

prosound NEWS

Volume 40 No. 9

www.prosoundnetwork.com

September 2018



SOUND O' SLEEP—The world outdoor premiere of Max Richter's *Sleep* took place in downtown Los Angeles in late July, where hundreds of audience members slept overnight on cots, lulled by an eight-hour musical piece that enveloped them via d&b audiotechnik's immersive Soundscape object-based processing. For more on the project, see page 40.

Exhibitors, New and Returning, Prep for AES

BY STEVE HARVEY

The 145th AES Convention, which is being held October 17-19 at the Jacob K. Javits Center in New York City, is attracting some new exhibitors and, thanks to a variety of factors, bringing some old friends back into the fold. For some, the location is attractive, while for

others, the timing is just right. And some exhibitors, well, they can barely wait to show off their new products.

This will be the first AES Convention appearance for Wisycom, which manufactures its wireless products in Italy. Exhibiting under the Wisycom USA name established earlier this year, the company has been

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Made in the Shade

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John Driskell Hopkins of the Zac Brown Band is a singer, songwriter and multi-instrumentalist, not to mention a longtime producer/engineer. Now you can add studio owner to the list, thanks to his Atlanta-based Brighter Shade Studios.



Hooray for Hollywood

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Hollywood Sound Systems has had a colorful history, from handling sound for the Oscars in the '60s and '70s to providing a veritable Aladdin's cave of live and studio sound products for rental today.



Pro Audio Centers In On Experience

BY CLIVE YOUNG

There's an old saying, "Experience is what you get when you

don't get what you want," but when it comes to pro-audio Experience Centers—permanent multi-use facilities that are showrooms,

training facilities, trade show booths and more all rolled into one—you may get more than you knew you wanted.

Harman Professional Solutions opened a 16,000-square-foot Experience Center in Los Angeles last November, and Shure, Inc. created one inside its new downtown Chicago office in The National Building this past Spring. Now QSC has announced that it, too, will have an Experience Center when it opens its new EMEA headquarters in Sinsheim,

Germany late next year.

The L.A. outpost isn't Harman's first; it may be the company's flagship Experience Center, but it joined facilities already operational in Singapore and Shanghai. More recently, the company opened a fourth center in London this past April.

"The facility showcases [our] product solutions in a variety of entertainment and enterprise market applications, and demonstrates the integration of brands includ-

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Logitech Acquires Blue Microphones

BY CLIVE YOUNG

NEWARK, CA—Tech accessory manufacturer Logitech has acquired Westlake Village, CA-based Blue Microphones from private equity firm the Riverside Company for roughly \$117 million in cash.

Founded in 1995, Blue made a name for itself with a number of studio-grade professional microphones, and debuted the first USB mic in 2005. Today, it offers more than 30 products for both consumers and professionals, including headphones and numerous microphone accessories. In 2013, the Riverside Company acquired Blue from another private equity firm, Transom Capital, for an

undisclosed amount.

“Blue’s already-premier consumer brand and innovative product offering were very attractive upon our initial investment,” said Riverside managing partner Loren Schlachet. “Working with a stellar management team, we were able to help Blue’s annual sales grow in excess of 20 percent and increase earnings nearly four times under Riverside’s ownership.” During its tenure with Riverside, Blue expanded its footprint in broadcast, gaming, game streaming and esports applications.

“With Logitech’s vast resources and incredible reach, Blue will be on a much bigger stage from the beginning. The end result is fulfilling our ultimate purpose: helping as many of our users find and amplify their voice as we can,” said Blue CEO John Maier. “Blue and Logitech have a lot in common. Both companies work at

being small, fast and hungry, crafting great products with cutting-edge design and technology. We’re an established leader in the broadcasting space with a strong product portfolio. Logitech has design at its heart, tech know-how and global reach. Together, we can do amazing things.”

The sale to Logitech is in keeping with the personal computer and mobile accessory manufacturer’s history of M&A, and it’s not Logitech’s first move into pro audio, either, having acquired Ultimate Ears (Irvine, CA) for \$34 million in cash in August 2008. Blue, too, has done its share of acquisition over the years, having bought Summit Audio in April 2011, later handing off much of the brand’s management to JMP Electronics in late 2016.

Logitech CEO Bracken Darrell said in a statement that the acquisition will “accelerate our entry into



a growing market, and offers another way for us to help bring people’s passions (from music to blogging) to life.” He also noted the brands’ “additional synergies related to our existing gaming, PC webcam and audio categories.”

The transaction, which closed at the end of August 2018, is expected to contribute a point of sales growth for Logitech’s fiscal year 2019. Based on its performance in Q1 and the acquisition of Blue Microphones, Logitech raised its fiscal year 2019 outlook to 9 to 11 percent sales growth in constant currency.

Blue
www.bluedesigns.com

Logitech
www.logitech.com

briefs

Shure’s GPA Hat Trick

LONDON, UK—Shure (Shure.com) has been recognized as a 2018 Global Excellence Award winner by the Global Presence Alliance (GPA), a trade group for the Integrated Audio-Visual Experience Industry. Shure was previously honored with the award in 2017 and 2016.

GTCC Examines RCF with Exile

DENTON, NC—The Entertainment Technology program at Guilford Technical Community College in Jamestown, NC uses a RCF (rcf.it) HDL20-A line array system with SUB8006-AS subwoofers for teaching purposes, so on July 4, Morgantown, NC’s Blue Ridge Sound and Gallatin, TN-based Lonely Dog Productions invited school staff to check out RCF gear in an actual concert setting as they provided audio for an Exile concert at Denton Farm Park in Denton, NC.

Meyer Nets Bluehorn Patent

BERKELEY, CA—Meyer Sound’s (meyersound.com) proprietary digital technology, enabling the company’s Bluehorn System studio monitors to reproduce complex musical signals with flat frequency and phase response across the full audio bandwidth, now has a patent number: 9,992,573 B1. According to Meyer in the patent document, the technology restores the original phase relationships by applying an inverted phase response.



AES Archiving Event Proves a Success

CULPEPER, VA—The Library of Congress National Audio-Visual Conservation Center (NAVCC) Packard Campus in Culpeper, VA, was packed with audio pros recently when the Audio Engineering Society held its first International Conference on Audio Archiving, Preservation & Restoration—an event that sold out months in advance.

The conference, chaired by educator and AES past president John Krivit, drew pros and presenters from around the industry to discuss the creation and maintenance of audio archives, as well as explore the Library of Congress facilities and meet its engineers.

Building on the goals and standards of both the Audio Engineering Society and the Library of Congress, the conference served as a basis for further research and implementation of new techniques in the archiving, preservation and restoration of audio assets. Research papers presented at the conference are available for download in the AES E-Library. Downloads are free for AES members.

“The Library of Congress National Audio-Visual Conservation Center was honored to host the AES 2018 Preservation Conference,” said Greg Lukow, chief, National Audio-Visual Conservation Center, Packard Campus. “The library and the society have a shared commitment to audio preservation, a commitment literally written into law by the U.S. Congress 18 years ago when the AES was designated as a statutory member

of the library’s National Recording Preservation Board. Since then, the society’s participation on the board has been instrumental in preparing the 2010 NRBP study on the state of recorded sound preservation in the U.S., and the library’s 2012 National Recording Preservation Plan. It was fitting, then, that AES and the library would collaborate on the organization of a conference featuring leading experts in all areas of audio mastering and archiving from around the world, a conference that will stand as a seminal event in the history of the entire audio archiving and preservation community.”

The event’s platinum sponsor, Iron Mountain Entertainment Services, played a key role in the conference. Greg Parkin, Iron Mountain Entertainment Services vice president, North America, noted, “We are pleased that our very own Kelly Pribble was able to participate on the panel ‘The Challenge of Archiving Multitrack Recordings’ and contribute a treasure-trove of knowledge and experience alongside industry icons like George Massenburg and Jack Douglas. We look forward to working closely with AES and other key partners such as the Recording Academy to bring these important issues to the forefront.”

Another one of this year’s sponsors who has worked closely over the years with AES and the Library of Congress is the Recording Academy, a key proponent of the audio archiving, restoration and preserva-



A sold-out crowd attended the AES International Conference on Audio Archiving, Preservation & Restoration at the Library of Congress National Audio-Visual Conservation Center (NAVCC) Packard Campus in Culpeper, VA.

tion efforts. Maureen Droney, Recording Academy managing director, P&E Wing and Recording Technology, remarked, “The technical deep dives were enlightening, and the content—from 1950s jazz masters on *The Ed Sullivan Show* to field recordings from the 1940s, historic civil rights broadcasts and so much more—was truly moving. It shined a bright light on the true meaning and cultural importance of ‘archiving and preservation’ and those who do its work.”

Preserving media formats will also be a focus of the upcoming 145th International AES Convention being held in New York City, October 17-20, 2018.

AES
www.aes.org



SOUNDRECORDING

Toby Scott is His Own Boss 18

Toby Scott spent nearly 38 years working on the road and in the studio with Bruce Springsteen, but these days, he's working with local talent out of his Cabin 6 studio in Whitefish, MT and aims to expand his horizons.

Collins Opens the Door to Hinge 20

Grammy winner Dave Collins has been mastering music you know by heart since the 1980s, and now has completed a new facility with two rooms, the other being used by Craig Bauer, another Grammy winner whose Chicago-based Hinge Studio was Kanye West's homebase in the '90s.

SOUNDPOST/BROADCAST

Inside *Mamma Mia* Sequel's Mixes 25

More than 60 million people have seen *Mamma Mia!* on stages around the world and its cinematic version was a hit 10 years ago. This summer, the long-awaited sequel played everywhere with a variety of immersive mixes that were created with the input of ABBA songsmith Benny Andersson.

Roger Federer Gets Into Farm League 25

Venice, CA-based creative production house Farm League recently captured tennis great Roger Federer and Beastie Boy DJ Money Mark in the Mojave Desert as they collaborated on a sample-based, sound design-heavy music track for a commercial highlighting a new Wilson signature tennis racquet.

SOUNDTECHNOLOGY

Sound Innovations: Pliant Crewcom Wireless Intercom System 30

Tom Turkington, vice president of technology at Pliant, discusses why espousing theoretical or "ideal" conditions for the range of an RF system does not accurately reflect the practical operating distance under real conditions.

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Waves CLA-3A Modeled Compressor Plug-In; J. Rockett Audio Designs Rockaway Archer; Manley Reference Cardioid Tube Microphone; Soyuz SU-013 Small Diaphragm Condenser Microphone; Neural DSP Darkglass Ultra Plug-In; FabFilter Saturn Plug-In; D&A H-0600 Hydra Triple Guitar Stand

Need to Know: AI and Machine Learning 36

As part of Future's continuing Need To Know series, which examines the emerging technology trends shaping our world, we look at AI and Machine Learning this month, exploring how it was developed, where it stands today and what's ahead, not only for the world at large but specifically the Pro Audio arena as well.

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SPECIAL REPORT

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The annual Audio Engineering Society Convention will descend on New York City in mid-October, bringing with it the latest revolutions and technological advances in the worlds of recorded and live sound—but there's more at play this year as the convention continues to enjoy a new renaissance.

COLUMNS

softwaretech 21

Craig Anderton examines the spec for the Native Kontrol System.

viewfromthetop 47

One of the biggest pro-audio news stories of the year was Martin Audio's management buy-out. Now managing director Dom Harter sits down with *Pro Sound News* to look at where the venerable loudspeaker manufacturer's been and what lies ahead.

music,etc. 50

Jaques Sonyieux talks with Mikaela Davis about her latest album, selecting a producer, and where the harp sits in modern music.

Correction

In the Dante supplement to the August issue of *Pro Sound News*, a product listing erroneously stated that Radial's Dlnet Dan-TX and DAN-RX Dante direct boxes are wireless. The units, which allow users to connect instruments or line-level sources directly to networked audio systems using the Dante protocol, are not wireless. www.radialeng.com



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The Other 'Analog Vs. Digital' Battle

Last week, I did something that I never would have dreamed of a few years ago: I bought a new bicycle over the internet. I've had a decrepit, used 1980s folding bike for a few years and it's been begging to be put out its misery in that "I'm either going to get you killed or leave you stranded in the middle of nowhere" way that aged bicycles do. I wanted another folder, but none of the local shops carry them, so I was out of luck. While it seemed counter-intuitive to buy a bike without riding it first, faced with no other choice, I did some research and wound up ordering one over the web.

The experience—or lack of an experience, to be more accurate—highlighted to me the importance of real-world interaction when it comes to sales and purchases. If I had bought it in a shop, a salesperson would have helped me narrow down the choices and I would have gained all that subtle information you get in-person—what a product really looks like, the sounds it makes, the tactile sense of its surfaces, the cool little features you didn't realize were so important to you, and so on. Most of all, I would have been able to ride it and hopefully judge it against another model. Online shopping may let you compare prices, but it doesn't let you compare experiences. As a result, while I like the bike a lot, I'll never

know if I would have made a better choice had I seen in person.

In recent years, virtual existence on the internet has made doing anything in person seem hopelessly passé—call it Analog Vs. Digital if you will—but now it seems the tide is turning, with the real world making a comeback as people start to miss and appreciate what they've given up for the sake of convenience. Many companies are honing in on that revival and now we're seeing that trend in the pro audio industry, too.

Take our cover story on the rise of pro-audio experience centers. Brands have been building permanent multi-use facilities that are showrooms, training facilities, trade show booths and more all rolled into one. Those spaces are specifically created for illustrating how products fit into real-world situations, but they also serve another purpose: Providing that kind of attention and inciting confidence in a product goes a long way to building lasting relationships between brand ambassadors and customers.

Face-to-face interaction is likewise a key part to how pro-audio trade shows have rebounded over the last few years. The upcoming AES Convention, being held October 17-19 at the Jacob K. Javits Center in New York City, serves as yet another example of not only how

the shows have bounced back, but also how in-person interaction is still crucial. A slew of new, first-time exhibitors will be on-hand this year, while other industry mainstays like Universal Audio, Sound Devices and Meyer Sound will have booths on the exhibition floor for the first time in years.

Getting up-close and personal with gear at the AES Convention is always fun, but the great thing is that you're liable to wind up talking to the people who invented that cool new audio tool. Networking is a key ingredient of the convention, and I can't count how many times I've interviewed someone for an article and they said their new job, collaboration, corporate merger or some other life-changing event happened because "we started talking at AES." Those kinds of personal advances are the sort that no amount of "likes" on social media will ever spur.

If you can make it to the AES Convention next month, you should go. We'll be there covering it for everyone who can't make it via our website, daily newsletter, Tweets, posts and more, but don't let that dissuade you from heading to New York. You can read our expansive, detailed coverage of the show in our pages and on the web, but like everything else in life, you'll get even more out of experiencing it in the real world.

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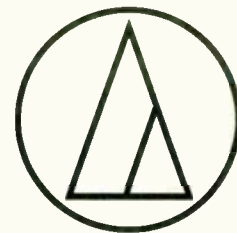
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Capitol Studios Launches Online Mastering, Vinyl Services

LOS ANGELES, CA—Capitol Studios recently launched new online mastering and vinyl-cutting services out of its iconic Capitol Tower facility in Hollywood, where clients choose an engineer from a list of world-class mastering engineers that includes Robert Vosgien, Evren Gökmar, Ian Sefchick and Kevin Bartley.

Aaron Gonzales, an engineer from San Antonio, TX, and Sam Maul, chief engineer at Shock City Studios in St. Louis, both recently used the service to work with Capitol's Robert Vosgien, whose credits include Black Sabbath, Gene Simmons, Elvis Costello, Alice Cooper, Bob Seger, No Doubt, Bush and BJ the Chicago Kid.

Gonzales remarks, "In the recent past, I was mastering my own music, but I was looking for other options. I looked around at a bunch of online mixing and mastering services, but most of them were a machine or automated process and seemed cheap and clunky. When I found the Capitol Studios website and read about their new mastering services, I had a hunch that this was the one.



Mastering suite RR1 at Capitol Studios

"I am very happy with the results on my project," Gonzales continues. "It's great to see a major studio like Capitol offering their services to all the independent artists out there who want to add a world-class finishing touch to their music."

