

# prosound

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GRID VS. GROOVE  
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KEVIN MAZUR/GETTY IMAGES

**SYMPHONIC HISTRIONICS**—The Who, seen here at Northwell Health at Jones Beach Theater in Wantagh, NY, last year, have brought the rock for more than half a century. They're backed by a symphony on their current Moving On tour, which starts another U.S. leg in April, but some things never change—singer Roger Daltrey still swings that Shure SM58 like a medieval flail and Pete Townshend cranks his d&b audiotechnik M2 wedges just a tad. Find out more on page 38.

## Companies to Watch 2020, Part One

BY CLIVE YOUNG

The holidays are over. NAMM is over. Those new year's resolutions? They're probably over, too. But the rest of the year still stretches out before us, ripe with potential and ready for the taking. That's the compelling attitude of many of the industry leaders we spoke with to com-

pile this year's "Companies to Watch" overview. Many built up momentum in 2019, and the year ahead will provide the opportunity to capitalize on those efforts.

Case in point? d&b audio-technik. "2019 was a milestone year for our Americas subsidiary," said Laurence (Larry)

(continued on page 48)

## Focusrite Acquires Martin Audio

Known for its recording gear brands, Focusrite took a major step into the live sound market in late December with the acquisition of loudspeaker manufacturer Martin Audio. Focusrite paid £39.2 million (\$51.2 million) for the business.



## June Audio Returns to Utah

After 20 years away, June Audio has returned to Provo, UT, with a newly-built, Wes Lachot-designed multiroom facility housing EDM production suites, live rooms and a considerable collection of instruments, backline and accessories.



## NAMM Ushers In New Podcasting Gear

BY STEVE HARVEY

By now, you have likely seen some of the impressive revenue and audience figures

associated with podcasting, a segment of the entertainment business that has truly exploded over the past couple of years. The pro audio

industry has taken notice, introducing a slew of new products and services or re-marketing existing offerings to address the voracious appetite of content creators eager to get in on the action.

Podcasters building high-end facilities—such as Gimlet (now part of Spotify) and Stitcher, whose facilities were both designed by Walters-Storyk Design Group—typically choose to integrate the kind of gear that is commonly found in broadcast or production facilities. Smaller

enterprises or individuals just getting into podcasting will appreciate the availability of tailored, affordably-priced podcasting solutions.

Of course, many microphones, preamps, mixers, interfaces and monitoring solutions are appropriate for podcasting even if they're not specifically marketed as such. Since it's not possible to cover every product here, let's focus principally on the product introductions at the 2020 NAMM Show, where

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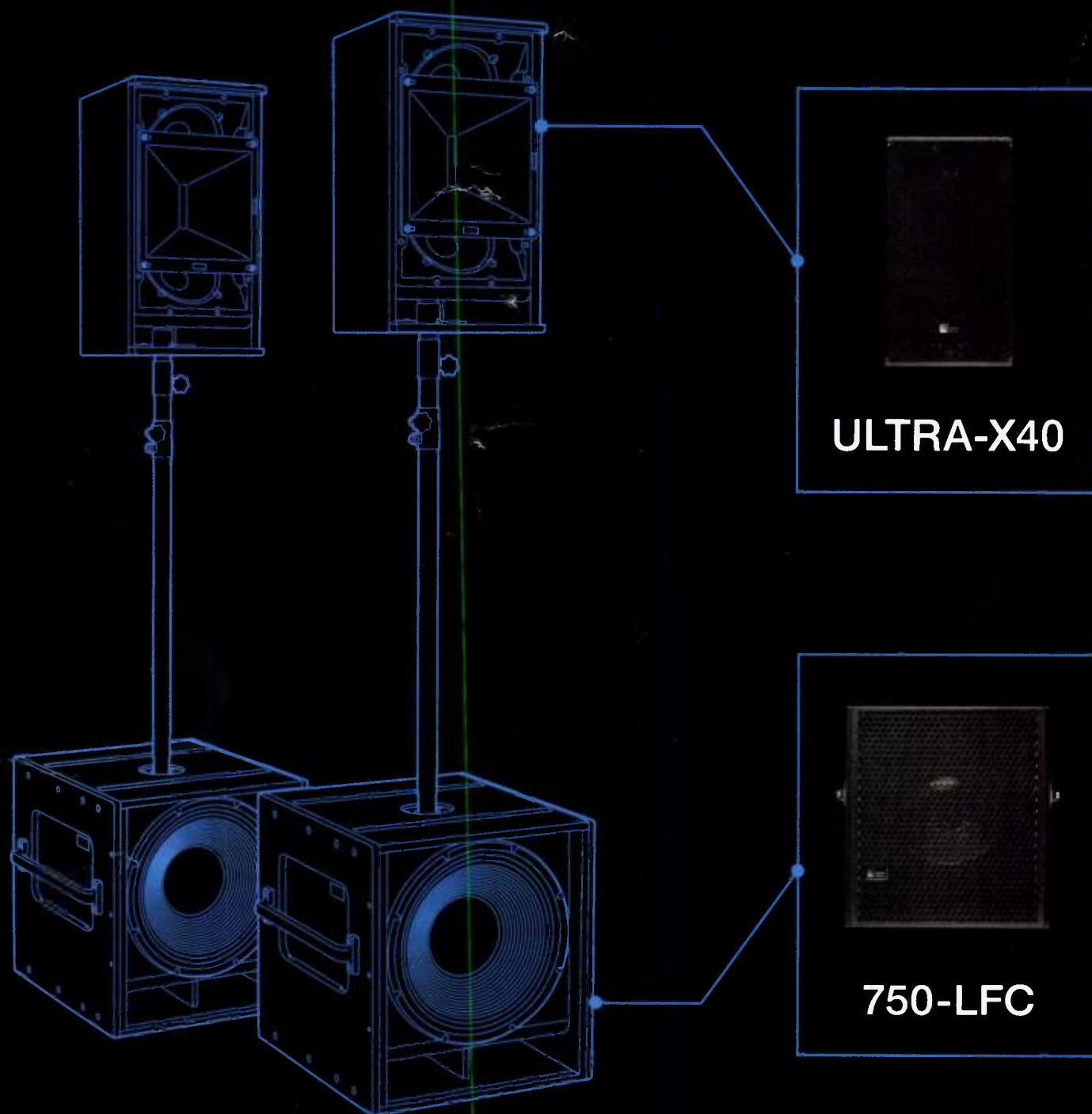
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# Focusrite Acquires Martin Audio in \$51M Deal

BY CLIVE YOUNG

HIGH WYCOMBE, UK—Known for its recording gear brands, Focusrite took a major step into the live sound arena in late December with the acquisition of loudspeaker manufacturer Martin Audio, paying £39.2 million (\$51.2 million) for the business. The move marked Focusrite's second acquisition of 2019, following the purchase of German studio monitor manufac-

turer ADAM Audio for £16.2 million (\$21.1 million) in July last year.

The deal included both Martin Audio and Martin Audio North America; the loudspeaker manufacturer brought with it roughly £4 million in cash (\$5.2 million). The deal was funded via a combination of existing cash resources and a £40 million (\$52.2 million) loan from HSBC and Natwest. Focusrite's brands include Focusrite, Focusrite Pro, Novation, Ampify and ADAM Audio.

The move brought to an end a near 18-month run of Martin Audio going it alone. In July 2018, the company underwent a management-led buyout from then-corporate parent Loud Audio, which also sold off Ampeg and EAW that year. The Martin Audio buyout was backed by UK-based private equity investor LDC, the private equity arm of Lloyds Banking Group, which invested £12 million (\$15.7 million) for "a significant stake" in the company. The new sale to Focusrite marked an exit for LDC.

Martin Audio will continue to operate from its offices and factory under the leadership of managing director Dominic Harter. Both Focusrite and Martin Audio are based in High Wycombe and have a long incidental history as a result. Focusrite founder and chairman Phil Dudderidge noted, "I have known Martin Audio since its beginnings in Covent Garden in 1971. Founder Dave



Focusrite founder and chairman Philip Dudderidge, Martin Audio managing director Dominic Harter, and Focusrite CEO Tim Carroll

Martin and I became close friends in 1989 when I served as an advisor to him and non-executive chairman for a year or so as we prepared the company for sale to Tannoy Goodman International [TGI] in 1990."

While the companies may be closely situated and share similar corporate cultures, all acquisitions ultimately concern the future, and the move allows Focusrite to gain a strong foothold in the live sound market. In August 2019, Martin Audio reported a 22 percent increase in sales in its financial year 2017-18, growing from £16.5 million to £20.1 million (\$20.2 million to \$24.6 million); the company stated it expected a further 20 percent increase throughout 2019. Focusrite has launched more than 60 products over the last four years and has seen

double-digit growth each year.

Tim Carroll, Focusrite CEO, noted, "The acquisition of Martin Audio is a strong demonstration of our strategic aim to expand into new markets. Martin Audio is also an established brand with solid financials that instantly add value. More importantly, though, they're culturally aligned with a clear part to play in our unfolding narrative.... The Martin Audio family share our hunger to innovate and our passion as music and sound enthusiasts. That we're just a stone's throw away will only further help unite us in achieving our common goal."

Focusrite  
www.focusriteplc.com

Martin Audio  
www.martin-audio.com

## briefs

### NAMM News Jam

ANAHEIM, CA—This year's NAMM Show (www.namm.org), which took place in Anaheim in January, was a notable success, with educational offerings provided by AES Academy, and numerous product introductions that may prove to become landmarks. The convention ended just as this issue went to press, however, so only some NAMM news made it into our pages by press time. See our March issue for full coverage and a complete wrap-up.

### AMS Neve Opens U.S. Showroom

LOS ANGELES, CA—AMS Neve (www.ams-neve.com) has opened its first showroom in the United States, partnering with Westlake Pro to create an environment for clients to listen to the entire product portfolio at the retailer's headquarters in North Hollywood, CA. The demo space includes a Neve BCM10/2 Mk2 16-channel console and the Genesys Black G32 console, as well as an array of outboard products.

### Avid's Sibelius Aids Visually Impaired

BURLINGTON, MA—In a joint initiative with Berklee College of Music's Assistive Music Technology (AMT) Lab, Avid (www.avid.com) is developing and improving accessibility features in its music composition and notation software, Sibelius, for visually impaired users. Avid also announced improved support for users with built-in screen readers, giving the visually impaired the same experience as sighted users on Windows using Narrator, NVDA and JAWS, and on Mac using VoiceOver.

## Harman Pro Names Divine President

BY CLIVE YOUNG

NORTHRIDGE, CA—Harman has promoted Brian Divine to the role of president of its Professional Solutions division. Divine will be responsible for overseeing the division's worldwide operations, strategy, product roadmap and performance across all 11 Harman Pro brands: JBL Professional, AKG, Martin, AMX, Soundcraft, Studer, BSS Audio, Crown, dbx Professional, DigiTech and Lexicon. The move came just days after the departure of Mohit Parasher, the division's former president and executive vice president.

Divine has worked in pro audio for the last 18 years, nearly all of them at Harman, with the exception of a three-year tenure at Bosch. In his 15 combined years at Harman Professional, Divine worked in nearly all of the entertainment



Brian Divine, seen here at NAMM, has been named to the role of president, Harman Professional Solutions.

and enterprise vertical markets the division serves, taking on roles in customer service, sales, engineering, marketing and product management. Divine was most recently senior vice president for products and customer

solutions in the Professional Solutions division and vice president of product and program management, respectively.

In a statement, Divine noted, "I am honored to accept this role, and do so with great humility and awareness of the awesome responsibility of carrying forward Harman's iconic brands that were built over the course of, in some cases, nine decades. The pro industry is in my DNA, as my career was built through dedication to Harman Professional Solutions and its employees, channel partners and customers. These influences will directly impact the direction of the division as we look toward a robust roadmap committed to, and aligned with, customer needs for leading-edge pro products in audio, lighting and video control."

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### Pro Podcasting . . . . . 1, 25

The podcast wave seems to only keep rising as more people discover the format, becoming avid listeners and in some cases podcasters themselves. Dozens of pro audio manufacturers debuted podcast gear at the NAMM Show, aiming to lower the barriers to entry while raising the quality of audio. For facilities like Chicago's BAM Studios, however, which recently added a podcast-specific room, the format presents a new revenue opportunity.

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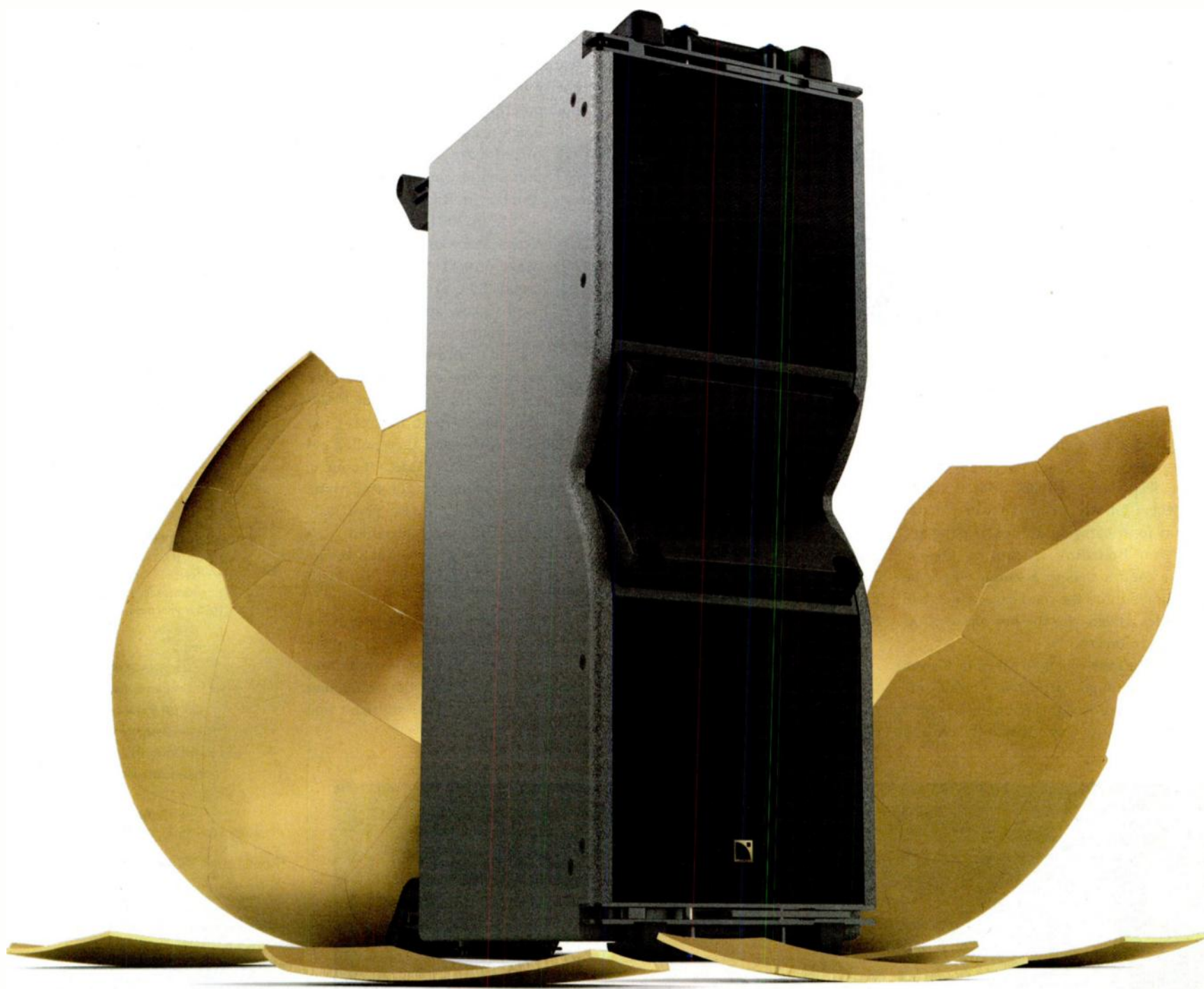
Peter Janis, former CEO of Radial Engineering, recounts how the not-so-good old days at the start of his career taught him perseverance and that money matters.

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Steve Harvey talks with Grammy-nominated band Ranky Tanky about the influence of Gullah culture and the pioneering work of Bessie Jones.



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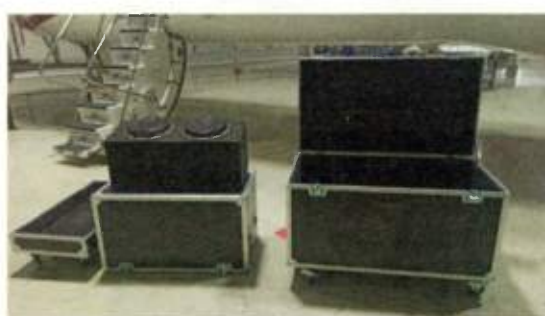
# Don't Smuggle Yourself in a Road Case

While live sound pros love a nice road case, it's a safe bet that beleaguered ex-Nissan president/CEO Carlos Ghosn loves them even more. In late December, the auto industry player, facing extensive charges of financial impropriety in Japan, jumped bail. In a plan straight out of *Mission: Impossible*, he was smuggled out of the country inside a road case that the news media characterized as "a box used to carry concert equipment" (some early reports mistakenly reported a double-bass case was used).

Facing allegations that he had underreported his substantial income for years, embezzled \$5 million from Nissan and more, Ghosn was awaiting trial and was not allowed to leave the country. According to reports, a team of 10 to 15 ex-special forces soldiers devised a plan where Ghosn left his Tokyo residence on foot, carrying a French passport. After boarding a train to Osaka, he took a taxi to a hotel, where he climbed into the road case, which had holes drilled into the bottom to allow him to breathe.

The case was then taken to Kansai International Airport in Osaka, one of 10 airports the team had staked out. Kansai was ultimately chosen

for its private jet terminal, which had low foot traffic, lax security and x-ray machines that could not handle large items. Members of the team, dressed as a concert sound crew, rolled two road cases—one carrying a loudspeaker, the other containing Ghosn—through security. The boxes were never examined, and soon he



The two road cases used to smuggle Carlos Ghosn out of Japan were abandoned in Istanbul.

was loaded on to a Turkish private jet headed to Istanbul. Once the plane had left Japanese airspace, Ghosn exited the case. Upon landing, he and the team drove 100 yards to a second private jet that took them to Beirut, Lebanon, where the CEO has a residence. Lebanon reportedly does not have an extradition treaty with Japan.

Evading the law is serious business, but an unexpected side effect was a tweeted commentary from Yamaha that went viral. Alluding to the incident, the company's post essen-

tially suggested, "Don't try this at home."

"I will not mention the reason, but many tweets have been going around about people entering large instrument cases. It's too late to warn you after an unfortunate accident, so be careful not to do this or let people around you do it."

Quickly, the advice went viral, racking up 86,000 likes and 54,000 retweets.

It's almost surprising that the team got the road cases through security by posing as a concert production crew. It wasn't long ago that such a group would have garnered extra attention from the authorities, as U2 system engineer Jo Ravitch recounted to me in 2001 for a *Pro Sound News* story on touring in the wake of 9/11: "Obviously, rock bands fly everywhere on a one-way ticket, and that's one of the things that sets off the so-called 'random' un-random search. One day, there were 42

of us trying to fly from Philadelphia to Austin, Texas—the whole U2 crew—and they pulled every single one of us aside! Of course, they were trying to get the plane off the gate, and the two poor little screeners, they were terrified: 'Oh my God! We've got so much to do. This is awful.' I said, 'Well, I'm with you there.'"

These days, there are plenty of things you can do to speed up the airport security process—enrolling in TSA Pre and so on—but smuggling yourself in a road case still isn't one of them.

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**CELESTION**



# At CES: Connecting Through HD Music

BY ANTHONY SAVONA

LAS VEGAS, NV—A half-hour before the “C Space Storyteller: Amazon Music” session began, every seat in the room was taken. By the time the panelists walked on stage, the room was packed, with people occupying every available space. While HD music streaming is an important and valued topic, no doubt the main reason for the throng of attendees was that one of panelists was 15-time Grammy Award-winning artist Alicia Keys.

Keys, whose single “Underdog” dropped that day in HD, was joined on stage by collaborator Emily Lazar, founder and chief mastering engineer of The Lodge, and Andre Stapleton, head of label relations—North America, Amazon Music. The session was moderated by Andrew Hampp, consultant/founder of 1803 LLC.

Three months ago, Amazon launched Amazon Music HD, a music streaming plan available as an add-on to Amazon Music Unlimited subscriptions that delivers lossless music in two quality levels—HD (CD quality: bit depth of 16 bits with minimum sample rate of 44.1 kHz) and Ultra HD (24-bit with sample rates ranging from 44.1 kHz to 192 MHz)—as well as 3D (immersive formats such as Dolby Atmos and Sony 360).

“From the inception [of streaming music], there were constraints that made it cost-prohibitive to take the actual recordings from the studio and get them to the listener’s ear:

bandwidth and storage issues,” said Stapleton. “As those constraints have fallen away, we set the table around a new vision of HD where we take the music exactly as it was recorded and deliver it in a lossless way to a mass market. Now we have convenience plus quality.”

The difference between standard streaming music and the HD formats is staggering, says Keys, who thinks it will have a profound effect on listeners. “The experience as a listener, as a fan, is what brings us together,” said Keys. “I am excited about mixing ‘Underdog’ in immersive audio and the highest HD. Music creates a spiritual experience that connects us. What is missing in the world right now is the connection between us, which allows these divisions to come to life. We need that connection.”

Lazar, herself a Grammy winner, was able to explain the difference in listening to HD versus standard. “Music is art,” she began. “Music makes us feel things and make those connections we desperately need. I dare anyone to tell me they would pay to go to a museum and see a photocopy of a photocopy of a photocopy of *Starry Night* and have the same experience as looking at the real painting and how it makes you feel. It is the same visceral experience you get when you listen to music. The idea of listing to a photocopy of a photocopy of a photocopy does not work for me or any of the artists I work with.”



From left: Alicia Keys discussed the emergence of HD music streaming at CES 2020 with Emily Lazar and Andre Stapleton.

And listeners are appreciating the difference. For the past three months, Amazon has been analyzing the data on those who upgraded to Amazon Music HD, and they are listening to music 10 percent more with HD than they had been doing in the standard format. With the large amount of music being streamed, that 10 percent increase is “quite significant,” according to Stapleton.

Amazon says it currently has over 50 million songs in lossless HD qual-

ity and over 2 million songs in Ultra HD quality.

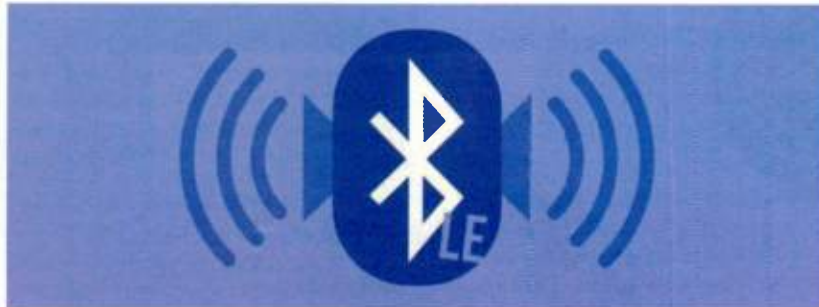
As HD streaming catches on, Keys says she would like to release her catalog in HD. Lazar is ready to help. “All this music over the past decade where we have been delivering in not-the-best quality to the masses? I have been busy mixing them in HD, and as soon as they can stream in high def, we got it. You will be able to experience all the albums you already love in HD.”

## Bluetooth SIG Debuts Bluetooth LE Audio

LAS VEGAS, NV—Bluetooth SIG, the group of companies that sets the Bluetooth standard, introduced Bluetooth LE Audio at the Consumer Electronics Show in Las Vegas in January. LE, which stands for Low Energy, is an improvement of Bluetooth’s current technology, called Classic.

LE offers several new features, including higher-quality audio, the ability to stream audio to multiple pieces of technology, and support for hearing aids. As it is designed to use less power, the new technology will increase products’ battery life.

Bluetooth LE operates on a newer audio signal compared to its Classic counterpart. LE Audio will include a new high-quality, low-power audio codec, the Low Complexity Communications Codec (LC3). Providing high quality even at low data rates,



LC3 will bring tremendous flexibility to developers, allowing them to make better design tradeoffs between key product attributes such as audio quality and power consumption.

“Extensive listening tests have shown that LC3 will provide improvements in audio quality over the SBC codec included with Classic Audio, even at a 50 percent lower bit rate. Developers will be able to lever-

age this power savings to create products that can provide longer battery life or, in cases where current battery life is enough, reduce the form factor by using a smaller battery,” said Manfred Lutzky, head of audio for communications at Fraunhofer IIS.

The new version allows LE Audio to implement new features, including support for multistream audio. That would make it easier for multi-

ple people to listen to the same audio source at once. It could also enable Bluetooth broadcast, in which a venue like a mall or a concert hall could beam music to anyone with a set of headphones.

People with hearing aids will receive improvements because LE Audio will soon support the devices. The new audio “will enable the development of Bluetooth hearing aids that bring all the benefits of Bluetooth audio to the growing number of people with hearing loss,” the company said in a press release.

Your old headphones won’t support the new technology, though. LE Audio can’t be updated through software, and it requires hardware updates that will be released later this year.

Bluetooth SIG  
www.bluetooth.com



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"You'd have to be living in a cave to not know about Sweetwater's legendary monstrous selection of gear. And Sweetwater's well-knowledged staff and wealth of web information make both equipment purchasing and support great experiences."

— Richard Chycki — Engineer — Rush, Aerosmith, Dream Theater, Mick Jagger, Alice Cooper, Seal, Skillet



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## Renkus-Heinz Co-Founder Looks Ahead at 90

FOOTHILL RANCH, CA—Renkus-Heinz co-founder Harro Heinz entered his 10th decade on the planet late last year, turning 90 on Dec. 14. As it

professional audio sooner than we expect. “We will very soon see a speaker that can be installed in a room and immediately configure itself to provide optimal sound,” Heinz said. “The technology to digitally steer sound will soon be considered the standard because of how effectively it can be placed in a space.”

Likewise, he feels that the focus will be increasingly on the audience. “When we look at the industry today, we still see a lot of focus on the performers or the product,” Heinz said. “That’s important, of course, as you have to have great content. But more important is that we look at the audience we serve, understand what they want, and deliver impressive experiences to them. Positioning sound with precision—and putting it on the audience—positions businesses for success.”

While the pro audio business of-

ten operates in a corporate climate these days, Heinz strongly feels that the industry’s continuing maturation can’t come at the expense of innovation. “We see commoditization continue in the audio world,” Heinz said. “What will set successful companies apart—whether they be manufacturers or integrators—will be the level of intelligence they can put behind their products and solutions. The future of AV belongs to those willing to experiment.”

Renkus-Heinz

[www.renkus-heinz.com](http://www.renkus-heinz.com)



Harro Heinz, co-founder of Renkus-Heinz, recently celebrated his 90th birthday.



Parent company RCF Group has named Roni Nevo as CEO of EAW. Nevo (left) is seen here with EAW president T.J. Smith.

## Nevo Named EAW CEO

WHITINSVILLE, MA—EAW has named Roni Nevo as its new CEO. Nevo is the president of RCF USA and will retain that position while carrying out CEO duties for EAW. Italy-based RCF Group is the parent company to both EAW and RCF USA, having acquired EAW in 2018.

In his new role, Nevo, who has worked within the RCF Group for more than 10 years, will work with EAW president T.J. Smith and the existing EAW team to adjust operations and expand its customer base worldwide. Nevo stated, “I am delighted to be given the opportunity to further expand the EAW brand.”

Smith said, “Roni brings a depth of experience and a proven track record to the team that will go a long way in accelerating our growth and bring greater efficiency to our operations. As EAW learns how to operate on its own again, I can think of no better person to lead the board.”

RCF Group CEO Arturo Vicari noted, “Roni Nevo has been a key figure in RCF’s success in North America for many years. He will now carry this experience forward in his new role at EAW.”

EAW

[www.eaw.com](http://www.eaw.com)

## MPSE Announces Golden Reel Winners

HOLLYWOOD, CA—The Motion Picture Sound Editors presented the 67th MPSE Annual Golden Reel Awards on Jan. 19, recognizing outstanding achievement in sound editing in 23 categories.

Academy Award-nominated producer Amy Pascal presented the 2020 MPSE Filmmaker Award to Marvel Studios executive vice president of production Victoria Alonso (with re-recording mixer Kevin O’Connell and supervising sound editor Steven Ticknor as honorary presenters). The 2020 MPSE Career Achievement Award was presented to Academy Award-winning supervising sound editor Cecelia “Cece” Hall by two-time Academy Award-winning supervising sound editor Stephen H. Flick.

