Los Angeles, installed a DiGiCo SD5 at front-of-house and an SD10 at the monitor position in early 2015. But as Andrew “Drew” Curtis, Moby’s FOH engineer, explains, he engaged Eighth Day Sound to supply a DiGiCo SD12 from its local facility that he could use for both the show and for rehearsals in advance of the world-premiere event with the L.A. Phil.

“We needed something that could handle a rehearsal for the band prior to the show and then, on the same session, to save programming time, [we had to be able to] drop it in at front-of-house next to the hall’s DiGiCo console without having to pull any seats. I’ve used pretty much every console in the DiGiCo line and I do enjoy the SD12’s ratio of power to size,” says Curtis, whose credits at FOH and monitors during 14 years of touring includes Seal, OK Go, Keshia and others. He also owns and operates Telesonix, an L.A.-based wireless microphone and IEM equipment rental and RF coordination company.

Following a prep day with Eighth Day Sound technician Dean Tarmann, Curtis continues, he headed to the rehearsal room, where the desk did double duty: “I was able to build a session that was functional on the monitor side and the front-of-house side simultaneously. Part of the reason to choose the SD12 was its flexibility and the fader count, which made the monitor part of the rehearsal quite a bit easier.”

He continues, “What draws me to that desk is being able to get an accurate representation of what’s happening; it’s such a neutral platform. I love the dynamic EQ on the desk, and I use the Digitube mic preamp section on the vocals generally, just to create a little bit of interesting harmonic content.”

On the night of the show, Curtis adds, “I took care of all the band

inputs that we rehearsed with prior—roughly 24 inputs, including the drum kit, a bass guitar, a solo cello, Moby’s piano and acoustic guitars, and all of the wireless vocals. There were three lead vocalists who split the duties on their respective songs for that particular set: Mindy Jones, Julie Mintz and Apollo Jane.”

Curtis worked alongside Shawn Murphy, who managed 72 inputs from the L.A. Philharmonic and a gospel choir, the Jason White Singers, on the hall’s SD5. “My approach was to leave as much room for Shawn as possible,” says Curtis, “so I took a conservative approach to the room. Once we had

(continued on page 43)



Andrew Curtis brought a DiGiCo SD12 from Eighth Day Sound to mix Moby’s performance with the L.A. Philharmonic for L.A. Fest.

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Vocalist Tyler Joseph catches some air while clutching his Shure Axient Digital vocal mic.

Touring *Trench* with Twenty One Pilots

BY STEVE HARVEY

LOS ANGELES, CA—Over the past two years, genre-defying duo Twenty One Pilots has become the biggest band in the world by many metrics, winning a Grammy Award, storming the charts, racking up Gold and Platinum records and breaking sales records long held by Green Day, The Beatles and Elvis. After a yearlong touring hiatus spent writing and recording a new album, *Trench*, lead vocalist and multi-instrumentalist Tyler Joseph and drummer Josh Dun are bringing their trademark energy and athleticism back to the stage with The Bandito Tour, which kicked off on October 16 and currently extends through June 30, 2019.

Harnessing the duo's eclectic sound and delivering it to their adoring fans on the initial North American leg of the tour was a 138-loudspeaker Meyer Sound LEO Family system supplied by VER Tour Sound in partnership with Concert Investor. The setup, designed by system tech Kenny Sellars, included 44 LEO and 56 LYON W and M modules in front, side and rear arrays covering 270 degrees, with six 1100-LFC low-frequency control elements flown per side in cardioid arrays. Seven pairs of ground-stacked 1100-LFC subs supplemented the flown rig, while additional MINA, UPM-1P and UPJ-1P boxes provided front, stage thrust and out-fill.

For Sellars, this was just another day at the office, made easier, it appears, by the Meyer Galaxy process-

ing system. "The PC—Phase Correct—settings make blending the different types of speakers effortless," says Sellars, who drives nine of the DSP units from a Galaxy AES, with a second AES version available for festivals, assisted listening and backup feeds.

"We had VER make custom boxes to lift the MINA fills to head height," Sellars reports. "This way they can still roll in and be ready without stacking them every day. The subs stay on their wheels as well, so it's truly plug-and-play."

It's all about the load-out, he says: "We average an hour for all audio gear to hit the truck on a normal day."

The Bandito show is complex, involving an A and a B stage, carefully choreographed stunts and a lift

for Dun and his drums, so automation keeps things running smoothly. There may be just two band members, but the crew is wrangling 78 inputs from stage.

"The whole show is run off SMPTE timecode, which is triggered by playback. However, I do everything manually at the desk," says Shane Bardiau, who signed on as FOH engineer in 2015, after the release of the breakthrough album *Blurryface*, and mixes on a DiGiCo SD5.

"I like to choose when I go to my next snapshot. I'm more of a hands-on mixer, constantly moving faders and changing dynamics per room."

The SD5 offers Bardiau features he can't live without, he says. "The open architecture is a game-changer. The fact that I can put whatever

channel strip/fader wherever I want is nice.

"And I've got a macro for everything—one button to switch between live input or virtual playback; one button to switch from my Waves world to bypassing my inserts and using only the console features as a backup, and to compare plug-ins versus desk channel strip; one button to switch between the various vocal mics that we use on stage."

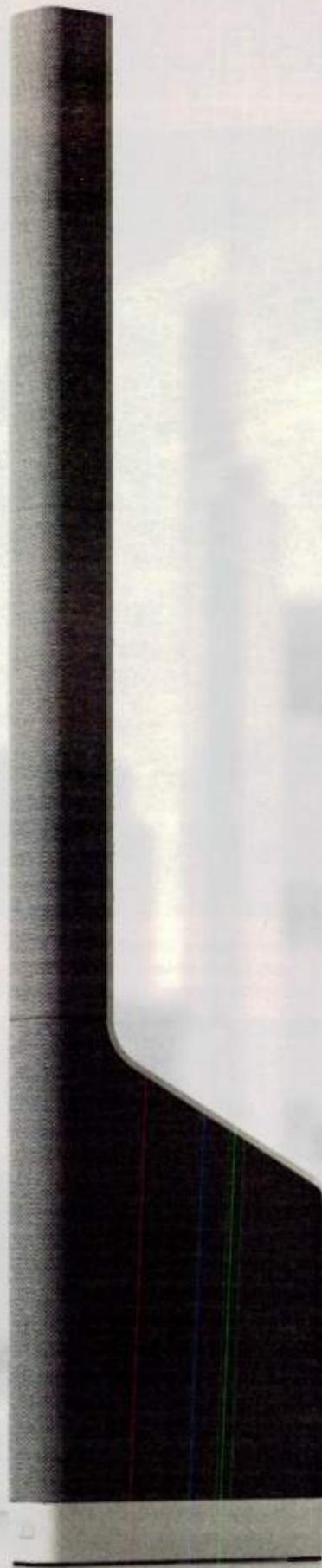
There's even a failsafe macro: "I've got alternate inputs set up in case my main inputs die—one button saves my snapshot and show file."