Maul notes, "I had been using local engineers for mastering, but frankly I wanted to get a new sound for the artist I was working with. I knew that if I could give it to the

next-level professionals, we could really make it shine. The engineers available through Capitol Studios' online mastering services are the type of pros that can make that happen. I loved the service—the immediate feedback is incredible. The first song turned out great, and I have already uploaded a second song and referred a friend, too."

Capitol Studios
www.capitolstudios.com

Report Explores Mixing Console Market

ST. ALBANS, UK—According to a report released by Futuresource Consulting's pro audio team, mixing consoles continue to experience a customer shift toward low-end products.

"As the march of technology continues, low-end mixer consoles have evolved into highly advanced pieces of equipment," claims Reid Rasmussen, associate consultant at Futuresource. "They far outclass and out-

perform their predecessors of just five years ago. Today, low-end consoles can provide much of what a midrange console used to deliver, compelling buyers to purchase low-end solutions to meet their mid-range needs."

Futuresource research shows that suppliers and channels alike have been taken by surprise by the strength of the market's low end. Many remain unsure of the nature of certain segments buying the hundreds of thousands of units shipped.

Despite this midrange squeeze-out, the total market remains buoy-



The report looks at all segments of the console market, from high-end offerings like Avid's Venue 56L to lower-cost models.

ant, valued at \$724 million last year and on track to deliver a value growth of 5.3 percent CAGR, according to the Futuresource report. Verticals explored in the report are touring and rental, portable sound, broadcast and studio, installed leisure and installed commercial.

"Looking to the high end of the market, we're seeing a lot of saturation," says Rasmussen. "Here, it's mostly about replacements and upgrades, though there are still opportunities within broadcast, touring, concerts and large events."

The highest price point at which

analog consoles can be sold has always been limited by the low end at which digital consoles are priced, according to the report, suggesting that with digital console prices falling, the market for analog consoles continues to shrink. End-users replacing existing analog equipment with digital is another factor contributing to accelerated growth at the low end of the market.

"Our channel research shows that customers expect new console products to do far more for less," says Rasmussen, "delivering more features, more plug-ins, effects built-in rather than outboard, more input and output channels, DSP included and more busses. All at the same price or less.

"With potential new market entrants looking to make quick advances and gain market share, the future landscape will be peppered with challenges and potential disruptions."

Futuresource Consulting
www.futuresource-consulting.com

Apogee Names Wagner President

SANTA MONICA, CA—Apogee Electronics has named industry veteran Phil Wagner as its new president. The announcement was made by Apogee CEO and co-founder Betty Bennett.

It's not the first time Bennett and Wagner have worked together. "I met Betty at the 1984 Summer NAMM Show at Chicago's McCormick Center," said Wagner. "Betty hired me for my first position in pro



Phil Wagner has been named president of Apogee Electronics.

audio while she was president of Phil Dudderidge's Soundcraft USA. We worked alongside each other, where I learned the Bennett method of 'making stuff happen' as we established Soundcraft New York."

Wagner began his career in New York City as a recording engineer at Soundworks, located in the basement of the legendary Studio 54. From there, he went to Soundcraft USA. In the intervening years, he became president of Solid State Logic, and most recently he was president of Focusrite Novation Inc.

With his arrival at Apogee, he will draw on his varied background for the manufacturer of audio interfaces for recording and post-production. "It gives me great pleasure to join Betty in guiding Apogee into the next phase of its strategic business plan," he said. "We have many great ideas and are planning for solid growth in our core markets."

Bennett said, "I've watched Phil grow professionally over many years with the various roles and positions he has had in our industry. His wife Cathy was part of the Apogee family for 15 years, and as a result, Phil and I have stayed close. I'm pleased that Phil is finally coming home to Apogee. His energy, skill and tenacity are all without equal. I know he is the right person to ensure our long-term growth."

Apogee Electronics
www.apogeedigital.com

Fantasy Recording Studios to Close in September

BY STEVE HARVEY

BERKELEY, CA—Fantasy Recording Studios, long known as “the house that Creedence built” and in operation at its present location since 1971, will close on September 5, 2018, according to the company’s operators, Wareham Development.

Wareham distributed an email on July 28 on behalf of the Fantasy Studios team that announced, “We are sad to inform you that the Berkeley building at 2600 Tenth Street in which we operate is being sold, and that Fantasy Recording Studios will be closing effective September 15th, 2018.

“We wish to thank you for your patronage and for the privilege of working with you on the incredible projects you have completed at Fantasy. We are grateful and proud that your works of art will represent us forever.

“Our wonderful staff engineers and producers have freelance relationships with other studios and production spaces, and would love to continue serving you going forward.

“Again, thank you for everything. Jeffrey, Jesse, Adam, Alberto, Robert, Cody, and James send you our best wishes on your future endeavors.”

According to a statement provided by Wareham spokesman Andrew Neilly to *The Mercury News*, “Wareham is in the very early stages of marketing 2600 Tenth St. for sale. After owning the building for the last 11 and a half years and investing significantly into the building—including supporting the studio operation—it’s necessary to focus our time and attention on our core assets and expertise, namely being one of the largest privately-held developers and owners of life science and medical technology buildings in the Bay Area.”

Wareham Development, which owns 4 million square feet of commercial real estate in Berkeley, Emeryville and Point Richmond, paid more than \$20 million for the 2.64-acre property, also licensing the Fantasy name, in 2007. More than 25 percent of the developer’s portfolio comprises biotechnology and related facilities.

The studio can trace its roots back to 1949, when brothers Max and Sol Weiss founded a label, Fantasy Records, specializing in jazz, comedy, spoken word and poetry in San Francisco. Saul Zaentz, who started work-



The SSL Duality SE console in Fantasy’s Studio A.

ing with the label in 1955 as a salesman, having previously worked with famed jazz producer and promoter Norman Grantz, purchased Fantasy with a group of investors in 1967.

Fantasy went on to become the largest jazz record label in the world, but its breakthrough came when Fantasy signed a garage band known as The Golliwogs, led by the label’s shipping clerk, John Fogerty. Rechristened Creedence Clearwater Revival, the band subsequently sold millions of records. When the Beatles split in early 1970, Creedence took over the title of No. 1 album artist but dis-

banded two years later

With CCR’s commercial success, Fantasy moved into a two-story building on the corner of Tenth and Parker in Berkeley. According to Fantasy’s website, “Containing three recording studios (A, B, and C) and a mastering room as well as offices and a spacious warehouse, the facility opened in February 1971.”

Zaentz moved into film production in 1975 with *One Flew Over the Cuckoo’s Nest*, which won five Oscars including for Best Picture. The film’s financial success enabled Zaentz to add a seven-story building

adjacent to the studio complex in 1980. The new building housed a dubbing stage and picture and sound editing suites. In 1989, Zaentz added a second mix stage and more editing rooms. Dubbed the Zaentz Media Center, the facility had a hand in post production on a string of TV and film projects, including Peter Jackson’s *The Lord of the Rings* trilogy, *Toy Story* and *Good Will Hunting*.

Fantasy Studios’ discography is expansive and eclectic. Green Day’s 1994 breakthrough *Dookie* was recorded there, as was Santana’s 1999 *Supernatural*, which garnered 15 platinum discs and won nine Grammy Awards. The facility’s client list also includes David Bowie, Journey, Joan

Baez, Jerry Garcia, Buddy Guy, Tony Bennett, Bobby McFerrin, Country Joe McDonald, McCoy Tyner, Sonny Rollins, Bill Evans, Flora Purim, Journey, Robert Cray, Aerosmith, Counting Crows, Chris Isaak and numerous others.

Further details regarding the facility’s future have not yet been made public. According to Wareham Development founder Rich Robbins, in a statement to local news site *Berkeleyside*, the building “will go on the market soon.”

Fantasy Studios
www.fantasystudios.com

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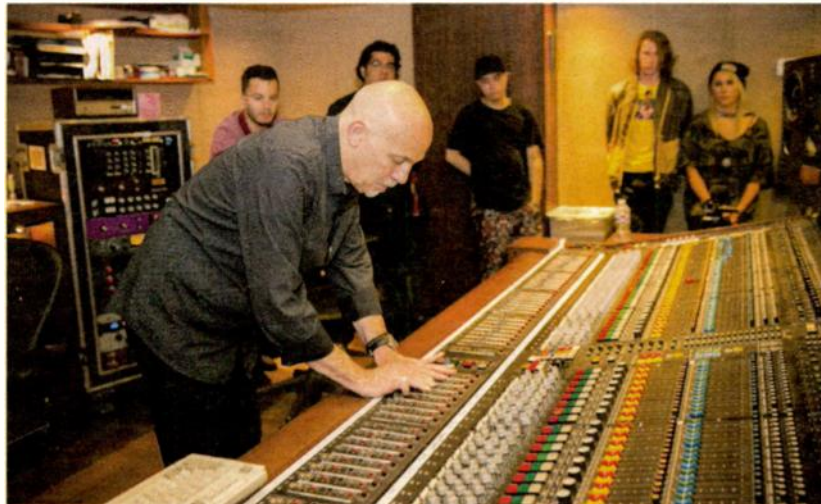
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Csaba Petocz Master Class Scholarship Opens

NASHVILLE, TN—Five-time Grammy Award-winning mix engineer Chris Lord-Alge (Green Day, Keith Urban, Rise Against, Pink, Carrie Underwood) will conduct a one-day advanced audio workshop at his personal recording studio, Mix L.A. as part of the Csaba Petocz Master Class Scholarship, an annual audio education event created to honor the legacy of the beloved producer/engineer Csaba Petocz. The scholarship is sponsored by Audio-Technica; the Recording, Radio and Film Connection (RRFC); and Clyne Media, Inc.

A three-time Grammy nominee with 37 number-one record credits and 32 platinum or multi-platinum albums, Petocz lived and worked in Los Angeles and Nashville working closely with top names, from Metallica to Larry Carlton, John Michael Montgomery to Alanis Morissette, Aretha Franklin to Elvis Costello, Morrissey, Al Stewart and more.

A total of six scholarship winners will be selected to take part in the workshop, which is open to advanced audio engineering and music production students and apprentices. Lord-Alge will lead the workshop sessions, which will focus on the essentials of mixing, critical



Grammy Award-winning producer/engineer Joe Chiccarelli adjusts faders on the console while last year's five winners of the Csaba Petocz Master Class Scholarship look on.

listening and production. Currently, Lord-Alge is finalizing a curriculum and class format that will stress mixing best practices, while instilling the standards and values that Petocz brought to the studio.

There is limited enrollment for this up-close-and-personal workshop, which will take place September 22, 2018. The six scholarship recipients will be chosen by the Recording Connection admissions staff.

"Csaba was a friend, a peer, a rock of confidence and a true profes-

sional," said Lord-Alge. "We had the best of times and the worst of times together, but we always knew how to laugh and use humor to balance out work and play. Csaba and I share a common work ethic and mindset about what we do. We always put the artist and the music first—we check our egos at the door and make the artist and the music the star of the show every time."

Michael Edwards, Audio-Technica vice president, stated, "Csaba was part of A-T's extended family, and

we are so glad we are able to continue to honor his accomplishments and to pass on his philosophies and ideals to the next generation of audio professionals. This scholarship has particular meaning to me, as before joining A-T, I had worked with Csaba in Los Angeles several times as his assistant engineer. Outside of being a friend, I learned so much from him not only about the recording process, but how to interface with artists, how to get the best performance out of them and the true meaning of a work ethic. He was a very special man. This Master Class scholarship is our way of honoring Csaba and all that he brought to his craft."

Deadline for submissions is September 3.

Csaba Petocz Master Class Audio Scholarship
<https://www.recordingconnection.com/csaba-petocz-scholarship>

Audio-Technica
www.audio-technica.com

Recording, Radio and Film Connection
www.recordingconnection.com

Clyne Media
www.clynemedia.com

Experience Centers

(continued from page 1)

ing JBL Professional, AKG Acoustics, AMX, BSS Audio, Crown International, dbx Professional, DigiTech, Lexicon Pro, Martin, Soundcraft and Studer," said David Glaubke, director, Global Communications, Harman.

In keeping with that, Harman's L.A. facility sports a grand entrance corridor that uses lights and audio synched to a giant LED video wall to underline the breadth of the company's offerings. Elsewhere onsite are a 6,000-square-foot soundstage for live entertainment audio, video and lighting demonstrations for house of worship, nightclub, performing arts, and touring applications; a café, boardroom and training center—practical-use spaces that demonstrate Harman products in restaurant, corporate and education settings; and a product showroom that presents solutions for retail, meeting environments, hotel rooms, home recording, networked AVoIP and more.

For Shure, its new Experience Center serves to answer a number

of aims. "Our primary goal was to create a realistic setting that would allow our customers and integrators to explore the features and benefits of Shure products," said Mark Humrichouser, VP of Americas and Asia/Pacific Sales. "In a sense, we also wished to 'reclaim' our Chicago roots, and begin the next chapter in Shure's story. We understood the importance of our Chicago heritage—and meeting the Shure standards for performance—which inspired and directed every aspect of the Experience Center development."

Shure's Experience Center acts as a central hub for customers, partners, integrators and staff, where they can do everything from demo gear to host artists passing through the city. "Given our increased focus on the integrated systems market with products like Microflex Advance, the Experience Center provides a dedicated space for our valued clients to truly understand and experience the features and benefits of these products in a real-world environment," said Humrichouser.

While QSC's EMEA Experience Center won't open its doors until December of next year, plans are already underway for it. "The Experience Center will showcase the latest

conference room technology from QSC, including a fully automated room with integration for soft codec applications like Skype for Business and Zoom," said Markus Winkler, senior vice president, QSC Systems. "For QSC, an Experience Center is a place where the AV industry can come experience a real-world demonstration of the Q-SYS audio, video and control platform, and QSC loudspeakers and networked amplifiers."

Intended to draw enterprise customers, integrators, programmers, consultants and channel partners who are interested in learning more about the company, QSC's Experience Center will share space within the new headquarters with sales, technical support, operations and marketing for the EMEA region, as well as a dedicated training center for all Q-SYS Training courses.

In an era where people are doing more and more over the internet, these pro-audio manufacturers are specifically moving in the opposite direction, each investing in permanent, real-world spaces to engage their customers, employees and others.

"Face-to-face interaction with our clients will always be of utmost importance when it comes to cus-

tomers satisfaction," said Shure's Humrichouser. "Being able to showcase the full feature and benefit sets of our products to prospective clients is best experienced in a real-life scenario, hence the Experience Center. This sort of face-to-face interaction is critical at trade shows as well."

Harman's Glaubke sees the Centers as a win-win for his company and its customers, allowing it to present its various brands in a focused, real-world environment rather than an exhibition booth with competitors literally only feet away. "Instead of spending less than an hour with a key customer on the floor of a loud trade show, we can host them at the Experience Center and spend a full day or more focused exclusively on their needs and demonstrating how our solutions can help," he said. "It also allows for a discovery process where customers can learn about products that solve a need in another area. They may be initially interested in Martin lighting, but discover we have an AMX product that solves their video content distribution problems. It's a completely immersive and engaging experience that goes far beyond what we could achieve at a trade show."

METAlliance Readies for Busy Fall

NEW YORK, NY—The METAlliance has been on the move in 2018, and is only picking up speed as it heads into the fall season. The coming months will see the group of famed producers and engineers hold a panel discussion at the AES Convention; host a private learning event for Berklee students at the Power Station at BerkleeNYC studios; announce the group's next METAlliance Academy event, to be held in early 2019; and kick off a monthly feature in the pages of *Pro Sound News*, starting with the October issue.

The METAlliance (Music Engineering and Technology Alliance) is comprised of the globally-recognized, award-winning audio engineers and producers Chuck Ainlay, Ed Cherney, Frank Filipetti, George Massenburg, Elliot Scheiner and Al Schmitt, who, along with the late Phil Ramone, co-founded the group in 2005.

The first half of the year found the group hosting one of its trademark Academy educational weekends in March at Capitol Studios in Los Angeles, recording more than 20 songs with featured performers eight-time Grammy nominee Tierney Sutton—who produced herself and her band's music—and José James, who worked with acclaimed producer Don Was. Throughout the Academy, they explained and discussed every recording decision with a group of attendees—recording enthusiasts, both beginners and seasoned pros, who got to mix songs, witness great performances and ask every question they could think of to the seasoned pros and performers.