The opening address was given by MPSE president-elect Mark Lanza. “This is an exciting time for film, television and games,” he said. “Business models, formats and distribution are all changing. Original scripted TV shows have set a record in 2019: there were 532 original shows this year. This number is expected to surge in 2020. Our editors and supervisors are paving the way and making



our product and the user experience better every year.”

Golden Reel Award presenters included Grammy Award-winning recording artist Melissa Manchester, Avid Technology CEO Jeff Rosica, game creative director Stig Asmussen, Cinema Audio Society (CAS) president Karol Urban, EIPMA president Bernard Weiser, Vaughn Film Festival co-founder and chair Antonio Ienco, Eleven Ninety One Entertainment creative director Alex Lappano, and *Hollywood Reporter* technical editor Carolyn Giardina, as well as actors Nadia Gray, Michael Nardelli and Valery Ortiz, and directors Michael Angelo Covino and Janina Gavankar.

A full list of all this year’s Golden Reel Award winners can be found at <https://bit.ly/30S256p>.

MPSE

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

## Audio Builders Workshop Sets Retreat Scholarships

BOSTON, MA—The Audio Builders Workshop’s second annual Selkie Scholarship is being offered to three qualified women age 18 or over (transgender or cisgender; non-binary individuals are welcome) to attend the Mountain Recording Retreat, hosted by Recording Boot Camp.

The 2020 Mountain Recording Retreat, held May 17–22, is an opportunity to spend a week learning, listening and relaxing in a community made up of mentors and fellow music makers. All the attendees and mentors learn, eat and hang out together, which allows plenty of time to connect with, and learn from, all involved. Mentors include Ronan Chris Murphy, John Rodd, Catharine Wood, Fett and Chris Kincaid.

The five-day retreat includes all workshops, a private room at Capon Springs (a mountain resort in rural West Virginia two hours west of Washington, D.C.), and three all-you-can-eat family-style meals a day. It is a chance for participants to disconnect and spend a few days focused on recording and community. Now in its fifth year, the retreat has become an annual tradition for many. Each year, 80 to 90 percent of attendees come back the following year.

Winners of the scholarship, a \$1,417 value, will be required to pay \$300 of the registration fee. Travel to the retreat is the responsibility of the winners.

The Selkie Scholarship is offered annually to applicants with “strong potential and demonstrated aptitude.” Applicants will provide an example mix along with an essay explaining what they hope to take away from the clinic and how the opportunity could help them in their own situation. The application period runs through Feb. 15, 2020. The form can be found at <https://goo.gl/forms/5ipnGhq1Rbhae2N2>.

Recording Retreat

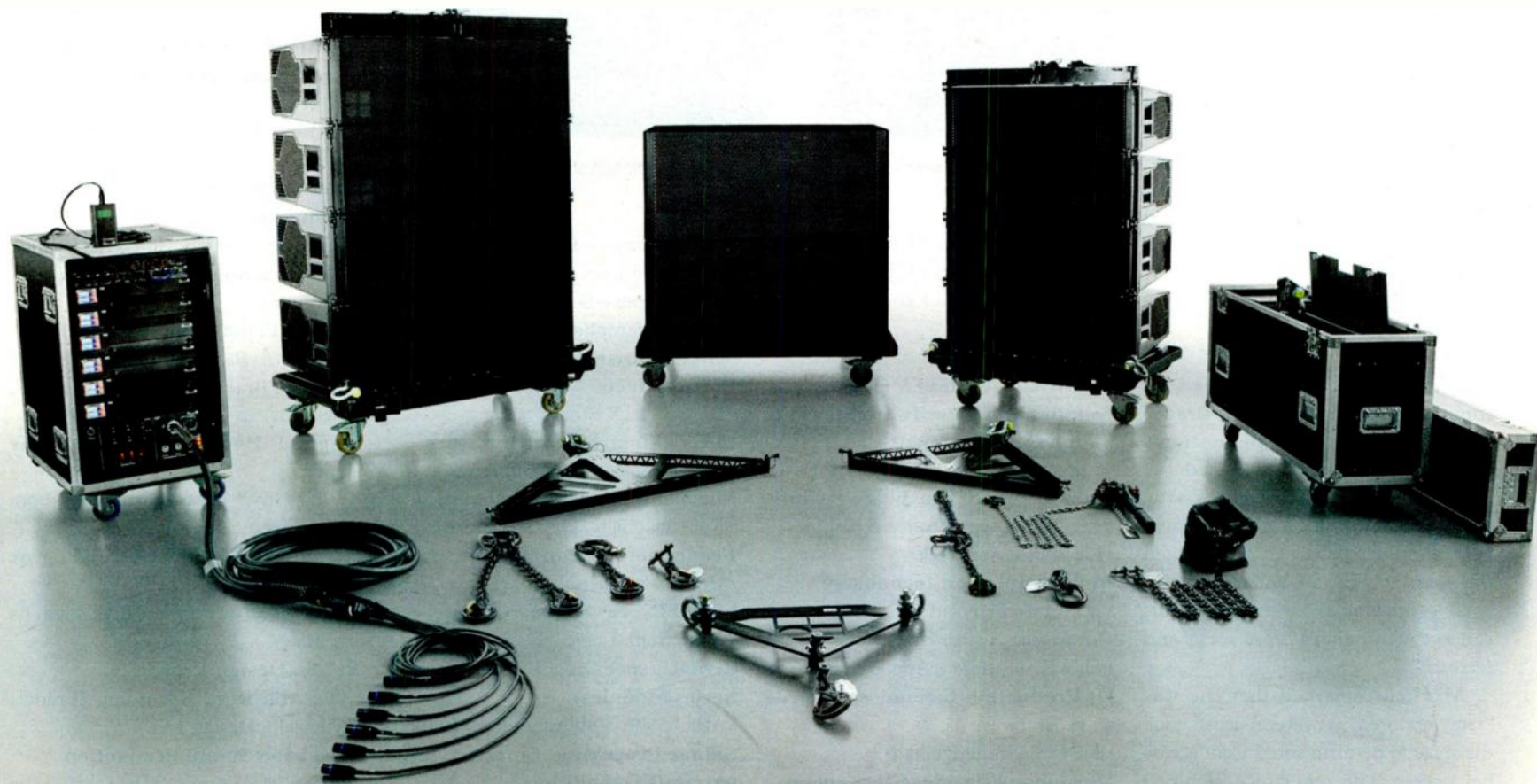
[www.recordingretreat.com](http://www.recordingretreat.com)



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# Sweetwater's Big 2019

FORT WAYNE, IN—Online pro audio/MI retailer Sweetwater had its biggest year ever in 2019, hitting \$805 million in sales, up 11 percent from \$725 million in 2018. Reporting “significant growth” across all product categories, its biggest increases came from pro audio, microphones, synthesizers, drums and guitars.

The Fort Wayne, IN-based company has been putting its 163-acre campus to good use, hiring 159 new employees last year, continuing work on a nearly 480,000-square-foot warehouse that will open soon, and hosting its annual GearFest trade show last June—an event that attracted nearly 500 vendors and 17,000 at-

tendees from nearly all 50 states and several countries including Denmark, Japan and India.

Additionally, Sweetwater’s partnership with Purdue University continued to grow, having first taken root when the school’s music technology program opened on the Sweetwater campus in August 2018. In 2019, 102 students took classes in the 8,000-square-foot facility that is home to a recording studio, editing suites, equipment library and more. That’s more than double the 45 students in 2018.

Looking ahead to 2020, crews will break ground on a 65,000-square-foot event center this



Sweetwater’s annual GearFest in June 2019 attracted 17,000 attendees.

summer that will be housed on the campus. Sweetwater founder and CEO Chuck Surack said, “We are proud of our continued growth and are excited to see what 2020 brings. Our success over the past four de-

acades is the result of our passion for serving customers and an unwavering commitment to always do the right thing.”

**Sweetwater Sound**  
www.sweetwater.com

## Gear, Pros Honored at NAMM TEC Awards

ANAHEIM, CA—Held Jan. 18 at the NAMM Show in Anaheim, the 35th Annual NAMM TEC Awards highlighted achievements in pro audio technology and its creative uses over the last year.

For the first time, three companies won two awards each in Outstanding Technical Achievement: Genelec (for its Aural ID and S360 A SAM products), Universal Audio (for Apollo x16 and its Capital Chambers plugin), and API (2448 Console and its 550A 50th Anniversary Edition 3 band EQ product).

In Technical Achievement, winners picked up honors in Wireless Technology (Shure), Microphones-Recording (Townsend Labs), DJ Production (KORG), and several additional categories in Headphone/Earpiece Technology, Music Instrument Amplification & Effects, Production Essentials and beyond.

Producer, songwriter and artist Joni Mitchell received the Les Paul Innovation Award. Michael Braunstein, the Les Paul Foundation’s executive director, introduced the honor and called Mitchell “a true renaissance woman,” while pianist/composer Herbie Hancock presented the award to Mitchell and noted, “It’s hard to imagine a world without this courageous woman’s brave songs and records.”

Mitchell remarked that she was “truly honored,” as several artists took the stage to perform songs from across her career. The repertoire included Suzanne Santo for “The River,” Kevin Ross for “A Case of You,” Weyes Blood for “Woodstock,” and Venice performing “Free Man in Paris.” The Les Paul Innovation Award has been presented annually to individuals from the music



Comedian/late night drummer Fred Armisen hosted the 2020 NAMM Show 35th Annual NAMM TEC Awards on Jan. 18.

industry including Jackson Browne, Joe Perry (Aerosmith), Paul McCartney, Neil Young, and 2019’s recipient, Peter Frampton.

### TECHNICAL ACHIEVEMENT

#### Amplification Hardware/Studio & Sound Reinforcement

- Auratone – A2-30

#### Audio Apps & Hardware/Peripherals for Smartphones & Tablets

- Genelec – Aural ID

#### Audio Education Technology

- iZotope – Pro Audio Essentials

#### Computer Audio Hardware

- Universal Audio – Apollo x16

#### DJ Production Technology (Hardware/Software)

- KORG – minilogue xd

#### Headphone/Earpiece Technology

- Neumann – NDH 20

#### Large Format Console Technology

- API – 2448 Console

#### Microphone Preamplifiers

- Rupert Neve Designs – 5211 Dual Mic Pre

#### Microphones – Recording

- Townsend Labs – Sphere L22 v1.3

#### Microphones – Sound Reinforcement

- Aston Microphones – Stealth

#### Musical Instrument Amplification & Effects

- Line 6 – HX Stomp

#### Musical Instrument Hardware

- Moog Music – Moog One

#### Musical Instrument Software

- Spectrasonics – Omnisphere 2.5

#### Production Essentials

- Cable Wrangler

#### Signal Processing Hardware

- Solid State Logic – Fusion

#### Signal Processing Hardware (500 Series Modules)

- API – 550A 50th Anniversary Edition

#### Signal Processing Software (Dynamics/EQ/Utilities)

- FabFilter – Pro-Q 3

#### Signal Processing Software (Effects)

- Universal Audio – Capitol Chambers

#### Small Format Console Technology

- Allen & Heath – SQ Digital Mixer Series V1.3

#### Sound Reinforcement Loudspeakers

- JBL Professional – VTX A8 Line Array

#### Studio Monitors

- Genelec – S360A SAM

#### Wireless Technology

- Shure – Axient Digital ADX Transmitter

#### Workstation Technology/Recording Devices

- Avid – Pro Tools 2019

### CREATIVE ACHIEVEMENT

#### Film Sound Production

- *Bohemian Rhapsody* (20th Century Fox, Regency Enterprises, GK Films)

#### Interactive Entertainment Sound Production

- *Marvel’s Spider-Man* (Insomniac Games / Sony Interactive Entertainment)

#### Record Production/Album

- *A Star Is Born* (Soundtrack), Lady Gaga & Bradley Cooper (Interscope Records)

#### Record Production/Single or Track

- “Bad Guy,” Billie Eilish (Darkroom / Interscope Records)

#### Remote Production/Recording or Broadcasting

- 61st Annual Grammy Awards (CBS)

#### Studio Design Project

- Old Mill Road Recording (Francis Manzella Design Ltd.)

#### Television Sound Production

- *Game of Thrones* (HBO / Warner Bros. Television)

#### Tour Event Sound Production

- Freshen Up, Paul McCartney

NAMM TEC Awards

www.tecawards.org



# Classic Rock Engineer Nick Blagona, Dead at 74

BY CLIVE YOUNG

HAMILTON, ON—A mainstay of the Canadian music industry for decades, studio engineer/producer Nick Blagona died Jan. 4 at St. Joseph's Hospital in Hamilton from complications resulting from kidney, heart and lung diseases. He was 74.

A Bavarian refugee who came to Canada with his parents at the age of 4, Nicolai Nicolaivich Blagonadegny grew up in Montreal and developed a fascination with music and technology at an early age. As a teen, he became a ham radio operator and built his first tape recorder from a Heathkit set. He attended McGill University and later Radio College of Canada.

Interested in becoming a studio engineer, Blagona emigrated to the UK in 1964 and quickly found work as an assistant engineer at Decca. He soon got the opportunity to move into the engineer's chair when others called in sick, resulting in his first session being for Tom Jones. Moving to Wessex Sound Studios, he engineered the Moody Blues, King Crimson's influential "21st Century Schizoid Man" (they opted to use his first take), and others.

After briefly moving to the Middle East, he moved back to Canada in 1971, connecting with producer André Perry. Together they decided to build Le Studio, with Blagona de-



Nick Blagona

signing the facility, resulting in the now-legendary residential recording studio in the Laurentian Mountains near the town of Morin-Heights. Over the years, the facility would host the likes of Rush, David Bowie, Bryan Adams and others. Working as the studio's chief engineer through 1983, Blagona recorded The Police's "Every Little Thing She Does Is Magic," numerous Bee Gees tracks including "You Should Be Dancing," April Wine, Chicago, Rainbow and others at the studio. He also became a producer for albums like April Wine's *Harder/Faster*.

The '80s found him producing and engineering Kim Mitchell, and becoming the engineer and mixer for a string of Deep Purple albums—*Perfect Strangers*, *House of Blue Light* and *Slaves and Masters*—as well as engineering solo and duo albums for members Roger Glover and Ian Gillan. The 1990s and 2000s saw him move into mastering, operating out of Metalworks Recording Studios in Mississauga, ON, where he worked

on albums by the Tea Party and Little Feat, though he still kept his hand in engineering, capturing albums by Alexisonfire, Protest the Hero, Ian Gillan and others. In more recent times, he opened Psychotropic Studios in Caledonia, ON.

Over the course of his career, Blagona received three Juno Award nominations and won a Félix Award for Best Engineer.

On his blog, musician Michael Lee Jackson honored Blagona, recounting a visit to see the engineer in the hospital in December. He wrote: "When I arrived at the hospital a few days ago, when Nick was still semi-lucid, I asked him how he was doing. 'Dying,' he said. I said, 'On the way here today, I was thinking about the immortality of your life's work. Records you've made have been threads in the lives of millions of people you haven't even met. Those records will always be played. Your work will be in the time capsule, I'm sure of it.' Nick smiled and said, 'That's pretty cool.' 'Damn right,' I said."

# Tim Boyle, Hollywood Score Mixer, Dead at 71

BY CLIVE YOUNG

SHERMAN OAKS, CA—A first-call Hollywood score mixer and recording engineer with more than 300 credits to his name, Tim Boyle died of liver cancer in Sherman Oaks, CA, on Dec. 22. He was 71.

Born in Norristown, PA, on Aug. 2, 1948, Boyle was a Navy veteran. Following his service, he went on to become chief audio engineer at the Paramount Pictures and Universal scoring stages, as well as to teach recording arts at USC and the Sundance Institute, and mix records and live events. He also co-founded the record label Waxsimile Productions with his daughter Briget.

Films he worked on included *South Park: Bigger, Longer & Uncut*, for which he won a Golden Reel Award from the MPSE, as well as both *Bill & Ted* movies, *Apt Pupil*, *Starship Troopers*, *The Hunt for Red October*, *True Lies*, *Ace Ventura: Pet Detective*, *Free Willy*, *The Sandlot* and hundreds more. His TV credits included *Home Improvement*, *Simon & Simon* and *Murder, She Wrote*, among others.

During his career, he worked with such entertainers as the Rolling Stones, Peter Dinklage, Eric Clapton, Tom Waits, Joanna Newsom, Quincy Jones and Whitney Houston. He was the chief audio engineer at the Church of Scientology from 2004 until his death.

Tim Boyle is survived by his daughters, Lyndsay Cavanagh and Briget Boyle, as well as his partner, Anne Trop; ex-wife Karen Tobin; his sisters, Ellen Kay and Nan; and grandsons, Mika and Valentin Cavanagh. Memorial services will be held in Los Angeles Feb. 16.



Tim Boyle

# Oscar Sound Noms Announced

LOS ANGELES, CA—*Joker* topped the nominations list when the 92nd Academy Awards contenders were announced on Jan. 13. The film's 11 nods included recognition in the categories of sound editing and sound mixing.

Three films—Martin Scorsese's *The Irishman*, Sam Mendes' *1917* and Quentin Tarantino's *Once Upon a Time ... in Hollywood*—tied for second place with 10 nominations each.

Even as the Oscar sound nominations came out, rumors continued to swirl that the two separate categories may be condensed into one in the future. The academy once

again nominated virtually identical lists of films for both sound mixing and sound editing.

The 92nd Academy Awards will be broadcast live on ABC on Feb. 9 from the Dolby Theatre in Hollywood to more than 225 countries and territories worldwide.

## SOUND MIXING

- *Ad Astra*—Gary Rydstrom, Tom Johnson and Mark Ulano
- *Ford v Ferrari*—Paul Massey, David Giammarco and Steven A. Morrow
- *Joker*—Tom Ozanich, Dean Zupancic and Tod Maitland

- *1917*—Mark Taylor and Stuart Wilson

- *Once Upon a Time ... in Hollywood*—Michael Minkler, Christian P. Minkler and Mark Ulano

## SOUND EDITING

- *Ford v Ferrari*—Donald Sylvester
- *Joker*—Alan Robert Murray
- *1917*—Oliver Tarney and Rachael Tate
- *Once Upon a Time ... in Hollywood*—Wylie Stateman
- *Star Wars: The Rise of Skywalker*—Matthew Wood and David Acord

Academy Awards  
<http://oscar.go.com>



# Music Sales Hit Record High in UK

BY STEVE HARVEY

LONDON, UK—A report from the Entertainment Retailers Association released on Jan. 3 provided a first glimpse at the state of the recorded music business for the past year. Spending by UK music fans on streaming services exceeded £1 billion (\$1.3 billion) for the first time in 2019, helping drive total music sales across all formats to £1.4 billion (\$1.8 billion), a record high.

UK consumers spent £92 million (\$122 million) more on recorded music in 2019 than in 2018, resulting in a 7.1 percent increase in total music sales over the previous 12 months. The 23.5 percent increase in music streaming revenue brought record labels a fifth successive year of growth, offsetting a 20 percent plummet in the sale of physical formats and downloads of singles and albums compared to 2018's totals.

The recorded music sales figures are just one part of a wider consumer spending report for 2019 released

by the ERA, which shows that video revenues rose 9.5 percent compared to 2018, while sales of games slipped 3.4 percent. Overall, total physical and digital entertainment spending increased 2.4 percent to £7.8 billion (\$10.2 billion) in 2019, marking a seventh successive year of growth.

The £1 billion spent on music subscriptions with services including Spotify, Apple Music, Amazon Music, YouTube Music and Deezer is four times that of five years ago, according to the report. That figure also represents a 31-fold increase from the beginning of the decade, when streaming accounted for just £31.5 million (\$41.2 million) in revenue.

Physical sales, which dropped 17 percent to £318.1 million (\$416 million) from 2018 to 2019, accounted for less than one-third the revenue generated through streaming services. CD sales remain in freefall and now bring in a fraction of the revenue they did at the beginning of the decade, when they accounted for £873 million (\$1.1 billion).

Downloads continue to trend sharply downward, slumping by nearly 27 percent from 2018 to just £89.7 million (\$117.3 million), which is less than half the revenue reported three years previously. Meanwhile, vinyl continued its resurgence, growing 6.4 percent and generating £97.1 million (\$127 million) in 2019.

The year's top-selling album was Lewis Capaldi's debut, *Divinely Uninspired to a Hellish Extent*, which sold 641,000 copies. Ed Sheeran's *No 6 Collaborations Project* was second, with sales of 568,110. In third place, the motion picture cast recording of *The Greatest Showman* racked up sales of 523,844 copies. The top 10 bestselling albums also included Billie Eilish's *When We All Fall Asleep, Where Do We Go?* and Ariana Grande's *thank u, next*.

According to a statement from ERA CEO Kim Bayle, "The rise of

digital entertainment services has created the biggest revolution in UK leisure habits in history, enabling people to access the music, video and games they love wherever and whenever they want, and transforming the fortunes of record labels, filmmakers and games developers."

Entertainment Retailers Association  
www.eraltd.org



Lewis Capaldi's debut, *Divinely Uninspired to a Hellish Extent*, was the UK's top-selling album of 2019.



The BAFTA Awards will be presented Feb. 2.

## BAFTA Sound, Music Noms Announced

LONDON, UK—The British Academy of Film and Television Arts has announced its nominations, including those for sound and original score, for the 2020 British Academy Film Awards, which will be presented at the Royal Albert Hall in London on Feb. 2.

Overall, *Joker* received the most nominations, 11, including for sound and original score, followed by Martin Scorsese's *The Irishman* and Quentin Tarantino's *Once Upon a Time in ... Hollywood*.

The film award nominees include:

### SOUND

- 1917—Scott Millan, Oliver Tarney, Rachael Tate, Mark Taylor, Stuart Wilson
- *Joker*—Tod Maitland, Alan Robert

Murray, Tom Ozanich, Dean Zupancic

- *Le Mans '66*—David Giammarco, Paul Massey, Steven A. Morrow, Donald Sylvester
- *Rocketman*—Matthew Collinge, John Hayes, Mike Prestwood Smith, Danny Sheehan
- *Star Wars: The Rise of Skywalker*—David Acord, Andy Nelson, Christopher Scarabosio, Stuart Wilson, Matthew Wood

### ORIGINAL SCORE

- 1917—Thomas Newman
- *Jojo Rabbit*—Michael Giacchino
- *Joker*—Hildur Guðnadóttir
- *Little Women*—Alexandre Desplat
- *Star Wars: The Rise of Skywalker*—John Williams

BAFTA

www.bafta.org

## UK's Monnow Valley Studios for Sale

BY CLIVE YOUNG

WALES, UK—Monnow Valley Studios, which has recorded the likes of Black Sabbath, Oasis, Tom Jones and Robert Plant since opening in 1975, has been put on the market for \$1.89 million U.S. with a deadline in mind. If the residential studio and its 2.5-acre riverside property don't sell by February, the current owners plan to redevelop the land.

Some of the studio's recording equipment will be included with the house, and depending on the offer, various items from a cache of vintage audio equipment currently used there that is owned by noted engineer Andrew Scheps could be included, including the studio's current console: a vintage 64-channel Neve 8068 Mk II with flying faders.

The studio was famously featured on the cover of Oasis' debut single, "Supersonic," which sent the band to the top of the charts in April 1994. The piano that appears in the photo later sold for \$17,000 at auction.

Other acts that have recorded there over the years include Stereo-



The cover of Oasis' debut single, "Supersonic," was shot in the live room of Monnow Valley Studios while the band recorded the track.

phonics, Pulp, Simple Minds, Manic Street Preachers, Joss Stone, The Charlatans, The Levellers, Editors, Biffy Clyro, Marti Pellow, Feeder, Busted, Laura Marling, Iggy Azalea, Idles, Kaiser Chiefs, Twin Peaks, Badly Drawn Boy, Editors, The Alarm and The Cult.

The residential facility features ten bedrooms, eight bathrooms, two living rooms, a dining room and two kitchens. Meanwhile, the studio facility, attached to the house, includes a live room, control room, machine room and amp room.

Monnow Valley Studios  
www.monnowvalleystudio.com

MICHAEL SPENCER JONES





Meeting at the NAMM Show were (l-r): Funky Junk director Paolo Orizio and AMS Neve distribution manager David Walton.

## AMS Neve Gets Funky in Italy

ITALY—Audio dealer Funky Junk Italy has installed the country's first Neve Genesys Black G64 console in LG Studio Modena. The studio, which is owned by producer Gabriele Ferrini, already had a Neve Genesys Black G32 console but upgraded to a G64 by adding a 16-channel extension.

"2019 was a very successful year for AMS Neve products in Italy, and we are delighted to see so many top artists and producers switching to the Genesys console range," said Funky Junk Italy director Paolo Orizio.

"Alongside the G64 we installed in Modena at the end of the year, we have also supplied a Genesys Black G32 console to Italian artist Gianluca Grignani, another G32 console with a 48 frame to Italian violinist and composer Carlo Cantini, and we have sent a Genesys G32 console to one of our dealers," he noted.

Orizio noted a demand for AMS Neve's 1073DPA dual channel mic preamp as well. At the recent NAMM convention in Anaheim, CA, he placed an order for 20 AMS Neve 1073DPA units, which will be distributed among pro audio dealers in Italy. He was also keen on the NAMM launch of a new hardware version of the legendary AMS RMX 16 digital reverb, saying, "We are very excited about this unit and anticipate strong demand."

AMS Neve  
www.ams-neve.com

## Schauspielhaus Bochum Brings It

BOCHUM, GERMANY—One of the largest and most noted drama theaters in Germany, Schauspielhaus Bochum, recently completed an audio renovation that included the placement of new digital network technology across all of its venues and the addition of multiple Allen & Heath dLive systems.

Schauspielhaus Bochum, the primary theater, sports a capacity of 811 seats, while its second theater, Kammerspiele, holds 400 people. Twenty-eight-year veteran technical director Christoph Bonk explains, "We offer many different genres—classical theater and musicals but also concerts—so we have to be very flexible in the sound department. We realized that our workflow wasn't up-to-date anymore and we've been looking for the perfect solution to address that. We needed flexibility, redundancy and good sound, and we wanted to be future-proof."

With that in mind, the theater turned to Allen & Heath. Its two main venues now operate three dLive surfaces each: an S7000, S3000 and C1500 in the main theater and an S7000, C3500 and a C1500 in the Kammerspiele, plus various



A major renovation at Schauspielhaus Bochum resulted in the acquisition of several Allen & Heath dLive systems.

MixRacks and stage boxes, which are connected via Cat cable and fiber networks. The theater also uses Qu series mixers in its smaller spaces and for receptions or speeches.

"For larger or more complicated plays, we sometimes work with two sound engineers and surfaces," says Bonk. "One engineer mixes the actors' microphones, the other looks after the playback system. The most important features for us are fast ac-

cess to the sound parameters and effects, and a customizable surface. The integration of stage boxes into the network is very easy, and we can reach each position on stage easily by just pulling a Cat cable—there's no need for heavy, complicated multi-core cables anymore. Our 16 wireless microphones are connected digitally using AES/EBU."

Allen & Heath  
www.allen-heath.com

## Clear-Com Workshops Connect in APAC

MELBOURNE, AUSTRALIA—Clear-Com recently hosted a pair of workshops on intercom system design and new technologies for theater professionals in Singapore and Melbourne. Hosting the events was Jason Crystal, associate sound designer for the Broadway productions *Hamilton* and *Tina: The Tina Turner Musical*.

"It's easy for me to speak about these technologies because I know first-hand how critical they are in making sure a production like *Hamilton* seamlessly comes to life, night after night," Crystal said. All productions of *Hamilton*—touring, Broadway and West End—rely on a combination of Clear-Com's FreeSpeak II wireless intercom system, HelixNet all-digital networked partyline intercom system, Encore Partyline, and LQ Series of Audio over IP (AoIP) interfaces for production team com-



Jason Crystal, associate sound designer for Broadway productions *Hamilton* and *Tina: The Tina Turner Musical*, led Clear-Com theater communication workshops in Australia and Singapore.

munications.

At each session, Simon Browne, vice president of product management for Clear-Com, delivered an update about products planned for 2020, including FreeSpeak Edge, GPIO and AoIP interfaces, waterproof beltpacks, and the company's ongoing adoption of AoIP standards. Also on hand was Vinnie Macri, outreach manager for Clear-Com, who presented product information.

The Melbourne event was co-hosted with Jands, Clear-Com's distribution partner in Australia.

In Singapore, the workshop was held at the Wild Rice Theatre, an in-

novative new venue that's home to one of Singapore's leading theater companies and features Clear-Com systems.

Looking back on the workshops, Crystal said, "Talking to my professional colleagues, especially to new users in other countries, and sharing my experiences to help them learn new approaches is always a treat. Judging from their engaging questions during the sessions and our intriguing post-show conversations, they were enjoying the discussion as much as I was."