Bardiau has a Waves SoundGrid Extreme Server, two DiGiGrid MGBs and a network switch integrated with the SD5. Long drives between shows and time constraints due to the production's complexity leave no time for the band to soundcheck. "When we did soundcheck, it wasn't beneficial to me anyway because the room changes so much when filled with people," Bardiau says. Should he need to hear anything during setup, "The DiGiGrid MGBs allow me to track all my inputs at 96k, which enables me to use virtual soundcheck with a MacBook running Waves Tracks Live."

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Twenty One Pilots

(continued from page 38)

Bardiau leans heavily on Waves plug-ins, especially the C3 multi-band compressor. “I use it on a lot of different inputs, but having it on my master bus has been a huge advantage. I’ve got my vocal group side-chained to the middle band around 1 kHz. When my artist sings, he punches a little hole out of the mix for his vocals to sit right on top, no matter how loud the mix is.”

Bardiau has other favorite plug-ins: “I’ve got the SSL Master Bus Compressor on all my buses. Having it crush with quick responses on my parallel drum bus makes my drums have a huge sucking sound, giving them massive life. I’ve listened to a lot of different plug-ins and onboard ‘verbs, and nothing compares to H-Reverb when it comes to in-the-box ‘verbs. And MaxxVolume has done wonders in getting my vocal to pop. The gate is so good for a vocal—sensitive and accurate.”

Lawrence “Filet” Mignogna at monitors generates 12 mixes from his DiGiCo SD10. “I do run snapshots, but it’s only for a few specific level changes,” he says. “Most of the board is ‘safed’ and I run most of the cues manually, as there are several mutes and unmutes within songs. For bigger cues, I have several macros built, which is a great, versatile feature of DiGiCo consoles.” He relies largely on the desk’s internal effects, with an outboard Bricasti M7 for Tyler Joseph’s vocal reverb.

Mignogna runs 12 channels of Shure PSM 1000 IEMs: “Two guys in the band and a spare for each, mixes for backline techs and crew, plus mixes for the opening acts” who join Twenty One Pilots for a couple of songs each night.

Five Meyer Leopard cabinets are deployed across the stage as monitors. “Tyler uses one in-ear for half the show because he really likes hearing the room and feeding off the audience, so the fills aren’t loud but give a bit more presence on deck,” says Mignogna.

A 12-mic talkback setup in tandem with the show comms enables everyone to speak with each other; it’s managed through Mignogna’s console. “With several moving parts—lifts, stunts, automation—there are several spoken cues that are needed and called out at specific times to specific people,” he reports.

The tour is traveling with a Shure microphone package. “The



Keeping the audio moving forward are (l-r): Austin Dudley, RF tech; Colten Mortensen, SL P.A. tech; Kenny Sellars, systems engineer and crew chief; Cliff Skinner, monitor technician; Shane Bardiau, FOH engineer; and Murphy Johnson, senior P.A. tech.



VER Tour Sound is providing a 138-loudspeaker Meyer Sound LEO system for the Bandito tour.

Shure Axient wireless system sounds the best. The quality of audio that comes out of the pack is incredible,” says Bardiau.

On the vocal, ukulele and bass guitar, he says, “I’m taking an AES line out of the Axient unit and going directly into my [DiGiCo] SD-Rack. The clarity is unmatched.”

He adds, “Tyler’s vocal works so well with the KSM9HS capsule. He’s all over the room with the mic and this capsule can handle it. The high output before feedback is a huge plus and helps me, especially when he’s out on the B stage.”

The drums are all miked with Shure models: “There’s a 91A/Beta 52 on kick, Beta 57s on all snare tops and SM57s on the bottoms, 98As on toms, KSM137s for hats and ride, and KSM32s for overheads,” he says.

Tickets were in such demand that a second North American leg has been added to the tour beginning May 1. But first, following December shows in Australia and New Zealand, the Bandito Tour heads to Ukraine and Russia before visiting 18 countries across Europe.

Meyer Sound
www.meyersound.com

DiGiCo
www.digico.biz

Waves Audio
www.waves.com

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A Jersey Boy Hits Chicago

CHICAGO, IL—The musical *Jersey Boys* may be everywhere, but so is its inspiration, Frankie Valli, still touring more than 55 years after he became famous as the lead singer of the Four Seasons. When he recently played Chicago's 3,900-seat Auditorium Theatre, regional audio provider Gand Concert Sound was there to ensure everyone heard every note.

The crew set up Nexo Geo T line arrays and RS18 Ray Subs powered through Yamaha T5n amplifiers. Gand placed a Yamaha PM5D-RH console at front of house for mix engineer Jim "Redford" Sanders.

Tim Swan, general manager, Gand Concert Sound, noted, "This

auditorium in particular is very difficult to design and fly arrays capable of enough upward-tilt to hit the way, way up there gallery balcony seats. Geo T's unique system enables us to get the extreme rake required."

A Yamaha CL5 and 48 channels of Rio stageboxes were used for monitors, with Mike O'Malley mixing,



Gand provided a Nexo Geo T system for Frankie Valli in Chicago.

along with Nexo PS15 stage monitors and an LS18 used as a drum sub. Also on hand, Nexo Alpha eF boxes were used for sidefills, and everything was powered by Nexo NX4x4 amps. Nexo PS8s with a NxAmp 4x1 were used for frontfills.

Gand Concert Sound
www.gandconcertsound.com

Yamaha/Nexo
www.yamahaproaudio.com

Church at Viera Covers Variety

MELBOURNE, FL—Florida's Church at Viera recently outfitted its two venues with a number of Allen & Heath desks, which are tasked in a variety of applications. Church at Viera's dLive includes an S7000 Surface and DM64 MixRack, both located at FOH. Two DX168 Expanders accept sources on stage. Wireless mic receivers, audio from video and Ableton Live tracks connect to the DM64 at FOH. An SQ-6 Digital Mixer serves the church's Youth Center, supplemented by an AR2412 AudioRack. A GLD-112 Digital Mixer mixes streaming broadcasts for the church's website. Dante cards in each mixer implement audio networking throughout the church.

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Nils Lorvick, a Church at Viera volunteer, mixes FOH on a dLive S7000 Surface.

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Wall of Sound

(continued from page 36)

The original Wall of Sound, as envisioned in 1972 by audio engineer Owsley “Bear” Stanley and created with Dan Healy, Mark Raizene, Ron Wickersham, Rick Turner and John Curl, was a physical wall of speakers composed of six separate P.A.s placed on scaffolding behind the Grateful Dead, acting as a simultaneous monitor and house system. Each instrument and vocal had its own dedicated speakers within the wall, which resulted in low intermodulation distortion and inadvertently provided on-stage localization of sound to a performer.

“It was essentially a very early version of line arrays, stacking boxes 30 to 40 feet in the air, all with the same signal in them and getting that coupling,” said Dermer. “The front row, 15 feet in front of it, got sound from three or four boxes, but as the sound went further out, it coupled more, so it didn’t have to be punishingly loud on stage to carry through—they had enough boxes that it could play for miles.”