In August, the new METAlliance Academy Curriculum Series book series, published by Hal Leonard Books, released its latest title, *Al Schmitt on Vocal and Instrumental Recording Techniques*, sharing the insights and knowledge of the 20-time Grammy-winning engineer who's worked with everyone from Sinatra and McCartney to Usher and Dr. Dre. The book takes readers into the studio with Schmitt as he works through his miking process, discussing how to select proper equipment, and guiding readers on how to capture only the best sounds. Additionally, Schmitt reveals his favorite techniques and setups for a number of instruments, including drums, bass, piano, guitars (both acoustic and electric), organs and horns as played across many genres of music.

Looking ahead, METAlliance

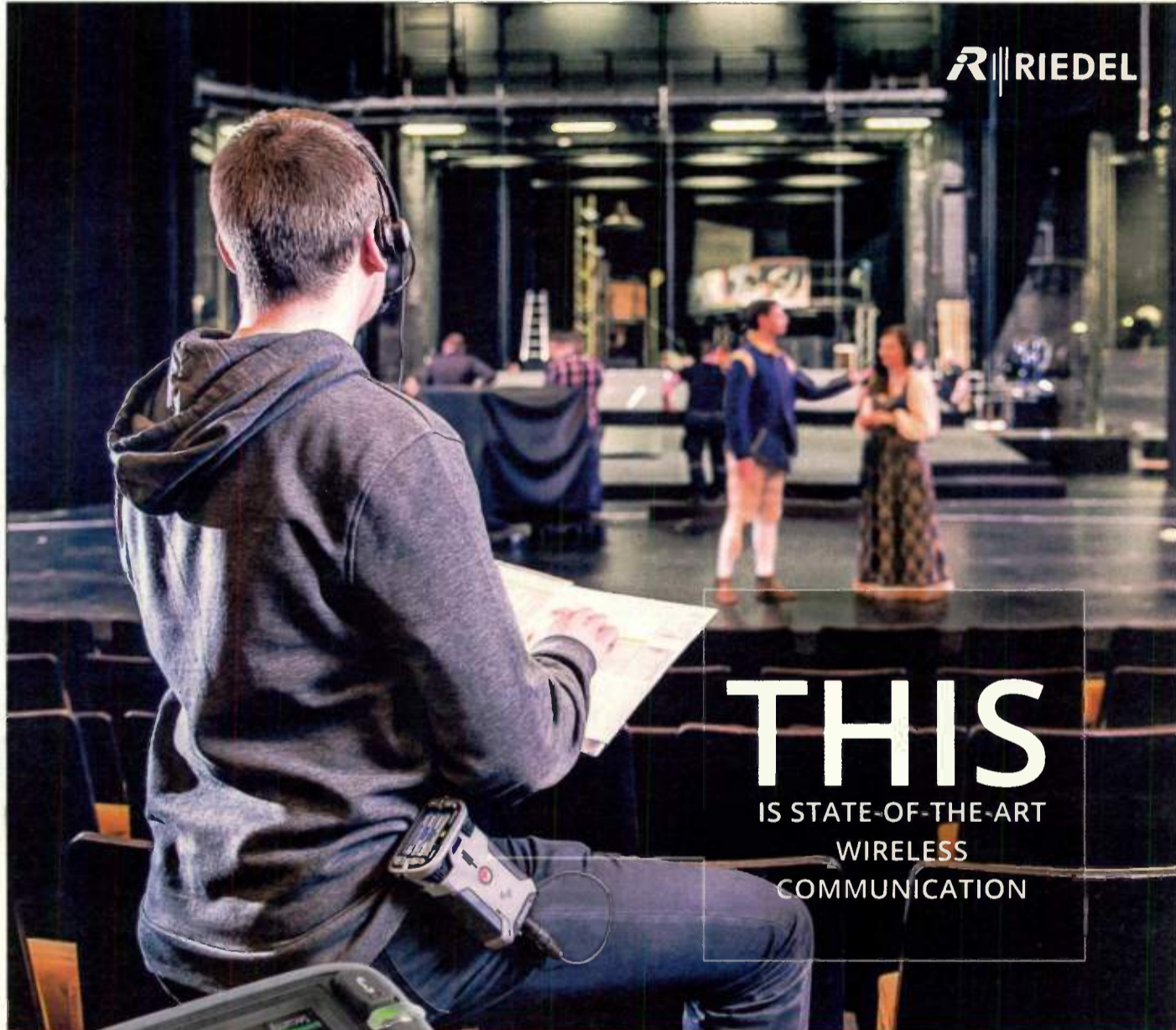


The METAlliance includes (l-r) Frank Filipetti, Elliot Scheiner, Chuck Ainlay, Al Schmitt, Ed Cherney and George Massenburg.

members will gather in mid-October for a freewheeling panel at the AES Convention, to be held in New York City at the Jacob Javits Center. Those who can't make it to the show should

keep an eye out for the group's new monthly feature in *Pro Sound News*, which will further the METAlliance's educational mission as members review new and venerable gear, share

best practices and insights, and more. Also expected in October will be the announcement of the group's next Academy workshop weekend, anticipated to be held in Southern California in January around the time of the Winter NAMM Show in Anaheim. Those interested in attending the workshop should keep an eye on our pages and the METAlliance website for upcoming details.
METAlliance
www.metalliance.com

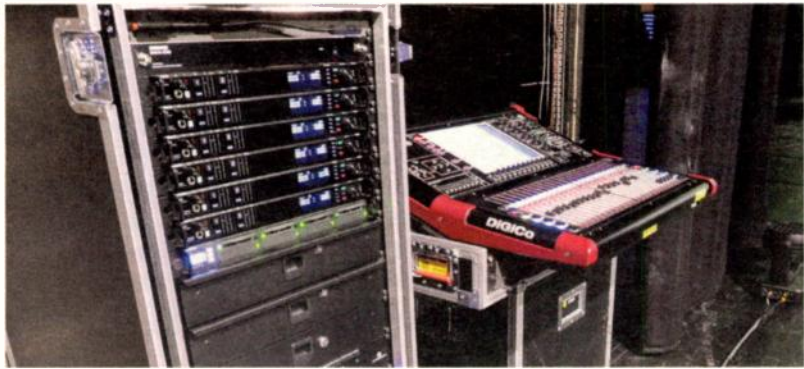


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- External 4-Wire and GPIO Interface box



Shure Axient Digital receivers and a DiGiCo desk sit stageside at the Leicester Haymarket Theater.

Shure Lands at Renovated Theater

LONDON, UK—After being closed for a decade, the Leicester Haymarket Theatre has been brought back to life following a £3.6m investment to redevelop it as a training facility for students studying production and performance related trades. Its sound reinforcement has been part of the renovation—a process that included opting for Shure’s Axient Digital, making it the first UK venue to use the new system.

Autograph Sales & Installations spec’d and installed the venue’s various audio systems. The project was led by Chris Austin, Technical Sales Manager, Autograph Sales & Installations, who noted, “The Haymarket have used Axient Digital on external events in challenging RF environments, and have found the monitoring and control through Wireless Workbench very useful. Good use was also made of the ShurePlus Channels iOS app on the first show in Haymarket, letting the production No2 walk-test the system on his own

while watching for interference from stage machinery being used for the first time.”

Much as U.S. audio providers lost use of the 700 MHz band a decade ago, when it was reassigned by the FCC to emergency services, sound reinforcement suppliers in the U.K. will also have to give up that range soon.

“With the upcoming loss of 700 MHz, it’s only getting harder to produce big events from a wireless spectrum perspective,” said Austin. “A key consideration of specifying Axient Digital was its large tuning range, which removes one headache for the client when planning spectrum for an external event.”

As the 900-seat Haymarket theatre comes back to life, plans are afoot for it to host theatre productions, e-sports tournaments, live music, awards, parties and conferences.

Shure
www.shure.com

HK Audio Rolls Up to Rock & Bike Fest

DERBYSHIRE, UK—Pedaling into its 14th year, Derbyshire’s annual Rock & Bike Fest took place in mid-July on the historic grounds of Carnfield Hall, South Normanton. The event drew hundreds of campers and show-goers to celebrate music, bikes and beer while listening to acts like Big Country, Lindisfarne, Fleetwood Bac, Women in Rock, Surreal Panther, Kesia Gill, and Grand Ultra via an HK Audio system provided by SR vendors Dezign Audio and Sound Alliance.

Throughout the weekend, the two sound companies used HK Audio Contour, Linear 5 and Premium Pro systems for the event’s main stage. Additionally, all performers received on-stage audio via HK Audio Contour and Linear 5 monitors.

To bolster the backline and front of house systems, also on hand were two loaned Linear 4000 subs.

Mike Smith of Sound Alliance said, “We were extremely impressed with the noticeable extra bottom end that came from the Linear 4000 subs, so much so that we have picked up a couple to add to our existing HK Audio festival rigs.”

Rock & Bike Fest supported and donated to a host of charities including Air Ambulance, Blood Bikes, Cancer Research, Parkinsons & Treehops Hospice, and Soldiers Off The Street.

HK Audio
www.hkaudio.com

Yorkville Sound (U.S. Distributor)
www.yorkville.com



Music fans and bike enthusiasts joined together for Rock & Bike Fest, highlighted by 80s Scottish rockers, Big Country.



Tackling Bjork’s Effects On The Road

REYKJAVIK, ICELAND—Alternative pop chanteuse Bjork played the European festival circuit this summer as part of an 11-date tour that began in her hometown of Reykjavik. Along for the ride to mix every show was front of house engineer John Gale of Galeforce Sound.

Recreating Bjork’s songs live is no simple task. Take her vocals, which are often submerged in effects—at FOH, Gale ran them into dual ProTools rigs set up with timecoded ProTools sessions running specific plug-ins in order to handle the live vocal and flute effects. To get the vocals—and the considerable onstage flute ensemble—into the Pro Tools rigs, Gale



Touring Europe this summer, Bjork’s vocal were handled—and heavily effected—with care by FOH engineer John Gale.

used two RME MADiface USB, compact, 128-channel interfaces, which provide MADI I/O over USB 2.0.

As might be imagined, ensuring low latency was crucial, as audio had to pass in and out of ProTools quickly without any audible pops, glitches or perceived delays. “We experimented with the buffer sizes to find a low setting that was rock solid,” explained Gale. “I’m using the MADiface in this situation for the vocal effects, like reverb and delays, on Bjork’s vocal microphone and also the live effects on the flute ensemble. I’m also sending these effects back to Bjork’s monitor engineer so it has to be as low latency as possible as

she’s monitoring this on stage.”

RME interfaces use the company’s TotalMix software to handle routing and mixing, and Bjork’s musical director, Matt Robertson, made use of it during rehearsals and pre-show setup checks.

“The musicians on stage have TotalMix setups too, so that they can listen to their own mixed outputs, without having to have the monitor engineer switch to a particular scene or snapshot,” Robertson said. “There is also some very clever stuff you can do with TotalMix to route timecodes to various outputs and even back into the same device which can sometimes be really useful.”

RME
www.rme-usa.com

Synthax (U.S. distributor)
www.synthax.com

Moving Feet at Meadows In The Mountains

BULGARIA—If you talk about live music in the mountains of Europe, you might picture Julie Andrews running through a field singing *The Sound of Music*, but Bulgaria's annual Meadows in the Mountains is a radically different story. For starters, there's more than one person there. In fact, there's thousands. Then there's the PA: The festival is so high up that a horse-drawn cart and a small flatbed truck are the only way to get audio gear to the site.

Nonetheless, the four-day festival, high in the Rhodope Mountains that line Bulgaria's border with Greece, draws thousands to its site outside the small town of Polkovnik Serafimovo. Once there, revellers find a festival comprised of six areas, each featuring an Audio Feed-provided Funktion-One system.

Audio Feed's Oz Jefferies comments, "MITM is our favorite festival. Nestled up in the Bulgaria mountains above the clouds with no noise restrictions, the festival organizers give us free rein to create the best possible audio experience. Funktion One on every stage allows us to do this; it's not about volume, it's about clarity."

On the Main Stage, four Evolution 6Es were combined with eight



Delivering the Funktion-One PA via horse-drawn cart is just one challenge when it comes to providing sound for Bulgaria's Meadows in the Mountains festival.

F121s and two F101s. Two XTA APA-4E8D and two MC2 Delta 80s provided amplification.

Over on the Sunrise stage a similar set up of four Evolution 6Es, eight F121s and two F101s was used – along with two BR132 bass reflex speakers and an F81 for fill. Amplification was provided by two XTA APA-4E8D, an XTA DP-448 and an MC2 E60.

The Yoga area featured two Funktion-One F101 and BR-118, with MC2 Delta 80 amplification,

while the Far Far East space used two Resolution 2, two BR-118s and two F101s, with XTA DP-448, MC2 E4-75 and MC2 E-100 amplification. Elsewhere, the M'Laddins Stage used two F101s and a BR118.

Despite daily thunderstorms, all systems delivered, though perhaps none more so than the one used on the Lower Pines Stage, which ran 24 hours a day for the full duration of the festival without any breaks. Two Funktion-One Resolution 4TS, six F118 Mk2s and two Resolu-

tion 1s were used with an XTA DP-448, MC2 E60 and MC2 E-90. "It's amazing that we can install a system midday Thursday and it didn't stop being used until 9.30am on Monday morning," said Jefferies.

Funktion-One
www.funktion-one.com

Calrec Reports Korea Sales

KOREA—Calrec Audio is reporting "serious momentum" in the Korean market with the sale of its audio consoles and AoIP interfaces to broadcaster,s including Hyundai Home Shopping Network, Munhwa Broadcasting Corporation and Korean Broadcasting System.

The Hyundai Home Shopping Network, a T-commerce channel, installed the first Brio36 console in Korea.

MBC TV, a terrestrial TV channel owned by Munhwa Broadcasting Corporation, has also installed a Brio console as an option for its news operation. MBC already has 14 Calrec consoles installed, so was familiar with the company's capabilities.

Meanwhile, Korean Broadcasting System (KBS), a long-time Calrec customer that uses the company's consoles in its TV and radio studios and regional sites, is currently installing two new Artemis desks for live radio.

KBS also recently purchased two Summa consoles, one being used by KBS ChunCheon for live news and entertainment programming. The second Summa was used for the FIFA World Cup and is now being installed at KBS Mokpo.

In a separate project, KBS also installed Calrec AES67 interfaces at its main facility to connect its range of existing consoles to an AoIP network.

The installations were handled by Calrec's official Korean distributor, Ingang Audio.

Calrec Audio
www.calrec.com

Broadcasting Hits in the Himalayas

NEPAL—People everywhere love hit radio, whether they're on an ocean beach, or up in the Himalayas. For those in the latter area, many tune into HITS FM 91.2 to get their fill of the latest tunes, and they're hearing that Mix via a newly installed Lawo Crystal radio broadcast console, marking the first placement of a Lawo system in Nepal.

The updated studio was unveiled in a recent inauguration ceremony overseen by HITS FM's independent Technical Consultant, Ram Saran Karki.

The decision process included discussions via phone between the station's technical and management team, and Lawo Sales Director for Southeast Asia, Tan Boon Siong, who answered the team's questions with information about the crystal console, its technical integration and workflow options. Also of concern was the support Lawo could provide.

After a few months of debate, Lawo was awarded the order and delivered a 12-fader split version



Nepal's HITS FM 91.2 recently got a Lawo Crystal radio broadcast console.

crystal with countersunk kit and analog extension IO. The desk offers RAVENNA/AES67 compatibility and VisTool touchscreen-optimized PC software for extended visualization and control of crystal installations.

The radio broadcast mixing system was delivered with pre-config-

ured settings. After two phone calls between HITS FM's independent Technical Consultant and Tan to understand the basic setup, the team was able to modify and fine-tune the system.

Lawo
www.lawo.com

Toby Scott is His Own Boss

BY STEVE HARVEY

WHITEFISH, MT—You might imagine that after nearly 38 years working on the road and in the studio with Bruce Springsteen, Grammy Award-winner Toby Scott would be happy to spend his newfound leisure time in the scenic wilderness of northwest Montana, where he's lived since 1991. But since parting ways with the Boss' Thrill Hill Recording organization in late 2017, Scott has stayed busy working with local talent and is now keen to expand his horizons.