Clear-Com  
www.clearcom.com



# Capricorn Studios Revitalized for Next Generation

BY STEVE HARVEY

MACON, GA—Macon began a major revitalization of its downtown area at the turn of the millennium, attracting investment that has ultimately led to the reopening of the birthplace of Southern rock, Capricorn Sound Studios. Now part of Mercer University and rebranded Mercer Music at Capricorn, the historic building has been reworked to include a second studio, a rehearsal complex and a museum.

Mercer University president William Underwood had a vision for creating space downtown to cultivate music talent, according to university spokesman Larry Brumley. “He had the idea for a music incubator, a place where musicians could rent rehearsal rooms and collaborate, and it could be a launching pad for talent. He saw Macon’s music legacy and asked, Why can’t it happen again?”

“A rising tide can lift all boats,” says Rob Evans, the facility’s chief engineer and studio manager, noting that the facility is open to all. “It’s a resource to the entire world. We welcome music tourists, producers, engineers, musicians. There’s a lot to see in Macon and here at Capricorn.”

The facility, which comprises four



CHRISTOPHER IAN SMITH

Studio A at Mercer Music at Capricorn is centered around a unique 40-input version of API’s new 2448 analog console.

abutting buildings, was purchased in 1967 by RedWal Music, a company co-founded by Mercer graduate Phil Walden, his brother Alan, and Otis Redding. The soul singer’s untimely death in a plane crash three days after finishing overdubs on “(Sittin’ on) the Dock of the Bay” delayed

the launch of Capricorn Records and its studio until 1969. The label subsequently introduced the world to Southern rock pioneers the Allman Brothers Band, Marshall Tucker Band, Charlie Daniels and Wet Willie before going bust in 1979. Over the ensuing decades, the buildings fell

into disrepair.

But on Dec. 2, 2019, 50 years to the day after first opening its doors, Capricorn returned in all its 1970s splendor following a \$4.3 million renovation project. While parts of the complex were close to collapse, says

(continued on page 24)

## NYU’s Clive Davis Institute of Recorded Music Reinvents Itself in Brooklyn

BY STEVE HARVEY

BROOKLYN, NY—New York University (NYU) has consolidated its media, technology and art departments in the former headquarters of the New York City Transit Authority at the MetroTech Center in Brooklyn. The 12-story building has been built out according to the specific needs of each department, including the Clive Davis Institute of Recorded Music, which has outfitted its portions of two floors with multiple recording studios, editing suites, rehearsal spaces, training labs, practice rooms, offices and other facilities.

“We identified the spaces that FM Design would be responsible for and we did all of the design for those spaces, from demolition to doorknobs,” says FM Design president Francis Manzella. That includes four recording studios along an outside wall on the fifth floor of the building that feature double-



NICK SANSANO, NYU

Inside the Clive Davis Institute of Recorded Music’s Nature Room with the facility’s API AXS Legacy console are (l-r): Radovan Maricic, service department director, API; Matt Marinelli, owner, Coral Sound; and Adrian “Ben” Eckroth, electrical technician, API.

height live spaces. Floor-to-ceiling windows flood the sixth-floor offices and teaching labs with light through interior windows overlooking the

tracking rooms.

“The rooms sound amazing. We’re really happy with Fran’s work,” says associate chair and pro-

duction faculty head Nick Sansano. Sansano is a producer, engineer and musician whose career started at New York’s Greene Street Recording, where he recorded and mixed several seminal Public Enemy albums, among other projects.

“The integration was vast and had to be done in a short amount of time. They realized it was a big enough job that we could collaborate,” says Jeff DelBello of design, installation and sales company dB Sound Design, who worked on the project with Matt Marinelli, owner of Coral Sound.

DelBello and Marinelli began designing their part of the project two years ago. “Jeff and I have been friends for years,” says Marinelli, “but we’d never worked on a project of this scope together before.” The pair split the integration workload 50-50.

Marinelli has had a long career designing and integrating commercial and private studios. “Building for a school is a different beast. You’re trying to design something flexible but also intuitive, because you have first-year students who have never seen any of this stuff be-

(continued on page 24)



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Multicat™ the worlds first RJ45 breakout wired to our legendary W1 multipin connector, you'll get Whirlwind quality, fast delivery, and the satisfaction of knowing they're made right here in the US of A. Find out more at [whirlwindusa.com](http://whirlwindusa.com) to see which Catdusa® fits your audio/lighting needs, and discover how Whirlwind is changing an industry.







Monitoring options inside June Audio's Studio 1 include ATC SCM150ASLs, a pair of Barefoot MM26s and three MM45s, plus a JL Audio Fathom subwoofer.

## June Audio Returns to Utah

BY STEVE HARVEY

PROVO, UT—"We built this studio to be a great place for people to have the experience and opportunity to make their art," says Scott Wiley, a musician, engineer, producer and owner of June Audio Recording Studios, which opened at the end of 2019 in Provo. "The community of musicians around here is really what I like most. That's why I love being here."

If the June Audio name rings a bell, it's because this is the facility's second incarnation. About 20 years ago, Wiley and his wife moved from Southern California, where they both grew up and where he studied music recording at USC, and built the original June Audio on the first floor of a mid-1920s house in Provo. They later sold the property, the studio and the gear and returned to Los Angeles, where Wiley worked at Sunset Sound, Sound Factory, Conway and other facilities. But after having kids, "I decided the lifestyle wasn't going to work for me," he says, and they returned to Provo.

Six or seven years ago, he began talking with Wes Lachot Design, based in Chapel Hill, NC, about building a new June Audio. He visited as many Lachot-designed studios as he could during a short trip back east. However, Wiley's search for a suitable property over the next few years was, well, messy. Long story short, a succession of building owners, eyeing more lucrative prospects, paid him to continue looking elsewhere.

"I've made more money being

in the way of people in my career," he chuckles, "but it did allow us to build this place, so I'm grateful for that."

The new location, amazingly,

is the same house where the Wileys had lived previously, above the original June Audio. After discovering that the property was back on the market, Wiley calculated

that Lachot's design for the site would also fit on the deep lot behind the house and bought it—again.

"We'd been planning a studio with Wes Lachot Design for four or five years," says Wiley. "But Wes and his team really had our backs. I'm sure they've raised their rates in the meantime, but they stuck with their original quotes and really helped us out."

The old house had fallen into disrepair and had to be completely refurbished. It's now fully outfitted as a production facility. "The downstairs is more of a proper studio in terms of size, while the upstairs rooms are editing and production suites," Wiley reports. "We have three producers who have moved into the house. Collectively, they work for Kaskade, the DJ, and do a lot of EDM music and remixes. They have their own separate projects as well."

The purpose-built facility behind the house took about a year to complete. "We had a great contractor," he says. The building's rectangular floor plan encompasses a central hallway with a large control room and tracking space, Studio 1, on one side, with the smaller Studio 2 on the other, behind which there is a large space to warehouse—or, arguably, display—Wiley's collection of musical instruments, backline and accessories.

"I've been collecting for a long time. I've still got my first guitar my parents bought me when I was in eighth grade," he says. "I enjoy

(continued on page 23)



"I've been collecting for a long time. I've still got my first guitar my parents bought me when I was in eighth grade," says Scott Wiley.



## MIDI 2.0 Comes Into Focus



BY CRAIG  
ANDERTON

In the May 2018 Software Tech column ("MIDI-CI Makes Its Debut," [www.tinyurl.com/v2nocd5](http://www.tinyurl.com/v2nocd5)), we covered MIDI-CI (MIDI Capability Inquiry), which had just been ratified by the MIDI Manufacturers Association. Now, additional aspects of the MIDI 2.0 spec have fallen into place, and the first pieces of gear with elements of MIDI 2.0 are working their way out of R&D and into the real world.

The most fundamental MIDI 2.0 difference is that it's now fully bidirectional; think of MIDI "conversations" as changing from a monologue to a dialogue. Bidirectionality is at the heart of MIDI-CI, and the implications are such that we really don't know what it will bring in the future, any more than we knew in 1983 that MIDI would control the fountains at the Bellagio in Las Vegas, Disney parades, and the Broadway production of *Miss Saigon* (or end up in smart-phones, for that matter).

MIDI-CI could have a major influence on protocols like the NKS specification ([www.tinyurl.com/ssb5lju](http://www.tinyurl.com/ssb5lju)). Currently, companies use NKS to map the hardware controls in Native Instruments' keyboard control surfaces to software parameters. As MIDI-CI becomes commonplace, the control surface could just ask a soft synth about what parameters it has, and match something like a dedicated filter cutoff hardware control to the appropriate parameter. This might even make "MIDI learn" an endangered species, because a parameter could send its own request about what it wants to learn. Bidirectional communication is also what makes backward-compatibility possible; if a MIDI 2.0 device queries a MIDI 1.0 device and doesn't get a response, it can fall back to communicating via MIDI 1.0.

Interactivity could facilitate more flexible ways of dealing with improvisation. For example, some acts use a DAW to sequence live performances via program changes and mix automation. Perhaps a performer could trigger a command like "loop this section again" simply by tapping a footswitch for a program change that's already selected, then double-tapping it to resume the existing sequence.

The original MIDI spec was tied

tightly to hardware—that ubiquitous 5-pin DIN connector, with a separate input and output. Modern transports like USB, AVB, TSN, etc. are inherently bidirectional, and MIDI 2.0 can run over any kind of network, so MIDI 2.0 will be able to deal with other bidirectional net-

working protocols that may appear in the future.

MIDI 2.0 additionally offers the higher resolution for which people have been clamoring since the spec was introduced, and in the process, it has reimagined the role of controllers. The cumbersome, compound

RPN and NRPN controller messages have been replaced by single controller messages that are as easy to use as MIDI 1.0's continuous controller messages. And you won't run out of controllers—the number of registered and assignable controllers has been expanded to 16,384 each, and that even includes the kind of per-note controllers need-

(continued on page 23)

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- Built-in web-based controller



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**ARTIST:** ...AND YOU WILL KNOW US BY THE TRAIL OF DEAD

**ALBUM:** X: THE GODLESS VOID AND OTHER STORIES

**LABEL:** DINE ALONE

**PERSONNEL**

**Produced by:** Conrad Keely, Charles Godfrey

**Engineered by:** Charles Godfrey

**Studio:** Scary American (Austin, TX)

**Mastered by:** Peter van 't Riet at FineTune Mastering (Soest, Netherlands)

**EQUIPMENT NOTES:** PMC twotwo.8, ProAc Studio 100, Avid Pro Tools, Apple Logic Pro



**ARTIST:** YUNG YUNO

**ALBUM:** EYE OF THE STORM

**LABEL:** LONELY HOURS RECORDS

**PERSONNEL**

**Produced by:** Filthy Flux, OBM Beats, DMipe Beatz, Rob Tavaglione

**Engineered by:** Rob Tavaglione at Catalyst Recording (Charlotte, NC)

**EQUIPMENT NOTES:** Millennia-Media STT-1, Focal Trio11 Be



**ARTIST:** MY SISTER, MY BROTHER

**ALBUM:** MY SISTER, MY BROTHER EP

**LABEL:** SELF-RELEASED

**PERSONNEL**

**Produced by:** Peter Groenwald, Sean McConnell, Garrison Starr  
**Mix Engineer:** Ryan Hewitt at House of Blues Studios (Nashville, TN)

**Studios:** Oldest Bird Studio (Hendersonville, TN), Silent Desert Studio (Nolensville, TN)

**Mastered by:** Andrew Mendelson and Darby at Georgetown Masters (Nashville, TN)

**EQUIPMENT NOTES:** Adam A7X, Avid Pro Tools



**ARTIST:** THE MYSTERY PLAN

**ALBUM:** ZSA ZSA

**LABEL:** TEN MILLIMETER OMEGA

**PERSONNEL**

**Produced by:** Jason Herring, Rob Tavaglione, John Fryer, Ian Masters, That Guy Smitty

**Engineered by:** Rob Tavaglione, Jason Herring, Paul Jensen

**EQUIPMENT NOTES:** Digital Performer 9, Focal Trio11 Be, Avantone Mixcubes



**ARTIST:** ADEOLA "ADE" FABOLA

**ALBUM:** SWEETEST THING I KNOW EP

**LABEL:** SELF-RELEASED

**PERSONNEL**

**Produced by:** Ade Fabola, Thomas Pitts, Lucas Kane

**Engineered by:** Lucas Kane  
**Studio:** Hive Productions (Manchester, UK)

**Mastered by:** Lucas Kane at

Hive Productions

**EQUIPMENT NOTES:**

Apple Logic Pro X, Focusrite Scarlett 2i2



**ARTIST:** MELODY

**ALBUM:** GIRL BEHIND THE PIANO

**LABEL:** SELF-RELEASED

**PERSONNEL**

**Produced by:** David Snider

**Engineered by:** Geoff Gray, Alex Stricker

**Studio:** Far & Away Studios (Boulder, CO)

**Mastered by:** David Glasser at Airshow Mastering (Boulder, CO)

**EQUIPMENT NOTES:**

Studer A80, Avid Pro Tools, ATC Loudspeakers SCM100 ASL, Fairchild 670, Grace Design m108



**ARTIST:** THE LIL SMOKIES

**ALBUM:** TORNILLO

**LABEL:** UNITED INTERESTS

**PERSONNEL**

**Produced by:** Bill Reynolds

**Engineered by:** Bill Reynolds, Mauro Castro (assistant)

**Studio:** Sonic Ranch (Tornillo, TX)

**Mastered by:** Dave McNair

**EQUIPMENT NOTES:** Neve 8068, ATR tape machine, Genelec monitors, Avid Pro Tools



**ARTIST:** FLAX

**ALBUM:** FLAX

**LABEL:** SELF-RELEASED

**PERSONNEL**

**Produced by:** Zack Feinberg

**Engineered by:** Chris

George

**Mix Engineer:** Jay Wesley

**Studios:** The Living Room (New Orleans, LA)

**Mastered by:** Count at Vertebrae Productions (San Francisco, CA)

**EQUIPMENT NOTES:** Otari Series 54, Neotek Series 1E sidecar, B&W Nautilus 802, NHT M-20, Avid Pro Tools



**ARTIST:** K.C. CLIFFORD

**ALBUM:** K.C. CLIFFORD

**LABEL:** FREE SKIPPER RECORDS

**PERSONNEL**

**Produced by:** Will B. Hunt

**Engineered by:** Will B. Hunt

**Studios:** Spaceway Studios (Fort Worth, TX), Castle Row Studios (Del City, OK)

**Mastered by:** Gary Hedden at GHL Audio (Nashville, TN)

**EQUIPMENT NOTES:**

SSL 9000 J, DDA DMR12, Dynaudio BM6A, Yamaha NS-10, Avid Pro Tools



**ARTIST:** TOM BREIDING

**ALBUM:** LOVE COMMITS ME HERE

**LABEL:** AMERISON RECORDS

**PERSONNEL**

**Produced by:** Daniel

Marcus, Tom Breiding

**Engineered by:** Daniel

Marcus, Tom Breiding

**Studios:** AmeriSon Studio

and Daniel Marcus Music (Pittsburgh, PA)

**Mastered by:** Tom Breiding at AmeriSon Studio

**EQUIPMENT NOTES:**

Alesis Monitor One, Yamaha NS-10M, Avid Pro Tools, Apple Logic Pro X

## Gateway Reviews with Sonoris

PORTLAND, ME—Gateway Mastering Studios in Portland, ME, is using a customized version of the Sonoris ([www.sonoris-software.com](http://www.sonoris-software.com)) DDP Player, branded Gateway Player, which can import both DDP and disk image files and streamline the review process by enabling clients to play back audio files, export WAV files and burn CDs through an app.

## Burwell Remodels with WSDG

LONG ISLAND, NY—Film composer Carter Burwell commissioned the Walters-Storyk Design Group's ([www.wsdg.com](http://www.wsdg.com)) architectural, acoustic and engineering design team to build a 600-square-foot, 5.1-capable studio equipped with an Avid S6 32-fader console, and Genelec 8351A mains and 8300 surrounds at his newly-renovated home overlooking the Atlantic Ocean on Long Island, NY.

## Atmos Music on TIDAL

NEW YORK, NY/SAN FRANCISCO, CA—Subscribers to streaming platform TIDAL's HiFi tier with compatible Android smartphones or tablets now have access to a growing library of music available in Dolby Atmos ([music.dolby.com](http://music.dolby.com)) from UMG and WMG.

## Dissecting Immersive Music

LOS ANGELES, CA—A workshop at the PMC ([www.pmc-speakers.com](http://www.pmc-speakers.com)) studio in Los Angeles presented 5.1 music by Grammy-nominated A Bad Think ([www.abadthink.com](http://www.abadthink.com)), Michael Marquart's one-man project, as well as Dolby Atmos mixes from the UMG catalog, with a panel moderated by Niko Bolas featuring Dave Way and Bob Clearmountain, who worked on the album *The Savior*.



## June Audio

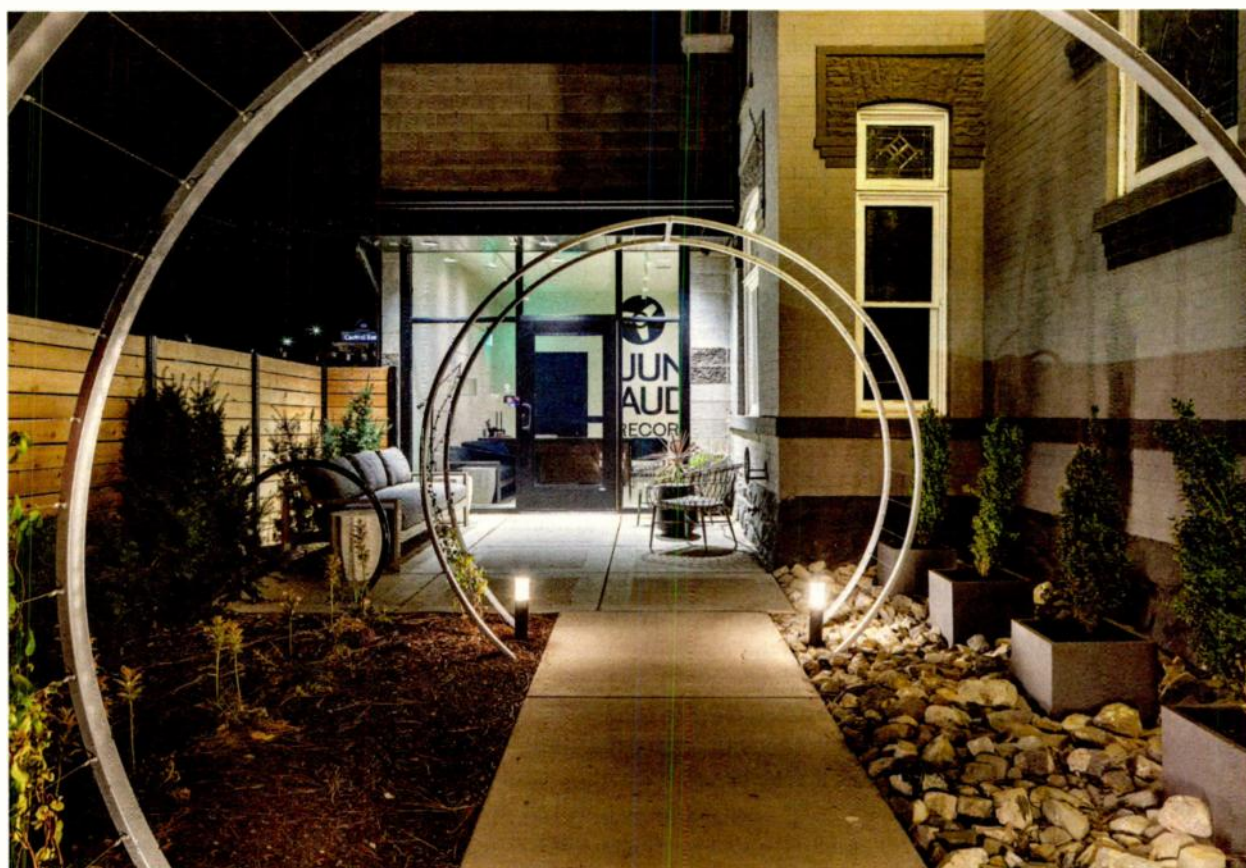
(continued from page 20)

driving around and trying to find deals. I get lucky a lot."

If nothing else, it's handy having the appropriate instrument available at a moment's notice. "You use the right snare drum and it makes your life easier—and I'm lazy," he says. "I want to make it sound right at the source and not have to turn all these knobs."

Control Room 1 is a diffuse RFZ (reflection-free zone) design incorporating Brett Acoustic Slatfusors on the rear wall. "It's a well-built room, designed by somebody who's clearly done a lot of working studios," says Wiley. "It's just easy to work in. I never have to think about it."

A 32-channel API 2448 in-line console takes pride of place in the room. "I got really used to working on APIs when I worked at Sunset Sound and Sound Factory," he says. "We were moving forward with the idea of having a 32-channel 1608 when API introduced the 2448. I read that it's in-line and thought,



June Audio is based around a house restored into a production facility consisting of a studio and editing suites, while a new building behind it houses two studios and a warehouse.

are available for 5.1 projects. "We don't do a lot of surround, but we're trying to be flexible," he says.

Chandler, Kush and DIYRE units.

The 820-square-foot tracking room offers an 18-foot ceiling and variable acoustics via rotating Brett Acoustics Multifusor reflective/absorptive panels. There are three iso booths.

Across the hallway, Control Room 2, a similar RFZ design, is centered on a 32-channel Daking 1112 desk. Like Studio 1, the console is paired with Burl Motherhip B80 converters and a Pro Tools HDX rig; it also features ATC SCM150 mains. The 500-square-foot tracking room, outfitted with RPG BAD panel acoustic panels, includes a single iso booth.

Wiley is keen to help up-and-coming artists from the area, which has already spawned Imagine Drag-

ons and Neon Trees. "I just love the musicians here and the friendships. We try to keep rates low. If we could afford it, I would love to record people for free."

Wiley has organized 24-hour recording marathons at the old studio and is currently planning another, times two. "We used to call it the June Audio 24, but we're going to do it in both rooms, so this will be the June Audio 48. We set up all the gear and we give everybody a free hour. It's so brutal, but it's really fun," he says.

"It gets a lot of people through the door and a lot of people meeting each other. I love that communal aspect."

June Audio Recording Studios  
www.juneaudio.com

"We built this studio to be a great place for people to have the experience and opportunity to make their art."

Scott Wiley

that's the console we need. I'm enjoying having so many channels and being able to run a session all on the board."

The room's main monitors are ATC SCM150ASLs. A pair of Barefoot MM26s and three MM45s, plus a JL Audio Fathom subwoofer

The credenza is packed with all the usual suspects, including a pair each of Maag Audio's EQ2 PREQ4 devices. "We're lucky to have Maag Audio here in Provo; I know those guys well," says Wiley. The API desk also houses four Maag EQM 500 series modules, alongside API, CAPI,

## MIDI 2.0

(continued from page 21)

ed for nuanced, musically expressive playing. (Steinberg's Note Expression feature has already provided the "proof of concept" for why per-note expression is useful.) Controllers are now capable of 32-bit resolution—a major improvement compared to 128 steps—which means digital controls will have a smoother, more analog feel. Even velocity response has been upgraded, from 8 to 16 bits, and there's space reserved for hundreds of new MIDI messages.

Enhanced resolution applies to timing as well; major timing improvements in timestamping and jitter reduction are part of MIDI 2.0. Even better, some of these changes can apply to MIDI 1.0 devices. It's

ways this technology will be applied in the future. Just like MIDI 1.0, a lot of thought and development went into creating a toolset designed to last. And again, the specification is a cooperative effort among all major manufactur-

dissemination point for information about all aspects of MIDI.

It indeed looks like MIDI's next generation is gearing up for the long haul, and I wouldn't be surprised if MIDI 2.0 duplicates MIDI 1.0's stay-

Bidirectionality is at the heart of MIDI-CI, and the implications are such that we really don't know what it will bring in the future.

even possible retrofit some MIDI 1.0 devices for compatibility with selected aspects of the MIDI 2.0 specification.

Many of MIDI 2.0's advantages are obvious now, but as with MIDI 1.0, it's impossible to anticipate the

ers, with the MMA and AMEI (the Japanese equivalent) working together to maintain compatibility, while enhancing the specification in an orderly, premeditated way. Furthermore, [www.midi.org](http://www.midi.org) will continue as a free, educational site that serves as the main

ing power ... which has kept the spec viable for 37 years.

Check out author/musician Craig Anderton's [craiganderton.org](http://craiganderton.org) educational site, [craiganderton.com](http://craiganderton.com) digital storefront, and stream his music at [www.youtube.com/thecraiganderton](http://www.youtube.com/thecraiganderton).



## NYU Clive Davis

(continued from page 18)

fore," he points out.

"They run these studios 16 hours a day, seven days a week. They see a lot of action, so everybody had input on how, ultimately, this is going to function and last over the years."

While the studios are numbered, each also has a name that reflects the striking décor and finishes, curated by Sansano. The first, for Dolby Atmos production, is the only control room with a double-height ceiling, to accommodate the overhead speakers; it's known as the Retro Room. "The walls are a mod '70s pattern designed by Lenny Kravitz, who has a textile and furniture company," says Sansano.

The control room is outfitted with a Rupert Neve Designs 5088 analog desk that was relocated from its former NYU home. "We had to figure out a way to integrate the monitoring," says DelBello. He worked with Jun Yamazaki of Japan's TAC Systems to install the company's MADI-based VMC-102 controller. The signal chain also incorporates an Avid MTRX and a DirectOut Technologies Andiamo MADI-based converter

unit. Next door is the critical listening room, which DelBello equipped for Dolby Atmos playback.

Next in line is Oscilloscope Labs, home to the private production studio of the late Adam "MCA" Yauch of the Beastie Boys. Yauch succumbed to cancer in 2012 at the age of 47. His wife, Dechen Wangdu, donated the studio in its entirety to NYU for as long as they need it.

Marinelli was involved with the original studio at Oscilloscope Labs on Canal Street in Manhattan from the beginning, overseeing its evolution from a Pro Tools system through a vintage Neve 8058 analog mixing desk to the 8078 console that now resides at the MetroTech location. "We had the opportunity to rebuild the studio at NYU and maintain some of the aesthetic ideas from the original facility," from the color scheme through the studio furniture to the collection of production gear and instruments and shelves of records and books, says Marinelli. "Fran did a good job of implementing the feel of the original room without trying to do a facsimile."

Studio 3, better known as the Nature Room for its images of forests and sylvan color scheme, houses a new API AXS Legacy analog mixing console. The room was integrated by

Marinelli.

The fourth studio, the Warhol Room, is named for the licensed Andy Warhol prints and images covering the walls. It features an analog SSL 9000K console moved over from NYU's Manhattan facility.

The two Dolby Atmos rooms and the Warhol Room are all outfitted with PMC monitors. Oscilloscope was upgraded during the relocation to the midfield ATCs that had been on Yauch's wish list, and the Nature Room features JBL's mastering-grade M2 monitors. Otherwise, says Sansano, "We put the newest generation Genelecs everywhere, in all our playback spaces, edit suites, classrooms, labs and offices."

He adds, "We also built a massive shop, with five benches and all the gear, including instruments." There are additionally two overdub rooms on the fifth floor, integrated by Marinelli, featuring API Box consoles and a booth for vocals.

Marinelli and DelBello worked together on two hybrid rooms. These floating, sound-isolated, multifunction spaces complete with backline and theatrical lighting can be used as teaching, performance or rehearsal rooms. "I put a small d&b audiotechnik P.A. system in each one," reports DelBello.

"We also have a DJ practice room with an assortment of equipment, and we have three piano practice rooms," in addition to five edit suites with in-the-box workflows, says Sansano. "And we built a couple of rooms for our music instruction faculty that are offices but can serve as classrooms, with Genelecs, a small mixer, microphones and videoconferencing."

Indeed, several of the rooms are equipped for multimedia presentations and feature the latest video technology in addition to cutting-edge audio. "On the sixth floor, we built a large multimedia room for presentations and guest lectures, with a Barco video wall and PMC Wafer speakers in the walls and ceiling for a multimedia experience." Also on the sixth floor are a couple of DAW labs with 12 stations in each for teaching Pro Tools, Logic, Ableton and Sibelius, as well as streaming technologies and streaming business.

"I don't know how many recording and rehearsal facilities like this are being built on a commercial scale. Maybe none," says Sansano. "This was an opportunity to do it right, so this is a representation of the best that it can be."