That sheer number of boxes was ultimately why the original Wall came down for good. The band performed

Marc Muller (left) transcribes historic performances by The Grateful Dead so that they can be played live by his tribute act, Dead On Live.

through a preliminary version in February 1973, and every tweeter blew during the first song. Undeterred, the Dead began touring with the Wall of Sound in March 1974, only to retire it seven months later when Wall-related production costs spiraled out of control. “It was too big not to fail,” quipped Muller.

The new, roughly half-scale version wasn’t a strict copy, as Dermer opted to use modern-day gear and take advantage of the last 45 years’ worth of audio advancements. Each instrument got five small-format L2821 line array boxes from Slovenia-based ADR Audio (Asbury Audio is its U.S. distributor), and the show was mixed on an Avid Venue Profile console. “I have access to a Gamble EX56 and we were going to go all-analog with it, but based on the time constraints and putting it all together, we’re going with the Profile,” said Dermer.

Perhaps the most noticeable technical difference was the show’s vocals. With the original Wall, two condenser mics were used out of phase to capture each singer, with one picking up the voice and the other capturing the stage sound. Summed together, the stage was cancelled out and the

resulting vocals were fed to a massive, horizontally curved center cluster.

“For me and a lot of people, that cluster was one of the original Wall of Sound’s defining features,” said Dermer. “The original design, using the differential mics, didn’t work fantastic then; I’m sure with some technology and time, we could get it to work now, but on a one-off, to design the cluster, the mics and everything else, it’s not worth the time.”

The dramatic curved center cluster still appeared on stage, albeit as a prop, and vocals were instead sent to the installed house line array at stage left and right. As a result, stage wedges and single-ear IEMs provided the band with vocal monitoring, but everything else followed the design principles of the original Wall, said Dermer: “As far as all the instrumentation goes, it works like the original—everything that comes out of the amps goes out to my console, gets processed, routed and sent back to its own P.A., so they hear what the audience hears.”

For Muller and the band, playing through the Wall of Sound was a mind-blowing experience. “It was pretty surreal standing on stage with it in 2014,” Muller recalled. “We didn’t know what to expect. We

thought we were going to get blown off the stage with volume, but it was really wonderfully managed. It filled the room to the furthest seat in the same way that the Grateful Dead were trying to achieve—the same clarity and volume.”

Back at the mixing desk, Dermer was pretty excited as well: “Phil Lesh said the original Wall of Sound was like ‘riding your own sound wave.’ It truly was! The sound was huge. In theaters, you sit around 100 dB, maybe 105 on a loud rock show, but we ran 92 to 95 dB all night. The sound was absolutely enormous, but it had a clarity that I’ve never heard. Everything that people said about the original, that it was the finest sounding P.A.? I feel that we truly did a decent re-creation of that. No IM distortion, no trying to separate the backline from this sound or that sound; everything was truly on its own and it was fantastic.”

Dead On Live
www.deadonlive.com

Asbury Audio
asburyaudio.com

The Capitol Theatre
www.thecapitoltheatre.com

“We didn’t know what to expect. We thought we were going to get blown off the stage with volume, but it was really wonderfully managed. It filled the room to the furthest seat in the same way that the Grateful Dead were trying to achieve—the same clarity and volume.”

Marc Muller

Moby

(continued from page 37)

the orchestra in for the full rehearsal on the day of the show, I was able to have a chat with Shawn and ensure we were on the same page as far as SPL and the venue's expectations."

Murphy is a studio and live sound engineer who is probably best known for his film score mixing work, with more than 350 movie credits and an Academy Award, for 1993's *Jurassic Park*, to his name. Although he says he's relatively new to the SD5, he has had a lot of experience with the SD7 at the Hollywood Bowl and with the Chicago Symphony and Pacific Symphony, as well as the SD10.

Amplifying the orchestra was a deliberate choice, says Murphy. "Given the fact that Moby's vocal, his solo instruments and his band were going to be somewhat amplified, and given the constraints of the concert hall acoustics, they felt that the orchestra needed to be helped—certain sections especially, such as the strings and winds—as invisibly as possible within the context of the amplified group."

He adds, "We modified the [in-house] Meyer Sound reinforcement system a little bit to accomplish that and changed the miking to emphasize that approach. I had them acquire an additional 20 DPA 4099s, which I used on stands," a method he frequently employs. "Assuming the show is not too loud, the sound is very good. The leakage is under control because they are hypercardioids, and they're invisible."

Overall, says Murphy, "I think it came off very well. Sonically, we played it a little bit louder than I thought we would, but no one objected."

At the SD10, monitor engineer Kevin Wapner, the hall's head of audio, fed stereo mixes to the band's Shure PSM 1000 packs. "They were all pretty precise about where they wanted things panned and placed—pretty much the way they were looking at the stage and heard the orchestra," he says.

For the orchestra, "The L.A. Phil percussion players were also on in-ears. And I put out a few hotspot speakers, with one for the conductor," says Wapner.

Curtis miked Moby and the band using a mix of DPA and Shure capsules atop Lectrosonics RF handheld transmitters from the hall's inventory. "I used a DPA d:facto 4018 capsule on Moby's voice, which I've really enjoyed lately," he says. "Two of the female vocalists are super soft-spoken; knowing the gain-before-feedback capabilities of the Shure Beta 58, I opted for that."

Curtis miked the kick drum with

Apart Audio Enters U.S. Market

BERLIN, CT—TMP-Pro, the professional audio distribution division of The Music People, is now stocking Apart Audio products and is seeking independent sales representatives for the brand.

Apart Audio is a player in the small- to medium-installment market, and is a part of the Audioprof Group International, which includes Community Professional Loudspeakers. With products currently used in more than 90 countries, Apart Audio has been installed in noted restaurants, arenas and institutions around the world, including Samjung Animal Park in South Korea, the Medical University of Johannesburg in South Africa, and Fisht Stadium in Sochi, Russia, which was home to soccer games during the 2018 FIFA World Cup.

Founded in 1992 by Tom Ghey-



Apart Audio and Community Professional Loudspeakers are both part of Audioprof Group International.

sens as Audioprof, Apart Audio has long been involved in the pro audio business as a specialized manufacturer of fixed installation audio products. Meanwhile, Audioprof Group International overall is also focused on fixed install sound solutions. The company sells in more than 100 countries worldwide and has its headquarters in Antwerp, Belgium.

"Apart has been a worldwide powerhouse in the small- to medi-

um-installment market for a while now, and we are excited to be able to bring that same quality experience to U.S. installers," said Thomas Tedesco, vice president of sales and business development. "We at TMP-Pro are proud to be the exclusive U.S. distributor of this innovative and price-competitive brand and are excited to bring on independent representatives."

Apart Audio
www.apart-audio.us

a Shure Beta 91A inside and an SM7 outside. "I can get a different and super interesting sound that I can blend, depending on the song," he says. An SM57 covered the snare top, with a Beyer M201 on the bottom.

During rehearsals, Curtis had used a Royer R-122 active ribbon to capture the punch of the toms without grabbing too much cymbal high-end. "We ended up going without toms, but I still liked the darker, natural tone of

the ribbons on the whole kit," he says. A Neve RNDI on the bass and a Radial JDI on Moby's acoustic guitar, plus DPA 4099s on the solo cello and the piano, rounded out the band mic plan.