With a population of just over 7,000 people, Whitefish is a far cry from Hollywood, where Scott started his engineering career at Clover Studio in 1975, working with producers such as Tom Dowd, Steve Cropper and Ron Nevison, and studio owner Chuck Plotkin. But there have been plenty of projects, from local artists to visitors from far afield, to keep him busy at his Cabin 6 studio this past year, and for some time before that.

Scott climbed aboard the Springsteen train in 1980 after he worked with Plotkin on the mixes for *The River*, Springsteen's fifth studio album, and clicked with the team. Before long, he was recording Springsteen's shows in the Record Plant Remote.



Toby Scott at work in his Cabin 6 Studio, located in Whitefish, MT.

Next thing Scott knew, he was in New York starting the two-year recording project that would become *Born in the USA*, one of the best-selling albums ever. A few years later, Scott designed a "studio in a box"—actually, about 20 road cases—that recorded hundreds of Springsteen's live shows and numerous home studio projects.

One project that recently landed on Scott's desk was, appropriately enough, a jazz remake of Springsteen's *Born to Run* album by vocalist and

multi-instrumentalist Paul Jost and his band. "This is one of my pride and joys," says Scott. "He asked me how they should record it and I said, do it in a club." The album was recorded in New York at The Bottom Line in Greenwich Village. "They sent it to me and I mixed the whole thing."

Scott's studio features Avid Pro Tools 12.8 and an Artist Mix. "I'm old school; I like to put my fingers on faders and be able to move them up and down," he says. "I've learned to

mix by mouse, but it's handy to have the faders. You can move two faders in different directions; you can't do that with a mouse."

He says, "I still use my Yamaha NS10s. I had to replace the tweeters. These are original NS10s that were supposed to sit vertically. I probably bought them in 1978. A producer who used to work with [engineer/producer] Val Garay and me came in with a pair. I thought they were great and got a pair. When I get a mix on the Yamahas, I know it's going to sound good everywhere."

Scott starts by putting up static mix with no fader moves. "I get a balance. If something needs EQ to fit better, I do that. I listen, and then I start doing moves."

He also has a pair of Auratone speakers. "When I start mixing, I put the speakers in mono. I tell people, get it together so that you hear all the instruments in mono through a single Auratone. I don't mix loud—maybe 90 dB—and also so quiet that you can hardly hear it. Then you put it into stereo and it sounds great. That's just my thing," he says.

When it comes to panning, "It's either left, right or center. I will go to three-quarters between left or right and center, but I don't do a lot of stereo, like pianos. I went through that in the Seventies."

(continued on page 24)

ZBB's Hopkins Has It Made in the Brighter Shade

BY STEVE HARVEY

ATLANTA, GA—John Driskell Hopkins—Hop, to those who know him—is a sucker for Christmas music. So much so that one of the first releases to emerge from his new private recording facility, Brighter Shade Studios, is a holiday album, *You Better Watch Out!*, featuring him with the Joe Gransden Big Band.

Music fans perhaps know Hopkins better as a founding member of the multi-Grammy Award-winning Zac Brown Band. He's quite the multi-hyphenate: a singer, songwriter, engineer, producer and multi-instrumentalist; a movie actor, with two film roles to his credit; and an active member of the National Academy of Recording Arts and Sciences, Atlanta Chapter, having been elected as advisor in 2015 and voted to a Governor Seat for the 2015-17 term. And now he's a studio owner.

Not that this is his first studio. "My first studio was in my garage, in the early '90s, with my little analog 8-track machine," Hopkins recalls. He subsequently worked at



John Driskell Hopkins at Brighter Shade Studios with his rack of Radial 500 Series modules.

a variety of professional facilities, most recently at Atlanta's 800 East, until 2010. "That gave me a good 10 years of knowing what things are supposed to sound like," he says.

Brighter Shade—the name comes from the band he formed in 1996, which still performs occasionally—is on the upper floor of a building in the suburbs of Atlanta and spans about 2,500 square feet. The facility

was constructed in consultation with Nashville-based Steven Durr Designs. "He did a lot for Zac's place up in Nashville, Southern Ground Studios, and did a great job of helping me design and realize the vision," says Hopkins.

The large and airy live room, under a 20-foot A-frame roof, easily accommodated Gadsden's 17-piece jazz big band. The control room,

which is approximately 350 square feet, can also hold plenty of people, plus there is an iso booth, lounge and a bar area. "It's very well lit," he says. "We've got eight-foot doors that are all glass. It's just a really wonderful space."

For the holiday album, "We had all 13 horns in the big room, drums in the lounge, the bass player in the booth, and the keyboard player in the control room with me singing into the wall. It was 25 guys up here going bananas on Christmas music," says Hopkins.

It's not Hopkins' first Christmas release—that would be 2015's *In the Spirit: A Celebration of the Holidays*, which featured the Atlanta Pops Orchestra—and it won't be the last. The next one will feature local musicians from the ATL Collective, he reveals. "We're going to be focusing on R&B songs. And I hope to have two more [albums]; I've got some ideas for those."

There are some stories behind the wood finishes throughout Brighter Shade. A large diffuser in

(continued on page 24)

PHOTOS BY NEIL S. WHITE



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Collins Opens the Door to Hinge



Dave Collins at Dave Collins Mastering

BY STEVE HARVEY

PASADENA, CA—Dave Collins Mastering is a singular facility. There's the man himself, a Grammy Award-winner whose work you have undoubtedly heard if you've listened to any music since the 1980s. There's his mastering console, a unique signal chain of one-offs and custom components dedicated to helping get the artist's intention across to listeners. And there's the room, which houses the first U.S. installation of the Northward Systems mastering desk.

The facility, in the middle of a strip of nondescript storefronts in Pasadena, features two rooms—mirror images of each other—designed and built by Collins in consultation with Thomas Jouanjean of Belgium-based Northward Acoustics. Collins, chief mastering engineer at A&M for 14 years through 2002, moved into one room, relocating from his former Hollywood facility. Craig Bauer, another Grammy-winner, whose Hinge Studio in Chicago was Kanye West's home base in the '90s, has taken up residence in the other.

Jouanjean's FTB (Front-to-Back) design philosophy creates a very controlled yet natural acoustical environment, a "quasi-anechoic response speaker-to-room and speaker-to-engineer," according to Northward's website. Part of that solution includes Northward's monitors of choice; both rooms house a pair of soffit-mounted ATC SCM110ASL Pro three-way active speakers.

Collins reveals that ATC upgraded the tweeters in both rooms after the reference monitors had been installed. "It was fun to have the designer here because, when we were doing some measurements and calibration, he said he'd never seen his

speaker perform as well as it does in this room," Collins says.

The Northward Systems mastering desk is a streamlined, low-profile console with twin roll-around racks. The units are designed to be as acoustically transparent as possible. Collins' console houses some highly customized gear. "I take these designs, spec them out and have somebody build them for me, to a superb standard," he says. "It's basically filters and equalizers. And the signal path really is just straight through."

The input to the console is a stock Maselec de-esser, a high-pass filter with resonance. "It can cut straight off or have a little peak right before it rolls off," he says.

Next in line is an analog peak limiter with an insertable audio transformer, then the Davelizer, which offers Baxandall peaking bass and treble control with adjustable and repeatable frequencies. Those are followed by an equalizer designed by the late Barry Porter, co-designer of the Trident A-Range. "His design is by far the most evolved of all the parametrics," says Collins.

Available compressors include Pendulum Audio's OCS-2 and ES-8, plus a Magic Death Eye tube

unit built by Ian Sefchick, a mastering engineer at Capitol Studios. "It's an unusual one-off that really sounds great, similar to a Fairchild," explains Collins. Following that is "an SSL G384 that I took apart and added shorter and longer release times, different VCAs and a little different analog signal path."

Collins says, "When I started working in pro audio in 1983, the people doing the best work all had custom systems. Look at what Doug Sax was doing; his system was custom in ways that it took me 10 years to understand. It's one thing I can do that brings a little uniqueness to the project."

He adds, "I considered Doug a friend; I miss him. He taught me a lot of stuff, and not just about mastering."

Unlike multichannel recording studio gear, he says, it's practical to build custom two-channel units for mastering. "It's been a lot of work, but it's a lot of fun as well," he says.

Mastering is a specialized job, Collins observes. "You don't listen like a recording engineer; you listen to the whole sound at once. And the tools are unbelievable! You can do things today that I would not have thought possible. But you must lis-

ten as a fan to the music—and don't get caught up in all the technology."

And listen with the computer screen off, he says. "There's no way you are paying as much attention to listening when you're looking at the monitor."

Whatever the type of music, Collins says, he's listening for anything that's distracting from the emotional communication. "That's the job—to be able to figure out which one of those knobs will bring the music closer to the listener."

Bauer, across the hallway, moved to L.A. from Chicago in 2014, bouncing between various temporary locations until Collins offered him a home in his building. "Dave's got golden handcuffs on me because this room sounds so good," he says. "I'd never used ATCs before. When I first came over and listened, the center image was so focused that it threw me. I'd never heard anything like it."

Although he initially focused on jazz in Chicago and has worked with the likes of Styx and Smashing Pumpkins, Bauer has long been a go-to guy for hip-hop and gospel. He now concentrates solely on mixing, using an Avid S6, and is happy to no longer be recording: "I much prefer to be a guy who doesn't have to keep hitting play and rewind. I've done that long enough," he says.

Bauer built his original Hinge Studio in Chicago in 1993, where he installed one of the first Euphonix CS2000 digitally-automated analog consoles. In 2008, he had to move to a new Chicago location due to a lease issue. "If you're going to build a studio, plan on losing it at some point," he cautions.

In 1997, local rap group The Gettys, which included Kanye West, recorded some demos at Hinge. After that, says Bauer, "Kanye worked with me exclusively. Most of *College Dropout* was tracked at my place, and I mixed most of *Late Registration* and some of *Graduation*."

One recent mix project was for a gospel client, artist and producer Donald Lawrence, with whom Bauer has worked for about 15 years. "We've done a record almost every year and every one has been nominated for a Grammy," he reports. To date, Bauer has received over 35 Grammy nominations and is a two-time Grammy Album of the Year nominee and Grammy Award recipient.

Dave Collins Mastering
www.davecollinsmastering.com

Hinge Studio
www.craigbauer.com

The NKS 2.0 Spec—Controller Salvation?



BY CRAIG ANDERTON

One of the limitations surrounding electronic music instruments has been the lack of tactile control—a situation that reached the height of user-hostility when, during the “race to the bottom” synth phase, you had to do everything through a calculator-style keypad—with results showing on a two-line LCD. Ouch.

The Native Kontrol System (NKS), introduced in 2015, was originally all about Native Instruments’ virtual instruments. Now with version 2.0, effects are part of the spec, along with significant third-party effects support. The premise is that with NI’s Complete Kontrol keyboards (or Maschine hardware), you can insert a companion Complete Kontrol plug-in in your DAW to browse a database of sounds, audition them with audio previews, and call up presets in virtual instruments and effects. Then you can take advantage of the keyboard’s control elements (8 rotaries, 8 buttons, wheels, ribbon controller and navigation) to tweak the sounds. The goal is faster, more hands-on virtual instrument control.

If you’re getting déjà vu, that’s because the above sounds like NI’s Kore, which was discontinued in 2011 (but not without subsequent updates for 64-bit compatibility, for which NI received well-deserved kudos). However, there are significant differences. Kore lacked the kind of display that could make tweaking more friendly. It was also an audio interface, and user requirements for audio interfaces are too diverse to be accommodated in a single desktop box. Furthermore, Native Instruments has become a music software powerhouse, with far more resources than were available for Kore. Finally, heavy hitters like Waves, Softube and Eventide have signed up, with some effects already updated for NKS compatibility. Including virtual instruments, around 75 manufacturers have tweaked their products for NKS.

Whether NKS has value depends on how you plan to use it, and what updates may be forthcoming. The Complete keyboards are excellent MIDI controllers, so that’s a given. Concerning NKS, the ideal appli-

cation for now is when you want to dial up different instrument sounds quickly in the studio (or live), add effects and do some tweaks. You’re not constantly loading and unloading instrument and effects plug-ins, just scrolling through them, and calling up presets. The ability to pre-

view sounds is also helpful. Note that the plug-in developer chooses which parameters are editable; it could be a handful for an effect, or over a hundred for a virtual instrument. The instrument UI opens up within the Complete Kontrol plug-in for more detailed editing.

However, effects are available only in the context of inserting post-instrument—you can’t load Complete Kontrol into an audio track’s insert and call up only effects, but you can move effects around in a series chain, and bypass individual

(continued on page 24)

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ARTIST: WE WERE PROMISED JETPACKS
ALBUM: THE MORE I SLEEP THE LESS I DREAM
LABEL: SELF-RELEASED (NORTH AMERICA), BIG SCARY MONSTERS (UK/EUROPE)
PERSONNEL:
Produced by: Jonathan Low
Engineered by: Jonathan Low
Studios: Miner Street Recordings (Philadelphia, PA) and Long Pond (Hudson Valley, NY)
Mastered by: Ryan Schwabe
EQUIPMENT NOTES: Quedest V2108, ATC SCM45, Avid Pro Tools



ARTIST: WATER SLICE
ALBUM: WATER SLICE
LABEL: SELF-RELEASED
PERSONNEL:
Produced by: Chris Lynch, Adam Rasmussen
Engineered by: Chris Lynch, Adam Rasmussen
Mix Engineer: Ingmar Carlson at The Gift Shop (Los Angeles, CA)
Studio: Frog Sound (Los Angeles, CA)
Mastered by: Dale Becker at Becker Mastering (Los Angeles, CA)
EQUIPMENT NOTES: Tascam M-50, Vintech X73 pre, Yamaha NS-10, Avid Pro Tools



ARTIST: SAME GIRLS
ALBUM: YOUNG MINDED

LABEL: TEXT ME RECORDS
PERSONNEL:
Produced by: Same Girls
Engineered by: Justin Kay
Studios: Different Fur Studios (San Francisco, CA)
Mastered by: Patrick Brown at Different Fur Studios (San Francisco, CA)
EQUIPMENT NOTES: SSL 4000 E/G, Tascam 388, Barefoot Sound MicroMain 27 monitors, Yamaha NS-10, Westlake Reference Monitors, Avid Pro Tools

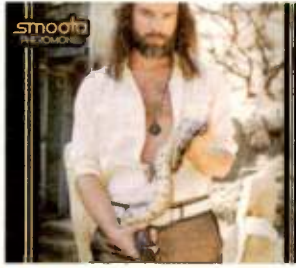


ARTIST: GIMMIC
ALBUM: THE GOOD NUT
LABEL: SELF-RELEASED
PERSONNEL:
Produced by: Gimmic, Toby Scott
Engineered by: Toby Scott
Studio: Cabin 6 (Whitefish, MT)
EQUIPMENT NOTES: Yamaha NS-10Ms, Royer mics, Avid Pro Tools



ARTIST: K-MAN & THE 45S
ALBUM: K-MAN & THE 45S
LABEL: STOMP RECORDS
PERSONNEL:
Produced by: Alex Giguere, K-Man & The 45s
Engineered by: Alex Giguere
Studio: The Gigi Inn (Montreal, Quebec)
Mastered by: Ryan Morey Mastering
EQUIPMENT NOTES: Midas Venice 320, Mackie HR824, Yamaha NS-10,

Steinberg Cubase Pro



ARTIST: SMOOTA
ALBUM: PHEROMONES
LABEL: BODY TO BODY RECORDS
PERSONNEL:
Produced by: Smoota
Engineered by: Smoota
Mix Engineer: Scotty Hard
Studio: White Fur Underground (Brooklyn, NY)
Mastered by: Kevin Blackler at Blackler Mastering (Brooklyn, NY)
EQUIPMENT NOTES: Apogee Duet, Equator Audio D5, Apple Logic Pro



ARTIST: VESS
ALBUM: SHADOWS
LABEL: SNUG RECORDS
PERSONNEL:
Produced by: Michael Finster of MHTC Music
Engineered by: Eddie Snuggs
Mix Engineer: Michael Finster
Studio: Snug Records Studio (Faith, NC)
Mastered by: Mercury Mastering (Oceanside, CA)
EQUIPMENT NOTES: Tannoy PBM 6.5 II with sub, Avid Pro Tools 8



ARTIST: RAM
ALBUM: AUGUST 1791
LABEL: WILLIBELLE
PERSONNEL:
Produced by: Andrew Weiss

Engineered by: Andrew Weiss
Studios: Home Studios (Port Au Prince, Haiti; Hopewell, NJ)
Mastered by: Greg Calbiat Sterling Sound (New York, NY)
EQUIPMENT NOTES: Universal Audio UA4-710D mic pre's, Genelec monitors, Yamaha NS-10s, Avid Pro Tools



ARTIST: TAWK
ALBUM: SHAPESHIFTER II: OUTBREAK
LABEL: SELF-RELEASED
PERSONNEL:
Produced by: Robert Carranza
Engineered by: Robert Carranza
Studios: The Living Room (Oyster Bay, NY)
Mastered by: Chris Gehringer at Sterling Sound (Edgewater, NJ)
EQUIPMENT NOTES: SSL AWS console, ATC SCM25 Pro monitors, Avid Pro Tools 12



ARTIST: CULTS
ALBUM: THE MOTELS
LABEL: SOUNDS DELICIOUS
PERSONNEL:
Produced by: Cults
Engineered by: Brian Oblivion
Studios: Thunderdome Studios (Piermont, NY)
Mastered by: Shane Stoneback at Palisades Studios
EQUIPMENT NOTES: Universal Audio Apollo, Neumann KH 80 monitors, Apple Logic Pro

Focusrite Key to Dyer's Keys

LOS ANGELES, CA—Musician, arranger, producer and composer Peter Dyer, who has worked with Mariah Carey, Adam Lambert, Aloe Blacc and St. Vincent and is a house band member on the new season of ABC's *American Idol*, has integrated the Focusrite (pro.focusrite.com) Red 16Line 64-in/64-out Thunderbolt 3 and Pro Tools | HD-compatible audio interface into his workflow.