Clive Davis Institute of Recorded Music  
<http://tisch.nyu.edu/clive-davis-institute>

## Capricorn

(continued from page 18)

Brumley, the original studio and control room were largely undamaged by the ravages of time. "When we reopened, we had a lot of Capricorn alumni come back. To a person, they said the room looks the same, sounds the same and even smells the same," he reports.

Evans says that in 2016, when Gregg Allman was receiving an honorary degree, he told president Underwood, "The room is perfect. Don't change a thing." He also said, "Get an analog console," so we've honored Gregg's request."

The studio, a Tom Hidley design complete with compression ceiling, opened with an API console and Westlake monitors in the front soffit. Following Allman's directive, the A room has reopened with a 40-input version of API's 2448 analog console, the largest built by the manufacturer to date.

"We were looking at a used API with quite a history at one point," Evans reports. "Then we thought, why don't we get exactly what we need, brand new and under warranty? I had

the DAW station put in the middle for the modern workflow." The desk includes API's 529C stereo bus compressor and is outfitted with Final Touch fader automation.

"We come in through the API and into 64 channels of Antelope Orion converters," he continues. "We're capturing into Pro Tools right now but we're going to add 24-track 2-inch tape."

The Mercer team added a second, 1,400-square-foot live room behind studio A's control room. "Studio B has a different sound and feel than the historic studio," says Evans. "The historic studio is very dead; studio B is a little more reflective. I've got it treated with 16 4-by-4-foot Acoustimax panels, strategically placed, and we custom-built rolling gobos."

"The room really sounds fantastic, but it does have a room sound. So for vocals, strings or a big drum sound, we can record into the B control room or take it to the patch bay of the API in studio A. We have 24 lines that feed the API and 32 feeding the B production room."

Since the budget wouldn't stretch to accommodate a second API desk in the B room, Evans says, "we have an Avid C24 running Pro Tools and a nice selection of preamps and other

gear, including Vintech Neve clones." Like the A room, studio B's control room offers Yamaha HS10 and Focal Solo6 Be nearfields, plus a Genelec 8020 5.1 system.

The new live room doubles as an event space, Evans adds. "It has a flown P.A. system, a lighting rig with moving lights and LED floods, and we have a stage we can take in and out as needed for performances. There's also a laser projection system and a motorized screen so you can score to film."

A complex of 12 rehearsal rooms, dubbed the Capricorn Incubator, has been constructed across two floors to facilitate the development of local music talent. It is open around the clock. Part of the second floor is additionally given over to offices, conference rooms and coworking space for creative professionals.

The complex also features 1,200 square feet of interpretive space—the Capricorn Museum—that tells the story of Capricorn and Macon's music history through artifacts and interactive digital exhibits. "Our curator, Jared Wright, did a fantastic job. He's maintained relationships with collectors over the years and knew where everything was and where to get it," says Brumley.

One of the consultants on the renovation project, Mercer alumnus Steve Ivey, a Nashville-based multi-award-winning producer and engineer, also owns a solar company. "He put enough panels on the roof, with the help of Mercer engineering students, to power the API and the lighting in studio A," says Evans. "And we can sell the excess back to the grid."

Mercer Music at Capricorn is surrounded by a high-end loft development that offers accommodation for visiting recording clients, says Brumley, who notes that Macon is just 90 minutes from the airport in Atlanta. The immediate neighborhood offers brew pubs and restaurants, and the city is home to numerous historic music-related attractions, including the Big House Museum and Rosehill Cemetery, where four Allman Brothers Band members are buried, and the Otis Redding Foundation.

"There's something in the water in places like Austin, Muscle Shoals, Memphis—a frequency, a combination of factors that make them magical—and Macon has that," says Evans. "When you walk into this studio, you can feel it."

Mercer Music at Capricorn  
<http://capricorn.mercer.edu>



## briefs

### School Adds Studio Tech Comms

KEARNEY, MO—Kearney High School in Missouri has added Studio Technologies (www.studio-tech.com) Model 371A and Model 373A intercom belt packs and a companion Model 5422 Dante intercom audio engine at its Bulldog Broadcasting Network (BBN), which covers about 25 football and basketball games aired on ESPN3 each year.

### Sony Takes Jumanji to Next Level

CULVER CITY, CA—Led by supervising sound editor/re-recording mixer Julian Slater, supervising sound editor Joel Shryack and re-recording mixer Kevin O'Connell, the audio team from Sony Pictures Post Production Services (www.sonypicturespost.com) created the soundtrack for *Jumanji: The Next Level* in Dolby Atmos in Sony Pictures Studios' historic Cary Grant Theater.

### TeamSpeak Tapped for Overwatch

NEW YORK, NY—TeamSpeak (www.teamspeak.com) is developing a secure in-game system enabling team voice communications to be recorded, distributed, transported and managed by one central admin for Blizzard Entertainment's *Overwatch* League global pro esports competitions, as the league's official voice supplier through 2022.

### Kaiser Comm Builds Post Facility

LOS ANGELES, CA—Kaiser Comm Construction (www.kaisercommconstruction.com) recently completed a multi-room facility encompassing three Dolby Atmos stages outfitted with Avid S6 and S3 consoles and Pro Tools HDX systems and JBL speakers in Burbank, CA, for Signature Post, which is owned by Greg Stone, principal of SPG Studios.

## Butter Jams to Make Bread

BY STEVE HARVEY

VENICE, CA—The close-knit staff at Butter Music and Sound's West Coast facility work hard and play hard. Visit on any given day and you will likely find them enjoying a communal lunch on the spacious second floor patio, which includes an outdoor kitchen. But as soon as lunch is over, they're back at work, crafting a TV commercial campaign for one major brand or another.

The full-service music company was established at its present location, barely a block from Venice Beach, a little over six years ago as a West Coast offshoot of the New York-based company. There is also an office in Berlin, Germany.

"We do everything from original music, music licensing from our own catalog, and music supervision to sound design for any moving picture," explains executive producer Annick Mayer. Previously senior producer at Butter New York for four years, she relocated to help launch the West Coast division.

"We have a really good balance between the space that we need to work and entertaining space for cli-



Bringing it for Butter are (l-r): creative director and composer Max Schad, executive creative director Tim K and composer Robbie Gardunio

ents. We also represent a small roster of bands for sync and have had some of them play showcases here."

While the majority of the work is for advertising, she continues, "we're picking up work in TV and film as well. We just got a TV show called *Bless the Harts* on Fox, an animated series that we're doing original music for. And Chip Herter, our director of sync, has been doing a lot of sync licensing for TV and films. So it's

across the board, music and sound for moving picture."

Mayer has led the team on some significant projects, providing original music and licensing for, well, pretty much every brand: "We work with all the major ad agencies in the U.S., so everything from Google, Airbnb and *Clash of Clans* to Comcast, NFL and Geico."

Compositions that don't make it  
(continued on page 27)



## BAM Studios Opens Podcast Division

BY CLIVE YOUNG

CHICAGO, IL—While podcasts have been around since the mid-2000s, the portable broadcast format has hit peak awareness in recent years. With the format's new prominence has come a wave of change that has swept away the amateur production values that were so prevalent in early years, replacing them with sophisticated audio presentations that include music, guest appearances, sound effects and more. To provide that level of audio artistry, a number of existing recording studios are now offering podcast production services.

Chicago-based BAM Studios recently launched its own podcast division, guided by Emmy-winning producer/creative director Chris Olsen. BAM's intent is, in essence, to provide one-stop shopping for potential podcasters. While technical offerings are the driving force behind the new division, it provides a variety of other services as well, from original content development to full production recording, editing and music, as well as final posting to a variety of podcast hosting sources.

The division is centered around



Inside the new podcasting facility, Studio K, are engineer Sidney Jones, engineer Dave Leffel, Emmy-winning producer/creative director, Chris Olsen, and owner of BAM Studios Brian Reed

BAM's new podcast recording studio, Studio K. The custom-designed room features a modular mic setup allowing up to four in-studio voices to be recorded simultaneously. Gear on hand includes the ubiquitous podcasting mic, the Shure SM7B, as well as three Electro-Voice RE27N/D broadcast mics mounted on Electro-

Voice 309 A shockmounts hanging from Blue Compass desktop boom arms, all leading to a pair of Focusrite RedNet X2P 2x2 Ethernet audio digital IOs. Fostex T40RP headphones are available for talent.

The studio can also connect clients, guests and hosts from around  
(continued on page 27)



# Inside the Oscar-Nominated Sound of *Ford v Ferrari*

LOS ANGELES, CA—*Ford v Ferrari*, the true story of the Ford Motor Company's upset racing victory at Le Mans in 1966, is nominated for sound editing and sound mixing Oscars, and much of the film's drama hinges on the excitement conjured by its sound. That's a fact not lost on reviewers such as Mihir Fadnavis of *FirstPost*, who noted, "Nothing beats the experience of bombastic sound design, tires squealing and sparks flying on a massive screen."

Creating those sounds was no simple feat. Production sound mixer Steve Morrow used a variety of wireless transmitters and receivers to capture the action, recording the sounds of the cars as well as their drivers. "We only had one vintage Ford GT40 on set," recalls Morrow. "The rest were film cars with more modern engines for the sake of reliability. So, for authenticity, the post-production

team went to a track day and convinced a bunch of guys with actual GT40s to let them record their engine sounds. Where boom mics were needed, we put Lectrosonics HMa plug-on transmitters on the boom poles so the operators could move around freely."

While one might move around a car to get sounds, when it comes to capturing the likes of Christian Bale and Matt Damon, keeping the mic still and out of sight is the priority. "I always use SSM transmitters for all the actors' mics," says Morrow, who was previously nominated for Academy Awards for his work on *La La Land* and the 2019 remake of *A Star Is Born*. "SSMs are the smallest and lightest transmitters Lectro makes, so the talent barely knows they're there.



The classic Ford GT40 was captured for *Ford v Ferrari* with a variety of boom mics, with Lectrosonics HMa plug-on transmitters on the boom poles.

They have other transmitters with higher output power, but we've never had a problem with range. For most of the dialogue, we have active shark-fin antennas on long coax cables, powered from the Venue 2 receiver chassis."

With the FCC rewriting the rules on wireless audio every few years, being able to find and hold a usable frequency is more crucial than ever.

Accordingly, Morrow comes to the set loaded for bear: "I now have three Venue 2 units on my main cart, so I can do 18 channels of wideband. The SSMs are wideband-capable, which is key with the available frequency spectrum being such a moving target."

For on-set communications and IFB monitoring, "My team, which included Craig Dollinger and Brian Mendoza, used LT transmitters to talk to each other," says Morrow. "We also used an older UM400a as an IFB transmitter, and we all listened using IFB-R1a receivers. I've recently just gotten into the M2 Duet system as well."

All that effort is paying off as the film won Outstanding Achievement in Sound Editing—Effects/Foley at the Motion Picture Sound Editors' Golden Reel Awards in mid-January. (For more on the Golden Reel Awards, see story on page 12.)

Lectrosonics  
www.lectrosonics.com

## AES to Garner Technical Emmy for AoIP Work

BY PAUL MCLANE

NEW YORK, NY—The Audio Engineering Society will receive a Technology & Engineering Emmy Award for its work with audio over IP, sharing the award with six partners who were involved in developing the AES67 standard: ALC NetworX, Audinate, Kevin Gross, QSC, The Telos Alliance and Wheatstone.

The award, presented for the "development of synchronized multichannel uncompressed audio transport over IP networks," will be given in a ceremony at NAB Show at the Wynn Encore in Las Vegas on April 19.

AES67 is a protocol that established a standardized language for audio transport. Although AoIP plays a huge role in radio, the Technology & Engineering Emmy Awards actually are presented for developments or standardization in engineering technologies that affect television.

AES noted that its AES67 standard for high-performance streaming audio-over-IP interoperability was introduced in 2013. It stated, "AES67 compliance allows audio content interoperability between the proprietary IP-based audio networking protocols developed

by the Emmy co-winners: Ravena, Dante, Q-Sys, Livewire+ and WheatNet-IP."

AES fellow Kevin Gross led the AES67 Standards effort and is the chair of the AES Technical Committee on Network Audio Systems.

In the AES announcement, Gross was quoted: "The improvement from audio networking born in the mid-1990s to new IP-based solutions emerged as a simultaneous invention from the honored companies. While collectively this represented a technical improvement, interoperability was not addressed until the AES initiated the X192 project on audio interoperability."

He thanked the late Steve Church, Rich Zwiebel, Philip Lawo and Andreas Hildebrand as leaders of companies who "understood the potential for a standard to take audio networking to the next level," and thanked then AES standards manager Mark Yonge for mentoring the process.

AES executive director Colleen Harper said AES67 "fundamentally changed the broadcast audio landscape and paved the way for recent similar developments for video."

AES  
www.aes.org

## ITU Recommends ATSC 3.0 as B'cast Standard

WASHINGTON, D.C.—The International Telecommunications Union (ITU) has adopted the Advanced Television Systems Committee's ATSC 3.0 as a recommended digital broadcast standard, paving the way for countries around the world to evaluate and use the IP-based digital broadcast standard, the first of its kind in the world.

ATSC 3.0, designed to deliver everything from 4K Ultra HD to robust mobile signals, also encompasses NGA, or Next-Generation Audio features, intended to enable new business models and give consumers a better experience. Developed by hundreds of industry experts who sought to create a state-of-the-art broadcast system based on the same Internet Protocol language used by over-the-top services, ATSC 3.0 greatly expands flexibility and adaptability for broadcasters, allowing them to transmit data that will both enhance TV broadcasts and provide new revenue opportunities.

The next step is to update the *ITU Digital Handbook* with best

ATSC 3.0

practices for implementation of ATSC 3.0. ATSC members are poised to continue supporting international standards efforts, including through the new ATSC Planning Team 6 on Global Recognition of ATSC 3.0.

"ATSC appreciates the efforts of the U.S. delegation to the ITU, led by the U.S. FCC, and we congratulate the ITU on its careful review and decision to include ATSC 3.0 as an official ITU standard. The system is currently commercially deployed in South Korea, where audiences have been enjoying high-quality Ultra HD video and next-generation audio from ATSC 3.0 broadcasts since 2017. U.S. commercial deployment begins in earnest this year," said Madeleine Noland, president of ATSC.

ATSC  
www.atsc.org



## Butter Music

(continued from page 25)

into a campaign are made available through the company's library. "We can give our clients access to this bespoke music written by super-crazy-talented composers and license it for a more affordable fee," Mayer says. "And if we happen to somehow have a slow day—which is not that often—our composers will write something for the library specifically."

There are three composers at the Venice facility, including Robbie Gardunio, creative director Max Schad (who recently relocated after 18 months at the Berlin office) and executive creative director Tim Kvasnosky, better known as Tim K. An almost 30-year veteran of the music business, Tim K. has worked on projects by the likes of Sam Sparro, David Frank of The System and Morrissey. Indeed, virtually everyone on staff has a parallel career as a recording artist.

Each composer has his own room, with access and tie lines to a shared live space and a vocal booth. The live room certainly gets used, says Tim K, "but we mostly do stuff in the box."

Schad and Gardunio use Pro Tools, while Tim K favors Logic Pro. "Malayna [Ellis, production coordinator] and Stone [Irr, producer] also have Logic Pro and do edits, laybacks and things like that," says Tim K.

Favorite software includes iZotope products, and all three composers lean heavily on composition libraries. "We're big Spitfire Audio fans," says Tim K, "and we use all the usual suspects for plug-ins. We're all on Universal Audio. I'm a UA artist."

ence. I use a [Sennheiser MKH] 416 to record vocals— that or a Shure SM7B."

"We're recording vocals and guitars every day," chimes in Gardunio, who also favors the 416. "It's really directional and gets rid of the room. I use Neve clones for vocals and APIs for acoustic instruments."

Focal monitors are common to every room. "I've been working with Focal since 2003. I had one of the first pairs of pro speakers in the

specializes in a younger sound that hews closer to today's musical trends. "We have eight hours to crystallize the sound of some song on the radio. When you do that every week, you see the trends and the techniques, and find things you can repeat, which is great for our chops."

"In one week, we'll do country, bluegrass, classical, hip-hop. It's so much fun and always a new puzzle. Every week, we're learning—and we still have to find the device within that instrumental palette to create tension and tell the story."

Social media is driving a trend toward shorter spots. "It used to be :30s and occasional :60s and :90s," he says. "But now we're doing a lot of :06s. You have to get straight to the point; you slam into the vibe and that's it."

There is no substitute for the storytelling abilities of composers such as those on the Butter team, Tim K believes. "I think there will always be a place for original music. Libraries are going to continue to get more varied, but that doesn't affect the kind of stuff that we do, where we have 16 points to hit in a 30-second spot with varied tempos. They're still going to need us to do that."

Butter Music and Sound  
www.gimmebutter.com

"I think there will always be a place for original music."

Tim Kvasnosky

The composers are constantly recording tracks through the collections of microphones and mic preamps in their respective spaces. Schad has even gone the extra mile, building his own API, Neve and Trident clones from Seventh Circle Audio kits.

"I've been here since February and I've done 200 tracks for specific projects already," says Tim K, who favors a Rupert Neve Designs Portico II Channel. "As a creative director, I try to have at least one mic open on every session. It makes a big differ-

country," reports Tim K. He and Gardunio use Dangerous Music monitor controllers, while Schad's room features a unit from SPL.

Despite those amenities, "We do a lot of mixing in headphones, surprisingly," says Tim K. "I was never a headphone mixer, but these guys do it all the time, and I'm blown away by what they do. Robbie is 25 years old and his ears are so good."

The New York office is best known for classic comedic commercials, says Tim K, while the Venice facility

## BAM

(continued from page 25)

the world to any session via Skype, digital phone patch, ISDN, Source-Connect, Comrex IP and IpDTL, making use of the facility's TV, film and commercial capabilities.

BAM Studios has already worked on a variety of podcasts, including AC-LU's *Talking Liberties*, Ronan Farrow's *To Catch and Kill*, Chris Olsen's *ShoutBox*, Callaway Rogue Moments with Bill Macatee, McDonald's *The Sauce*, and *Add Passion and Stir*, for which the studio provided voiceover recording, music licensing, sound design, editing and mixing. A slew of corporate podcasts have passed through the facility, and soon the studio's résumé will include BAM's own *Bang-Zoom* podcast, coming later this year.

The kind of entrepreneurial spirit often be found in fledgling podcasts is something familiar to BAM Studios, which marked its 20th anniversary in December. Founded by Brian Reed in 1999 in downtown Chicago, BAM sprang to life when Skyview Studios, a post-production facility he worked at, shut down. Left with a slew of McDonald's projects that he



BAM's podcast facility, Studio K, sports gear from Focusrite, Shure, Electro-Voice, Fostex and Blue.

was still booked for, Reed founded BAM as a single studio, employing one assistant. After several years going it alone, a former assistant, Dave Leffel, joined the team, resulting in a second studio. In time, BAM grew

to encompass a half-dozen studios across two locations, with rooms variously designed by Russ Berger Design Group and Threshold Acoustics. Today, the company has nine employees (including Ellie Bellie, the studio

pup) and offers sound design, ADR, voiceover recording and casting, digital patching, mixing, sweetening, re-recording and more.

BAM Studios  
www.bamstudios.com



## innovations: the manufacturer's view

# Music Enhancement: A Fresh Approach to In-Ear Monitoring

## ASI AUDIO X SENSAPHONICS 3DME MUSIC ENHANCEMENT SYSTEM

BY MICHAEL SANTUCCI

ASI Audio x Sensaphonics 3DME Music Enhancement System

I never set out to be a manufacturer. At my core, I'm an audiologist. My professional goals have always been tied to hearing health. As a musician, I knew the entire industry was at risk, so it was natural for me to focus my practice on the music industry. One opportunity led to another, and Sensaphonics evolved into one of the very first manufacturers of custom earphones.

Many have noted the potential for IEMs to help musicians hear their mix clearly and at safer levels ... "with proper use." As a manufacturer, I've designed many products with that in mind, but the bottom line is, live music tends to be loud. And there's nothing wrong with that. I love loud music, too!

Over the years, I've had tremendous success educating the industry on hearing health and designing innovative IEM products like the 3D Active Ambient system (U.S. Patent 8,160,261). By embedding a binaural microphone system in high-isolation earpieces, musicians gained access to the stage sound they were missing, eliminating the dangerous practice of one-in/one-out monitoring. It was unique and expensive, but it worked.

While many other IEM companies engaged in a seemingly endless battle for the highest driver counts, Sensaphonics remained focused on making the 3D system both more powerful and more affordable. It was a frustrating battle until 2018, when a chance meeting brought me together with CEO Jim Harris of Think-A-Move, a manufacturing company focused on headset products used in high-noise applications. After a few conversations, it was clear that our expertise and perspectives were ideal complements to each other. We joined forces to form a new company, ASI Audio.

Our shared vision was to create an entirely new approach to in-ear monitoring, using the Active Ambient technology platform. Our concept, called Music Enhancement, is embodied in our flagship product, 3DME.

Music Enhancement represents a new way of thinking about in-ear monitoring. 3DME is loaded with innovations and improvements, many of which have never been found in any IEM design. But the real beauty of this product is the way its features work together, making 3DME an ideal product on stage and off, for amplified groups or orchestras, and for music lovers as well, whether in the audience, at home or on the go.

Making this happen required re-designing the 3D Active Ambient system from the ground up. The ambient earphones are now universal fit (though there is a custom option), with new drivers and an upgraded MEMS microphone system. As a result, the IEMs themselves sound as great as ever, yet are more robust and less expensive than any previous 3D system.

The 3DME system's bodypack mixer has been similarly uplifted. It's now lighter in weight, smaller in size and rechargeable. Its only external controls are simple up/down buttons for ambience level, yet its capabilities have been expanded with the addition of a data output for its 7-band equalizer and other onboard tools.

The challenge was to provide new, expanded capabilities, but without making the system difficult or bur-

densome to use. In serving the music industry for over 30 years, one key thing I've learned is the importance of helping artists to focus on their performance, not their equipment.

We needed a way to implement personal control without making it confusing or complex. 3DME achieves that with another innovation in the world of IEMs: the ASI Audio app.

Using a smartphone or tablet, the app makes it easy to use the sound sculpting tools within the bodypack mixer. Input levels are adjustable. The limiter threshold can be set to ensure safe listening. And then there's the 7-band EQ, which allows you to literally dial in your personal sound signature. All these settings can be done in stereo, or via separate left- and right-channel controls.

The idea is to wear your 3DME earphones with the bodypack mixer plugged into your smartphone, which is used to customize your settings. Once you have the sound you want, your setup is saved to the bodypack mixer. Simply disconnect your smartphone or tablet, and your system is ready to rock, automatically saving your settings as the default for your next session. You can also save your settings into a library of personal presets within the app for easy recall.

This puts immense power into the hands of the user. On stage, you've got your monitor mix (usually through a wireless bodypack receiver), augmented by 3D ambience at your preferred level.

3DME is just as useful for orchestral and other acoustic musicians who have no monitor mix. For them, it acts as a variable hearing protection system with custom EQ. I've seen career classical musicians using 3DME literally moved to tears at being able to hear the orchestra the way they remember it from their youth.

3DME is a powerful tool offstage as well. Portable device listeners gain situational awareness of the sounds around them, and can control its level and tweak its EQ. Frankly, the applications are nearly endless.

It is said that true innovation lies in combining existing ideas in new and interesting ways that satisfy needs and meet new requirements. By adding app-driven sound tools to the unique technology of Active Ambient IEMs, I'm convinced that ASI Audio has achieved exactly that with 3DME Music Enhancement.

Michael Santucci, Au.D., is co-founder and chairman of ASI Audio.

ASI Audio x Sensaphonics  
www.asiaudio.com





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Frank Filipetti in his mix room.

## METAlliance®

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The METAlliance—Al Schmitt, Chuck Ainlay, Elliot Scheiner, Frank Filipetti and George Massenburg, along with the late Phil Ramone and Ed Cherney—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 METALLIANCE REPORT: Grid Versus Groove

BY FRANK FILIPETTI

Forty years ago in 1980, when I was just starting my career as an engineer, thinking about the year 2020 conjured up all kinds of fantasies. By then, we’d be in flying cars, the world would have conquered pollution, poverty and privilege, and we’d be enjoying a prosperity of unimagined proportions.

Well, we didn’t get most of those things. In fact, we didn’t even come close. But those of us lucky enough to have chosen music for their profession did receive some incredible benefits by 2020. Among those were the ability to record almost anything with incredible fidelity, anywhere, and for a fraction of the time, money and preparation it would have cost in 1980.

But as with all new things, there was some bad news along with the good: The art of recording multiple instruments together in a room is becoming a dying art. More and more recordings today are done piecemeal, one track at a time. What we gain in control is offset by the lack of the synergistic communication of musicians melding minds through the language of music in real time. That’s the “groove.”

Recording on a grid is standard operating procedure today. This makes it easy to overdub, edit and manipulate tracks in a way unheard of back in the 20th century—but at what cost?

Many students I work with today are brilliant on their DAWs of choice. I have heard works of incredible creativity and virtuosity from students at USC Thornton, Berklee and UMass.

I’ve heard beauty and inventiveness from young musicians in the United States, Mexico, Colombia, France, Italy, Japan and Russia. These students have encouraged me to believe that as derivative as pop music has become, there is real hope for true creativity in the future.

But as optimistic as I am, I can see a real danger lurking. Many of these students, as brilliant as they may be, have little or no sense of groove. For many of them, if it’s on the grid, it grooves, but for those of us brought up in the heyday of Motown and Stax, today’s grooves are facsimiles of true artistic grooves. All one has to do is take a computer-driven groove

band in a room, there is a palpable energy that happens when the groove is right. It’s not ephemeral; it’s easily recognizable by everyone in the session. Suddenly and spontaneously, at the end of a great take, everyone looks at each other, smiles and high-fives. You can feel the temperature in the room rise. The vibe is pure joy.

When a drummer plays to a click—and some are phenomenally good at it—as great as the track may be, there is often a point where the energy deflates in ways that you don’t experience with a great track that “breathes.”

As an example, let’s say the band goes to the pre-chorus and the communication among everyone is euphoric. As that energy makes its way through each musician, there may be a tendency to increase the bpm ever so slightly. As everyone is com-

speeds up the first bar of the chorus to get back to the click. As a result, he either needs to refrain from going where his inner musician feels it, or he will find his track being manipulated after the fact to reign him in. Slowing down followed by getting back to the groove is natural and exciting. However, slowing down and then speeding up to get back to the click is not only unnatural, it creates a temporary emotional collapse.

All of this happens at a preconscious level, of course, but preconscious or not, it doesn’t provide the same emotional arc that those tracks from the pre-click era provided. In the ’80s, the three most important elements before you pressed record were tempo, key, and whether or not to click. That third option is rarely discussed anymore. Maybe it’s time that one came back.

The art of recording multiple instruments together in a room is becoming a dying art. More and more recordings today are done piecemeal, one track at a time. What we gain in control is offset by the lack of the synergistic communication of musicians melding minds through the language of music in real time. That’s the “groove.”

from today’s music and compare it to “Dancin’ in the Street” by Martha and the Vandellas, or Ray Charles’ “What’d I Say” or Marvin Gaye’s “What’s Going On.”

Were you to place those tracks on a grid and retim everything to fit into a fixed bpm, you would no doubt hear the difference a great groove makes. Understanding what makes a great groove is more or less second nature to us old timers, but it’s not so easy if you haven’t been brought up in an age before the click track.

When you record a song with a

communicating that movement in real time, the entire band adjusts and the excitement builds. Just before the chorus enters, the drummer provides a stellar fill that actually slows the track down momentarily and creates a tension point that, a few beats later, upon the downbeat of the chorus, is released and once again, the band follows his/her lead. Groove, tension, release, exhilaration.

However, if the drummer tries that with a click track, a truly unnatural tension develops as he/she slows down the fill, then (very unnaturally)

Multiple Grammy-winner Frank Filipetti’s credits include Number One singles such as Foreigner’s “I Want to Know What Love Is” and “I Don’t Want to Live Without You” (which he also produced), KISS’ “Lick It Up” and The Bangles’ “Eternal Flame.” He’s worked with acts ranging from Korn and Fuel to Barbra Streisand and Elton John, and has also produced, recorded or mixed albums for Carly Simon, George Michael, Dolly Parton, Rod Stewart, Luciano Pavarotti and James Taylor, among many others.

METAlliance  
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## CRANBORNE AUDIO CAMDEN 500 MIC AMP ■ FOCUSRITE ELEVATE MASTERING PACKAGE ■ AKG K275, K371 HEADPHONES

### CRANBORNE AUDIO CAMDEN 500 MIC AMP

I've got to give credit to Cranborne for some very effective marketing. Once I read their claims of an extraordinarily clean mic preamp that can optionally get colorful in two different ways, my curiosity was piqued. Their claim is simple. Transformers offer great common-mode and RF rejection, and they impart often useful non-linearity, but they are not the best way to achieve really open dynamics or flat frequency response. Cranborne's solution is to employ numerous discrete transistors as gain stages and create two different circuits to emulate a transformer's tonal behavior.