While the Moby show received a lot of attention from fans of both the artist and the L.A. Phil, it garnered just a quarter of Murphy's attention simply for the fact that it was one of four consecutive events at the hall for him. By the end of the run, he

had mixed the L.A. Phil with singer/songwriter and violinist Andrew Bird the day before Moby and with Herbie Hancock the day after, and then he closed out L.A. Fest with a unique Pan-American event featuring La Santa Cecilia and Cuco.

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ACT / STATISTICS	CREW	EQUIPMENT
1 BRUNO MARS CLAIR GLOBAL	Chris Rabold (be); Ramon Morales (me); Chris Sullivan (cc/se); Scotty Megrath (ae); Paul Tobey (cc/rt tech); Jacob Caples, Matt Gallagher (techs)	HC: DiGiCo SD7 with SD Racks; MC: DiGiCo SD7 with SD Racks; HS: Clair Cohesion CO-12, CP-218; MS: Clair CO-8, CM-22, CP-118; IEM: Shure PSM 1000; HA: Lab.gruppen; MA: Lab.gruppen; HARDWIRED MICS: Shure SM 81, 91a, 52a, Beta 181, SM 58, 57; AKG C-414, 45; Sennheiser MKH 451EB, MD 421, MD 409; Beyers M 88 TG; Audio-Technica; Telefunken M80, M60, TK62 capsule; Radial J48, SW8, EXCT-SA, X-Amp Reamp; Countryman DI; WIRELESS MICS: Sennheiser 9000 with 9235 handhelds; FOH EQUIPMENT: Waves Mercury Bundle, SSL Bundle, Abbey Road Bundle; Bricasti M7; Empirical Labs EL-8 Distressor; Midas XL42; Chandler TG1; TC Electronic 2290; MONITOR EQUIPMENT: Waves SSL 4000, API Bundles
2 TAYLOR SWIFT EIGHTH DAY SOUND	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
3 ED SHEERAN MAJOR TOM	Chris Marsh (he/me/pm); Charlie Albon (s tech); David White (ae); Brian Thorene, Parker Vandeberg, 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
4 JUSTIN TIMBERLAKE CLAIR GLOBAL	Andy Meyer (he); Paul Klimson (me); Phil Kriz, Justin Lenards, Josh Hughes (se); Hugo Gudino Jr., Elliott Wiley (mse); Paul Manuel (ae); Dustin Chrysler, Carlos Lopez-Olavarria, Rachel Rozzi, Nathan Sonnenberg (techs); Kevin Leas (RF tech)	HC: DiGiCo SD7; MC: DiGiCo SD7; HS: Clair Cohesion CO-12, CO-10, CP-6, CP-118, CP-218; HA: Lab.gruppen PLM 20000Q; MA: Lab.gruppen PLM 20000Q; FOH EQUIPMENT: Neve Portico MBP, Neve 5014, Neve R10, Neve 5421, Neve 535, Neve 5043, Wes Audio Dione, Bettermaker 502V, Manley Vari MU, Elysia Xpressor, Apollo 16, Apogee Symphony, Thermionic LRB, Neve 5059, Antelope Orion, Antelope 10M, Antelope Trinity, Optocore X6R, Optocore, DD32, Focusrite 2i2, Neve Shelford Channel, Neve Portico II Channel, Neve 5045, Thermionic Swift, Thermionic Phoenix, Maselec MLA4, Focusrite 6i6; MON EQUIPMENT: Neve Shelford Channel, Neve Portico II Channel API 527, Bricasti M7, Smaart C2, Eventide Eclipse OTHER: Radial JX44, SGI44
5 DRAKE EIGHTH DAY SOUND	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
6 EAGLES CLAIR GLOBAL	Tom Evans (he); Ricky Leon, Charlie Hernandez, Jr. (me); Jared Lawrie (cc/se); Erick Ruiz (rf/stage e); Jen Smola, Matt Patterson, Dustin Andersen (techs)	HC: SSL Live L500; MC: DiGiCo SD5; Avid S6L; HS: Clair Cohesion CO-12, CO-8, CP-6, CP-218 subs; MS: Clair Cohesion CM-22; Clair 12am, ML-18; IEM: Shure PSM 1000; HA: Lab.gruppen; MA: Lab.gruppen; HARDWIRED MICS: Shure Beta 87, Beta 57a, Beta 91a, SM58, SM58s, SM81, Beta 56, Beta 58a, SM48; Audix D6, SCX25a; AKG 451; Audio-Technica AT4050; Telefunken M80, M80SH, M81, M81SH; Sennheiser e904, e906, MD409, MD421; DPA FA4018V, 2011C; Radial JDI, J48, SW8, DM1, JX44 switcher, Tonebone Headbone VT amp switcher, North Star overdrive, AC Driver acoustic preamp; WIRELESS MICS: Shure Axient; FOH EQUIPMENT: Bricasti M7; Waves Live; MONITOR EQUIPMENT: Neve 5035
7 PEARL JAM RAT SOUND	Greg Nelson (be); Karrie Keyes (me); Bjarne Hemmingsen (cc); Andrew Gilchrist (FOH/sys tech); Peter Baigent, Tom Carisco, Alex Boytsov (m techs); Jim Lockyer, Kyle Rogan, Taka Nakai, Mike Gazdziak (sys techs); Liz Burns (pm); Mark Smith (tm)	HC: DiGiCo SD5; MC: DiGiCo SD5; HS: L-Acoustics K1, K2, Arcs II, Kara, 108P, SB28, K1-SB; MS: EAW MicroWedge 12 II, MicroSub 15; Rat S wedges, Rat Trap side fills; HA: L-Acoustics LA-Rak; MA: Lab.gruppen; HARDWIRED MICS: Audix OM7; AKG 414, 460; Audio-Technica AT4050; Beyers Opus 87; DPA 4061; Heil PR40; Neumann BCM705; Sennheiser 421, e609; Shure Beta 52, Beta 56, Beta 57, Beta 91, SM57, SM58S, VP88; Radial J48; WIRELESS MICS: Shure SM58 capsule on UR2 handheld transmitter, UR4D wireless receiver, UA870WB antenna; FOH EQUIPMENT: Lake LM44; UA Live Rack; Brainworx Plug-Ins; MONITOR EQUIPMENT: Lexicon PCM 603
8 PHIL COLLINS 3G PRODUCTIONS	Michel Colln (he); Alain Schneebell (me); Neil Rosenstock (cc); Ben Phillips (se); Jim Brightenfield (m tech); Josh Driscoll (rf); Bill Blackstone, James Wizner (pa techs)	HC: Avid S6L-32D; MC: Avid S6L-32D; HS: L-Acoustics K1, K2, K15B, KS28, KARA, SB18, ARC-II, X8; MS: L-Acoustics; IEM: Shure PSM-1000; JH Audio; Future Sonics; Westone; HA: L-Acoustics LA8, LA12; MA: L-Acoustics; HARDWIRED MICS: Shure SM57, KM184, KSM8, Beta52, SM9; AKG C414; Sennheiser ME 64; Klark-Teknik DI; FOH EQUIPMENT: TC Electronic System 6000; Stock, Sony Oxford Plug-Ins; Waves server; MONITOR EQUIPMENT: Stock, Sony Oxford Plug-Ins; OTHER: Radial SW8, ProDB, JR2 foot switch, Tonebone Hot British, Tonebone North Star, Tonebone Direct Drive, J48, JDI
9 FOO FIGHTERS BRITANNIA ROW	Bryan Worthen (be); Ian Beveridge (me); Dan Ungaretti (cc/m tech); Gavin Murray (m tech); Adam Smith (se); Richard Trow, Alessandro Cestaro, Craig Ross, Michael Shear (techs)	HC: Yamaha PM10; MC: Yamaha PM10; HS: L-Acoustic K1, K2, K15B, KS28, KARA, ARC; MS: d&b audiotechnik M2; IEM: Sennheiser; HA: L-Acoustic LA12X; MA: d&b audiotechnik D80; HARDWIRED MICS: Sennheiser; OTHER: Radial J48, JDI, Headbone, X Amp
10 BILLY JOEL CLAIR GLOBAL	Brian Ruggles (he); Josh Welbel (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