Paczosa Sticks with Manley Glue

NASHVILLE, TN—The Manley (manley.com) Variable Mu Limiter Compressor was in the mid-down path when 10-time Grammy-winning producer and engineer Gary Paczosa, who is also VP of A&R for Rounder Records, and assistant engineer Shani Gandhi co-engineered and produced *Other Arrangements*, the third album from gospel-influenced roots artist Parker Millson.

Primal Kings Keep It Analog

HOLLYWOOD, CA—Lead singer/songwriter Chris Wilson, Primal Kings and producer and engineer Lennie Bent created the digital masters for the group's eponymous debut album—recorded to ATR Master 2-inch tape on a Studer 827 24-track tape machine and mixed to ATR Master 1/2-in. tape on an Otari MTR 10 2-track with 1/2-in. heads—at United Recording (unitedrecording-studios.com) in Hollywood.

Going Solo with ATC

LOS ANGELES, CA—Film composer Sven Faulconer has installed ATC SCM45A three-way nearfield monitors at his new personal studio after having worked with the brand's monitors at James Newton Howard's facility since 2013.

Timbaland's Virginia Beach Studio Hits the Market

BY CLIVE YOUNG

VIRGINIA BEACH, VA—Grammy-winning producer Timbaland has put his Thomas Crown Studios recording and post-production facility in Virginia Beach, VA on the market.

Over the years, Timbaland—AKA Timothy Zachary Mosley—has collaborated with the likes of Madonna, Justin Timberlake, Katy Perry, Coldplay, Shakira, Bjork, Brad Paisley, Duran Duran and others. Having moved his operations to Miami, FL, where he's resided for the last 10 years, he's now opted to sell the Virginia Beach complex.

The 6,756-square-foot facility sports three control rooms, a two-story live room, two bedrooms (which have been acoustically designed for use in recording as needed), four bathrooms, lobby, office space, a commercial kitchen, multiple lounges and a server room with dedicated HVAC.

Justin Timberlake's *Future Sex/Love Sounds* album was recorded at



Studio A of Timbaland's Virginia Beach, VA facility.

the site, and other artists whose work was recorded and/or mixed there include Beyoncé, Kanye West, Missy Elliot, Diddy and Nelly Furtado,

among others.

Sitting on .2893 acres of land, the WSDG-designed facility itself has an asking price of \$695,000—report-

edly nearly \$250,000 below assessed value—while the studio equipment is being offered under a separate agreement for \$200,000.

The studios' system design was created and spec'd by renowned engineer Jimmy Douglass.

Studio A's gear includes both a 72-channel Neve VR Series console and Yamaha DM 2000 desk; custom Augspurger monitor speakers; and racks filled with gear from Eventide, Yamaha, Lexicon, Universal Audio, Tube-Tech, dbx, Avalon, Millennium Music, Tascam and more.

Meanwhile, Studio B's inventory includes a Solid State Logic AWS 900 analog workstation; custom Augspurger monitor speakers, along with monitors from Yamaha, Casio and KRK; and racks with gear from Avalon Design, Apogee, dbx, Lexcon, XTA, Yamaha and others.

The listing is with Chris Zarpas of S.L. Nusbaum Realty Co, Norfolk, VA. S.L. Nusbaum Realty Co. www.slnusbaum.com

Mixing Elvis Presley's "New" Gospel Album

NASHVILLE, TN—Released in mid-August, *Elvis Presley - Where No One Stands Alone*, is a new album produced by Joel Weinshanker, Lisa Marie Presley and Andy Childs that brings vocal takes from some of the King's favorite gospel performances and pairs them with newly-recorded instrumentation and backing vocal contributions from musicians who performed on-stage and/or in-the-studio with him. It also includes a reimagined duet with Elvis and his daughter, Lisa Marie Presley, on the album's title track.

Key to the album's creation was multi-platinum engineer/producer Ed Seay, who monitored and mixed it entirely on a Carl Tatz Designs PhantomFocus System.

For Seay, the biggest challenge in creating the album was sound from other musicians—not only did he hear Elvis's vocal when he soloed it, but also the entire band with backup singers and a three-second live chamber echo that was printed with the vocal to tape. This was the way those sessions were recorded back in the day at Nashville's RCA Studio B, in one big room.

Seay ended up utilizing three different software programs to isolate the lead vocal—iZotope RX 6 Advanced, Zynaptiq UNVEIL, and a software program currently in Beta, designed by Lacy Thompson.



Engineer/producer Ed Seay in front of the CTD PhantomFocus System at his Cool Tools studio.

“Being fortunate enough to work on a record and artist that has stood—and will stand—the test of time tends to make the listening situ-

ation more critical than ever,” said Seay. “My PhantomFocus System not only gave me the articulate precision that the project demanded, but also

the confidence to trust my sonic decisions.”

Carl Tatz Design
www.carltatzdesign.com



Brighter Shade

(continued from page 18)

the live room came from Atlanta's now-defunct Southern Tracks Studio, where the likes of Bob Dylan, Pearl Jam and Bruce Springsteen recorded. The bar counter includes a section of sapele, a tonewood, that came from Taylor Guitars via Zac Brown's warehouse. "The floors are oak and the ceiling is pine, so it's a lot of Southern woods," says Hopkins.

The control room features The Box by API, a console choice informed by a past studio. "When I was downtown with my buddy in a commercial space off Cheshire Bridge Road, my first full-time gig as a recording engineer, we had an API 24x8, an old-school console. I really got accustomed to the 512 pre's."

He has a handful of outboard API preamps, but adds, "I wish I had a few more of those, and I hope to build them up. I continue, like every other studio owner, to buy and

sell and trade and morph the tones. But right now I'm kind of on a spending freeze—as you can imagine, after all this construction."

There are plenty of other options: "I've got four Neve pre's and a rack on the side that I will fill up eventually with an 8-channel rack, and I have 10 Radial pre's that are in a 500-series rack." The 10-slot Radial Powerhouse rack is fully loaded with duplicate Jensen Twin-Servos, Power Pre's, Power Tubes, JDV Pre's and EXTCs (reamping guitar effects interfaces).

The JDVs are particular favorites. "They are so very convenient," he says. "I love the interface and the way I can pop into these awesome pre's right from the control room. They are super quiet and have been delivering warm, consistent sounds for acoustic guitar, bass and keyboards, so I'm Class A across the front right away. I can get drums on all my Class A pre's, and then just overdub everybody on



Class A. I've got a lot of great flavors in here—and some cool outboard in the rack on the back wall, too."

Plus, he says, "I've got a Midas Venice [console] that I use to fill in the gaps if I've got a big band in there. The Midas stuff is super clean, and their EQs are accurate."

Hopkins is a longtime Pro Tools user: "I've been on Pro Tools for coming on 20 years. I got Pro Tools in '99—Pro Tools 4, I think—right when they went 24-bit. We had been doing digital recordings on ADATs and DA-88s, and it was all 16- and 20-bit, so 24-bit was big news."

Hopkins is prepared for any power issues. "I've got Furman everywhere," he says. "I've got one of their conditioners in every rack, and I've got two of their battery backups on my hard drives, and my computer."

The list includes a pair of Furman F1500-UPS battery backups/power conditioners, plus two Furman P-8 PRO C power conditioners featur-

ing an uninterrupted power supply. He also installed three Furman PL-PRO DMC power conditioners with Furman's Linear Filtering Technology (LiFT), which reduces the AC noise. A Furman P-1800 PFR offers a stable, protected and filtered low-impedance power supply for his connected electronics.

"I've had Furman stuff since I was in high school," he says. "I was amazed at how much cleaner everything was after plugging into the Furman stuff. They're an amazing company that has always been on the cutting edge of what people need in terms of power conditioning."

In between live appearances, Hopkins has had time to work on a variety of projects at Brighter Shade, including material by the John Driskell Hopkins Band, Alex Guthrie, Mike Rizzi, Katie Deal and others. Even if the studio isn't busy, he says, "It's another awesome place to put my guitars. As you can imagine, you start living on top of them after a while—and only so many of them will fit under the bed!"

Furman
www.furmanpower.com

Radial Engineering
www.radialeng.com

Brighter Shade Studios
www.brightershade.com

Toby Scott

(continued from page 18)

To help spread the word that he's available for projects, Scott is working with Super Secret Agents. Music producer, composer and songwriter Jason Dragon and Tony Drootin, studio manager of New Jersey's Sound On Sound Studios, founded the audio production talent agency.

"I want to get back into recording and mixing, and, of course, I love to do live stuff, but the other thing I like to do is pass it on. I've spoken at Berklee a couple of times and at recording schools in Seattle and near me," says Scott, who will also be doing a class at Sound On Sound.

Few big name acts pass through his area, says Scott, but it has produced some homegrown talent, including Ethan Thompson. Scott took Thompson under his wing when the performer was 14 years old, mentoring the teenager on songwriting and rudimentary recording techniques.

"He played me a few songs and I gave him some advice," Scott recalls. "There are loads of people who need help in the music business. I generally help people who are young and need guidance."

Fast-forward 14 years and Scott recently arranged for Thompson's band, Ocean Park Standoff, which includes English DJ/songwriter Sa-

mantha Ronson and drummer Pete Nappi, to perform at a fundraiser for the local North Valley Music School. Thompson took voice and instrument lessons at the school before going on to Berklee College of Music, meantime winning a Folger's jingle contest and later competing on 2014's *American Idol*.

The opening band for the fundraiser, also at Scott's recommendation, was Gimmick, a jazz fusion quartet of high school seniors. "They're excellent players," says Scott, who recorded the musicians for an album. "It came out great," he says.

Other recent projects have included mixes for several songs by two Colorado pop acts for a producer who relocated to Montana from Denver, as well as recording and mixing a seven-piece country band from Nashville and an X-rated Christmas parody song album for a local vocal acting group. Scott has also been working with a singer from Iceland who regularly visits his daughter, who lives in the area.

But a highlight for Scott was being able to travel to Skywalker Sound to see a film scoring project he worked on with a flute player with Native American roots get fully realized with an orchestra replacing the virtual instruments. Leslie Ann Jones did the recording and mixing, he says. "It was great at Skywalker; that place is fabulous."

Toby Scott
www.tobyscottaudio.com

Anderton

(continued from page 21)

effects. Parallel effects aren't possible, but then again, they aren't possible in most DAWs. Another limitation: you can record automation for virtual instruments but not for effects. NI is looking into this for a future update.

And speaking of updates, at present, the deepest integration (e.g., transport, track navigation, mixer controls, enable/disable functionality, etc.) is with Cubase, Nuendo, Maschine, GarageBand, Logic and Live (which requires a somewhat more complex setup compared to the others). Sorry, no Pro Tools or Studio One.

So what about the future? NKS has been available for virtual instruments since 2015, starting with Komplete Kontrol 1.5. There's no word yet whether NKS will be opened up to other controller companies, but opening it to competing plug-in manufacturers is significant. Regardless, if you follow the arc of progress since then for both NKS and the Kom-

plete keyboards, it's clear that NI is committed to the concept. Now it's doubling down on NKS and I expect updates will continue.

In closing, though, here's a cautionary tale that's not about NI. Cakewalk by BandLab had worked perfectly with Komplete Kontrol until a Windows update—then the keyboard functionality still worked, but nothing appeared in the display. Users were upset NI and BandLab didn't have a solution, and vented on forums. But they couldn't come up with a fix: The problem was the Windows update (which itself was later updated, fixing the problem).

I've commented how pro audio and video people serve at the pleasure of Microsoft and Apple. Granted, Microsoft fixed what it broke. And yes, Apple came up with a software fix for its overheating MacBook Pros. But the handwriting is on the wall: We can't afford downtime. Invoke System Restore (Windows) and Time Machine (Mac) before making any major changes to your computer setup, and test the system thoroughly before the opportunity to roll back disappears. Your gig may depend on it.



briefs

Wisycom Takes a Test Drive

MONTVERNIER, FRANCE—Motor Trend magazine, which documents its road tests with online videos, recently took sound mixer Daniel S. McCoy, CAS, owner of ToneMesa, and his Wisycom (www.wisycom.com) MTF41 wireless wideband bodypack transmitter and MCR42-S2 dual-true diversity UHF miniature camera receiver along for the ride for episodes in Europe and California.

Calrec Aids SBN's Message

BATON ROUGE, LA—Reverend Jimmy Swaggart's SonLife Broadcasting Network, a 24/7 faith-based TV network, is now using a Calrec (calrec.com) Summa console, a Brio console and two DiGiCo S21 consoles with MADI cards on a Hydra2 network to handle audio with complete redundancy for all studio programming and live broadcasts at its SBN studios.

No Fallout for Lectrosonics

OXFORDSHIRE, UK—Multi-award-winning British production sound mixer Chris Munro employed Lectrosonics' (lectrosonics.com) PDR Portable Digital Audio Recorders to capture Tom Cruise's dialogue during the non-stop action scenes on *Mission: Impossible—Fallout*, including a HALO skydive and helicopter sequences, also relying on Smb transmitter belt packs for the production.

Chapman U. Upgrades Coms

ORANGE, CA—The Dodge College of Film and Media Arts at Chapman University in Orange, CA, recently upgraded its Clear-Com (clear-com.com) Eclipse digital intercom system to an Eclipse HX system, enabling the addition of Clear-Com's IVC-32-HX Ethernet/IP card to expand the college's comms capabilities with V-Series keypanels and the Agent-IC mobile app.

Sugar's Sweet New Space

Los Angeles, CA—Post-production house Sugar Studios recently unveiled new facilities that extend across three floors of the Wilern Theater Tower, including a 25-seat Dolby Atmos mix stage designed and integrated by Audio Intervisual Design (www.aidinc.com).

Inside *Mamma Mia* Sequel's Mixes

BY STEVE HARVEY

LOS ANGELES, CA—More than 60 million people have seen *Mamma Mia!* in the theater since it premiered in London's West End in 1999, with seven stage productions reportedly running worldwide at any given time. In 2008, the jukebox musical—based on some of Swedish pop band ABBA's many hits—made the transition to the screen, smashing box office and sales records as it rolled out worldwide. It remains the UK's all-time best-selling DVD.

Ten years on, here we go again. ABBA songsmiths Benny Andersson and Björn Ulvaeus have been involved in the show's development since inception and were executive producers on the 2008 film. They have returned for the sequel, *Mamma Mia! Here We Go Again*. This time around, Andersson took the lead with the music, overseeing the re-recording of ABBA songs with the actors—at London's Abbey Road Studios—and working alongside dialogue and music re-recording mixer Michael Minkler from start to finish.