#### OUT OF THE BOX

The Camden starts with a detented gain control in approximately 5.5 dB steps ranging from +8 to +63 dB. A three-way toggle switches between mic, line and Hi-Z input (1.5 megohm) with phantom power, polarity reverse and a multistage high-pass filter (-6 dB at 50 Hz) available. This clean path achieves very impressive specs: THD+N of 0.0002 percent, -129 dB EIN (with a 150 ohm load, unweighted), frequency response within +/-1 dB from 5 Hz to 200 kHz at all gain settings (not a misprint), common mode rejection greater than 85 dB (typical) and minimal phase shift of less than 2 degrees from 50 Hz to 20 kHz!

That's all clean and dandy, but that's where the two Mojo circuits step in. A series of filters and harmonic generators (2nd and 3rd order) provide Thump or Cream, which aptly describe their respective low- and high-end enhancements. The control knob clicks off for no Mojo at all and then can be cranked from subtle to radical processing beyond typical transformers in either Thump or Cream mode, but not both.

#### IN SESSION

I first tried out the Camden on a bass guitar DI; we already had a nice clean tone and were looking for some growl-y, sustain-y stuff to run in parallel for an edgy rock tone. We had some gritty distortion coming out of an MXR distortion-pedal-DI that sounded only ok until we kicked in

the Mojo. Cream was nice but a little forward and top-end-y for this case, but Thump was right on point. At about 75 percent, a very nice thickening and warmth thing kicked in and gave our bass an attitude boost and an emphasis on the lowest two octaves I was looking for.

A drum room with a ribbon or a condenser mic was rather similar to bass DI. I found excellent response dynamically and frequency-wise with both the low gain required via the LDC and the higher gain needed for my AEA ribbon mic. As you've probably already guessed, some Mojo only made things better. Mojo can be pretty subtle, so I found myself typically

amount of Thump does wonders for increasing punch and presence of the low-end downbeats, while significant amounts of Cream helped create snare-like excitement of the high-end upbeats.

The same principles applied to kick and snare tracking, with Thump favoring kicks and Cream favoring snares. This wasn't a hard and fast rule, though, as hard-rocking kicks gained attack and aggressive excitement via Cream, and thin snares benefitted from the fullness and substance of Thump. I never did get to try tom-toms (as I had only one Camden and would need two or three), but I'd bet that some Mojo could make up for deficiencies in drum head selection or even poor technique.

Vocal tracking and overdubbing presented a near confusion of choices, but there were excellent results no matter which path I chose. For starters, I tried Camden on a vocalist who wanted clean linearity and nothing more. That's what Camden delivered, with nicely open dynamics, plenty of headroom and flat frequency response that made my mics seem fuller than they've ever been.

Where things got interesting was backing vocals and stacking. I found myself using all of Camden's features to create differentiation and variety. Every combination of the high-pass filter, Cream and Thump found a perfect application. Anywhere from subtle on some tracks to profound on others, Camden allowed me to stay in

the creative zone and avoid constant repatching (or re-miking) to achieve my multi-textural goals.

Clean guitars are translated perfectly, but dirty guitars seem to cry out for some Mojo. You might need Thump thickening or Cream emphasizing, but either way, you won't need much (25 to 50 percent) to increase attitude and musicality.

The direct 1/4-inch input sounded exceedingly flat and neutral with both my basses and acoustic guitars—nothing special, but nothing in the slightest bit deficient either; just clean and slightly honky, like the sources. Mojo to the rescue! Cream at 50 to 75 percent added a little beard, plen-



#### BY ROB TAVAGLIONE

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Cranborne Audio Camden 500 Mic Amp

dialing in values above the 12 o'clock position, whether it was the darker, rounding features of Thump (on the LDC) or the excitement-boosting sweetening of Cream (on the ribbon). Following the Camden with some compression helped even more, even though I chose more neutral compression than the colorful stuff I would typically select.

Percussion tracking offers plenty of flexibility, too. A little Thump helped tambourine tracks to smooth out, with high-end softening even if there was no bottom end to enhance. Cajon tracking always finds me with a low and a high mic, and Camden can assist either one. A moderate

ty of character and sounded almost amp-like for a prominent bass sound and increased mix audibility without adding level. Thump at 75 percent brought the big-bottom depth that sounded almost like an Ampeg SVT and guaranteed a bass player smile.

Acoustic guitar was similar, with a perfectly ok (but slightly nasal) sound sans Mojo. Cream at 50 percent was delightful, with more richness, harmonic overtones and increased presence. Thump at 50 to 65 percent was equally wonderful, with increased fullness, texture and euphony, needing the HPF to reign in the extended bass. Both Mojo settings could turn a scratch guitar DI track into a keeper track if a lack of time or isolation was a problem. Seriously impressive results.

The "negatives" are few and not crucial: more metering beyond a pair of LEDs would be nice, the unit will loudly click/pop with the throwing of a switch (including gain), and a separate Mojo on/off switch would be nifty. I did not miss an output level control or impedance switching due to the inherent flexibilities of the Mojo circuits.

#### THE FINAL MIX

Don't confuse the Camden with a specialized one-trick-pony generator of dirt and harmonics. It's more accurately a reference-type preamp with an entirely neutral, linear, flat and open response across all gain settings, and it has breathtaking consistency from all sources. The fact that Camden can also generate harmonics, color and attitude makes it the most versatile preamp I've tested. Camden has destroyed my preconceptions about transformers and their necessity, making it a game-changer ... especially for only \$349.

If you'd like to hear the Camden in action, visit the Cranborne website for informative videos and a slew of audio examples. You can also send Cranborne a WAV file that they will Mojo for you, free of charge.

Cranborne Audio  
[www.cranborne-audio.com](http://www.cranborne-audio.com)



## FOCUSRITE ELEVATE MASTERING PACKAGE

As of late, Newfangled Audio has been releasing some interesting plug-ins that are distributed by Eventide—which comes as no surprise because Newfangled founder Dan Gillespie is a former engineer at Eventide. The Elevate Mastering Limiter (as reviewed by Rich Tozzoli in *Pro Sound News* in February 2018) remains available, but its component pieces have been broken up into individual plug-ins, making the Punctuate, Saturate and Equivocate modules available for tracks and buses. Aided by AI, the plug-ins are capable of powerful functions that reach beyond the scope of conventional plugs.

### SATURATE

Saturate is a spectral clipper with a dual personality that can do soft saturation or hard clipping; uniquely, it allows the tailoring of a smooth transition between those two states. Despite great flexibility, this plug is very easy to use, as there are only two controls: Drive and Clipper Shape.

Continuously variable Clipper Shape allows fine-tuning response, as the visual indicator moves from a smooth “cursive” S to a linear shelved-off S. This allows gentle saturation, or saturation that clips hard on just the peaks, or constant hard clipping, with exacting control of the transition point.

Drive allows up to 12 dB of processing; when you push Drive harder, your signal moves up the processing curve’s S and indicates when you’ve reached the hard clipping zone. Metering is the same as in Equivocate, while a defeatable Auto mode ensures unity gain even under heavy saturation.

This all probably seems a bit pedestrian, but there’s sophisticated signal processing going on via artificial intelligence that somehow manages to keep your signal’s tonal balance largely intact, whether subtly saturated or over-the-top distorted. Traditionally, such processing yields unwanted piercing high end, excessively tubby low end,



Focusrite Elevate

or murky low-mids, but without many side effects, you’ll find Saturate more useful than similar processors.

For mixes, the ability to lightly saturate allows additional detail, more warmth and a little in-your-face-ness without conveying dirt, aggression or woofiness. The process sounds more like fullness, analog-ness and presence—qualities that can benefit most any mix. Barely audible changes are actually quite visceral and profound here.

Conversely, now that Saturate is easily used as a channel insert (or on a subgroup/bus), you can drive that response well beyond saturation and into some grungy dirt, all without the typical nasty complications. Drum busses are a natural choice; you might choose parallel processing to preserve punch, but don’t be afraid to try complete signal processing with careful adjustments to Drive and Shape. Without the typical tonal mangling, you might just find yourself discovering new tones and simpler methodologies.

Beyond drums, there are plenty

of other useful applications for Saturate, like getting a vocal saturation for a “tubes ’n’ tape”-type sound, bass guitar plumpness or growl, subtly increasing synths’ presence or destroying them with clipping, and adding life and character to blandly recorded guitars (subtly with amp’d/mic’d ones or more heavily with DI’d/virtualized ones).

But best of all is the ability to massage clean acoustic instruments with more consistency and attitude, without getting fuzzy, obviously processed or changing their tone. I’m finding this really helpful when mixing wimpy instrumental tracks or trying to please persnickety bluegrass/folk players who want great tone but don’t want to sound the slightest bit unnatural.

### PUNCTUATE

Newfangled has applied the technology of the EQ section in Elevate (with its 26 frequency bands and MEL-based spacing) to Punctuate, allowing excellence at typical transient-shaping uses and some new functions as well.

Primarily, there are 26 frequency band sliders that can be arranged to either suppress or enhance that band up to 12 dB. Two big time-savers are that you can choose to draw a curve across these faders (Draw Curve) or reset them (Reset Trans). There’s also a global Transient Emphasis control ranging from -100 to 100 (for de-emphasizing or emphasizing). You can choose a Transient Length to help tune in, as measured in milliseconds, but the artificial intelligence that’s built in via Adaptive Transient (continuously variable from single band to multi-band) and Adaptive Length (also continuously variable from all the same lengths to different lengths) can do much of this work for you. Parallel processing is available with a Mix control. Visually, the same thorough metering found in Saturate is here, but there’s also a Transient Meter that shows only transients and their general frequencies over time.

The obvious use here is to bring drums out of a mix, which is now quite possible without significant artifacts. You can hone in on the transient attacks and their frequencies and bring them out (or suppress them) without pulling up neighboring signals like EQ or even dynamic EQ would. Kicks are easy, toms a little tougher, and snare can be trickiest to isolate, depending on its tone. In certain mixes, you could even pull up signals not as transient as drums/percussion, like pianos, upright bass and plucky guitars.

Now that Punctuate is a channel plug-in, too, more apps come to the surface. Take good old snare, for example; you can increase the snare’s fundamental and primary harmonics while subduing the attack of high-hat bleed or neighboring tom-toms. Slappy bass guitar not popping enough? Hone in on the thumb pops and finger slaps separately, and balance to taste.

That’s all good, but Punctuate is worth its price for one simple function: the ability to manage transients in a full mix with a degree of separation not quite possible without smart AI helping out.

### EQUIVOCATE

The most straightforward processor of the trio is what looks like a simple equalizer, but there’s much more than meets the eye. The 26 frequency bands are triangular in shape and in a MEL spacing that is reportedly more natural to our hearing than 1/3-octave spacings. (Oddly enough, the bands are very wide in the low frequencies and quite narrow with high frequencies.) For power users, the bandwidths are reconfigurable (via Custom), allowing very specific processing. Your EQ curve can be set a fader at a time or

(continued on page 33)

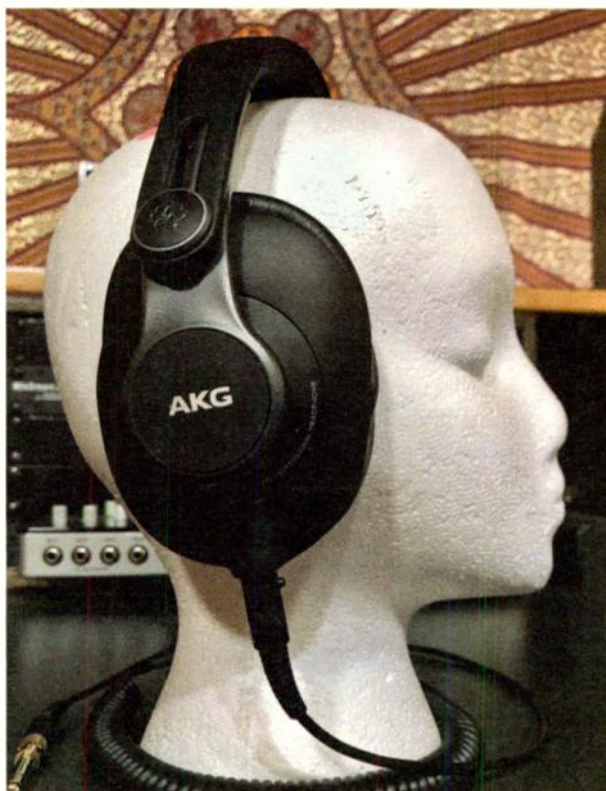
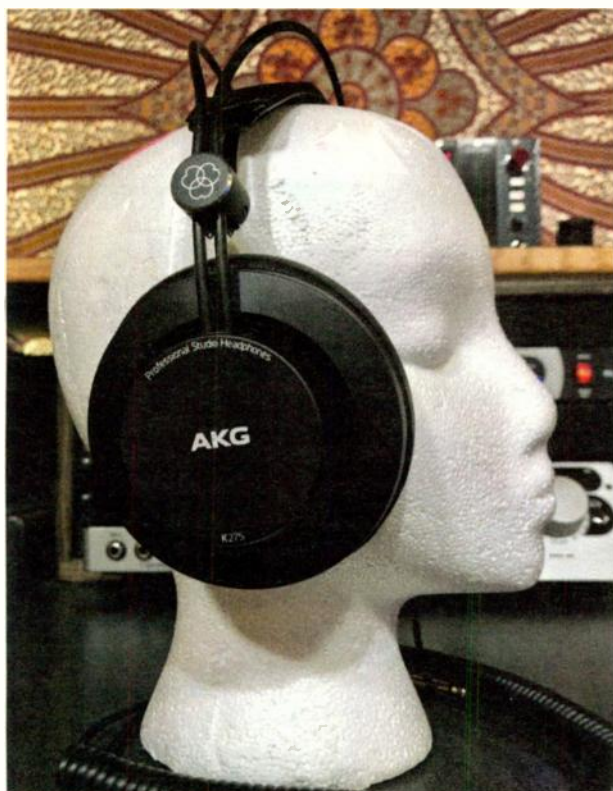


Saturate



Punctuate





AKG K275 (left), K371 (right) headphones

## AKG K275, K371 HEADPHONES

I'm still a fan of AKG's classic K240s, with their open-backed design and rather open sound as well, but the two models reviewed here are closed-back and more in line with modern performers/recordists who like the tight isolation, extended bass and high SPLs of closed-backs.

### K275

The K275s offer a round, closed-back, over-ear design and slow-retention foam ear pads. They don't look like it, but they fold right up for easier transport, with a three-axis hinge and rotatable cups, and they come with a nice cinch-top storage bag. At 295 grams (0.65 pounds), they're slightly heavy in use, but still comfortable because of the soft ear pads. These headphones will only go so small, however, as the headband ten-

sion defines fit, so smaller people and those with bald heads might want to try them on before purchase.

The large 50 mm drivers operate at a low-ish 32 ohms, enabling efficient use with a 109 dB SPL/V rating and wide response from 16 Hz to 28 kHz. Sonically, I found the 275s to have a warm high end, with more of a bottom end emphasis and plenty of low-mids, not the carved out middle that is so common. The low end isn't terribly defined, so I had trouble making mix decisions, but I found that performers liked tracking through them quite a bit. Bassists and guitarists appreciated the full, warm response, even if they weren't such a hit with vocalists.

The stereo imaging was strong, with a well-defined phantom center, and dynamics were slightly con-

strained at higher volumes (like most headphones). Although I wasn't able to mix on the 275s solely, I did find them a useful mix check for excessive low-mids and to make sure that higher-pitched elements were well represented.

The two big steel bands that are the backbone of the 275s seemed amply strong and durable, and the three cables provided (coiled, short straight, and long straight) are connected via a nice LEMO connector, ensuring long life and durability.

### K371

Even though the 371s are foldable, over-the-ear and closed-back, they're really nothing like the 275s. Here, the ear cups are oval, with a softer slow-retention foam, and their lighter 255-gram weight (0.56 pounds) makes

for a comfier fit. These cans have ear cups on sliding bands, unlike the sliding headband of the 275s, which allows for a snugger fit. Plus, they still fold up (the ear cups and their support arms snap and fold inward).

Once again, we've got 50 mm drivers, but this time with pure oxygen-free voice coils (and the accuracy that reportedly brings). These phones have 32 ohms impedance but yield a very efficient 114 dB SPL/V, with an extremely wide frequency response of 5 Hz to 40 kHz.

The K371's sonic signature is decidedly different from the 275, with a tighter and more defined low-end response, more punch, still a warm top end, and upper-mids that are much more forward. Dynamics and imaging seem comparable to the 275s and sufficient.

I found performers liking these cans, too, with instrumentalists and vocalists enjoying them, but bassists not so much (nor myself when mixing). As much as I loved the comfort and fit of these phones (I can wear them for hours without fatigue), I never could get over one prominent midrange frequency bump (600-ish) that got in the way of my mix decisions. This response made vocal and upper instrument decisions tough, but I still found the 371s to be a great bottom-end reference checkpoint. Their nicely moderated bass response is well distributed and quite even across the spectrum, providing great insight to bass and drum mix decisions.

The three cables and storage bag complement the 371s as well, making them a good choice for users who wear headphones for very long periods of time, who want effective isolation and comfort, and those who like their guitars/vocals/snare more prominent than their kicks/basses/toms.

AKG

[www.akg.com](http://www.akg.com)

## Focusrite

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drawn in (Draw Curve), and is easily resettable (Reset Gains). A MatchEQ function brings AI help in matching the tone of your signal to a target source. An Auto level control maintains unity gain even during significant EQ'ing. Metering offers peak and RMS levels at both input and output.

### THE FULL ELEVATE KIT

Even though the individual components now have some very cool uses, utilizing Elevate for mastering remains a quick and convenient way to level up. The modules are locked into

order (equalizer>limiter>transient module>saturation), but the simple interface makes achieving a competitive sound quick and relatively easy. Optional dithering, automatic level control and quick access to the adaptive processes' severity makes dialing in hot levels with retained transients a lot easier than it's ever been.

All things considered, I think the Elevate Mastering bundle may be misnamed. The ability to use individual modules as track inserts, L-R mix processors, or subgroup processors makes this package most attractive and flexible for those seeking the advantage of AI-aided adaptive processes for extreme processing beyond the scope of typical mastering work.

Focusrite

[www.focusrite.com](http://www.focusrite.com)



Equivocate



## KEF Expands Reference Line

To answer the call for high-end integrated AV speaker system solutions, KEF has added a second Reference In-Wall, THX Certified Ultra custom installation model to accompany the formidable Ci5160REF-THX model. The new, smaller Ci3160REF-THX makes use of the same Reference driver topology as the box designs and uses two 6.5-inch bass drivers and 6.5-inch Uni-Q driver array. The larger Ci5160REF-THX has four 6.5-inch bass drivers and 6.5-inch Uni-Q driver array. Both models use the same Reference, solid aluminum front baffle, which eliminates unwanted vibrations. Each in-wall model can be used in left, right, center, side and rear applications.



## Telos Alliance Axia iQx AoIP Console Update

The Telos Alliance introduced new software (v1.3.2) for the Axia iQx AoIP console. Introduced in late 2018, the console combines a mix engine and surface into one unit and can be plugged into an existing AoIP network. The software update adds Automix to the Axia iQx; using this tool allows operators to automatically and efficiently balance the levels of on-air microphones when more than one mic is open at a time in a studio. The Automix function intelligently pulls down the levels when a person isn't speaking and resolves conflicts based on assigned priorities. Version 1.3.2 is now available for download.



## MXL Microphones Revelation II Tube Mic

MXL Microphones executives unveiled the Revelation II tube microphone at NAMM, describing it as following in the footsteps of arguably "the greatest microphone that MXL ever made." The MXL Revelation II will use the latest design and manufacturing technologies with the aim of providing the clarity and versatility of the original, but at "a fraction of the price." An actual price was not available at press time. The new mic will sport a dual gold-sputtered, 6-micron diaphragm and hand-selected EF86 pentode tube. Its polar pattern selection will be controllable by a variable pattern control knob.



## Mackie EleMent Series Microphones

Mackie is moving into the microphone market with the introduction of three mics under the EleMent Series: EM-89D Live Vocal Dynamic, EM-91C Large-Diaphragm Condenser, and EM-USB USB Condenser. The EM-89D dynamic microphone features a cardioid polar pattern; it is designed primarily for stage use but can double for use in the studio. Similarly, while it's intended to be a handheld vocal microphone, it can also be used as an instrument and amplifier microphone. The EM-91C's classic cardioid polar pattern makes it flexible enough to handle a variety of studio applications. While Mackie recommends using it on stringed instruments, the mic is also up for live streaming, voiceovers and other types of content creation. The EM-USB condenser mic connects directly to a laptop or mobile recording device using USB-C and features a built-in headphone output with independent volume control. It also provides controls for main input gain and mute.



## AMS Neve 500 Series RMX16

AMS Neve debuted a 500 Series edition of its classic RMX16 digital reverb system at the NAMM Show. The 500 Series edition revives the original hardware in a three-slot 500 Series format while adding new features and hitting a more attainable price point. The new unit provides the nine

## firstlook

### SSL 2, SSL 2+ Interfaces

Solid State Logic has announced a new range of personal studio products, marking the high-end recording manufacturer's first foray into those waters. Kicking off the line are the SSL 2 personal studio and SSL 2+ collaborative studio audio interfaces. Both interfaces are USB-powered and sport mic preamps, a 4K analog enhancement mode "inspired by classic SSL consoles," monitoring and a SSL Production Pack software bundle. The SSL 2 personal studio is intended for individual singers, songwriters, media producers and the like, while the SSL 2+ collaborative studio provides expanded I/O for musicians working and recording together. The 2-in/2-out SSL 2 sports two analog mic preamps, 24-bit/192 kHz conversion, a single high-grade headphone output, monitor mix control for low-latency monitoring tasks, and balanced monitor outputs. The SSL 2+ feature set adds to those available with the SSL 2, providing a production hub for those wanting to collaborate, with an additional headphone output with independent monitor mix, MIDI I/O, and additional unbalanced outputs for DJ mixers.



programs that came standard with the original AMS RMX16, including Ambience, Nonlin and Reverse. It also features micro-programmed parallel processing of 16-bit data, plus an additional nine aftermarket programs. The unit employs an 18 kHz bandwidth, allowing it to also be used as a digital delay line. Additionally, it has a 90 dB dynamic range and 0.03 percent distortion in delay mode, adjustable input and output levels for optimum signal to noise performance, and control of each program's reverberant parameters.



## RME Babyface Pro FS

The newly launched Babyface Pro FS audio interface sports RME's proprietary SteadyClock FS technology, improved preamps/converters and increased headphone power. According to the company, RME has improved the mic preamps and AD/DA converters, and has installed the same headphone circuit used in the company's ADI-2 Pro series. The interface includes RME's SteadyClock FS circuit with the intent of providing low jitter and high jitter immunity, aiming to improve converter performance and raise audio quality to reference-class performance. The unit includes two digitally controlled preamps providing individually switchable 48V phantom power. These improved circuits feature a gain range of 76 dB, adjustable in steps of 1 dB, including a relay-driven PAD.



## PreSonus StudioLive ARc Series

PreSonus has launched the StudioLive ARc series, a line whose three models combine a multichannel 24-bit, 96 kHz, USB-C compatible USB 2.0 audio interface with an analog mixer front end and the company's XMAX Class



A mic preamps. The StudioLive AR8c offers four mic preamps and six balanced line inputs for 8x4 recording/playback, while the StudioLive AR12c sports eight mic preamps and 12 balanced line inputs for 14x4 recording/playback. The StudioLive AR16c provides 12 mic preamps and 16 balanced line inputs for 18x4 recording/playback. All models support recording every channel plus the main mix over USB and feature a three-band analog EQ on every channel; mic/line boost for low-level vintage synths, broadcast microphones and consumer electronics; and Bluetooth 5.0 connectivity.



## NEXO P8, P10 Loudspeakers

NEXO, a Yamaha company, recently added P8 and P10 compact point-source loudspeakers to its P+ Series. These compact, lightweight, multi-purpose cabinets join the P12 model in the P+ Series to broaden the audio possibilities for sound designers and engineers. The P8 features a coaxial 8-inch LF driver with a 1.5-inch diaphragm HF driver. The P10 has a coaxial 10-inch neodymium LF driver and 1.7-inch diaphragm HF driver. The horn driver can rotate in both cabinets. The steel grille on P+ Series models can be removed, allowing the horn to be swapped out and changing the standard 100° x 100° dispersion to a 110° x 60° alternative.



## L-Acoustics Kara II

L-Acoustics announced the Kara II modular line source at NAMM, updating the line for the first time since its debut a decade ago. The update centers around the addition of Panflex, giving Kara four-in-one directivity, allowing it to cover any audience geometry. Directivity patterns offered include 70° or 110° symmetrical and 90° asymmetrical, steering to either the left or right. Since Kara boxes are still in use around the world, L-Acoustics will make available a kit to upgrade existing Kara with Panflex technology. Kara II sports a two-way active WST enclosure, has a bandwidth of 55 Hz to 20 kHz, can hit 142 dB, and weighs 57 pounds. Kara II for rental ships in March; Kara II for install will ship later in the year.



## Earthworks Vocal Capsules for Wireless Mics

Earthworks Audio used the NAMM Show as a launchpad for SR3314 and SR5314 wireless vocal microphone capsules. Aiming to achieve the clarity of a studio condenser on stage, the capsules' sound is created by coupling the studio-quality small-diaphragm cardioid condenser capsule with a Class A amplifier circuit using Earthworks-proprietary technologies. According to



Earthworks, this results in an extended flat frequency response and clean impulse response. The capsules feature a tight cardioid polar pattern and extreme attenuation of sound sources located beyond 90°, with maximum rejection at 180°. The SR3314 is designed to work with any handheld wireless transmitter that uses a standard 3-ring concentric connector.

## DiGiCo Quantum338

The Quantum338 digital mixing system is described as possessing the speed of DiGiCo's other Quantum desks in a smaller-format console. Quantum338 includes 128 input channels with 64 busses and a 24 x 24 matrix, all with full channel processing. A "dark mode" is available, to be used on the desk's three 17-inch, 1,000-nit high-brightness multitouch screens. There are also 70 individual TFT channel displays, and the floating Quantum chassis features 38 x 100mm touch-sensitive faders laid out in three blocks of 12 fader banks, along with two dedicated user-assignable faders, each complete with high-resolution metering. The desk offers 32-bit ADC and DAC converters, which are built into Quantum338 as standard, alongside six single or three redundant MADI connections, dual DMI slots, and a built-in UB MADI USB recording interface. Mustard Processing, Spice Rack, Nodal Processing and True Solo, all launched last year for the Quantum 7, are standard on Quantum338.



## JBL IRX Series Portable P.A.

JBL Professional launched its IRX Series with the IRX108BT (8-inch) and IRX112BT (12-inch) compact portable P.A.s with Bluetooth. The IRX Series boxes include real-world EQ presets, dbx AFS2 Automatic Feedback Suppression, and one-touch ducking to automatically lower music volume when speech input is detected.



## Yamaha L-Acoustics L-ISA DeskLink

Yamaha Professional Audio and L-Acoustics have co-developed an L-ISA DeskLink that natively integrates the latter's L-ISA immersive mixing technology into Yamaha's flagship Rivage PM7 and PM10 mixing systems. Within the Rivage consoles, for every mono or stereo input channel, a direct control of L-ISA Objects or Groups will be available on the console control surface and touchscreens. The five main L-ISA parameters—Pan, Width, Distance, Elevation, and Aux send—will also be stored for each object in the console Scenes, with dedicated recall scope.



## firstlook

### Yorkville Sound Synergy SA221S Subwoofer

The newly announced Synergy SA221S Subwoofer, a dual 21-inch subwoofer, bolsters Yorkville's Synergy Array point-source system, which also includes the SA153 three-way active cabinet and SA315S active subwoofer. Voiced for live and DJ music, the Synergy SA221S contains two high-excursion 21-inch neodymium woofers housed in a bass reflex enclosure. The cabinet can be oriented vertically or stacked horizontally depending on setup requirements. Footholds allow the SA153 or SA315S to be stacked on top of the SA221S. The SA221S can be used to supplement Synergy Series systems consisting of SA153 tops and SA315S subs, and reportedly extends the frequency response of the system down to 30 Hz, with usable output to 25 Hz. Alternately, the SA221S can be crossed over directly to the SA153 top. The SA221S is powered by a standard 15 amp wall socket, and Yorkville states that the sub boasts the maximum output possible for that amount of power.