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

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

PMC Speakers has named audio veteran **Tim Ireland** its new chief executive officer. With the appointment, co-founder **Peter Thomas** moves from his role as managing director to company chairman. Ireland will take on overseeing day-to-day operations of the company, aiming to expand



Peter Thomas and Tim Ireland

its product portfolio, UK distribution business and global distribution network. Additionally, he will be in charge of the manufacturing and operations departments, sales and marketing, personnel and finance functions, plus the company's U.S. office in California. Ireland previously spent seven years as CEO of Meridian Audio and was head of product development at Bowers & Wilkins.

Thomas will concentrate on supporting the board as chairman, as the company looks to expand its manufacturing facilities. In that capacity, he will continue to work with his son, Oliver Thomas, who heads up research and development.



Ben Millson

Adamson Systems Engineering has established a new office in Chiang Mai, Thailand, and has appointed **Ben Millson** as managing director for the APAC region to oversee the new office and its operations throughout the relevant territories.

In his new role, Millson will oversee sales and distribution operations across the APAC region, collaborating with Adamson's current staff, partners and distributors. Originally from the UK, Millson began his pro audio career more than 15 years ago with Adam Hall. Since then he has taken key appointments with brands including AVSL Group, Studiomasster, Cadac and, most recently, d&b audiotechnik, where he spent nearly five years as regional sales manager and technical sales specialist for the Asia-Pacific region.

Eastern Acoustic Works has promoted **Jim Newhouse** to vice president of global sales. Newhouse has served the company as North American sales director since 2015. Before joining EAW, he worked as a regional



Jim Newhouse



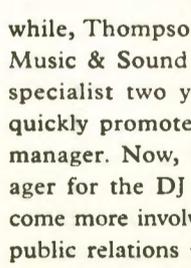
Jim Meyer



Jaime Thompson



Kris McDougall



George Puttock



Frank Oglethorpe

sales manager at Bose Corp. and owned and operated AV systems integration firm Clear Signal. As EAW North American sales director, Newhouse established a direct sales team, increased installation market revenue, and initiated a successful dealer incentive program.

American Music & Sound has hired **Jim Meyer** as Upper Midwest regional sales manager for the Music Creation Division, promoted **Jaime Thompson** to marketing manager of the DJ Division, and expanded national sales manager **Kris McDougall's** responsibilities, adding Re-loop, Xone and Hercules.

Meyer joins American Music & Sound with a degree in audio engineering, a strong record in customer service and more than 13 years of sales and management experience. Meanwhile, Thompson joined American Music & Sound as the DJ product specialist two years ago, and was quickly promoted to national sales manager. Now, as marketing manager for the DJ Division, he'll become more involved in the artist and public relations side of AM&S's DJ brands. Elsewhere in the company, McDougall has added Re-loop, Xone and Hercules to his sales repertoire, which join the Lewitt and Fostex brands that he has managed for the company since 2015.

Frank Oglethorpe has set up One F Sound to distribute the MASELEC line of mastering products in North America. Oglethorpe was formerly with Prism Media

Products, which previously distributed the MASELEC line. Oglethorpe started out as a technical engineer at Air Studios London, going on to become technical manager at the legendary Air Studios Montserrat, which, during his tenure, hosted Sting, Dire Straits, The Beatles courtesy of Geoff Emerick, Rush, Arrow and more. After a two-year stint in theater with Martin Levan Sound Design, he went to FX Rentals, where he was technical director for 10 years.



James McManus

James McManus, a 12-year employee of MSE Audio, to the role of international sales director. McManus joined MSE in 2006 as a residential sales manager, becoming commercial sales director in 2017, a position he most currently held. In 2017, he also became consultant account director, where he actively manages the interaction between consultants within the industry and MSE Audio's internal commercial audio division. McManus has an extensive background in professional audio, having toured nationally as a sound engineer in the 1990s. Prior to his role at MSE Audio, McManus managed a \$2.5 million sound and lighting system in a 10,000-member church in Kansas City, MO.



George Puttock

all major high-end professional loudspeaker systems on the market and brings with him an understanding of audio applications built on the experience of countless tours. For the last six years, Puttock has undertaken extensive and varied duties on the road with artists including Ellie Goulding, Placebo, The Script and Enter Shikari, as well as numerous classical symphonic concerts. During that period of his career, he developed a familiarity with not only the technical aspects of CODA systems but also with CODA Audio as a company.



Rob Atkins

Middle Atlantic Products has brought on **Rob Atkins** as regional brand sales manager, Southeast. In this position, Atkins will work closely with sales teams and product management to foster relationships with local integrators and consultants by providing brand expertise relative to the Middle Atlantic portfolio of solutions, including racks, technical furniture and power. The move comes as part of an overall investment by parent company Legrand | AV to expand its teams in each region across the United States. Atkins has more than 20 years of AV experience, including six with Middle Atlantic. He has held sales and development management positions with several AV companies, and also served as regional sales manager for Middle Atlantic, laying the foundation for his understanding of the company's product offerings.

Rupert Neve Designs has hired **Tim Hurrell** and his company, Sound Communications, to act as European sales manager for Rupert Neve Designs. Josh Thomas, general manager and co-founder of Rupert Neve Designs, noted, "We are immensely lucky and proud to bring on Tim Hurrell as our European sales manager. As the company continues to grow, we needed to find someone to support us further in the European markets, and Tim's extensive experience makes him the ideal partner." Hurrell has spent his career in the pro audio industry as a reseller, running Avid's pro audio business and co-founding a professional audio-specific marketplace along the way.



Katrin Gravier

Katrin Gravier, who recently joined ultra-low-power optical link technology specialist Silicon Line as head of finance and administration, has been promoted to the post of chief financial officer. In the new role, Gravier will be responsible for all finance-related activities, including budget planning, monthly financial reporting and in-house accounting, and will support the company in future fundraising efforts. Prior to joining Silicon Line in February 2018, Gravier spent three and a half years at Nokia Networks in Munich.