The plan was to mix the film on Universal Pictures' Stage 6, Minkler relates, but due to scheduling changes, he pre-mixed the dialogue on the Avid S6 console at Pace Pictures. The re-



Michael Minkler (left) and Benny Andersson

cently opened facility, which features a Dolby Atmos stage that Minkler had a hand in designing, is in a former Soundelux location in Hollywood.

Supervising sound editor Warren Shaw assumed effects re-recording mix duties on Stage 6, which features both a Harrison—a brand Universal has favored for at least 20 years—and an Avid console. "The S6 is permanently installed in two sections in the center, but they still use the Harrison for routing and summing," Minkler says. The film's sound effects editor, Dan Kenyon, ensured continuity by joining the mixers as stage editor.

After years of experience with the

immersive platform, Minkler is a fan of mixing in Dolby Atmos from the get-go. "You might as well start native Atmos—then it's a very easy conversion down to 7.1 and 5.1," he says.

Despite the massive cast and the production challenges—wind machines, camera boats and other typical location disturbances—the dialogue mix was nothing out of the ordinary, he reports. "There's a lot of ADR in the movie. I was very happy with the way it fit in."

As with the original movie, which Minkler also mixed, the new sequel/prequel is all about the music. As Minkler notes, Andersson and his longtime studio collaborator, engineer, mixer and producer Bernard Löhr, as well as Andersson's son Ludvig, a recording engineer and associate producer on this new film, are steeped in stereo.

"It was a learning process for Bernard and for Benny," he says, noting that Andersson was present at the mix. "We mixed the songs as if we were in a 7.1 environment and made everyone happy. Then we took it into an Atmos room and played with it."

Andersson and Löhr soon realized the possibilities afforded by Dolby Atmos, Minkler says. "Benny was very excited about it. His initial reac-

(continued on page 28)



Roger Federer Gets Into Farm League

BY STEVE HARVEY

VENICE, CA—From Pierre Schaeffer's innovative musique concrète through the work by Bernie Krause, Cabaret Voltaire's Chris Watson and Roger Waters and Ron Geesin, there is a long, rich history of making music using natural sounds. Lately, the advertising industry has jumped on the biomusic bandwagon, with one recent example mashing up electronics, balls and rackets in a spot for Wilson Tennis featuring Roger Federer and DJ Money Mark.

Filmed over a single day in the Mojave Desert near Palm Springs, CA, during the BNP Paribas Open in nearby Indian Wells earlier this year, "Play Your Heart Out" is more than just a commercial for Wilson's new Pro Staff RF97 Autograph tennis racket. It's also a documentary of the making of the spot's soundtrack.

But wait, there's more—it's a promo for Federer's first single, too. The 45 rpm vinyl release, available only in a limited-edition box set—with an MP3 download card, a behind-



Federer performs for the camera (and microphones)

the-scenes photo book, faux tennis ball Bluetooth speaker and Swiss star Federer's signature RF97 racket—features an extended version of the soundtrack backed with a stripped-down remix titled after his trademark exhortation, "Chum Jetze!" ("Come on!" in Swiss German).

The creative company behind the spot is Farm League, a film, com-

mmercial and branded content production house headquartered in Venice, CA. Farm League worked with Wilson Tennis a few years ago, reports commercial filmmaker Tim Lynch, executive producer and company co-founder. "They came back and really wanted to do something special with Roger, given all that he's accom-

(continued on page 28)

Technicolor Closes Film and Immersive Sound Facilities

BY STEVE HARVEY

HOLLYWOOD, CA—In response to changes in the marketplace driven by streaming media companies such as Netflix, Technicolor is shuttering its feature film sound and immersive sound facilities, focusing instead on episodic and streaming sound services and putting greater emphasis



on its thriving VFX and color grading business.

“Based on the industry shift, we have made the hard decision to refocus our sound offering to our thriving episodic and streaming sound services,” stated Sherri Potter, president of WW Post Production at Technicolor. “Change is never easy, but the market demands were not there for us to continue theatrical or immersive sound. We will support any committed projects through the end of the year, after which point we will optimize our Paramount facility to better reflect the needs of our clients, with environments that support picture as well as



Technicolor CEO Frédéric Rose receives the Hollywood Chamber of Commerce Star of Recognition on behalf of the company for its 100 years of creative technology on March 30, 2015.

episodic and streaming sound.”

In the company’s first half 2018 financial results, issued July 24, Technicolor reported revenues of €1,769 million or approximately \$2,075 million—a drop of 9.3 percent year-on-year. The company noted that its production services recorded “a solid

performance,” ticking up 4.6 percent, “driven by high capacity utilization and strong growth in Film and TV VFX as well as Advertising VFX.”

Potter expanded on her statement in an interview with *The Hollywood Reporter’s* Carolyn Giardina, who broke the story on July 25. She not-

ed that Technicolor is “seeing fewer blockbuster releases, and budgets are starting to shrink.”

Technicolor’s feature film sound services are concentrated at its Technicolor at Paramount complex, a 65,000-square-foot facility spread across three floors in a building on the Paramount lot that began to come online in late 2011. The building officially opened to much fanfare in March 2012 with an Oscar-winning talent roster that included the re-recording mixer teams of Scott Millan and Greg P. Russell, and Terry Porter and Anna Behlmer.

According to the *THR* report, the two largest mix stages will be converted to color grading rooms. Potter commented that Technicolor is honoring current commitments and projects and will remain home to the mix teams “through the end of the year.” Technicolor will continue to provide sound services for episodic content at Paramount as well as its other sites on Seward Street in Hollywood, in Toronto and elsewhere.

In early 2017, Technicolor launched The Sound Lab at Technicolor at its headquarters in Burbank, led by Scott Gershin, the award-winning veteran supervising sound editor and designer. The immersive audio unit, which includes four Dolby Atmos stages and multiple 9.1 and 7.1 rooms, is also being shut down.

Technicolor
www.technicolor.com

Douglas Grindstaff, *Star Trek* Soundman, Dead at 87

BY CLIVE YOUNG

PEORIA, AZ—Emmy-winning sound editor Doug Grindstaff died July 27 in Peoria, AZ; he was 87. Over the course of his lengthy career, Grindstaff won five Emmys from 14 nominations, working on staple TV programs such as *Mission: Impossible*, *The Odd Couple*, *The Brady Bunch*, *Fantasy Island*, *Dallas* and others, but his best-known work was done on the original series run of *Star Trek*.

Born on April 6, 1931, Grindstaff attended the California Institute of the Arts and served in the U.S. Army during the Korean War. A life-long audio pro, Grindstaff went on to run sound departments at studios such as Paramount and Columbia, and served as president of the MPSE,

which honored him with a Lifetime Achievement Award in 1998.

His editing Emmy wins were for variously for *The Immortal*; *Medical Story*; *Police Story*; *Power*; and *Max Headroom*.

While he was nominated in 1967 for his work on *Star Trek*, he didn’t win, and yet the sounds he created for the show are now indelibly marked in the annals of pop culture, ranging from the whirs of the Enterprise—doors opening (a squeaky shoe), the transporter and red alert signals—to the beeps of communicators, medical scanners and phasers, not to mention the purr of the infamous Tribbles (a manipulated dove’s coo).

Grindstaff is survived by his wife, Marcia; five children; 16 grandchildren; and 13 great-grandchildren.



Douglas Grindstaff in an undated promotional photo.

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Farm League

(continued from page 25)

plished," he says.

Inspiration for the spot came during discussions with Wilson, which has long been Federer's racket supplier. "They said what gets him really excited is that he still loves to play. He gets excited about the sounds of the game," such as the bounce of the ball, sliding on clay courts and the grass mower, says Lynch. "Even talking about that can make him want to go and play again."

More importantly, the tennis ace was prepared to make himself available for a good chunk of a day. Typically, says Lynch, "with an athlete at that level, it's very difficult. Often you get five minutes; they walk in and you give them the line. We do a lot of that stuff, too."

With Federer's interest and commitment nailed down, "We took a more experiential approach, having the desert as a backdrop, and then pitched bringing in Money Mark, someone who works with these really random ways that he makes sound. We thought we'd just get these guys together and let them record and make a song."

Back in 2001, Jeff Elmassian of Endless Noise won multiple awards for his soundtrack to director Paul Hunter's "Freestyle" spot for Nike. Groundbreaking at the time, the award-winning campaign reimagined Afrika Bambaataa & The Soul

Sonic Force's "Planet Rock" using basketball percussion and the squeak of sneakers on wood courts. Seventeen years later, Money Mark's track harkens back to Kraftwerk, the inspiration for Bam's "Planet Rock," slyly combining electronic beats, the twang of rackets, whooshing balls hitting drums (and a microphone), and a variety of vintage synths and keyboards.

Musician, producer, remixer and keyboard repairman Money Mark is probably best known for his collaborations with the Beastie Boys; he has also worked with Beck, the Yeah Yeah Yeahs and Jack Johnson. Beginning in 2014, he recorded and toured with David Byrne in the Atomic Bomb! Band, a supergroup performing the music of Nigerian funk musician William Onyeabor.

On his Instagram feed, DJ Money Mark posted a photo of part of his desert setup with details "for the nerdy music fans." The list includes a "classic Model D Minimoog, Drumfire 808, Yamaha MR10 snare sound, Blofeld kick drum and hi-hats, and Crumar Orchestrator for the melody (what I used on Atomic Bomb gigs)."

"We started the piece off with [Federer] trying to hit the drum; that was a lot of fun," says Lynch. "He took that seriously. He took I don't know how many passes before he hit it. Then he started locking in to hitting it time and time again. That was cool to watch."

Lynch continues, "We started isolating sounds, then it was more about



Money Mark on the Wilson Tennis set

letting them play. Mark would play some sounds; he had a drum machine and would loop some cool sounds. That made for some good visual performances. Roger was really into the beats. When we asked him to hit 10 ground strokes, Mark would put on a cool beat and Roger would have fun with it."

The spot has a decidedly '70s vibe, playing to the look of the vintage P.A., speakers and instruments used. "Mark had a field recording unit and said, 'I want to be a character, too.' He sent me photos of a guy who did field recordings ... Alan Lomax. He brought all his gear out there and hooked it up. He's got some amazing stuff," says Lynch.

Federer, it seems, has a musical ear. "He knew how to hit the ball on

the racket to make all the different sounds. Where on the strings he was hitting it, or how hard he was hitting it, or if he was putting spin on it, making a kind of slice-y sound. That gets lost a little bit in the audio bed, but it's all there. It's hard to pull it out of there, but there are little nuances," Lynch says.

All in all, it was a memorable day in the Mojave with the man who was then the No. 1 seed. "We're very proud of it. We do a lot of commercial work with athletes, but this one just felt special. It's so hard to get those guys out of their element and do something like this, but he had such fun—and none of those guys do that anymore."

Farm League
www.farmleague.us

Mamma Mia!

(continued from page 25)

tion was, 'Oh my gosh, this is what I always wanted my music to be like—more immersive.'"

Ultimately the music mix didn't stray far from the original stereo versions, Minkler says. "We played with it and went to extremes and brought it back down again. Bernard had his own mix room adjacent to our big mix room; when he got some ideas about pulling things apart, he would test those out in his room.

"The music is basically a band, not an orchestra, so to pull the band apart so that different instruments are in different speakers, or different spaces within the room, wasn't pleasing. We wanted to maintain a nice, tight mix, so the final result wasn't wild and crazy," Minkler says.

That said, there were some opportunities to spread the vocals out in the immersive environment. "When the material was brought to the stage,

Bernard had already put the vocals in a space that was correct for him. The music is mostly in the left-right of the room and the vocal is in the center. The background vocals are spread left and right. They could be more toward the front, some toward the middle, some toward the back—it was a case-by-case decision-making process."

With the songs having a specific sound and the live action scenes in their own acoustic environment, transitions could potentially be jarring. "But because this is *Mamma Mia!*, we didn't hold as tight to those two worlds," says Minkler. "We could break out from the cinematic world into the musical world, and on occasion we could distinctly break away. The film is so much fun, and the way it was directed, they can break into song and it's OK."

The final mix took about three weeks, then it was on to versioning. "It took us 16 days to do all the deliverables; it was a whole bunch of work," he says.

The Dolby Atmos RMU can render to 5.1 and 7.1, but it must be



From left, Tanya (Christine Baranski), Sophie (Amanda Seyfried) and Rosie (Julie Walters) in *Mamma Mia! Here We Go Again*.

managed, says Minkler. "You can't just push a button and walk out the door; you have to listen to it." It is especially important to manage the levels of the ceiling elements as they are downmixed into the sides, and to keep a handle on their front-to-back positions and levels. The latest version of Dolby's Atmos software offers enhanced control of those downmix coefficients, but there are the other playback platforms to consider.

"They're just different and you've

got to keep your hands on them," he says. "There's the IMAX animal that we have to deal with. Then there's Auro-3D and DTS-X. Each one is just a little bit different and you have to pay attention."

Deliverables drudgery aside, Minkler enjoyed mixing the film. "It's a wonderful movie, so fun and happy," he says. "I thank Benny for making happy music."

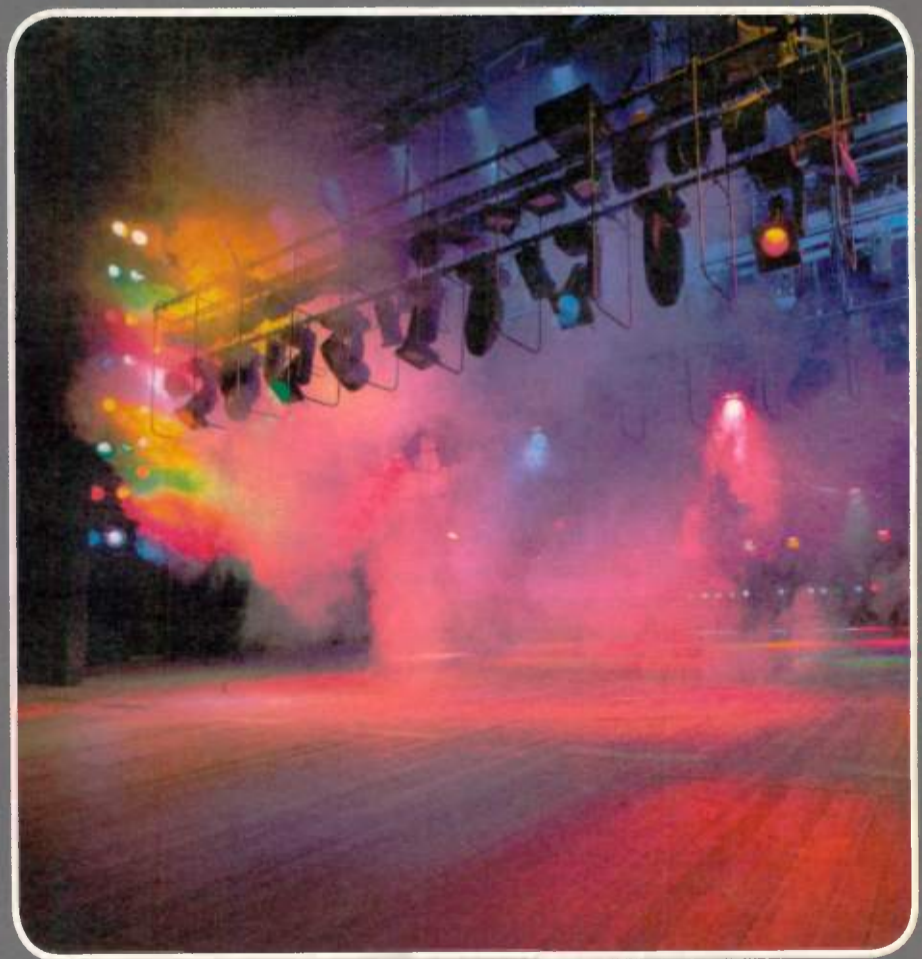
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Considering RF and Actual Use Conditions

PLIANT CREWCOM WIRELESS INTERCOM SYSTEM

BY TOM TURKINGTON

While only one of a number of extremely important factors, range truly is the holy grail of wireless products. "How far can I go?" is almost always the first question on everyone's list. This is especially true for professional wireless intercom systems, where increased coverage area can often mean the difference between success and failure in challenging production environments.