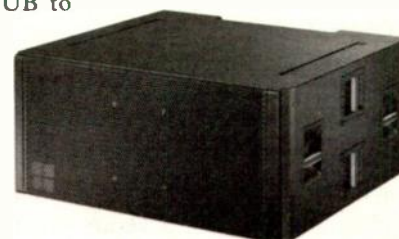


There's more information on all the products featured at [prosoundnetwork.com/feb2020](http://prosoundnetwork.com/feb2020).



## d&b audiotechnik KSL-SUB

d&b audiotechnik has added KSL-SUB to its SL-Series line array family. Available in both flown and ground stack (G) versions, KSL-SUB extends the frequency response of a KSL System down to 36 Hz. The KSL-SUB and KSL-GSUB subwoofers operate with two forward-facing 15-inch drivers and a single rear-facing 15-inch driver. Measuring 39.4 x 35.4 x 17.7 inches and with a weight of 181 pounds, KSL-SUB delivers an output of 139 dB driven by d&b D80 amplifiers. KSL-GSUB was designed to have a low profile; used without the KSL-SUB standard rigging hardware, it has a height of roughly 45 cm, allowing for under-stage deployment. Using a KSL-SUB adapter frame, the KSL-SUB can be deployed above KSL-Tops as part of a flown array. The KSL-SUB is available in touring carts with protective covers; the "hybrid" KSL-SUB touring cart allows users to leave the KSL flying frame on top of the KSL-SUB adapter frame below the subwoofers during transportation if they choose.





## Tool Tours with Intricate, Immersive Sound

BY STEVE HARVEY

LOS ANGELES, CA—For years, visuals have been the focus of Tool's live shows, the band disappearing into the shadows as it essentially creates a soundtrack to the video, laser and light displays. Those elements have constantly evolved over the years, says Liam Halpin, the band's system tech since 2015, "but there's not really been any developments with the audio." Until recently, anyway.

Late last year, as fans eagerly awaited the release of Tool's first new album in 13 years, *Fear Inoculum*, Halpin and FOH engineer Alan "Nobby" Hopkinson introduced an overhead speaker system to add an extra dimension to the art-metal band's soundscapes. "I wanted it to be psychedelic, random movements that caught people out," says Hopkinson,



Bringing the band's immersive sound to the masses are (l-r): Liam Halpin, system tech; Beau Alexander, monitors; Nobby, FOH engineer; Dan Buckley, P.A./stage tech; and Jerod Untiedt, crew chief and monitor tech.

son, who has worked with the band for 20 years. "We just wanted to make the experience larger."

"We refer to it as the effects P.A.," says Halpin, who rejected the new generation of spatial sound systems,

which require five or more speaker hangs across the stage, in favor of custom-designing a rig that would not obstruct sightlines. "The whole point of an immersive system is to

(continued on page 42)

### briefs

#### Stick Figure Drawn to Bose

NEW YORK, NY—SoCal reggae/dub band Stick Figure is to bring behind its new *World on Fire* album. Every tour has its challenges, but FOH engineer David Cardonick faced one on the first night of the tour. "Coming into that venue, I had never mixed on a Bose (<https://pro.bose.com>, ShowMatch system before. This was my first exposure to their larger-venue systems. Luckily, it was a pleasure to mix on. Everything sounded great, and the band was happy, too."

#### Shure Captures AMA Stars

LOS ANGELES, CA—Artists including Billie Eilish, Green Day, Camila Cabello, Post Malone, Ciara and Thomas Rhett used Shure ([www.shure.com](http://www.shure.com)) Axient Digital for their performances during the American Music Awards (AMAs) broadcast in November. The awards' audio team used 24 channels of Shure Axient Digital to power the artists at the AMAs, and a live performance by Taylor Swift, who was named Artist of the Decade, featured a customized Shure Axient Digital KSM8 microphone. ATK Audiotek handled FOH production for the awards broadcast. Wireless and audio provider Soundtronics provided the antenna system and handled frequency coordination.

#### Clear-Com Goes Back to School

NASHVILLE, TN—December saw students in the Audio Engineering Technology program at the Mike Curb College of Entertainment & Music Business at Belmont University get hands-on training from Clear-Com ([www.clear-com.com](http://www.clear-com.com)), learning best practices for the use of intercom systems in live performance applications. The company provided deep-dive, hands-on sessions on beltpacks, base stations, panels and more.

#### Redeemer Church Veers to Velocity

NEW YORK, NY—Velocity Pro Systems recently designed and installed an audio system for the Upper West Side of Manhattan campus of the Redeemer Church. The system is based around a Martin Audio ([www.martin-audio.com](http://www.martin-audio.com)) Wavefront Precision Mini array system that includes eight WPM per side with three SX118 subs flown in the center. Amps include a single iK81 per side with one-box resolution and an iK42 for the subs, with CDD6's for under-balcony fills.

## Soundcheck Nashville Celebrated the Holidays with Charity in Mind

NASHVILLE, TN—While the holidays are meant to be a joyous occasion, they can hit hard for those in need. With that in mind, December saw Music City services provider Soundcheck Nashville combine its 2019 holiday celebration with a charity drive, collecting over 700 toys and bikes for needy children in the Nashville area.

The event, held in two of Soundcheck's studios, featured live music from the Soundcheck House Band and by country act Sixwire, all of which was mixed on Allen & Heath dLive digital mixing systems at both FOH and monitors.

At FOH, Soundcheck used a dLive C3500 Surface with CDM48 MixRack. "I placed the FOH MixRack offstage next to the monitor position, giving me a super clean and uncluttered FOH setup," said in-house audio engineer Caleb Rose. At monitors, Soundcheck used an S5000 Surface with DM48 MixRack. Allen & Heath's gigaACE network made the connections. Rose noted, "The Cat 6 cabling was a lifesaver as we had a short time to set up and tear down the system to coordinate with our normal rehearsal schedule. Also, because gigaACE can handle bidirectional digital audio, I had a lot of



Caleb Rose mixed audio on an Allen & Heath dLive console throughout Soundcheck Nashville's 2019 holiday celebration, which collected more than 700 toys and bikes for kids in need.

flexibility to patch anything I needed from FOH."

Sixwire's appearance included guests John Elefante and Derek St. Holmes. Rose notes, "I was able to drag their inputs onto the Surface without pause or stress, and I added FX to their mix to give the guest singers a more identifiable sound. The dLive made this a breeze."

Overall, the Soundcheck system had more than 40 inputs, 14 outputs,

and over 10 FX units running simultaneously. Rose continues, "There wasn't any noticeable slowdown or lag. With all the flexibility, power, and the ease of use of these consoles, you would be hard-pressed to find a situation they couldn't accommodate."

Allen & Heath  
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Soundcheck Nashville  
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## The Who Take Symphonic Turn for Moving On! Tour

BY PAROO STREICH

WANTAGH, NY—Envision the seamless marriage of a 50-piece symphony with a supremely powerful rock band. Not every group could pull that off, but Rock and Roll Hall of Fame godfathers The Who might just be the dream partner for any orchestra. The Who's Moving On! North American symphonic tour proved that nightly as it took the band on a 31-date trek through the fall of 2019, with the band teaming up each night with regional classical musicians assembled specially for the evening.

The Who's legendary guitarist Pete Townsend and vocalist Roger Daltrey have a proven track record of blending a half-century of rock classics with classical sensibilities, and the resulting tours have proven tremendously popular with their fan base. "Pete liked the idea of doing another symphonic tour," said FOH orchestra engineer Chris "Chopper" Morrison, "especially after Roger did his solo Tommy tour last year from top to bottom with an orchestra." Chopper has served as systems engineer since the band's 50th anniversary tour of 2014-16 on behalf of the group's audio provider, Eighth Day Sound (Highland Heights, OH).

"Roger wanted the orchestra to feel powerful—but that doesn't mean loud," said Robert Collins, the band's longtime FOH engineer, who is devoted to the core band mix. "That was the challenge: striking that balance of intimate feel with power." Chopper and Collins set up camp daily around a DiGiCo SD7 desk with a 24-fader EX-007 side-car unit for the orchestra, which was the same arrangement used on Daltrey's Tommy tour. "It's the top tier of what's available now," said Collins, an SD7 stalwart who uses an identical console on tours with Eric Clapton. "The SD7 is excellent to work with because you see everything with just the flick of a button, so we do four things at once with just



When The Who—seen here soundchecking at the Northwell Health at Jones Beach Theater in Wantagh, NY—toured this past fall, Adamson Systems Engineering S10s and S7p cabinets were used for front fills as part of a larger Adamson E-Series system.

two hands," Collins said. "This show is nonstop hands-on, and you can do it with these DiGiCo boards."

The blending of two sonically separate worlds obviously creates some challenges. "It's quite hard,"

said Chopper. "There's in excess of 150 open mics up there all the time—and then you've got The Who!" Collins admitted Townsend had concerns when the tour started. "Pete was looking at placements and thinking he was going to overpower the instruments around him, but we've gotten around that somehow. Pete and the band are getting the drive they want, while the crispness and range of the orchestra can still be heard."

Helping ensure that happened, The Who's nightly orchestra was close-miked with no overheads, and microphone selection was key. Shure KSM32s captured the brass section, while AKG C414s were used on percussion instruments and Neumann KM 184s grabbed tympani. "We've been changing things as we've gone along with different orchestras," said Collins. "One big thing this time out is that we're using the new DPA d:vote Core 4099s clipped onto all the violins, violas, cellos and woodwinds. They're great quality mics. If

you're going to get a lot of spill on stage, you want quality spill." While most of the strings were captured on wired mics, the string soloists had a measure of mobility as they used Shure Axient wireless systems.

"The DPA mics are rock solid," agreed monitor tech John Switzer. "We've used them for months now and haven't had any failures. We've got Barcus Berry pickups on the basses and these great Schertler pickups on the cellos; they're very easy to install and remove."

The band has held a Shure sponsorship in excess of 50 years. Members are outfitted entirely from the company's vocal mic line. This includes Daltrey's trademark Shure Beta 58A microphone, double-cabled and gaff-taped securely at the mic stem to guard against mishaps during his infamous mic swinging antics. "After 55 years, I'm sure he's hit something at some point," said Chopper, adding that if so, it hasn't happened during his time with the band.



Manning twin DiGiCo SD7 consoles nightly on the orchestral tour were (l-r) symphony engineer Chris "Chopper" Morrison and FOH engineer Robert Collins.



The tour carried an Adamson Systems Engineering E-Series system. While the arrangements changed subtly from venue to venue, the system in whole was based around main hangs of 15 E15 three-way, true line source enclosures over three E12 three-way, full-range enclosures per side. At the sides were hangs of 12 E15s over three E12s per side,

along with 270-degree fills from Adamson's S-Series, with four narrow-dispersion S10n two-way, full-range cabinets over eight standard S10s per side. Covering the front rows, S10s and S7p point-source cabinets were employed as front fills. Supporting all that in the low end was a hybrid system of nine flown E119 subs per side and an additional dozen E119s, stacked in front of the stage.

The Lab.gruppen-powered Adamson rig may have the audience covered, but on stage, the monitor engineers faced the prospect of mixing for enough musicians to constitute an entirely second audience. Aside from Townsend, all the musicians on stage wore in-ear systems and followed a click track. "Due to Pete's hearing loss, it's one big challenge all the time for the monitor

guys," said Collins. "It's a bit harder with Pete's quite-loud monitors but, again, we've gotten around that with trial and error."

As a result, stage monitoring was handled with d&b audiotechnik monitors across the stage, including a dozen M2 wedges, a trio of V-Sub subwoofers, a pair of Q10 speakers and 10 E8 speakers, all sharing mix-

(continued on page 43)

## VITALstats

### The Who

#### Eighth Day Sound

(Highland Heights, OH)

#### FOH Engineer:

Robert Collins

#### FOH Orchestra Engineer:

Chris "Chopper" Morrison

#### Monitor Engineer:

Simon Higgs

#### Monitor Engineer:

Trevor Waite

#### Systems Engineer:

Ben Smith

#### Monitor/Stage/Pro Tools

#### Tech:

John Switzer

#### P.A. Techs:

Tom Lawn, Shawn Tingle

#### FOH Console:

DiGiCo SD7 with EX-007 sidecar

#### Monitor Console:

(2) DiGiCo SD7 Quantum

#### House Speakers:

Adamson E15, E12, S10, S10N, S7, E119

#### Monitor Speakers:

d&b audiotechnik M2, V-Sub, Q10, E8,

#### Personal Monitors:

Shure PSM 1000; Fischer Amps Hardwired IEM Headphone Amplifier

#### House Amplifiers:

Lab.gruppen

#### Monitor Amplifiers:

d&b audiotechnik D80

#### FOH Equipment/Plug-

#### Ins:

Summit Audio TLA100, DCL200; TC Electronic System 6000, M5000; Sonic Farm Creamliner; dbx 160SL

#### Monitor Equipment/

#### Plug-Ins:

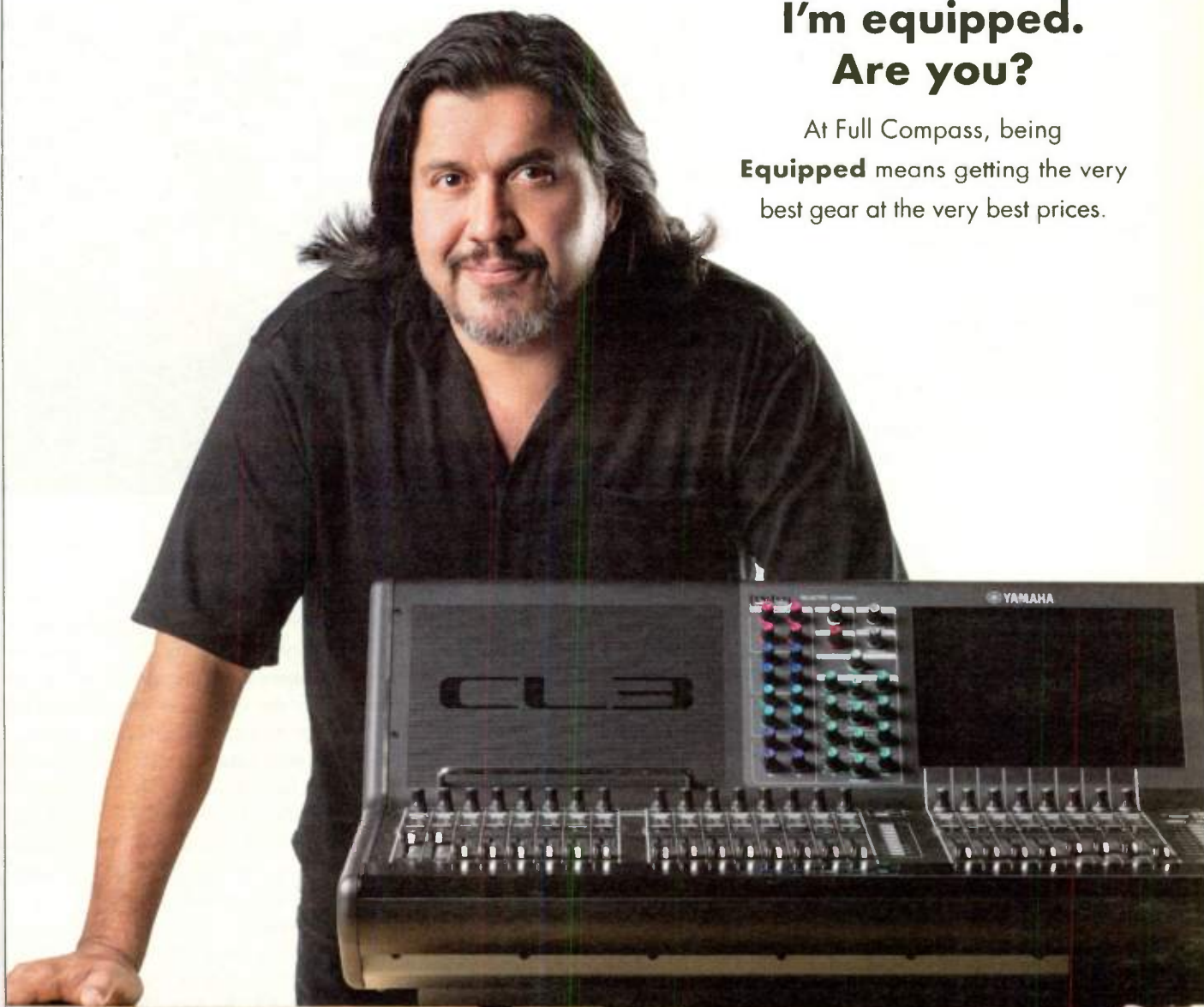
Bricasti M7; Smart Research C2; Summit TLA100, DCL200

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# Avicii Tribute Concert Overcomes Audio Challenges

STOCKHOLM, SWEDEN—EDM legend Tim Bergling, better known as Avicii, committed suicide in April 2018 following years of fighting stress and mental illness, leaving behind a legacy of hits and a legion of fans around the world. This past December saw his hometown of Stockholm host the massive Avicii Tribute Concert, during which 58,000 revelers filled Friends Arena to remember the electronic musician, songwriter, producer and remixer, and raise funds for a foundation established by the Bergling family to support mental health research and treatment.

On hand to honor their fallen friend were 20 collaborators and peers, including vocalists Rita Ora, Aloe Blacc, Adam Lambert and Dan Tyminski. The event also included DJ sets from David Guetta, Kygo, Laidback Luke, Dimitri Vegas & Like Mike, and Nicky Romero. Production provider The Bright Group supplied a complete audio, video and lighting production package for the event. The production manager was Daniel Hellsten.

The tribute concert entailed numerous challenges for audio production, including visual profile limitations due to live YouTube streaming, noise level restrictions, the sheer volume of the indoor stadium, and a combination of acoustic dampening and reflective surfaces that had plagued previous concerts there. Further complicating matters was a program blending a 30-piece orchestra with bass-heavy EDM tracks.

"It's quite a difficult arena since it's so huge and there is a lot of dampening," said audio systems tech Anton Söderberg, who worked on the project, "so it takes a lot of effort from the loudspeaker system to deliver the power and the clarity that we need." Ultimately, the production went with a Meyer Sound Leo Family system, aided by the presence of system designer Theis Romme of Meyer Sound European Technical Support.

The combination of long throw distances, 270-degree seating and strict noise limits required a distributed approach with multiple delay systems, according to Romme. "The distance from stage to rear topmost seats is about 150 meters and 30 meters high, so we configured the system with delays for both the main front and the out arrays. The coverage turned out to be excellent, with smooth transitions between arrays thanks to the common Leo Family characteristics and great work by Anton."

The system's main front arrays each comprised 16 Leo-M loud-



speakers over two Lyon-W wide coverage loudspeakers, with dual out arrays each configured with 16 Leo-M, four Lyon-M and two Lyon-W loudspeakers. The front fill system deployed a dozen Leopard loudspeakers, while the 270-degree far outfills were each 22 Leopard loudspeakers. Full range delay arrays, flown at seven hang points, comprised 104 Lyon-M and 20 Lyon-W loudspeakers and 18 1100-LFC low-frequency control elements.

For uniform bass throughout the venue, Romme laid a foundation with dual end-fire arrays of nine each 1100-LFC low-frequency control elements augmented by 18 1100-LFC elements at center. Another 12 1100-LFC elements were flown in cardioid arrays on each side. System optimization and drive was supplied by 16 Galaxy 816 and three Galaxy 816-AES3 processors linked via an AVB network running the Milan protocol. All loudspeaker inventory was drawn

from Bright Group's operations in Sweden and Norway.

"The coverage is very smooth with uniform transition between arrays," observes Söderberg. "The Leo loudspeakers have the throw, so we can push the first layer over downstage a bit more, and coverage with the Leopard arrays is just excellent. We also have Leopards as front fills, so the transition from the mains was easy to achieve. Overall, the coverage is above my expectations. The clarity at the top row seats is great."

As for the AVB network and Milan protocol, there wasn't much to say, according to Söderberg. "It's been rock solid," he says. "Everything pops up on the screen and works like it's supposed to."

After the guest DJs finished the opening section of the concert, the YouTube live stream launched for the live performance part of the show. Mixing the band, orchestra and parade of dynamic vocalists was Wayne

In December, Stockholm's Friends Arena hosted a massive tribute concert honoring the late EDM legend Avicii. The hometown crowd of 58,000 was covered by a Meyer Sound Leo Family system consisting of nearly 270 loudspeakers.

Sergeant, who came on board as Avicii's FOH mixer in 2014 for the tour supporting the multi-platinum *True* album. Sergeant was tasked with corraling 128 inputs for the parade of vocalists and shifting instrumental combinations.

"It's an incredibly difficult venue, so I thought overall the Meyer Sound system performed remarkably well," said Sergeant. "Of course, with the orchestra on stage, I was concerned about bass spill, but flying the cardioid sub arrays and putting more cardioid subs out with the delays really pushed the whole show evenly into the back of the room. It was really great having more delays than you can shake a stick at because when you have a noise restriction of around 97 dB, you want a distributed system that takes over from the mains. And it worked. We had buckets of headroom, and the intelligibility was fantastic in a room that's really tough."

"I really want to emphasize that we're doing this for Tim," production manager Hellsten says. "We're all in this together. We have 300 people working on the production team and I haven't heard one complaint. Everybody knows why we are doing this, and everybody is working hard and doing an amazing job."

Meyer Sound  
[www.meyersound.com](http://www.meyersound.com)

Tim Bergling Foundation  
[www.timberglingfoundation.org](http://www.timberglingfoundation.org)



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WRH



## Immersive Tool

(continued from page 36)

enhance the show for the majority of the audience," he says. "But how do you do surround sound for the upper bowl of an arena?"

Inspired by the Dolby Atmos system he had installed at home, Halpin continues, "What I came up with were traditional left-right surround hangs that would fly in the lower bowl, toward the rear of the arena, and fire back toward the stage. To add the height dimension, we've got seven cabinets of d&b audiotechnik V-Series firing from the middle of the arena either side of the ice rink to cover the back half of the lower bowl to about where front-of-house is. Directly behind those, closer to the stage, is another hang, flown off two frames so that I can get a lot of down-tilt. That covers from the front edge of the stage to the middle of the arena," he says.

But how to also give the upper bowl an enhanced experience? "The two ceiling hangs are each flown off a single piece of truss, on the center line, so I came up with the idea of having a side-firing hang flown from the same truss. Two more hangs on the back corners of the ice rink cover the rear section of the upper bowl and the section behind the surround hangs."

The main mix is delivered through left-right arrays of d&b GSL cabinets with KSL side hangs. A third hang per side, of V-Series, enables Halpin to deliver more even coverage without overtaxing the side hangs. Arrays of SL-Subs are flown behind the main and side hangs.

"By kicking the subs out at 45 de-

grees, I minimize the amount of interference between the hangs, and it gives me almost a zero delay time. By making the subs the zero point, I've allowed a greater degree of control over the tonal balance throughout the arena," says Halpin.

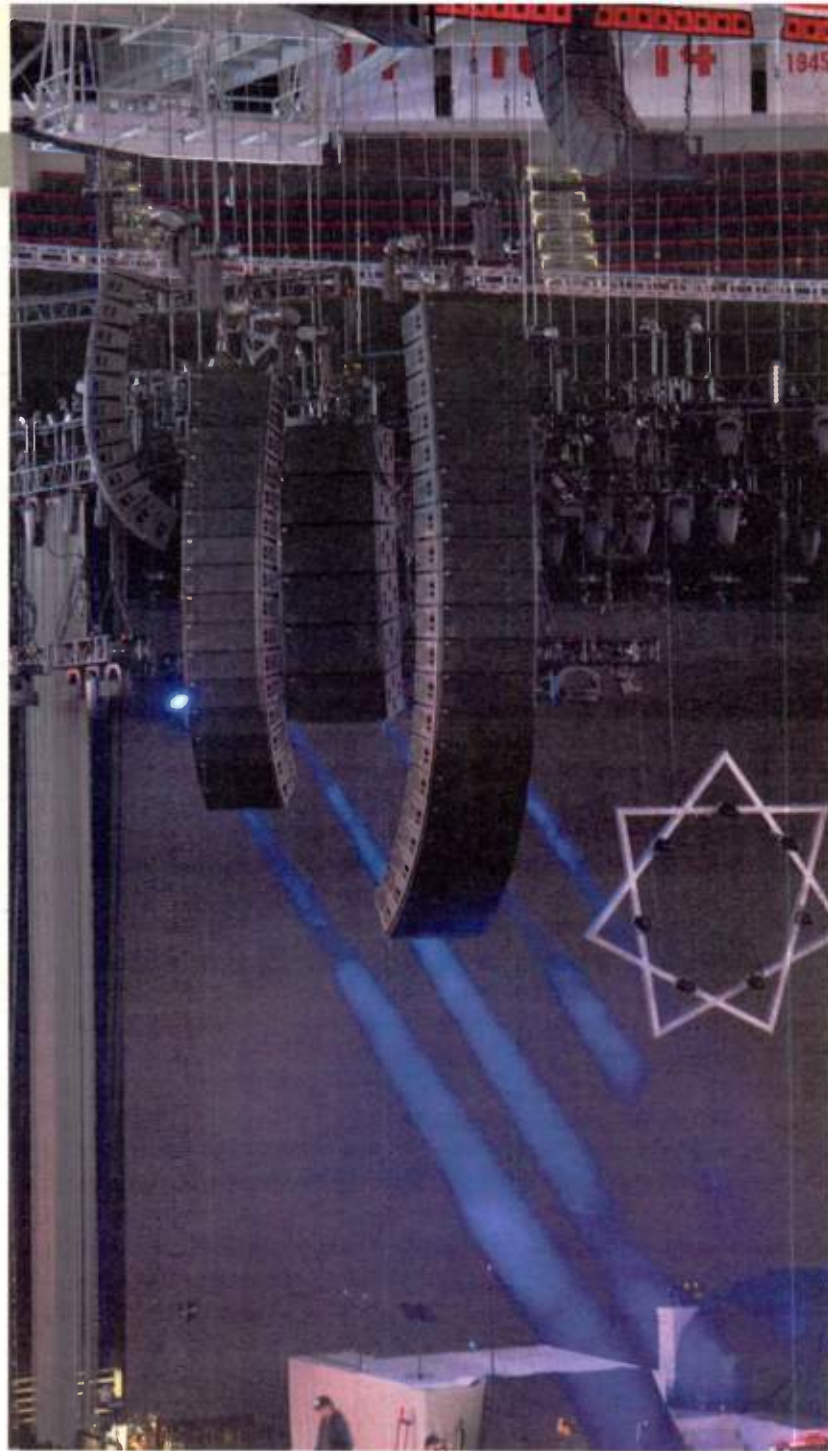
"Nobby is the engineer who decides how Tool sounds. My job is to make it sound the same in every seat."

Production provider Eighth Day Sound is supporting the world tour from its network of locations in the United States, Europe and Australia.

To control the positioning and panning of sources in the effects P.A., Halpin called on an old friend, Dave Haydon, director and co-owner of Out Board Electronics, manufacturer of TiMax live sound products. Out Board supplied Eighth Day with a TiMax SoundHub-S64, which supports 64x64 I/O on Dante, with analog and AES outputs offering redundancy.

"The room spatialization mapping was rendered by dropping the multi-channel loudspeaker locations onto a TiMax PanSpace map, then creating TiMax Image Definition objects comprising combinations of the relevant speakers with levels and delays set to allow placement or panning of the sound at or between the required 3D locations," Haydon explains. "Spatial events were programmed in the PanSpace Spatialization window either as Cues to be triggered manually, or remotely from stage via MIDI, or set up as live, real-time 3D pans for over 20 mix channels to be controlled at FOH by Liam, using TouchOSC on iPads driving the TiMax software's OSC port."

During a show, Halpin mixes selected elements on a digital Midas Pro2 console into the effects P.A., while Nobby handles the main house



The tour's Eighth Day Sound-supplied audio system is built around a variety of d&b audiotechnik speakers ranging from KSL and GSL boxes to V-Series and arrays of SL-Subs.

mix on an analog Midas XL4. "The first few shows, I was doing all the movement myself, other than some things we programmed that were always going to be the same," says Nobby. "Then it became obvious I couldn't do both. It's too much."

As the tour progresses, Halpin is now sending elements to the effects P.A. throughout the show. "We experiment with it every day," Nobby says, and no two shows are alike anyway, as the band improvises many sections.

"There's no timecode and no tracks," adds Halpin. "Everything is played live," and always has been.

Effects P.A. sources are a combination of the digital split from the stagebox and direct outputs from the XL4 via Ferrofish Dante converters (which also feed dual-redundant multitrack recorders that archive every show). Additionally, certain samples triggered by drummer Danny Carey, sent to the XL4 as a two-channel submix, are split out at the stage and fed individually to the Pro2. "This is a perfect example of how you can take something that starts off as a standard left-right P.A. in an arena and it becomes hugely flexible through the advantages of audio-

over-IP networking," says Halpin.