From Particle Physics to the 'Hyperreal'

CHRISTIAN HEIL, FOUNDER,
L-ACOUSTICS

BY DANIEL GUMBLE

A student of particle physics in the early 1980s, the young Christian Heil could scarcely have predicted the life in audio he would go on to have in the ensuing four decades. A chance meeting with a sound technician proved pivotal in spinning Heil's world from its axis.

"I remember meeting this engineer at a party and I had no idea what that even was," Heil recalled. "This person became a friend and he was my connector to this world, which was much more exciting than the physics of elementary particles, and I decided to shift my career. I started building speakers in my garage or in my room. I had no idea what was needed. I made a few mistakes, but progressively, being exposed to the realities of this industry, I understood that I had to change [my approach] completely."

In September of 1984, three years after completing his Ph.D. and following much experimenting with various speaker and cab designs, Heil deviated permanently from the path mapped out by his studies to launch a two-person, brown-box building operation called L-Acoustics.

"I decided not to go into the nuclear physics domain," he said, "and when I finally came up with some ideas that were interesting, I founded L-Acoustics. It was just me and my wife, a very small enterprise. At that time, companies making loudspeaker systems were not as big as today. They were small, artisanal companies, with maybe 30 people at most. It was around 10 years before we got to 10 people and received national exposure. We had a small range. Some companies started to trust what we were doing, and we started expanding our network of customers."

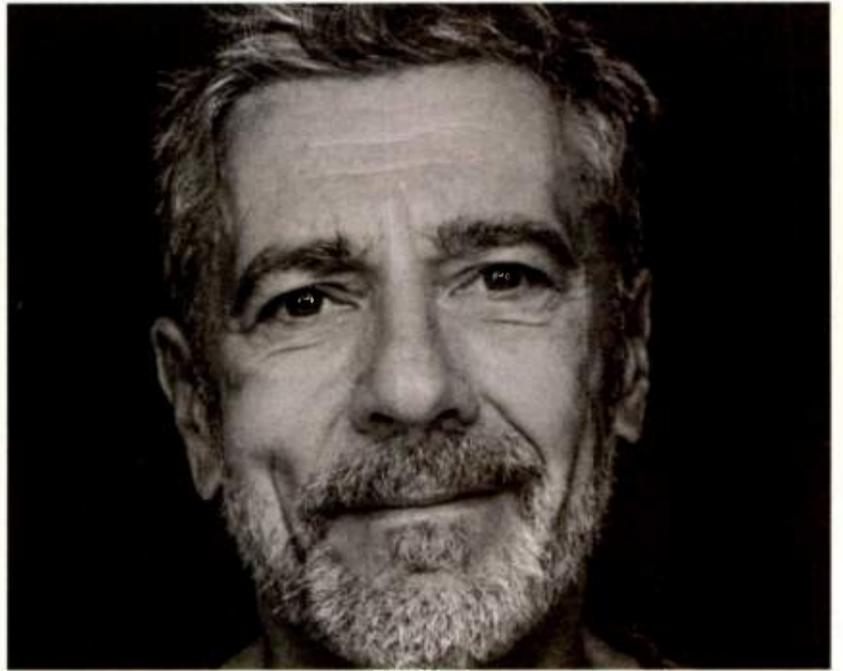
Despite Heil's decision to leave behind a career in science, it was his extensive background in the subject that helped inform his biggest audio breakthrough. His reputation as the forefather of line array technology was certainly not something he came by overnight, but over months and years of applying the rules and principles of optics and wave propagation to sound reproduction. Through "science and observation," he cultivated a new style that remains an industry standard.

"In the '80s, people were using two concepts," he explained. "One

was using stacks of bass bins, mid cabinets and high-frequency cabs separated—the assembly of that was quite artistic but not very effective. I understood that this was an attempt to combine the lows, the mids and the highs together. And there was another approach, which was cabinets that would include all these sections. When I was trying to [combine separate cabs] with my own products, I could not get the results of coupling I was expecting. Coupling in the low-end was easy but uncontrolled; the mids were controlled in such a way that it was fine up to a certain frequency, but above that, it created a chaotic field. In other sciences, like laser and light, the knowledge was that to combine sources of light together was more efficient, so I took that approach. Basically, what we created was a laser, but it had to be implemented mechanically. We had to understand the rules of combination between frequencies, how to modify the wavefront of conventional drivers. But that was obvious. What was not obvious was how to bring that to the market and how to convince the market."

Arguably, the task of bringing the V-DOSC line array system to market was even more of a challenge than conceiving it in the first place. The process of prying people away from tried and tested practices and pushing them toward new, uncharted territory can be arduous, as it was for Heil and his burgeoning loudspeaker brand.

"It took seven years before V-DOSC, before WST technology was recognized as a standard," he noted. "When we started, our job was to buy speakers from the market, put them in a box and sell the box. Later, we began to integrate these loudspeakers with other technologies, like mechanical rigging. You have to understand that, at the beginning, no speaker manufacturer was designing mechanical rigging; it was subcontracted to specialized companies. But we were not doing that; designing a V-DOSC, I had no other choice than to design a



dedicated system for it."

Could he have predicted the huge success he and the business would go on to have with the format? Not a chance, he said: "I thought we had brought one idea to the market, but I was convinced that other manufacturers or designers would come with other ideas or concepts. Apparently, the line source array concept has convinced many, many people—there is still some resistance in some areas—but as a general concept for the pro audio industry, it is interesting to see that it has convinced so many."

While the concept of immersive or object-based sound has been around for several years, advances over the past 18 months have raised its profile higher than ever before. For Heil, the possibilities offered by L-ISA Immersive Hyperreal Sound technology and its "hyperreal" capabilities are endless.

"The concept of L-ISA and other alternative technologies is to bring the speakers back to the center, where they should always have been, and if you have the option to use these speakers across the stage, that means you can bring signals to these arrays that will replicate what is happening on stage, so you are opening a new world of creativity to the engineers, the artists, to production, but the first thing is to accept this concept of having speakers across the stage. That will be the most challenging thing for the next generation."

However, Heil does accept that in the beginning, L-ISA will not be applicable to the vast majority of rock and pop shows, claiming that the technology's additional complexity will take time to be widely accepted.

"There are more challenges because the sound interacts with the lighting and the video, so it will only

happen when it makes sense for the artists, when the sound and music are most important," he explained. "I believe [hyperreal sound] is the future for maybe 5 or 10 percent of productions, but 90 percent will remain classic left and right because the sound is not considered as important. That is the next challenge. Convincing the 90 percent could take another 15 years."

Heil is also quick to highlight the distinction between immersive and hyperreal sound: "What is important is how you reproduce what the performers on stage are doing. You have to be able to connect the sound to the performers, to create some kind of intimacy. This is nothing like 'immersive.' We call that 'hyperreal sound' because we want the sound to be true. [Immersion] is the cherry on the cake."

Despite his work on the development of L-ISA, Heil is still heavily involved in refining all of L-Acoustics' product range. "As in the car industry, you are not making a revolution each time you create a new model," he said. "You have new models of cars every two years bringing some improvements—we do the same. Our products have to last at least a decade so as not to generate too much reinvestment for rental companies. We are improving in terms of weight, practicality, rigging, control. The new thing is array processing, improving the results of a system over an entire audience. All manufacturers are paying attention to that, so that is a form of evolution. The challenge is always coming from competition. This is where competition is interesting—it is the Darwinian effect of our industry."