At first thought, just turning up the transmit power might sound like an easy and practical method of boosting range, but it is much easier said than done. To see why, let's take a look at range as it relates to RF power. The distance an RF signal will propagate is governed by the Inverse-Square Law, which states that the intensity of a radio wave is inversely proportional to the square of the distance from its source. Said another way: To go twice as far, you have to increase RF power by four times! Expressed in dB, it takes a 6 dB increase or decrease in power to achieve double or half range. This simply isn't practical for a number of reasons, including regulatory, battery life, spectral efficiency and user density.

If cranking up the power isn't a practical technique for increasing range, what is? This is one of the most important questions we had to answer as we developed our new CrewCom wireless intercom system, which involved defining what range actually is. Manufacturers commonly quote range under "ideal conditions." This is essentially how far the receiver can be from the transmitter with no obstructions and no interference, taking the RF power of the transmitter, the receiver sensitivity, the antenna gains and the calculated path loss at the given operating frequency into account.

Calculating range using the ideal conditions method can achieve a large number, but it really isn't helpful in understanding practical-use conditions. There are many other factors that limit range in day-to-day production activity. For instance, the radio pack is worn on the body,

which acts as an RF absorber. Depending on the body size and shape, and the specific frequency in use, anywhere from approximately 9 to 18 dB of RF power can be lost. Remembering that a 6 dB reduction in power results in half the range, an 18 dB reduction in power from body-shielding would result in an eight times reduction from the ideal conditions calculation (half range three times).

It seems that a good working definition of range is how far radio packs can get from the transmission source under actual use conditions for the system. Therefore, there are many factors that must be considered in addition to RF power. In today's modern digital transmission schemes, which utilize the spectrum far more efficiently, one of the biggest factors in maximum practical range is how well the system handles intersymbol



CrewCom Radio Pack

interference as a result of multipath propagation.

Digital transmission schemes actually transmit the desired information (in this case, intercom audio) as a series of ones and zeros—referred to as bits or symbols. The speed at which these symbols are sent determines the data rate (or bit rate). Since more data is almost always desirable, higher data rates are used. Since symbol rate is inversely proportional to symbol width, narrower symbols are the result. As we will see, narrow symbols are more susceptible to intersymbol interference.



The Pliant CrewCom family

Intersymbol interference is different from traditional multipath fading, which occurs when one or more reflected signals arrives at the receiver out of phase with the primary, direct signal and they cancel each other out. With intersymbol interference, one or more reflected signals arrive at the receiver in phase with the primary signal, but delayed in time. In this case, both signals are received and they overlap each other. The problem occurs when the secondary signal arrives more than approximately 20 percent of the symbol width later than the direct signal. When this happens, the receiver cannot reliably distinguish a one from a zero in the bit stream, resulting in garbled, unusable audio.

There are many techniques available to combat intersymbol interference, each with its specific strengths and weaknesses. In the design of the CrewCom radio scheme, we chose to utilize a technique commonly associated with OFDM transmission schemes. We split the required data among multiple RF carriers. In doing so, we were able to reduce the data rate applied to each carrier, thus increasing the symbol width and greatly reducing the potential for intersymbol interference in typical production environments. This technique also ensures that enough data can be sent over multiple carriers to achieve high-quality audio and support efficient user density.

Mitigating the harmful effects of intersymbol interference is critical to achieving excellent functional range, but that in and of itself does not expand the area that may be covered.

To do this, CrewCom enables a "put the RF where you need it" approach. CrewCom uses a distributed architecture and a proprietary network to allow radio transceivers to be deployed in close proximity to any desired coverage area. Radio packs then seamlessly roam from one transceiver to another as the user moves from one coverage zone to another, all the while keeping the distance between the radio pack and the radio transceiver as short as possible.

Shortening the distance between the transmitter and the receiver ensures that interference, body-shielding, structure-related RF attenuation or a host of other detrimental RF factors have no significant impact on system operation. This is the most effective way to greatly expand a given coverage area without adversely affecting battery life, pack size, spectrum efficiency or user density.

To review: Increasing RF power is not a practical way to increase operational range. The theoretical or "ideal" conditions range of an RF system does not accurately reflect the practical operating distance under real conditions. Intersymbol interference plays a large factor in effective range of a digital RF system in reflective environments. CrewCom utilizes unique, proprietary technology to overcome the harmful effects of intersymbol interference. Ultimately the best way to greatly increase operational range is to put the RF where you need it. CrewCom's distributed architecture and proprietary network allows system administrators to do just that.

Tom Turkington is vice president of Technology at Pliant Technologies.

Pliant Technologies

www.plianttechnologies.com

WAVES CLA-3A MODELED COMPRESSOR PLUG-IN ■ J. ROCKETT AUDIO DESIGNS ROCKAWAY ARCHER ■ MANLEY REFERENCE CARDIOID TUBE MICROPHONE ■ SOYUZ SU-013 SMALL DIAPHRAGM CONDENSER MICROPHONE ■ NEURAL DSP DARKGLASS ULTRA PLUG-IN ■ FABFILTER SATURN PLUG-IN ■ D&A H-0600 HYDRA TRIPLE GUITAR STAND

Since much of the production and TV composing work I've been doing lately has been back and forth between Clubhouse Studios in Rhinebeck, NY, and my own production room, I thought I would discuss a handful of hardware and software products that have found their way into heavy rotation. These are pieces of gear that have, after repeated use on fast-moving sessions, made a difference in the workflow.

WAVES CLA-3A MODELED COMPRESSOR PLUG-IN

While the Waves CLA-3A, based on Chris Lord-Alge's favorite unit, has been around for years, I actually never used the software version until recently.

The original LA-3A was a solid-state compressor dating back to 1969;

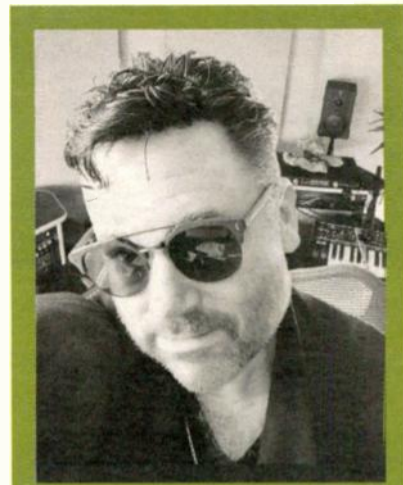


Waves CLA-3A Modeled Compressor Plug-in

this carefully modeled software version reproduces its unique sound, which can be found on countless hit records. Easy to use, it features nothing but a few main controls for compression. Peak reduction controls the amount of desired compression, while gain adjusts the makeup level after compression. The VU can display input, output and gain reduction levels. It uses an optical attenuator for gain reduction and features program-dependent compression characteristics,

meaning you almost don't know what you're going to get out of it, which is part of the fun.

I've noticed over the years that hardware versions of the LA-3A are hit or miss, so having one, albeit in software form, that has a consistent sound allows me to turn to it quite a bit. I tend to use it on guitars and bass mostly, as I don't do a lot of vocal work in TV world. It works equally well directly on a track or on an aux send via bus. I've provided some recorded examples for the online version of this review; you can hear that the plug-in adds a sense of punch and tightness to the guitars. In the example with the bus, I sent both the slide guitar (mono) and the rhythm guitar (stereo) to the same instance, which helped create, simply put, a nastier, more controlled sound. Overall, I'm glad to have the CLA-3A in my daily



BY RICH TOZZOLI

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

lineup.

www.waves.com

J. ROCKETT AUDIO DESIGNS ROCKAWAY ARCHER

I'm not someone who uses a lot of pedals to get my guitar sounds—typically I rely on the amps themselves to get what I need—but lately I've been

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SENNHEISER



J. Rockett Audio Designs Rockaway Archer

Reviews

(continued from page 31)

using pedals such as this one to get a bit extra out of my tone at the studio, as well as in a direct DI recording signal path in my own room.

Sitting comfortably on my pedalboard, the Rockaway Archer is an overdrive EQ and tone shaper that was developed for guitarist Steve Stevens. It's got an attractive, sturdy metal casing, and the six-band graphic EQ lights up for easy tweaking. The green colored bands are useful, residing at 100, 200, 400, 800, 1.6 kHz and 3.2 kHz, with 18 dB of cut or boost per frequency. Volume controls the overall output and gain controls the overall gain. That's all there is to it; you plug in and start tweaking.

Rockaway Archer has a vibe and character to it that works well in front of an amp or in a DI signal path. While you might think of it as a rock-focused distortion pedal, I use it

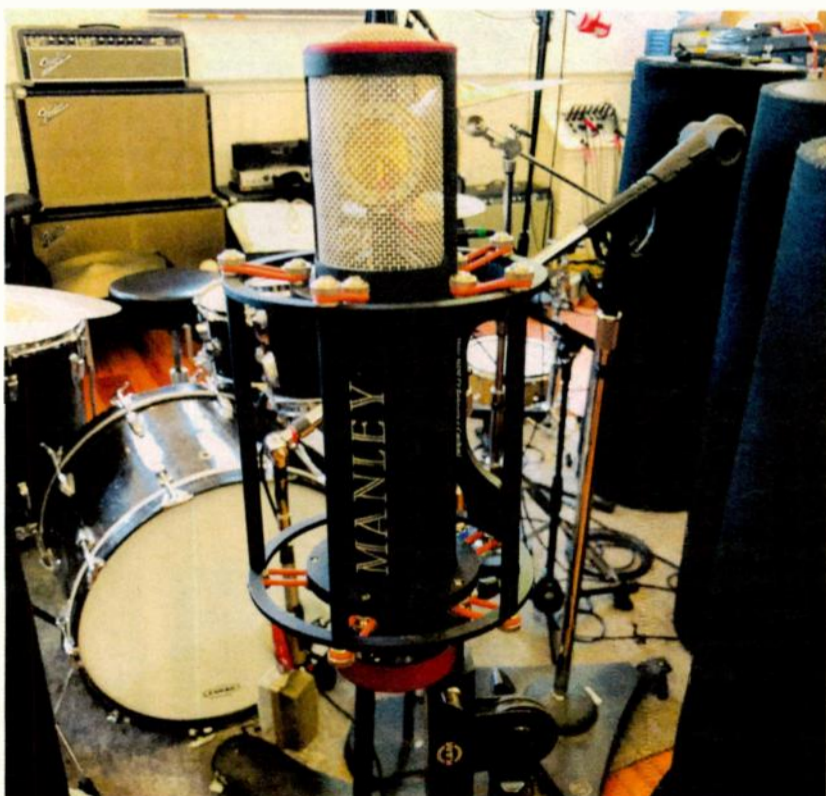
quite a bit on clean, clear guitar and bass tracks. It can add just a touch of thickness, and the EQ lets you tailor the tone for each instrument plugged into it. Coming in around \$250, this pedal is not on the cheap side, but for what I get in tone and flexibility, it's well worth it. I now turn to it on every session.

www.rockettpedals.com

MANLEY REFERENCE CAROID TUBE MICROPHONE

Original released in the early 1990s, the Manley Reference Cardioid Large Diaphragm Tube Condenser Microphone is a high-end piece of gear with a well-established pedigree. Interestingly enough, none of us in the Clubhouse collection of engineers and musicians had ever used one, so we were excited to put it to the test on a session. Since we were doing instrumental TV music, we tried it as a standalone mic in front of the drum kit in the live room, about 5 feet out from the kit and about 4 feet high.

Handcrafted in Manley's Chino,



Manley Reference Cardioid Tube Microphone

CA, facility, it features a cardioid polar pattern, a -10 dB pad switch, all-tube design with triode 12AX7s, a custom-wound output transformer, external power supply with a 20-foot power cable and locking 6-pin connectors, 10 - 30 Hz frequency response, a 6 micron gold-sputtered diaphragm and a max SPL of 150 dB. The black and red brass machine-tooled body feels solid, and there's a cool T-bar handle and locking clutch to adjust the mic.

The first thing that struck all of us when listening back in the control room was how massive the kick is. It was so punchy and booming that we had to make sure no other mics were on. Once soloed, we confirmed that this mic is a monster. It has a smooth top and good solid mids, and the bottom is unique to any room mic I've heard at the Clubhouse before. Testing it out with some 1176-style compression, it retained its overall punchy character and got even more nasty, in a good way. In the mix, it added a solid sense of punch, and I can see why people have used this mic for years now—it just delivers. I look forward to trying it out on more instruments and voices. Stay tuned for updates!

www.manley.com

SOYUZ SU-013 SMALL DIAPHRAGM CONDENSER MICROPHONE

We've had a pair of Soyuz SU-011s at the Clubhouse for some time now and have used them on multiple hit records, so we were excited to try out the SU-013 and see how it compares to its tube counterpart. This mic shows the same excellent build quality that we've come to expect from Soyuz. Weighing in at just under half a pound each, these mics feel solid. Designed and crafted entirely in Russia, they come packaged in a foam-lined Siberian hardwood box and include a 10 dB pad and a mic clip. We tested the SU-013 with the stock cardioid capsule, but omni and hypercardioid capsules are also available.

On this TV-focused session, we had the pleasure of recording drummer Daniel Glass, so we decided to see how the SU-013s performed on overhead duty in a spaced pair configuration. The first words that came to our minds when hearing them were "clear and warm," almost like they were going through tubes. With just a gentle presence boost, they have plenty of clarity while still retaining that classic sound. It allowed us to capture a really nice balance of cymbals and shells.

Compared to the SU-011, these sound a bit tighter in the low end and seem to have a faster transient response while still retaining much of the character and vibe that made us

Soyuz SU-013 Small Diaphragm Condenser Microphone

fall in love with Soyuz, thanks to its custom-wound transformer. Importantly, the SU-013 also takes EQ and compression extremely well. Come mix time, if you find yourself needing a little extra brightness, you can bring out plenty of sheen without any sign of harshness. We may have found our new go-to overhead mics!

—By Mike Dwyer
(Shawn Mendes, Bob Weir, The Lumineers)
www.soyuzmicrophones.com

NEURAL DSP DARK-GLASS ULTRA PLUG-IN

A collaboration between Neural DSP Technologies and Darkglass Electronics, the Darkglass Ultra plug-in (VST/AU/AAX) models two classic hardware units: the B7K Ultra and the Vintage Ultra. Primarily known as tools for aggressive bass tones, I've found Darkglass Ultra to be great on other instruments such as guitars, synths and even percussion.

The plug-in features the same layout as the hardware, with a few extras, such as the input and output knobs, and the ability to drag-and-drop presets. The input and output gain knobs affect the distortion range of the drive pot, while the stereo switch allows for stereo input signal processing and the VDU/B7K switch lets you change between both pedals. There's a resize button for two different window sizes, a quality switch for CPU conservation, and link/unlink EQ to have independent EQ for clean and distorted signals.

On the surface, you've got master volume, blend, level (of the overdriven signal), drive and an attack switch (boost/flat/cut). The grunt switch sets the amount of low-frequency information to saturate before clipping, and the bass (100 Hz), lo mids (250, 500, 1 kHz switchable), hi mids (750 Hz, 1.5 kHz, 3 kHz switchable) and treble (5 kHz) are all +12 dB adjustable. There's distortion and bypass "foot" switches, and the plug-in defaults to distortion "on." (I do wish they had an option on that.)

For my applications, I use it as a tone-shaping tool that can go from mild to extreme. While it certainly rocks on bass, it can add some character to most anything you put it on. It's really cool on drums and percussion, creating a crunchy sense of aggression that is not like many other



plug-ins. On clean DI guitars, such as the example included in the online version of this review, I turn up the treble and drive just a bit, turn the lo mids down, and end up with extra clarity and punch to help push them out in the overall mix. What I like about the Darkglass Ultra is that with a twist of a few knobs, you've generally got a better sound than what you started with. Can't ask for much more than that!

www.neuraldsp.com

FABFILTER SATURN PLUG-IN

What a special tool this is. Saturn is a flexible multiband saturation, distortion and amp modeling plug-in with a ton of possibilities. I use it for a variety of purposes, mostly in the realm of filtering and what I call "sonic sound design" of rhythmic elements.

It's got a crazy modulation section that is easiest explored by clicking through some presets, but to me, the power comes in exploring the bands that can be flexibly moved, soloed and tweaked.