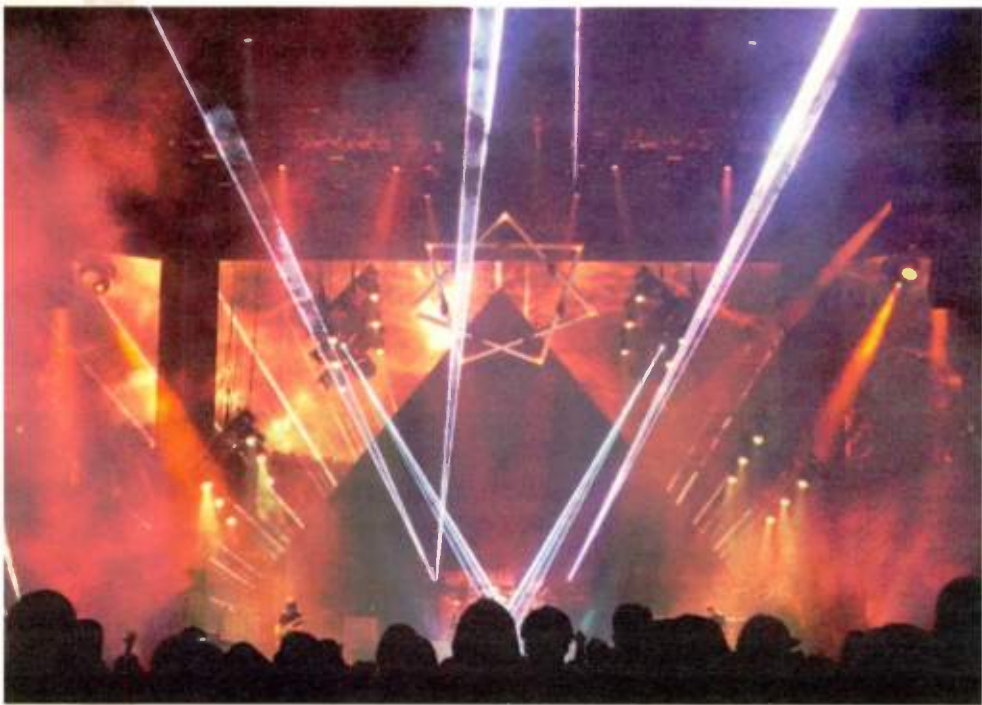
"We have a few auxes that come off the XL4 that feed into the Pro2," he adds, including some of Nobby's reverbs and delays, which he can dynamically move through the arena. "They extend out from the main system and become a huge moment in the room."

The pair were unable to guarantee how well the system would work until they tried it in an arena, but the band and their production team were prepared to roll the dice. "It was a gamble, but it's paid off," says Nobby, noting that the production was willing to underwrite the additional expense. "We had to get extra crew on board," he says. The rigging call is now 4:30 a.m., and on tight overnights, the riggers are flown ahead to the next venue, he adds.

Nobby originally planned to use the effects P.A. only on the initial U.S. leg following the album release, "but now we're taking it everywhere," he says, including the upcoming run in Australia and New Zealand.

"The band made that call. That's rewarding."

Eighth Day Sound  
www.8thdaysound.com



On tour, Tool tends to downplay the band itself and make the video, lighting and lasers the stars of the show.



## The Who

(continued from page 39)

es from two DiGiCo SD7 Quantum desks with SD Racks.

"Our biggest challenge is cable management," said Switzer, who has worked on large tours with Madonna, Coldplay and Widespread Panic. "This tour has 167 inputs, so that's about a half mile of cable. Each orchestra member has a headphone amp for clicks, and the band has 64 inputs, plus some tracks. The orchestra has 67 mics, and each of those inputs has 10 to 25 feet of XLR cable." With all that to set up daily, Switzer was relieved to have the support of his team. "My boys help me out miking the stage each night, so I'm not up there by myself doing all this," he said. "Otherwise it's like banging in a 6-inch nail with a feather."

To achieve better band-to-orchestra balance, Townsend, his brother, guitarist Simon Townsend, and bassist Jon Button scaled their guitar rigs down; additionally, drummer Zak Starkey played a completely electronic kit. "That's helped the whole band to quiet down a bit," said Chopper, "but when we started doing the orchestra shows, the hardcore fans who've been seeing The Who for years and years were moaning that it wasn't loud enough up front. They're used to the drums bashing them! We had to increase the ground system speakers up front and now they're satisfied."

At the FOH position, the outboard racks were full, with classics like Summit TLA100 and dbx 160SL compressor/limiters, and TC Elec-



Helping keep everything moving were (l-r) P.A. techs Tom Lawn and Sean Tingle, and monitor/stage/Pro Tools tech John Switzer.

tronic M6000 and M5000 reverbs. "There's no Waves [SoundGrid] or plug-ins," said Chopper. "Likewise, the only prerecorded tracks used are a few Who bits that everyone knows, like the intro to 'Baba O'Riley.' Everything else is live."

Despite the infamous half-century legend of The Who as 'the loudest rock band on the planet,' the house mix never went over 102 dB on the orchestral tour. "With The Who, bottom end is a thick issue," said Chopper. "It's not a hip-hop show. We use a stereo line signal conditioner, the Sonic Farm Creamliner, across the left and right because there's so much 'mud-range' and that improves the sound a bit."

Also, no snapshots were used in this "hands-on" show. "We're mixing as it goes, and every night is different," he added. "The orchestral parts have their music to follow, but the

band never play the same thing twice. Basically, we hear it, we do it."

The philosophy behind the mix was simple, with the orchestra treated

"The orchestral parts have their music to follow, but the band never play the same thing twice. Basically, we hear it, we do it."

Chris "Chopper" Morrison

as one big instrument alongside all the other band instruments. "We try and make it a rock show but not lose the orchestra feel," said Chopper. "Sometimes it will be Pete wailing away on the guitar with the orchestra in the background. Other times, the orchestra will come out clear and lovely, and you'll hear them predominantly over the rest of the band. But Roger's vocal? That's the main thing—he must

be heard over all of it."

In addition to presenting classic tracks in new arrangements, Moving On! also provided a vehicle for premiering new tracks from *Who*, the band's 12th studio album, released in November 2019. "They're trying to get settled with the way the new songs are arranged," said Chopper, "so it makes it harder for us if they're not gelling in. But the last few shows, the new songs are starting to have a great feel." When the tour resumes, crossing the UK in March before returning to the States in April, the band will focus more deeply on material from the new record.

"This show is definitely an emotional journey because of all the orchestration," said Switzer. "The band is 100 percent true on stage. They let their hair down when they speak to the audience. They don't have ego. They're one with their music and they're one with their crew. They're wonderful human beings."

"There's nothing like being here live seeing this band with an orchestra," adds Chopper. "It's like, would you rather be on a Skype call with your wife or girlfriend or in the same room with her? It's about the feel."

Eighth Day Sound  
www.8thdaysound.com

Adamson Systems Engineering  
www.adamsonsystems.com

## AES Readies Worship Sound Academy

NASHVILLE, TN—Fresh off its successful AES Academy at NAMM education event, the Audio Engineering Society is preparing for its next offering, the AES Worship Sound Academy, scheduled to take place March 10–11 at the Johnson Center on the campus of Belmont University in Nashville.

At the event, the AES Academy will examine specific elements of audio for houses of worship and related productions, covering fundamentals of sound, mixing for services and events, and outreach through streaming media. As well, exhibits showcasing the latest technologies will be featured.

Day one will begin with a session focusing on defining roles and

goals of a worship sound engineer and team, discussing attitude and focus, identifying core knowledge and considering the boundaries of responsibility. In-depth technology and applications sessions will follow, including "How Sound Moves: Physics Without Math" (covering concepts such as sound transmission, acoustics and system optimization), and separate sessions on FOH and monitor mixing for houses of worship.

"Reaching Outward: Streaming and Podcasts" will take place that afternoon, and attendees will be invited to a Producing Worship event that evening, which will use a live performance by touring artists with a veteran production team as the



platform for addressing the concepts of worship sound production.

On day two, the AES Worship Sound Academy will begin with a pair of sessions outlining microphone basics, wireless and in-ear monitoring, and available technologies and techniques to achieve clear and consistent sound. Afternoon sessions will cover "Productive Rehearsals and Sound

Checks," followed by a session on AoIP audio networking and management fundamentals, and the newly available possibilities afforded by these technologies for productions and facilities of any size. "Anatomy of a Tech Team" follows, providing an overview of workflow and illustrating the planning and prep required by tech team leaders, as well as maintenance, training and assignment of responsibilities, job descriptions and other details. The day will conclude with an "Unanswered Questions Town Hall."

Both days will also feature dedicated times for on-site lunch (included with registration) and to browse and network in the exhibition area.

AES Worship Sound Academy  
www.aesworship.org



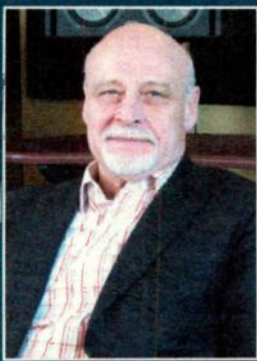
# centerSTAGE TOP 10 TOURS OF 2019

| ACT / STATISTICS   | CREW   | EQUIPMENT   |
|--|--|---|
| <b>1 THE ROLLING STONES   CLAIR GLOBAL</b>                   | Dave Natale (be); Steve Carter (me); Taylor Holden (mse); Tyson Clark (cc); Jo Ravitch, Jim Ragus (se); Thomas Huntington (rec tech); Matt Woolley, Brent Edgerton, Dave Enderle, Falko Knueppel, Jon Brook, Trystan Forbes (tech) | HC: Yamaha PM4000; Avid Venue Profile; MC: Midas XL4000; Avid Venue Profile; HS: Clair i-5, i-5b, P-2; MS: Clair 12AM, R-4, i-5b; IEM: Shure PSM 1000; HA: Crown Macro-Tech; MA: Lab.gruppen; WIRELESS MICS: Shure UR Series; FOH EQUIPMENT: Aphex 612, dbx 903, AlignArray software, iO loudspeaker processors; MONITOR EQUIPMENT: TC Electronic 1128; dbx 160A; SPL Transient Designer 4; OTHER: Radial JX44, JR5, KL-8, Voco Loco  |
| <b>2 ELTON JOHN   CLAIR GLOBAL</b>                           | Matt Herr (he); Alan Richardson (me); Nick Giamos (cc/se); Rolf Gerling (ame); Simon Matthews (tech)   | HC: Yamaha Rivage PM10; MC: Elton-owned custom-built/designed desk; HS: Clair Cohesion CO-12, CO-10; MS: Clair 12AM, 212AM; IEM: Sennheiser 2000; Shure P6HW; HA: Lab.gruppen; MA: Lab.gruppen; HARDWIRED MICS: Shure; WIRELESS MICS: Shure   |
| <b>3 BOB SEGER AND THE SILVER BULLET BAND   CLAIR GLOBAL</b> | Bruce Knight (be); Mark Harvey (me); Paul Jump (cc/se); Calvin Welshans (ae); Jacob Caples (tech)  | HC: DiGiCo SD-5 with SD Racks; MC: Yamaha Rivage PM10 with Rio Racks; HS: Clair CO-12, CO-10, CP-218, FF-II, P-2; MS: Clair SRM; IEM: Sennheiser 2000; Shure PSM-6HW; HA: Lab.gruppen PLM 20K44; MA: Lab.gruppen PLM 20K44; HARDWIRED MICS: Audio-Technica AT 4047; Shure Beta 91a, SM 57, KSM8, KSM 313, KSM9HS; AKG C314; Radial J48, JDI; Sennheiser MKH-416, e935, e904; Royer SF-24L, PSM-SS24; WIRELESS MICS: Shure UR4D with KSM 8, KSM9HS; FOH EQUIPMENT: Waves Mercury bundle and SSL 4000 collection; Neve Portico II Master Buss; API 2500 stereo compressor; Alan Smart C2 stereo compressor; Urei 1176In; TC Electronic Finalizer; TASCAM SS-CDR200, CD-01U  |
| <b>4 PINK   BRITANNIA ROW</b>                                | Dave Bracey (he); Jon Lewis (me-Pink); Horst Hartmann (me-band); Guillaume Burguez (cc); Johnny Keirle (se); Juan Beilin, Charles Well (ae); Jack Murphy (tech)  | HC: DiGiCo SD7 Quantum; MC: DiGiCo SD7 Quantum; Yamaha PM10; HS: L-Acoustics K1, K2, K1SB, KARA, KS28; MS: L-Acoustics X15, Clair CM-22; IEM: Sennheiser 2050; HA: L-Acoustics LA12X; MA: Lab.gruppen; WIRELESS MICS: Sennheiser 6000 series; OTHER: Radial SW8   |
| <b>5 ARIANA GRANDE   CLAIR GLOBAL</b>                        | Toby Francis (be); Erik Rodstol (me); Dean Mizzi (cc/se); Cory Harris (ae); James Ellison, Katy Hughes, Benjamin Scanlon, Andrew Black (tech); Jason Zito (pm)   | HC: Yamaha Rivage PM7; RND Neve 5060 buss mixer; MC: DiGiCo SD7; HS: Clair CO-12, CO-10, CP-218 Subs; MS: Clair CM14; IEM: Sennheiser EM 2050; HA: Lab.gruppen; MA: Lab.gruppen; HARDWIRED MICS: Shure; Sennheiser; Radial JDI, SW8; WIRELESS MICS: Sennheiser 5000/5235 series; Shure Axient Digital, ULX-D; FOH EQUIPMENT: Tube Tech SMB 2B; Crane Song STC8; Smart Research C-2; RND Sheldford Channel; API 2500; RND Portico II MBC   |
| <b>6 JONAS BROTHERS   CLAIR GLOBAL</b>                       | Chris Sullivan (he); Jon Kooren (me); Andrew Kastinelis (cc/pa tech); Chuck Smith (se); Matt Patterson (mse); Ryan Tribou (rf com/pa tech); Justin Robinson (rf coordinator)   | HC: DiGiCo SD7; MC: DiGiCo SD; HS: Clair Cohesion CO-12, i-3, i-DL, CP-218, CP-6; MS: Clair Cohesion CP-118; IEM: Shure PSM 1000, P9HW; HA: Lab.gruppen PLM20K44; HARDWIRED MICS: Shure Beta 91A, Beta 52A, Beta 181, Beta 58, Beta 52A, KSM32, SM57; AKG C414; WIRELESS MICS: Shure Axient; Sennheiser Digital 6000; FOH EQUIPMENT: Rupert Neve Designs 5045; Waves SoundGrid Extreme; API 2500; GML 8200; BSS DPR-901II; Midas XL42; API 2500; MONITOR EQUIPMENT: Waves SoundGrid Extreme; UAD Live Rack  |
| <b>7 KISS   CLAIR GLOBAL</b>                                 | Adam Stuart (be); Scott Diamond (me); Don Baker (cc/se); Scott Megrath (ae); Robert Taylor III, Casey Harriman (tech)  | HC: DiGiCo SD7 Quantum with SD Racks; MC: DiGiCo SD7 Quantum with SD Racks, Yamaha QL-1(drummer); HS: Clair CO-12, CO-10, CP-6, CP-218; MS: Clair CM-22, 12AM, CP-118; IEM: Shure PSM 1000, Shure P9HW; HA: Lab.gruppen PLM 20K44; MA: Lab.gruppen PLM 20K44; HARDWIRED MICS: Shure 52a, Beta 91a, SM 57, SM 58, VP-88, KSM 137; Neumann TLM 102; Sennheiser MD-421, MKH-416, e935, e904; Audio-Technica AT 4050, AT 3031; Radial J48, JDI; WIRELESS MICS: Shure Axient AD4Q; FOH EQUIPMENT: Waves Mercury Bundle, SSL Collection 4000, TASCAM SS-CDR250N; Bricasti Design M7; Empirical Labs EL-8; API 2500  |
| <b>8 FLEETWOOD MAC   CLAIR GLOBAL</b>                        | David Morgan (be); Myles Hale, Blake Suib (me); Thomas Morris (cc/se); Ken Hottenstein, Chris King (stage e); Chris Fulton, Amy Bamarrito (techs)  | HC: DiGiCo SD5; MC: Avid S6L; DiGiCo SD5; HS: Clair Cohesion CO-12, CO-10, CO-8, CP-218 subs; MS: Clair 12AM, ML-18, R-4III; IEM: Shure PSM 1000, PSM600; HA: Lab.gruppen PLM 20000Q; MA: Lab.gruppen PLM 20000Q; HARDWIRED MICS: Earthworks SR40, DP30, SR25; Shure KSM8, Beta 181C, PGA81, Beta 91a, Beta 56, KSM8, KSM 32, KSM 313, KSM 27, KSM141, SM 57, SM 58, Beta 98; Sennheiser e935, e602, e902, MD421, MKH-50; Audio-Technica AE 4100, AT 4047; AKG C414B; Audix D4; Beyer M201TG; Neumann KM 184; Royer R121L; DPA 4099; Radial DI; WIRELESS MICS: Shure Axient; FOH EQUIPMENT: Bricasti M7; TC Electronic M6000; Eventide Eclipse; Lake LM44; Waves Mercury Bundle, SoundGrid; AAX McDSP Live Pack; MONITOR EQUIPMENT: Yamaha SPX990 |
| <b>9 GARTH BROOKS   CLAIR GLOBAL</b>                         | Dan Heins (be); Martin "Tike" Santos (me); Tee Cee Bailey (me); Pat O'Neil (cc); Rob Rankin (se); Kevin Kapler (m tech)  | HC: Yamaha Rivage PM10; MC: (2) Yamaha Rivage PM10; HS: Clair Solutions i218, i212, is218m; MS: (50) Showco SRM, (16) Clair Cohesion CO-8; IEM: Shure PSM 1000; HA: Lab.gruppen PLM 20000Q; MA: Lab.gruppen PLM 20000Q; HARDWIRED MICS: Shure Beta 91a, KSM137, Beta 98a, Beta 56a, SM57, SM58, Beta 58, Beta 57a; Telefunken M82, M81SH, M80SH, M60; Heil PR28; WIRELESS MICS: Shure Axient RF; Crown CM311 Headset; Telefunken M80 Capsules; FOH EQUIPMENT: Bricasti M7; TC Electronic M6000  |
| <b>10 JUSTIN TIMBERLAKE   CLAIR GLOBAL</b>                   | Andy Meyer (he); Paul Klimson (me); Phil Kriz, Justin Lenards (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; OTHER: Radial JX44, SG144  |

**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 highest-grossing U.S. tours of 2019, as ranked by *Pollstar*. 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.





## Michael Descoteau Synthax

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

**A:** I've recently taken on the position of broadcast sales manager at Synthax. Synthax distributes several premium pro audio lines including RME, Ferrofish, myMix and, more recently, audio over IP products by Digigram. In my new position, I'll be responsible for

taking these various technologies to the broadcast community and will be focused on a solutions-based approach for companies in this market. With Synthax's diverse portfolio, I will want to understand our customers' challenges and figure out how we can help. Additionally, one of my focus areas will be training, updating and supporting our reseller base, while presenting our comprehensive solutions to system integrators, mobile truck vendors, and many other professionals in the broadcast ecosystem.

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

**A:** While the technology is constantly evolving, I bring to bear a lot of experience in the field, having worked with major broadcast events including sports, television shows and other applications. Over the years, I've come to understand how productive workflows are created and how to make the "magic" happen. In addition to the many projects I've worked on, I've been blessed to have been mentored by highly accomplished colleagues who have been generous with their knowledge, patience and understanding. Whether it was working on Fox Sports' audio package, the transition of *Late Show with David Letterman* to the Ed Sullivan Theater, working with leading mobile truck vendors or collaborating on the audio sound bed at *SNL*, I've been surrounded by professionals my whole career.

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

**A:** The broadcast market is very important to Synthax, and we plan to significantly increase our presence in this space with our end-to-end solutions. We will do this through targeted promotions, trade events and education. That said, nothing can replace the tried and true sales method of getting in front of end users and resellers and winning them over with competitive, performance-based broadcast solutions. We want our customers to fully understand the breadth of our portfolio, and how this can play a major role in a rapidly evolving broadcast market—which is increasingly becoming IP-based. Perhaps most important of all, we will make a point to listen to our customers and the challenges they face.

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

**A:** My near-term goal is to spread the gospel of Synthax and be on the ground for our customers so they know we are here to help. While RME and Ferrofish are established brands in the broadcast market, we want to help establish Digigram as a leader in this space, particularly as it relates to IP workflow. I want to meet with as many of our customers as possible and let them experience Digigram's offerings firsthand vis-à-vis other competitive offerings. In the long term, I am excited about our potential to develop additional products that will help us drive customer success. We have so much potential in our current ecosystem of products and it is truly exciting to see what possibilities the future may hold.



Evan MacKenzie



Charlene Clements

ASI Audio has hired industry veteran **Evan MacKenzie** as vice president, marketing and sales. With a background in branding, marketing and sales management, MacKenzie is expected to drive integrated marketing while building the company's sales network and brand. Previously, MacKenzie directed marketing and communications efforts

for industry stalwarts including DPA Microphones, Gibson Professional Audio, QSC and American Music & Sound.

ASI has also brought on **Charlene Clements** as manager, client development. In her new post, Clements will help build the company's sales operations across both the music industry and audiological channels. Clements comes to the company with 15 years of experience in sales operations and management at Ety-motic Research.

Clear-Com has hired regional sales manager **Michael "Mike" Franklin** to address growing demand in the South-Central region of the U.S. Franklin will oversee sales activity in Texas, Oklahoma, Missouri, Kansas, Louisiana, Mississippi, Arkansas, Ala-



Mike Franklin

bama, Tennessee and Kentucky, with a particular focus on supporting Clear-Com's partner network in the region. The appointment is part of an overall strategy to increase the company's sales presence in the United States. Franklin joins Clear-Com from Lawo, where he was a senior sales manager for North America. Prior to Lawo, he worked as director of sales for Harman International before transitioning to Studer, where he was a senior sales manager for the United States.



Thorsten Goecke

Atlona parent company Panduit's senior vice president/managing director for EMEA.



Luis Wasserman

Mackie has named **Luis Wasserman** sales director, Asia-Pacific (APAC) region. Wasserman's professional background blends six years of product management experience in Honeywell and Broan-NuTone with over 11 years of international sales leadership at Scanticon Corp. and AMETEK. He holds a bachelor's degree in political science from the Universidad de Los Andes and a master's degree in business administration (MBA) from the University of Minnesota.



Sam Spennacchio

Italian pro audio manufacturer K-array has appointed **Sam Spennacchio** as a U.S. sales director. He will be responsible for assisting in the growth of K-array business in the United States, concentrating particularly on the event production and live sound verticals. As a pro audio industry veteran, Spennacchio previously held management

positions at Mark IV Audio as vice president and SPL-NY as president; he also held sales roles at Fiberplex, Crest Audio, Klark Teknik/Midas and Martin Audio.



Jason Chesla

Platinum Tools has promoted **Jason Chesla** to national account manager. Chesla had been the company's marketing manager since 2016. In this new role, Chesla will be working with Platinum Tools' key North American accounts, service providers and international accounts. He will continue to assist in the marketing department during this transition. Prior to joining Platinum Tools, Chesla was the sales and marketing manager for T3 Innovation.



Joey Palkowitch

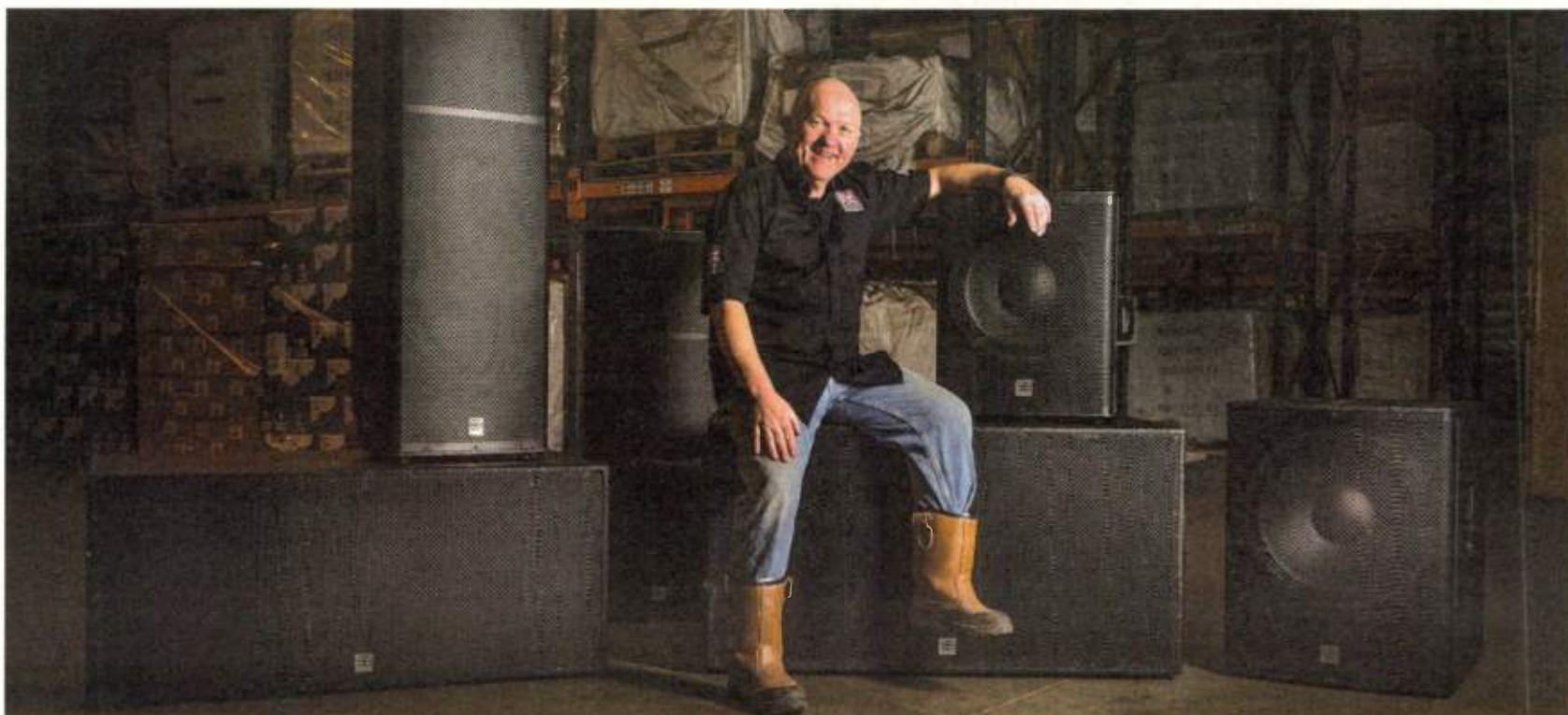
LEA Professional has appointed industry veteran **Joey Palkowitch** to the role of North America sales manager. Based at the company's South Bend, IN, headquarters, Palkowitch will manage North American sales, working closely with the company's U.S. representative team and Canadian distribution partner. Palkowitch will also lead product training sessions and serve as a liaison for technical service and support. Previously, he served in various sales and support roles of increasing responsibility for Harman Professional, most recently as a regional sales manager.



Alena Althouse

Reflex Marketing, which reps brands in the pro audio, musical instrument and contracting verticals throughout New York, New Jersey and Pennsylvania, has named **Alena Althouse** its marketing and communications manager. In the newly created role, Althouse will support vendors, resellers and the Reflex field sales team, leveraging an expanded tech stack and her marketing skill set. Althouse has a master's degree in communication and experience in ecommerce, having most recently supported the NHL Shop for Fanatics.





Andrew Bishop, founder of BishopSound

## Building Up That British Sound

ANDREW BISHOP, FOUNDER, BISHOPSOUND

BY DANIEL GUMBLE

"The live music scene is getting increasingly competitive and the needs of our industry have changed," said BishopSound founder Andrew Bishop when his company debuted its line array system. "Promoters are driving rental companies into the ground by offering less money for the sound at events, and the middle market for high-quality, affordable P.A. products has been vacant—that is, until now."

Designed and tuned in the UK and manufactured in China, the company's Delta Dual Passive line array system aims to provide a more affordable solution for the live sound market without compromising on audio quality. The line array consists of four Dual 8-inch boxes that come in a purpose-built plywood flight case. The speakers are BishopSound's own Neo Drivers with 2.4-inch voice coils and twin 1.23-inch HF units with titanium diaphragms; British-made Kevlar speaker cones are incorporated, while each box handles 600W RMS. The company is also launching subwoofers designed to work with the line array to offer a "complete package."