L-Acoustics
www.l-acoustics.com

The Aha Moment: Selection to Become a Destination

Apple's iPhone is one of the most successful products ever, but is it better than other smartphones? Not really. In fact, several alternatives offer better cameras or more memory, or are more affordable. So what sets it apart? In the beginning, it was the apps. Yes, with a selection of more than 200,000 apps to choose from, Apple created a winning formula that put it first in the game.

Years ago, while visiting Chris Tso at Musician's Friend (he's now with Full Compass), I learned that MF plays the "long tail." I had no idea what that was, but Chris suggested that I find the book and read it. Chris Anderson's *The Long Tail* looks at product selection and velocity, whereby products that typically have high velocity—as in sales volumes, such as the iPhone—tend to have very low margins, while slow-moving items tend to be much more profitable. (In other words, according to the book's subtitle, "the future of business is selling less of more.") By offering a diverse array of products or services, you can, in essence, retain your customer.

This is what Apple did with the iPhone and what Amazon, Google and others do every day: offer a huge selection that makes it easy for

the consumer to buy from a single source. Customers buy into the ecosystem and then find it's easier to stay there than leave.

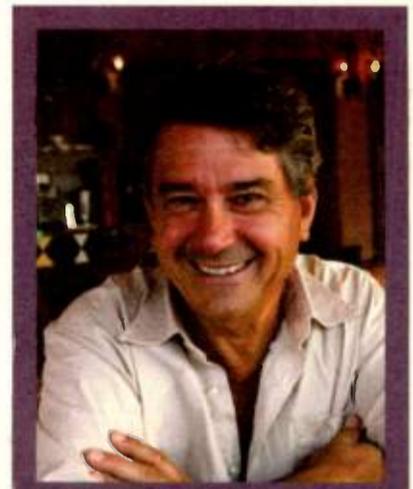
Retail giants such as Costco do this without actually touching the product; they simply list it on their website. The consumer trusts Costco's high-quality reputation and advantageous return policies, and orders with wild abandon. The manufacturer sends the product to an authorized warehouse, the product is shipped, and Costco makes 30 percent by simply managing the purchase order. If a problem occurs with the product, the manufacturer is left to clean up the mess. Amazing. And how about the membership fee that Costco charges? They get consumers to pay for the inventory before they even own it! Absolutely brilliant!

Companies like Audio-Technica, Shure and Sennheiser do the same. In the beginning, there was only one kind of microphone. It was used to record concerts, as a broadcast mic, on a podium or stage, and for radio interviews. Over the years various "specialty" microphones were developed to meet specific needs; omnidirectional lavaliers, supercardioid shotguns, ultra-rugged dynamics and cellphone mics are just a smat-

tering of the variations now available.

The Aha Moment: Create a catalog with a wide selection of product offerings. At Radial, we came up with every iteration of a direct box or switcher that we could think of. If someone wanted to switch between two instruments using the same DI, we had the answer. By the time I exited the company, there were over 100 different SKUs (stock keeping units) providing solutions for acoustic guitars, USB-equipped laptops, high-output keyboards and even Bluetooth connectivity. I recall meeting with Sweetwater president Chuck Surack when he was considering taking on our line. He asked, Why so many boxes? I told Chuck that it was the selection that made it all work. We could say yes to any situation, and for Sweetwater, they could get all of their interconnect solutions from a single company. Chuck took a chance on us that paid off: In 2016, Radial was one of the only companies whose sales to Sweetwater outpaced their meteoritic growth.

Put it this way: With the advent of the internet, if you are looking to buy a purple microphone with a gold pop-filter, you can find it. It may be in the Czech Republic or Shenzhen, China, but it is out there. It is only a matter of searching for it. By pre-



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

senting a wide array of solutions to your customers, you have a better chance of keeping them. I recall hearing that Solotech was once able to lure a Justin Timberlake tour away from a competing sound company because it offered not only audio but also staging, video and lights. This all-in-one solution made it easier for the tour manager because there was only one company to deal with. The same applies in the AV contracting world: If you speak with large-scale integrators, they are no longer selling a list of products; they are selling solutions that include service, upgrades and well-being.

Podcasting

(continued from page 1)

ranging from solo efforts that use the Scarlett 2i2 to in-studio productions that use gear from the top end of the Clarett USB line.

Part of podcasting's appeal to content creators is its relatively low barrier to entry, but that also means that many who enter the field don't come to it with an audio background. "While there are certainly audio experts in the field of podcasting, the majority of users are looking for a way to share their hobby, talents, advice and their story with a broader audience," said Robb Blumenreder, manager of audio for video at Sennheiser. "Most people don't have a high level of audio experience, so finding creative ways to bridge that knowledge gap is an important step toward getting them started." Accordingly, Sennheiser has been bringing products like its MK 4 digital, HandMic digital, ClipMic digital and

AMBEO Smart Headset to podcasters' attention.

While podcasts often focus on storytelling, listening to new podcasts over time can inadvertently reveal another story: that of how their creators learn more about audio. Derek Badala, Synthax's director of sales for the Americas, gave an example, noting, "The podcast community struggles with a mix-minus setup when interviewing folks via Skype. If you see the videos and links online, there are all kinds of crazy solutions offered, usually with adapters, Y cables and just bad audio practices." With those scenarios in mind, Synthax's RME brand points to its Babyface Pro interface as a solution.

Still, parsing the pro audio world can be intimidating to new podcasters. Manufacturers including Audio-Technica have been reaching out to them through user events at SXSW and PAX gaming culture festivals. Audio-Technica's Gary Boss, marketing director, professional markets, noted, "We knew early on that many

Audio-Technica mics were being selected as popular options for podcasting.... While professional podcasters will use very high-end studio products, the majority of users are not as tech savvy as studio engineers. The more we can help them select the appropriate mic, the better." A-T now has four turnkey podcast/streamer packs with a mic, headphone and boom arm; the packs feature AT2035, AT2020, AT2020USB+ and AT2005USB microphones.

For many podcasters, the ability to record on a mobile device is a key factor, not only for portability but also for the simple fact that they already own a smartphone or tablet that can be tasked for production. Soren Pedersen, senior product specialist at Shure, said, "We noticed that more content creators are using their mobile devices to capture content on-the-go, [and] the need for digital microphones that allow them to capture professional sounding audio—anytime, anywhere—is also increasing." As a result, Shure introduced the MOTIV line, which is

aimed at emerging content creators, including in the fields of podcasting and YouTube video creation. "MOTIV was a chance to provide a solution for quicker, more agile content needs on devices like mobile phones and laptops," said Pedersen.

Whether by introducing new lines of gear or demonstrating how long-time industry-standard equipment can be applied to podcasting, pro audio manufacturers are finding that the new content format ultimately sits comfortably in their wheelhouse. As Eric Larsen, director of Marketing at Tascam—which has seen podcasters turn to its DR-40 and DR-10X digital recorders—put it, "From a market perspective, we see no fundamental difference between podcasters and the recording musicians we have traditionally supported. In both cases, you are dealing with artists who are looking to communicate thoughts and emotion. The only real difference is that one primarily speaks, while the other plays and sings, but in the end, the technical needs are quite similar."

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Trekking Through Christmas

BY JACQUES SONYIEUX

William Shatner is a cultural icon whose influence spans generations. Many think of him as Captain Kirk on *Star Trek*, inspiring intergalactic curiosity, but aside from his decades-long acting career, he is a competitive horse rider, a published author, a famous pitch man for a hotel booking site and a recording artist with no fewer than eight albums under his belt.

Now, at the age of 87, Shatner brings us *Shatner Claus*, a new Christmas album featuring several Christmas songs, “reimagined.” Shatner made the album with artist contributions from Brad Paisley, Todd Rundgren, Henry Rollins, Iggy Pop, Judy Collins, Mel Collins (King Crimson), Elliot Easton (The Cars), Billy Gibbons (ZZ Top), Rick Wakeman (Yes), Artimus Pyle (Lynyrd Skynyrd) and more. *Pro Sound News* wanted to find out what the attraction was and why another Christmas album.

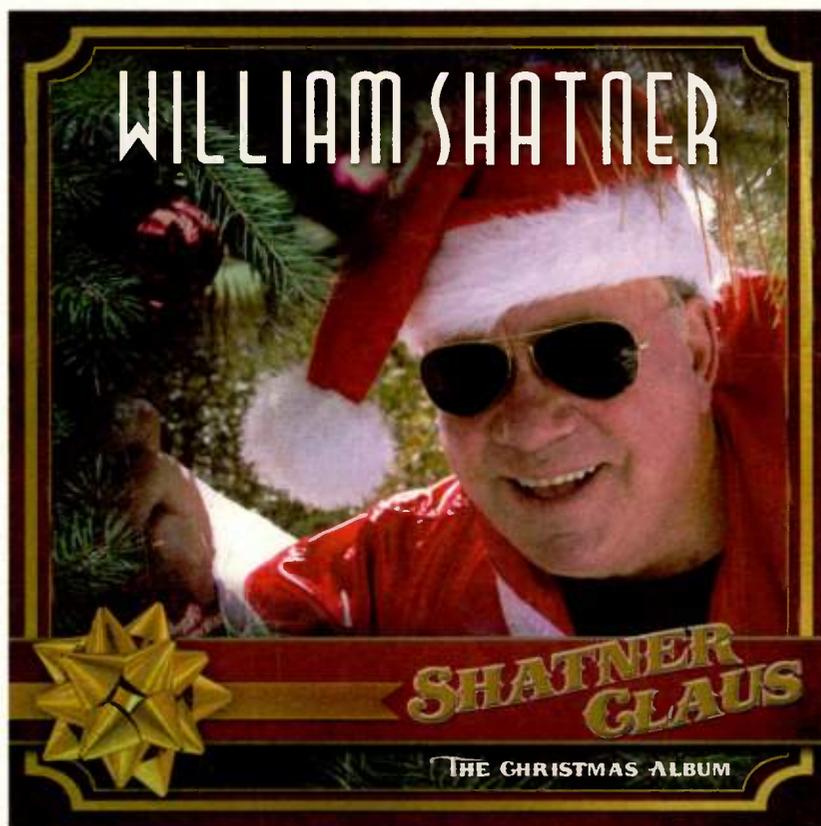
ON VISUALIZING SONGS

Out the blue, my label, Cleopatra, called me and asked if I would be interested in doing a Christmas album. I thought, “What a great challenge that could be considering my musical limitations.” So I said yes and began to compile a list of the standard Christmas songs, knowing that I would want to bend them a little to make them uniquely mine. For each song, I envisioned myself as a film director and imagined what I would do to make each track a little different.

For example, on “Jingle Bells,” I pictured two guys on a horse-drawn sled being pulled by horses who are filled with the joy of being in the snow and in the cold. But then the horses start to run off. On “Blue Christmas,” I imagined that I was stuck in a club due to a blizzard outside. I’m drinking at the bar and I’m blue because I can’t get home. Then all of a sudden there’s Brad Paisley and he starts to sing. And I am like, “Oh my God, Brad Paisley is locked in here, too!” So each of these numbers has its own visual context that the listener may or may not get, but it doesn’t matter. For me, this gives each song a flavor that it would not otherwise have had.

ON A SOLDIER’S CHRISTMAS POEM

There is a poem by Blaze Anthony, a wonderful poet and a veteran who has been emotionally disturbed by battle. I had a sheaf of his poetry that I loved, so I asked him if he could write me a Christmas poem. He ended up writing a poem from the perspective of a soldier, presumably in Afghanistan, who is writing to see what it is



MANFRED BAUMANN

William Shatner's eighth album is the holiday-themed *Shatner Claus*.

like back home. He asks, “Is there a gift for you and one for me?” So I called the poem “One for You and One for Me” and had some music put to it. The arrangers would bring in the music, and I would make adjustments, telling them how I felt about the poem: “There is not enough battle” or “There’s not enough sadness” or “The joy of Christmas.” I wanted all those themes mixed into the music so they would support the poem. Eventually we got there. I think it is an epic Christmas song about a soldier who has written home, asking, “What’s it like at Christmas there, because it’s no fun here.”

ON AUDIENCE REACTION

Having been doing this for many years, you don’t know if a project is successful or not until the audience tells you. It doesn’t matter if it is a written play, if it is a stand-up comic routine, or an ad-lib improvisational performance. The audience will tell you by their applause, by their laughter, by their tears, or by their trying to access whatever you are doing by buying tickets or albums. When I finished the album and I listened to it, I thought, “God, this is really good! I wonder if this is as good as I think it is?” I feel that we have created, along with these other incredibly talented artists, something very special about Christmas. And how many times have people tried to do that?

ON ARTIST PARTICIPATION

Brad Paisley was playing in Los Angeles, and I was visiting with him on

his bus. I said to him, “I want you to do a Christmas song with me, Brad.” And he said, “Great! What’s the title of your album?” I said, “I don’t know—I haven’t named it yet.” And right then and there, he said, “Well, what about *Shatner Claus*?” And we all started laughing. So that’s what I used.

It’s mind-boggling, the artists who came to participate on this album, and the credit goes to my record label for that. I have done other albums where they were instrumental in collecting a diverse and genius pool of talent. It turns out that a lot of these men and women wanted to be on the album, so when it was announced, my label got a lot of phone calls. I am starstruck by all these guys, but I am more starstruck by their talent than their reputations. The technology of today allowed us to ask somebody in Upstate New York to lay down a track and send it to us. Then we would put it together.

ON THE RECENT MARS LANDING

I’ve been following the Mars landing and I’ve got my fingers crossed. It is an incredible adventure into the unknown. We will never solve the mystery of what’s out there, but we can get occasional peeks at the awesomeness of space and the final frontier. The glimpse of what has transpired in the past by our voyage to Mars is merely lifting the corner of a curtain to a vision that is so complex and yet so simple that we humans cannot comprehend it. But we can get a feel for it by this voyage to Mars.

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