### TELL US ABOUT THE ORIGINS OF BISHOPSOUND.

I started BishopSound in 2016, drawing on my previous experience in several different industries, culminating with me owning the amplification and P.A. manufacturer Carlsbro. Carlsbro had been taken over by a Chinese company and I was working as a consultant for a number of famous brands before being more or less dragged back into the audio world by former export customers who were

complaining that they didn't like the sound of some of the "affordable" P.A. products they were being offered. The fact that they were willing to place quite large orders with me if I would come up with a genuinely different range made the idea very appealing, so I gathered a team of engineers and designers, and we set about coming up with a very distinctive approach to the market, both in terms of our products and the way we sold them.

I could see that there was an opportunity to offer speakers that sounded different—what I call the "British sound," a more musical sound—and that are either sold directly online by me or by a handful of genuine specialists at very affordable prices, and in both cases, with an emphasis on personal service.

When we began, we were offering point-source speakers and a huge range of accessories to end users—bands, entertainers, DJs, colleges, venues and the like—but word got around that our products were affordable, reliable and sounded great, so we were soon selling to installers and hire companies, who are always under significant cost pressures.

### IS THE PRODUCT LINE MANUFACTURED ENTIRELY IN THE UK?

We are adding new British-made products to the portfolio, but focusing on large subwoofers and wedge monitors at this time. These are being designed and manufactured in the UK. Presently, our Delta Dual passive line array is designed and voiced here, and manufactured in China.

### WHAT MADE YOU DECIDE TO LAUNCH A NEW PRODUCT RANGE INTO AN ALREADY HIGHLY COMPETITIVE MARKET?

This is a carefully researched move borne out of comments we have had from professional customers who are finding they can no longer make a profit hiring out some of the big-brand products. Hire companies are under extreme pressure from promoters, festival organizers and so on to cut their prices. For a major tour or a festival main stage, [brand names are] worthy of consideration, but on B stages or at smaller venues, they need something good sounding, reliable and affordable; the fact that there isn't a big-brand name on the boxes just doesn't matter. What matters is that it works, sounds great,

and they can make a profit from using it.

### WHERE WILL THE RANGE BE AVAILABLE?

It's available in stock immediately. Our business model is very different from most others. We manufacture and sell direct to the end user online via our website. However, we are growing local support by adding agents and dealers who are keen to work with us. Our new Listening Center in the Midlands is just that: a place to have a private consultation with professional sound engineers who are not on the payroll but simply enjoy our sound and believe it to be exceptional value for money. This is not a shop. It's more like a doctor's consulting room where you can get "one to one" advice and even on-site support if required.

### YOU SAY THE BUSINESS IS ABLE TO OFFER A MORE COST-EFFECTIVE ALTERNATIVE TO SOME OF THE "BIG NAME" LINE ARRAY BRANDS. HOW HAVE YOU BEEN ABLE TO DO THIS?

Because we are a very lean company. BishopSound consists of just my wife Victoria and myself. Of course, we don't try to do everything, so we have a team of professional designers, sound engineers and advisors who work on projects for us. We don't have a huge infrastructure to support, with inflated overheads. Neither do we use expensive routes to market. We pay attention to the product and not all the "riders," like the size of the show stand, posh offices, armies of representatives, entertaining, wining and dining. If you meet us, we will put the kettle on for a mug of Yorkshire tea and listen to your needs.

(continued on page 47)



# Money Matters, Part One

It is said that money is the root of all evil—yet we cannot live without it. For me, it started with a weekly allowance, a paper route, cutting lawns, shoveling driveways ... anything I could do to make a buck. What I learned early on—and over and over in the years to come—was that creativity, never giving up and finding a path around obstacles are crucial skills to develop in business.

I think Pete Townsend of The Who was my first big guitar influence. He played a Gibson SG, and therefore that's what I wanted. For my 14th birthday, my dad bought me a Raven SG copy, my first electric guitar. For an amp, I hijacked his old stereo system and proceeded to blow the speaker in no time. Immediately afterward, I bought a 12-inch EV driver, put it into a wooden box, and all of a sudden I was electric! The only problem? The Raven was not very good, and, well, it was not a real Gibson.

So I saved all my cash until I had \$200—enough to buy a used SG. I was in heaven! That is, until the guitar fell over—I watched it fall in what felt like slow motion—and the headstock broke off. I was devastated. Upon closer inspection, I realized that the neck had been previously broken and repaired. I went back to the store where I bought it and they refused to give me my money back. So my father suggested I bring them to small claims court. I did it all myself. I filled out the paperwork, went to court and was awarded my money back. I scrimped and saved again until I had \$500. By the time I turned 16, I had enough to buy a brand new Sunburst Gibson Les Paul Deluxe, mimicking my new guitar hero: Jimmy Page.

We are all driven by money. It is the medium that makes the world turn. These days, as part of my busi-

ness lectures, I profess that sales are the most important facet of any business. You can have the best administration, top-notch buyers, and the most efficient shipping department in the world, but without money coming in the door, you have nothing. Cash is the lifeblood of a company, and sales is the most important department, as

Boy do you ever begin to realize the value of money when you can barely afford a meal.

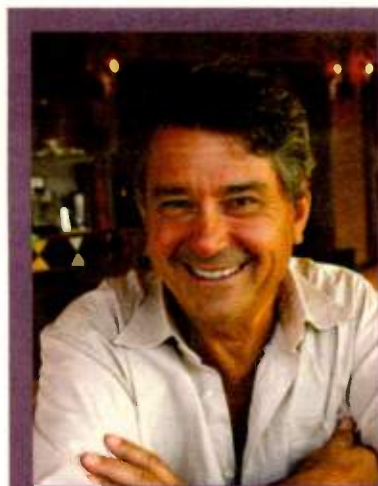
it brings in the cash!

When I was about 19, playing in bars in and around Montreal, we would play any gig where we could to make a buck. With the world going disco in the late 1970s, it became harder and harder to find rock 'n' roll clubs. Some weeks, money was so tight that I had to collect bottles on the side of the road just to pay for cigarettes. Boy do you ever begin to realize the value of money when you can barely afford a meal. I decided to give up playing music that I did not enjoy, and moved to Ottawa, follow-

ing my parents.

Within a couple of weeks, I got a job at a pro audio shop, and for the first time in my life, I actually had a wallet flush with cash. I bought a used light blue Pontiac Le Mans, took girls out for dinner.... I was king of the world! That is, until my boss brought me into his office to tell me that I was making too much money ... more than guys who had been with him for over 20 years. I was paid the same base salary as the rest of the sales team, plus commission, and I was their top producer. As a thank you, they wanted to reduce my income. Not smart. I promptly quit, moved west, and enjoyed an illustrious career with Fender Canada before launching out on my own with Radial. In 1988, while with Fender, I was making over \$80,000 a year, plus a car and all expenses paid. This is the equivalent of about \$200,000 in today's dollars—a very good salary indeed—but that's getting ahead of myself.

By 1984, I had saved \$5,000—just enough to afford a small mortgage. Because Vancouver is constrained on all sides between mountains, the U.S. border and the ocean, I figured that the limited amount of real estate coupled with the warmest (yet rainy) weather in Canada would eventually make the city a magnet for folks wanting to



BY PETER JANIS

Peter Janis, former CEO of Radial Engineering, is a 40-year veteran of the music industry. Exit Plan ([www.exit-plan.ca](http://www.exit-plan.ca)), his consulting firm, assists business owners to build their companies and prepare them for eventual sale.

move out of Canada's winter freeze. This would surely drive property values up. In my mind, the best option was to buy an acreage, so I spent days driving around the lower mainland until I found a property that I could afford. It was listed for \$89,000 and I offered \$59,000. We settled at \$64,000 for a 2.5-acre lot with a 950-square-foot tear-down house that was built in 1908. I made it work with minimal renovations and lived there for eight years until 1992, when my wife became pregnant with my son Adam.

Peter Janis, former CEO of Radial Engineering, is a 40-year veteran of the music industry. Exit Plan ([www.exit-plan.ca](http://www.exit-plan.ca)), his consulting firm, assists business owners to build their companies and prepare them for eventual sale.

## View

(continued from page 46)

### WHAT ARE YOUR AMBITIONS FOR 2020 AND BEYOND?

We will continue to talk and listen directly to our customers, and if we get enough people asking for the same thing, we will agree on a price point and make it. We have been very customer-led from the outset. We will stick to the common thread: "Make products that are reliable, affordable and durable."

### WHAT ARE THE BIGGEST OPPORTUNITIES FOR YOU IN THE MARKET?

Export is obviously going to be increasingly important. We already do export, but there is enormous potential, especially as we are starting to

"It comes as a surprise to a lot of our customers that when they call us, they speak to the person whose name is on the box. That is a real source of satisfaction to me—that our customers feel they have a relationship with us and that we are there for them."

Andrew Bishop

offer increasing numbers of products that are not only British-designed and -voiced, but made here, too. That counts for a lot, and it matters a lot to me personally.

We're very much a Yorkshire-based company, and Yorkshire was once the home of the British audio and speaker business. We'd like to play a part in bringing manufacturing back home.

### AND THE BIGGEST CHALLENGES?

Managing such tremendous growth is a challenge in itself. Naturally, there

are technical challenges and production challenges, too, but mostly our biggest challenges are business-related, which will be only too familiar to all. Fortunately, we have been able to get some very experienced people to help us with those, which is one of the advantages of the model we use of calling in outside experts on an as-needed basis.

On a personal note, continuing to make time to talk to customers so I can learn even more about their needs is always hard. It comes as a

surprise to a lot of our customers that when they call us, they speak to the person whose name is on the box. That is a real source of satisfaction to me—that our customers feel they have a relationship with us and that we are there for them. This isn't an idle marketing claim; it is quite literally how we work. The downside of that is it takes a lot of time. I am constantly looking for ways to create that time.

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# Companies to Watch

(continued from page 1)

Italia, president and CEO, d&b audiotechnik. “We utilized a major investment from our parent company to significantly expand our staff, upgrade our Asheville headquarters, open a new West Coast regional office and training center, and make global introductions of the A-Series and additions to the SL-Series. 2020 will see continued investments in staff, facilities and infrastructure, an expansion of our Soundscape initiatives and additional key new product introductions.”

DiGiCo general manager Austin Freshwater noted, “2019 was the first full year of DiGiCo and Klang working together as one team,” which resulted in the DMI-Klang, an in-ear mixing expansion unveiled at NAMM that provides immersive mixes natively from a DiGiCo work-surface. Meanwhile, the new Quantum 338 console (see story on page 35), he said, “truly embodies DiGiCo’s bold, forward-thinking vision for the next decade ... and is truly a console for the future that our customers are very excited about.”

An Avid spokesperson noted that 2019 saw the company expand its Venue S6L unified live sound platform, debut the S4 and S1 control surfaces, add Dolby Atmos integration to Pro Tools and more. She added, “In 2020, Avid will continue its commitment to delivering innovation in both software and hardware solutions for music production and audio post-production.” Avid is getting ready for Avid Connect 2020, which takes place just prior to April’s NAB Show, where attendees will explore issues including artificial intelligence, machine learning, delivering for OTT and streaming revenue.

Gary Boss, marketing director, professional markets, Audio-Technica, stated, “In 2019, we introduced an innovative line of modular gooseneck microphones with 72 different capsule, length and mounting options. We also debuted our ES954 hanging mic array. 2020 brings network-enabled monitoring and control to our popular 3000 Series wireless via A-T’s Wireless Manager software to help navigate the congested wireless spectrum—and we are just getting started.”

Trend-spotting early means being able to capitalize on industry shifts. Bob Boster, president of Clear-Com, pointed out, “In 2019, we saw a culmination of a trend that’s been happening over the last five years: the industry moving toward IP-based sys-

tems in response to their increasingly complex communications needs.... Clear-Com products—FreeSpeak II, HelixNet and LQ—have played a major role in the technological advances in theater, and in the transition to IP workflows. We also made significant product announcements in 2019 that address this trend with FreeSpeak Edge and the completion of our Eclipse HX system, now available as an AoIP matrix. We expect the industry to continue moving in this direction into 2020.”

The audio pros in Berkeley, CA, noted, “Meyer Sound marked 40 years as a company in 2019 and continues to lead the way as an industry innovator with a new generation of self-powered point-source loudspeakers: the Ultra-X40. In 2020, innovative and exciting products will be launched, including a new spatial audio tool for live mixing and a new compact point-source loudspeaker, and developments will continue in line array technology for live sound [along with Meyer Sound’s] industry leadership in the development of Milan for AVB solutions and collaboration on M-Noise as a new test signal.”

Another company with an anniversary in 2019 was Mackie, which turned 30. A spokesperson noted, “Mackie has long been known for disrupting the professional audio industry by producing great sounding, reliable gear. In 2020, we wanted to do something above and beyond, and completely re-imagined our flagship SRM series. SRM V-Class spares no expense and delivers the loudest, best-sounding and most advanced loudspeaker that Mackie has ever produced.”

Some companies have only just entered the pro audio market, such as longtime industrial computer manufacturer Arista Corp. Paul Shu, president, noted, “2020 holds great potential for Arista. After experiencing positive response to our Stealth Silent Audio Workstation, we’ve expanded our product portfolio. We’ve added the E-Vocal line of Dante converters and have been proactively recruiting manufacturer reps to help expand the company’s professional audio sales channels.”

Renkus-Heinz had a busy 2019, as co-founder Harro Heinz turned 90 (see page 12) and Matt Czyzewski was named president in April. Czyzewski expounded, “We expect 2020 to be the year of digitally steerable audio! By introducing accessible products and demystifying the technology, Renkus-Heinz is looking to enable a year of true discovery around what cutting-edge pro audio technology can do for a business. We will see new and impressive ways in

which businesses are leveraging better sound, and we will see new ways in which professional audio is impacting businesses beyond the ‘traditional’ AV considerations.”

Glenn Booth, director of marketing, professional audio, Yamaha Corp. of America, remarked, “In many ways, 2019 was about network connectivity for both installed sound and live sound applications,” noting Yamaha’s Dante integration across all of its key product categories, including amplifiers, consoles, loudspeakers and network switches. “Looking ahead to 2020 and beyond, we’ll continue to meet the changing needs of the pro AV market, increasing our emphasis on total sound system solutions, and focusing our new product R&D on enhanced AV over IP capabilities—especially as more pro AV system projects move to an IT infrastructure—along with a larger focus on products that do not require specialized, dedicated hardware, as well as more software- and enterprise-level computer hardware.”

In 2019, Aerosmith, alt-J, Bon Iver, Mark Knopfler, Ennio Morricone and Lady Gaga all used L-Acoustics’ L-ISA Immersive Hyper-real technology for live sound—and CEO Laurent Vaissie plans to build on that success. He said, “As L-ISA makes its mark on even more tours and residencies—as well as major corporate events, multimedia art installations and performance venues—2020 promises to be the year that spatialized audio truly begins to emerge as the new gold standard.”

Tim Carroll, CEO of Focusrite, commented, “In 2020, Focusrite will continue to deliver solutions that cater to the demands of our customers, and that give them the flexibility to push boundaries.” Having added to its quiver of brands with the 2019 acquisitions of Martin Audio (see page 5) and ADAM Audio, Carroll noted they collectively plan to make good on “a shared mission to create the most holistic creative experience for all audio creatives.”

The Audio Engineering Society gained a new executive director in 2019, Colleen Harper, and doubled down on increasing the diversity of its membership and “service to an ever-growing body of audio practitioners,” she said, adding that 2020 will see the AES provide new AES Academy offerings (see page 43), Dublin and New York conventions, an on-demand video portal and other new resources.

We spoke with dozens of industry leaders to compile this year’s “Companies to Watch.” Keep an eye out next month for part 2 for more of their insights, accomplishments and predictions.

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## Podcasting

(continued from page 1)

a handful of manufacturers were even streaming directly from their booths.

Apogee was one of the first manufacturers to offer microphones and interfaces suitable for podcasting. The company's USB HypeMiC features built-in analog compression with three settings and comes with a separate pop filter. For those wishing to add their own compression, there's HypeMiC+. Apogee also offers several audio interfaces, ranging from the 2x2 One and 2x4 Duet to the 10x14 Symphony Desktop, which incorporates vintage mic pre emulation.

Celebrating 15 years in business, British manufacturer Sontronics launched Podcast Pro, an end-address dynamic mic designed for spoken-word applications, with a supercardioid pickup pattern for side rejection of fellow contributors. Available in red or black, it incorporates internal protection against distortion and sibilants and, according to the company, requires no EQ.

A number of manufacturers are making things easier for podcasters by offering equipment bundles. AKG's Podcaster Essentials bundle, for example, includes the AKG Lyra USB microphone, AKG K371 headphones, Ableton Live 10 Lite recording software, a four-part Berklee Online recording class and a full set of audio cables, including a headphone splitter. Lyra's Adaptive Capsule Array uses four capture modes and offers 24-bit/192 kHz audio performance and plug-and-play operation.

Meanwhile, Mackie's Creator Bundle combines its EM-USB mic with Avid Pro Tools First and Waveform OEM software. Part of Mackie's

EleMent mic series, the EM-USB offers a built-in headphone output with independent volume control, plus main input gain and mute controls, and ships with a mic clip, tripod mount and USB-C cable.

MXL Microphones' Overstream bundle includes either a 990 Blaze (internally illuminated with red LEDs) or 990 Blizzard (blue) condenser mic; a desk-mounted, hinged-arm mic stand; and an integrated pop filter and shock-mount. The Overstream Pro bundle adds MXL's Mic Mate Pro XLR-to-USB inline audio interface.

Audio-Technica has tweaked the messaging on its 20 Series to attract podcasters. Four bundles variously offer AT2005USB cardioid dynamic

and AT2020USB+ cardioid condenser USB microphones, and AT2020 and AT2035 cardioid condenser microphones, packaged with ATH-M20x headphones and a custom boom arm with integrated cabling.

There are several options for those who prefer the features of an audio interface over a USB direct connection. UK-based Audient's minimalist, USB-powered EVO offers a novel feature: SmartGain, a big green button that allows the gain to be set with a tap. The four-channel EVO 4 will be available in Q1 2020; EVO 8 (eight channels) is scheduled for Q2.

German manufacturer RME's Babyface Pro is a two-mic, 24-channel interface offering control of mixing, routing and remote contribution

mix-minus management via proprietary TotalMix software, eliminating the need for an external mixer.

PreSonus has essentially turned its FaderPort into an audio interface with the ioStation 24c. The device combines the recording capabilities of the company's Studio Series USB-C 24/96 audio interfaces with the functionality of the FaderPort USB production controller and comes bundled with PreSonus software.

PreSonus also has you covered if you do need a mixer. The StudioLive ARc series combines a 24/96 multichannel USB 2.0 audio interface with an analog mixer front end; it records to an internal SD card. A Super Channel handles four stereo

compact hardware package supporting four presenters and phone, USB and Bluetooth source connections. Now it has competition, from Zoom's six-input, 10-fader LiveTrak L-8, which offers podcaster-friendly features including pads for triggering bumpers, ads and sound effects, four headphone outputs, and support for remote contributions with automatic mix-minus. It can record to a computer and SD card simultaneously, and will run on AA batteries or USB.

If you already own a RØDECaster Pro, Gator Cases offers a Titan hard-shell case that accommodates the unit and two microphones. The company was one of several podcasting from the show floor.

Whatever gear you have, don't overlook the effect that your room—whether it's a permanent or temporary location—has on the sound quality of your podcast. Auralex, also podcasting from its booth, offers a variety of solutions for fixed or mobile podcasters, as do other manufacturers.

Auralex's DeskMAX is a portable and lightweight nearfield solution comprising two panels and two stands that can be used anywhere that boundary-mounted acoustical treatments aren't feasible or desired. The next step up is Auralex's D36-DST Roominator Kit of 18 DST-112 and 18 DST-114 panels, designed to temper the acoustical problems of a room up to roughly 6 x 8 x 8 feet. For larger rooms (up to 100 square feet), the Project 2 Roominator Kit adds LENRD bass traps to a kit of 24 2-inch thick, 2-square-foot Studio-foam Wedges.

With so many pro audio manufacturers now creating equipment for the podcasting market, expectations for the audio quality of even amateur productions should rise in tandem, making for better listener experiences.

Whatever gear you have, don't overlook the effect that your room—whether it's a permanent or temporary location—has on the sound quality of your podcast.



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# ≡ Gullah, *Good Time* and a Grammy Nomination

BY STEVE HARVEY

The Gullah, also known as the Gullah-Geechee, are a close-knit community descended from West African slaves who have long lived on the Sea Islands and Lowcountry region of Georgia, Florida and South Carolina. Their culture and traditions are being brought to a wider audience today through the music of Ranky Tanky, a five-piece from Charleston, SC, whose 2019 release, *Good Time*, was nominated for a Grammy Award in the Best Regional Roots Album category.

Four members of Ranky Tanky—drummer Quentin Baxter, bassist Kevin Hamilton, guitarist and vocalist Clay Ross, and trumpeter and vocalist Charlton Singleton—first played together in a jazz band after college. They got back together in 2016 and recruited vocalist Quiana Parler, a former *American Idol* contestant and one of three band members with Gullah family ties.

The band's jazz- and gospel-inflected interpretations of the centuries-old music, poems, games and children's songs of their ancestors have obviously struck a chord with fans. Their debut album, *Ranky Tanky* (which loosely means "get funky"), went to No. 1 on *Billboard's* Jazz and Contemporary Jazz album charts.

The band's sophomore album, *Good Time*, was produced at Truphonic Recording Studios in Charleston and mastered by Vlado Meller. It debuted at No. 2 on the *Billboard* Jazz

chart in July 2019.

Gullah music probably first entered the national consciousness in the early 1960s, when ethnomusicologist and archivist Alan Lomax recorded singer Bessie Jones. But as Charlton Singleton explained to *Pro Sound News*, the Gullah tradition doesn't just inform Ranky Tanky's songs but music at large.

## ON THE INFLUENCE OF GULLAH CULTURE

Gullah has been around for so long, it's definitely an informant to a lot of other musical genres. If you were to go to a number of different places, especially in the South, where you have arguably the birthplace of jazz, and the birthplace of folk music in the Appalachian Mountains, there are certain similarities in the sounds of those places. They have direct ties to the Gullah community and West African music.



Ranky Tanky's latest album, *Good Time*, was nominated for a Grammy Award in the Best Regional Roots Album category.

You had this group of people living on these islands before anybody came up with jazz in the late 1890s, or folk or rock 'n' roll or gospel. All of that came after the Gullah community was born. That's why we talk about it being an informant to so many different styles.

The best person to describe how it all connects is probably Quentin, our drummer. Sometimes when Quentin explains it and taps out or sings a Gullah rhythm and talks about how it has infused into another style of music that we've come to know as blues or gospel or jazz, you go, "Wow, I never heard it that way."

It goes further than that. Clay always talks about his time playing in Cyro Baptista's Beat the Donkey band and going to Brazil and hearing the music there. Clay said, "That sounds like Quentin playing at church."

## ON THE PIONEERING WORK OF BESSIE JONES

She, along with Alan Lomax, brought a lot of material to the forefront so that everybody could experience it. The material from our first recording is nothing but Gullah standards, as we call them. You can find a lot of recordings of those tunes from various sources, but Bessie Jones and her book, *Step It Down*, is something that we referred to quite a bit, especially when we were starting this band.

## ON THE PRODUCTION TEAM

Rob Macomber was the lead engineer. He works with Jazz at Lincoln Center and mixes a lot of live recordings there. Elliott Elsey assisted.

Quentin was the producer. He and Rob worked on a number of projects together. Quentin has produced an album for me, and he's produced for a number of other musicians in the Charleston area. He produced a record

for Grammy-nominated jazz vocalist Rene Marie. When we decided to look for a producer, it was a no-brainer to look right next to us in the band.

Before we even walked into the studio, Quentin sat us down one by one and talked with us about what we wanted to hear and how we wanted it to come through for our personal instrument. He was very meticulous. It was fun to be in the studio with his ideas. Quentin made it all so easy.

We're excited to be reaping the benefits of his masterful production skills. Hopefully it'll end with a Grammy Award.

## ON RECORDING AT TRUPHONIC

They have a really nice setup, and they're very quick and thorough. It has been a joy to work with them. Anytime you're in a studio situation where you've got quality people who know what they're doing and are all-in on the project, you can just come in and be the artist and not worry about other stuff.

We'd been playing these songs at shows, so by the time we got to the studio, it was just a matter of tweaking something here or there. There were very few overdubs. There were some fixes, but pretty much all the rhythm tracks were just one or two takes.

And Vlado, who is legendary, has his mastering room there. His resumé is a who's who of music.

## ON RANKY TANKY'S BOOSTERS

We appreciate the support, especially from the local community and the Gullah community, and the encouragement and well-wishes that they have given us. And not just as Ranky Tanky but individually, all through the years. The "village" has been around us since day one and we feel blessed to have this sort of support and encouragement from them.

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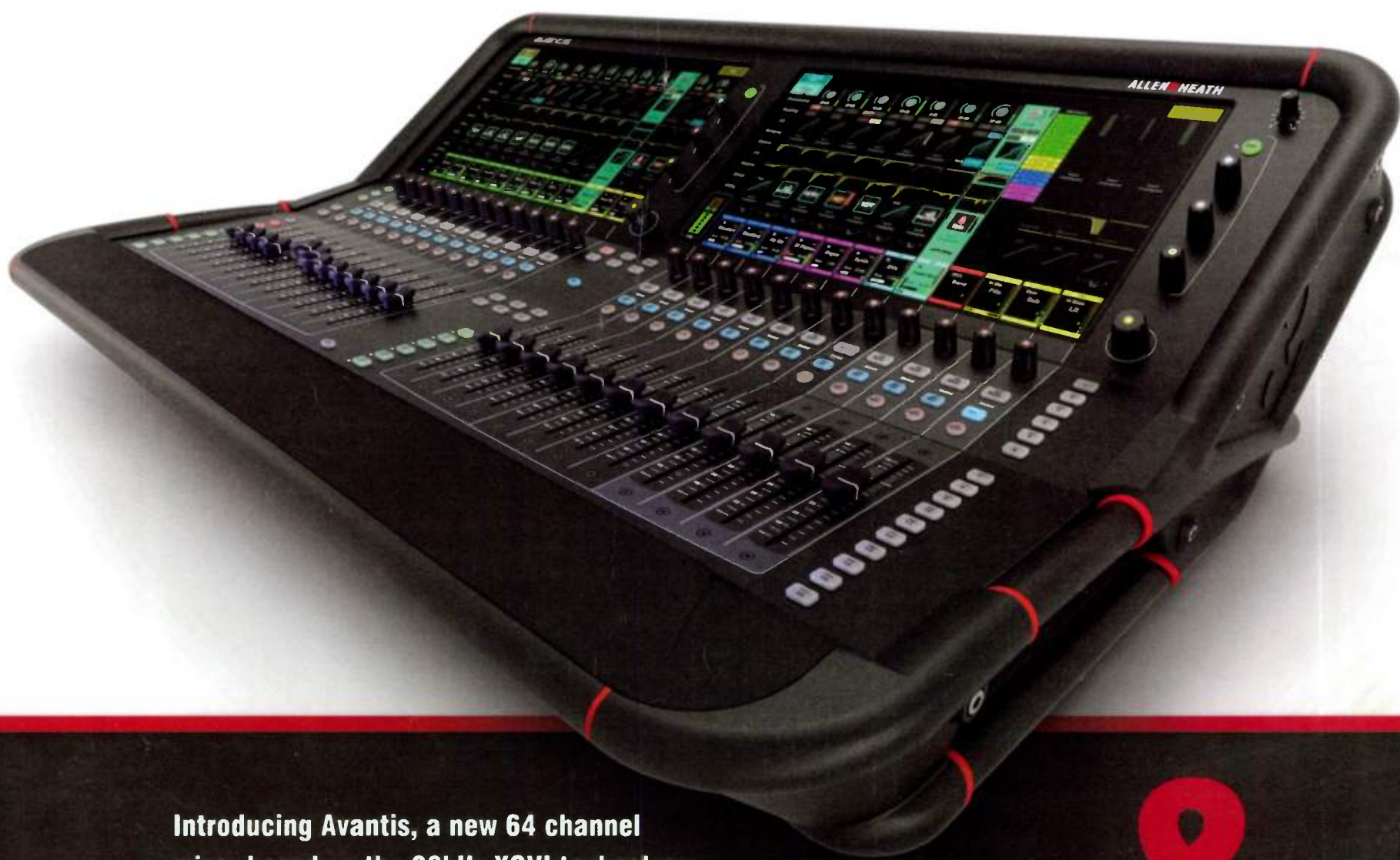
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