Each band (up to six) can be tone-shaped and saturated, with sounds ranging from Clean Tube to Destroy, and you can automate them for creative results. This lets you really push or pull sounds in ways that honestly no other plug-in can do. In the online audio example, I took a standard percussion loop and turned it into something edgy by pushing an upper mid band up and featuring a Broken Tube crunch, while cutting the other bands around it. I find that when I need to get something to cut through a mix, Saturn can always get the job done.

www.fabfilter.com



Neural DSP Darkglass Ultra Plug-In



FabFilter Saturn Plug-In

D&A H-0600 HYDRA TRIPLE GUITAR STAND

A guitar stand in Pro Sound News? Well, yes, actually. It's one of those things that you don't realize the importance and value of until you use it on a full session. I tend to use several guitars per track, layering them to get a fuller sound. Since I play bass as well on much my TV work, I also have a variety of them on hand. My go-to guitars are a chambered Les Paul standard, D'Angelico Excel SS and handful of Telecasters, but lately my favorite studio tool has been a classic Gibson Firebird. And one thing for sure is that Firebirds and rack guitar stands do not get along. The unique shape, dating back to its 1963 design by car designer Ray Dietrich, means it simply falls out of most stands.

The Hydra Triple features room for three instruments, with six equally angled legs for maximum stability. It's gravity-activated with a locking yoke (covered with a soft thermal polymer) that literally grabs your guitar. The

D&A H-0600 Hydra Triple Guitar Stand



height can be adjusted with a single knob and the whole thing folds down to about half its size. You can practically throw the guitar into the stand and it's not going anywhere. Oh, and it fits a Gibson Firebird perfectly!

www.dnaguitargear.com

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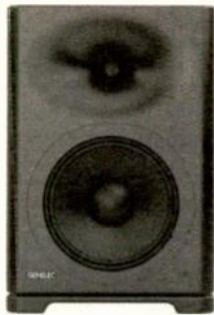
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GENELEC S360 SAM STUDIO MONITOR

Genelec's new high-SPL Smart Active Monitor—the two-way S360A—is intended for use in large immersive setups in post-production studios or film mixing stages and play-live monitoring in music production. Housed in a compact enclosure featuring low and controlled diffraction, the S360 features a 10-inch woofer based on Genelec's Master Series, and a completely integrated extended directivity control waveguide DCW, supporting its 1.7-inch titanium diaphragm compression tweeter. Genelec says the S360 offers a short-term SPL capability of 118 dB, with peaks even higher, and a long throw capability that can provide reference-quality accuracy at listening distances greater than 33 feet.



SENNHEISER MEMORY MIC WIRELESS MICROPHONE

Sennheiser has introduced its wireless Memory Mic—essentially a small wireless lavalier mic for use with smartphones. Aimed at journalists and reporters, the small, 30g wireless microphone is said to provide broadcast-quality sound while working at any distance from the smartphone, transmitting within the 2.4 to 2.4835 GHz frequency range. The Memory Mic works in tandem with a Sennheiser Android or Apple smartphone app and attaches to clothing via a magnetic clip. When recording, the integrated microphone of the smartphone is also active and works to concurrently pick up ambient sound. The Memory Mic features a Sennheiser condenser capsule with omni-directional pick-up pattern. The microphone's sensitivity can be set at three levels in order to adapt to louder or softer voices.



UNIVERSAL AUDIO UAD SOFTWARE V9.6

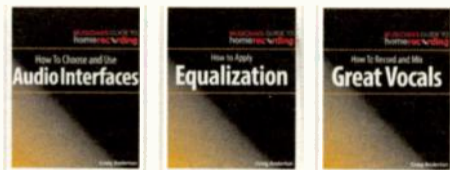
Universal Audio has released UAD Software v9.6, which includes new channel strip, guitar amp, mastering suite and microphone collection plug-ins. UA's new Century Tube Channel Strip plug-in (pictured) features a vintage tube mic preamp, dynamics control and a "classically voiced" EQ. The Suhr PT100 Amplifier features a custom "Plexi-style" output transformer, four EL-34 power tubes and six 12AX7 preamp tubes. The Brainworx bx_masterdesk plug-in offers a chain of analog mastering tools in a simple interface, providing multiple levels of EQ and compression, plus M/S processing, bass management, and stereo enhancement. The Bill Putnam Microphone Collection offers emulations of rare, vintage mics such as the Telefunken Ela M 251E, AKG C12A, Neumann U47 and RCA 44, among others.



THE MUSICIANS GUIDE TO HOME RECORDING

Industry mainstay (not to mention *Pro Sound News* columnist/blogger) Craig Anderson has a new book series, *The Musicians Guide to Home Recording*, starting with a trio of titles. *How To Choose And Use Audio Interfaces* discusses all types of audio interfaces; types of analog and digital connections and how to use them; interconnection protocols; product options; and more.

Meanwhile, *How To Apply Equalization* provides tips on how to use an EQ, exploring equalizer parameters; when to use different equalizer responses; linear vs. non-linear phase EQ; plug-in formats, mid/side equalization; and other important topics. Finally, *How To Record And Mix Great Vocals* shares how to capture the best vocal performances via choosing the right mic; mic placement; microphone accessories; mic preamps; taking maximum advantage of composite recording; and more.



firstlook

AUDIO-TECHNICA ATH-M60X MONITOR HEADPHONES

Audio-Technica has shipped its new ATH-M60x on-ear professional monitor headphones. Designed for studio, broadcast and mobile applications, the ATH-M60x is a low-profile, on-ear professional headphone model that utilizes the same proprietary 45 mm large-aperture drivers found in the ATH-M50x, using rare earth magnets and copper-clad aluminum wire voice coils. According to the company, this aids in providing an extended frequency range with accurate bass response. The ATH-M60x's low-profile, closed-back, on-ear design provides sound isolation and sports memory foam within the earpads and headband. The headphones come with three interchangeable cables with 3.5 mm (1/8") mini-plugs—1.2 m - 3.0 m coiled, 3.0 m straight, and 1.2 m straight—as well as a 6.3 mm (1/4") screw-on adapter and a protective carrying pouch.



BETTERMAKER MASTERING EQUALIZER

Bettermaker has introduced its Bettermaker Mastering Equalizer, distributed in the U.S. by TransAudio Group. The unit offers analog signal path processors controlled by digital plug-in recall and automation. The Bettermaker Mastering Equalizer is configured for stereo, dual mono, or M/S operation. It features four parametric bands (two of which can be toggled to shelving), a low-cut filter with adjustable resonance, a high-cutoff filter, and a passive Pultec-style section with "air bands" at 23 kHz and 28 kHz. A digital control workflow includes a five-inch touchscreen with "plug-in style" EQ curve representation paired with RTA of the pre- and post-processing signal for visual confirmation of the equalizer's effect.



ATTERO TECH SYNAPSE DM1

Attero Tech has introduced the Synapse DM1, a networked audio monitor for confidence monitoring of networked audio and local sources at the rack. The DM1 includes two modes of network audio monitoring: Standard and Extended. The standard mode features monitoring of any of the 32 channels assigned to the Dante/AES67 receiver inputs. Extended mode allows subscription based monitoring of up to 128 channels (Dante-only) loaded to the DM1 using the unIFY Control Panel Software. In both modes, audio may be selected for monitoring by the user via the front panel controls. The DM1 also features AES-3 digital outputs for connectivity to full range powered speakers or amplifiers, and 2 channels of analog I/O for local source monitoring and network connectivity.



WAVES ABBEY ROAD CHAMBERS PLUG-IN

Waves Audio's Abbey Road Chambers plug-in emulates the sonics of the famed recording facility's echo chamber, which has been used for decades to create reverbs, delays and other spatial effects on recordings by the Beatles and others. Developed together with Abbey Road Studios, it offers control of three rooms—Abbey Road's Studio Two echo chamber and its Mirror Room, and additionally the Stone Room from Olympic Studios, London. The emulation of the Studio Two echo chamber includes detailed variables like the original valve Neumann KM53 microphones and Altec 605 speaker, as used on almost every pop recording done at Abbey Road during the 1960s.



There's more information on all the products featured at prosoundnetwork.com/sept2018.

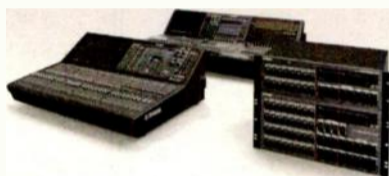
PRESONUS EARMIX 16M PERSONAL MONITOR MIXER

Designed to work with the PreSonus StudioLive Series III family of mixers, the new EarMix 16M personal monitor mixer accepts 16 mono channels of input via AVB networking and sports a headphone amplifier that can drive low-impedance devices such as IEMs. Each unit can create its own custom mix, and users can apply limiting and three-band EQ with sweepable midrange frequency to each channel, as well as to the main mix. Monitor mixes can be saved to internal memory and users can store and recall up to 16 mix scenes locally. The EarMix 16M can be powered with its included external power supply, but also works with Power over Ethernet (PoE), which enables network cables to carry electrical power to compatible devices.



YAMAHA CL/QL V5.0 UPDATE

Yamaha Professional Audio has released Version 5.0 for Yamaha CL and QL digital audio consoles, sporting new features and expandability. The Portico 5045 Primary Source Enhancer by Rupert Neve Designs is now available in the Premium Rack. The device is intended to help control background noise from microphone sources while enhancing clarity and increasing feedback margin. A new Individual Fade Time functionality allows different fade times to be set for each fader, and is intended for users who need complex fader control, such as musicals and other theatrical applications.



Dante devices newly supported by V5.0 include Rupert Neve Designs RMP-D8 8-Channel Remote Control Dante Mic Pre, Sennheiser EM6000 Digital Wireless Receiver, Shure AD4D and AD4Q Axient Digital Wireless Receiver, and the NEXO DTD Digital TD Controller. Future updates will provide support for other Dante devices.

ALLEN & HEATH 96 KHZ DANTE CARD FOR SQ

Users of Allen & Heath SQ Series consoles will now have their own 96 kHz Dante Dante card, which the console company just began shipping. The SQ Dante card allows a SQ console to connect to 96 kHz amplifiers, interfaces and other devices on a Dante network, without unnecessary sample rate conversion or added latency. In addition to facilitating system integration, the new card enables digital splits and multitrack recording direct to a computer. The SQ Dante card can also be switched to 48 kHz to accommodate existing Dante networks and is Dante Domain Manager ready.



RADIAL CATAPULT MINI TX AND RX

Radial Engineering has shipped its new Catapult Mini TX and RX, which create a 4-channel audio snake for sending analog audio signals over Cat 5 cable. Many buildings are already pre-wired for Cat 5, allowing Catapult Minis to transmit audio between rooms without the need to install or supply new cabling. The Catapult Mini TX (transmitter) and RX (receiver) both feature a compact steel chassis with a hardwired fan-out to four XLR connectors. All of the Radial Catapult modules are compatible with each other, and are sold individually, providing the option to mix and match as needed. The Catapult Mini TX and RX can be used together as a pair to create a compact four-channel audio snake, or they can be matched with other Catapult modules that include splitting capabilities or transformer isolation.



COUNTRYMAN H7 HEADSET MICROPHONE

Countryman Associates has introduced its new H7 Headset Microphone. Based around a slim side-address capsule, the H7 has been designed to offer extended dynamic range and a precision cardioid pattern. The H7 is water-resistant and its headframe weighs less than 7 grams (0.25 oz). The mic boom, which slides independently of the earloops to place the mic right at the mouth, flips for left- or right-side placement. The headset mic is available in four color tones—light beige, tan, cocoa, and black—and utilizes an water-resistant connector that detaches from the microphone and reportedly provides more than 5 ATM of ingress protection.



JBL VTX A8 Line Array

JBL Professional ships its new VTX A8 dual 8" line array loudspeaker this month. For VTX A8, new transducers were custom-engineered by JBL to integrate more drivers into a smaller, lighter cabinet for a compact footprint. The VTX A8 sports two JBL 2423K 2" compression drivers found in the larger VTX A12, each combining the compression drive, phasing plug and line array waveguide in a single part. The loudspeaker's 110-degree dispersion pattern goes down to 350 Hz, and is intended for small- and mid-size venues, front fills and similar applications. It shares the VTX A12's rigging mechanism, suspension system, dimensions and Performance Manager software, and accessory options expand the VTX A8's mounting, integration and installation capabilities.



SOMMER CABLE SYSBOXX PANEL SYSTEM

Sommer Cable has introduced its new SYSBOXX modular panel system for rack, wall, floor, desk and duct installations. The new SYSBOXX panel system features more than 100 modules to choose from for personalized panel configuration. The connector modules feature flat ribbon cables for simple internal wiring. A professional look is achieved through countersunk screwheads and an anthracite coating. SYSBOXX modules provide a clear layout and can be labeled. The various frames, providing stability through sandwich construction and 2.5 mm/0.1" thick front, side and back panels can be configured online and ordered via the product's website.



firstlook

EAW RADIUS RSX212L MODULE, RSX18F SUBWOOFER

Eastern Acoustics Works has added the new RSX212L line array module and RSX18F subwoofer to its Radius Series. The two-way RSX212L line array module is loaded with two 12-inch low frequency drivers and two 1.7-inch voice coil compression drivers. Like the smaller RSX208L line array, the RSX212L includes array self-detection via on-board infrared sensor and accelerometers that enable EAW's OptiLogic technology to pre-optimize the array to reduce setup and tuning time, according to the company. The RSX212L features three-point rigging, a new flybar, caster pallet and cover designed for deployment and pack down. The new RSX18F is a single 18-inch, flyable, low frequency module that offers automatic cardioid functionality, in stacks of two or greater, via OptiLogic. The subwoofer can be flown with the companion RSX208L line array module via a new accessory adapter.



AI and Machine Learning

BY MICHAEL GARWOOD

As emerging technologies go, artificial intelligence (AI) has certainly taken its time in making its presence felt on the world.

Surprising as that may be, the term AI has actually been around for almost 70 years, having been first coined back in 1955 by computer scientist John McCarthy, a.k.a the 'father of AI', the same year Emmett Brown invented time travel in the movie "Back to the Future".

Since then, AI has experienced a largely stop-start existence, principally due to sporadic funding and below-par technology. In truth, the term AI has (arguably) gained more notoriety for storylines of killer robots (and the occasional Wall-e) hell-bent on destroying mankind than for its practical use and business benefits. But that's all changing.

THE FOURTH INDUSTRIAL REVOLUTION

Thanks to breakthroughs in computing power, the advent and availability of big data, cloud hosting/storage, highly sophisticated software, and complex algorithms, the potential of AI is now starting to be fulfilled—with the business world being the biggest beneficiaries.

The market has reacted at pace. In recent years, billions of dollars have been invested by many of—if not all—of the world's leading organizations into AI technologies (and companies), each of them looking to utilize some form of AI technology to future proof and improve their businesses, and/or create a competitive advantage

Various estimates suggest more than \$46 billion will be spent on AI services by 2020 by businesses, a figure rising to above \$51 billion 12-months later.

WHERE WE ARE

Depending on what you have seen, heard, or read (fictional or not), you may have different ideas as to what AI is and is capable of at this stage. To offer some clarity there are three simple levels to be aware of:

1. Weak AI

AI capable of demonstrating human intelligence to carry out specific tasks.

2. Strong AI

AI capable of showing self-awareness, the ability to think and make decisions for itself to the same level as a human being.

3. AI Super Intelligence

AI showing superior levels of intelligence to human beings and fully in control of its existence.

For now—and for the foreseeable future—only Weak AI is currently relevant, so it's time to remove any images of a leathered up, sunglasses wearing Arnold Schwarzenegger.

IT'S ALREADY HERE

Examples of weak AI have widely been adopted by many different businesses and are in use today—you just might not realize it.

In fact, it's a fairly safe bet that you've already unknowingly encountered some form of AI and machine learning technology before you started reading this article. Maybe even before you got out of bed.

Have you ever used Apple's personal assistant, Siri? Or Google's Alexa? Perhaps you've noticed how your emails can often now detect questions being asked of you and automatically provide you with a ready-made short reply? How about your smart phone that seems to be able to predict sentences you're about to type as you're typing?

For those that like a bit of online shopping (such as Amazon) or video streaming (Netflix), have you ever wondered how those personalized recommendations are determined? What about Facebook and its ability to not only recognize there are people in the photo you've posted, but can sometimes even identify them too?

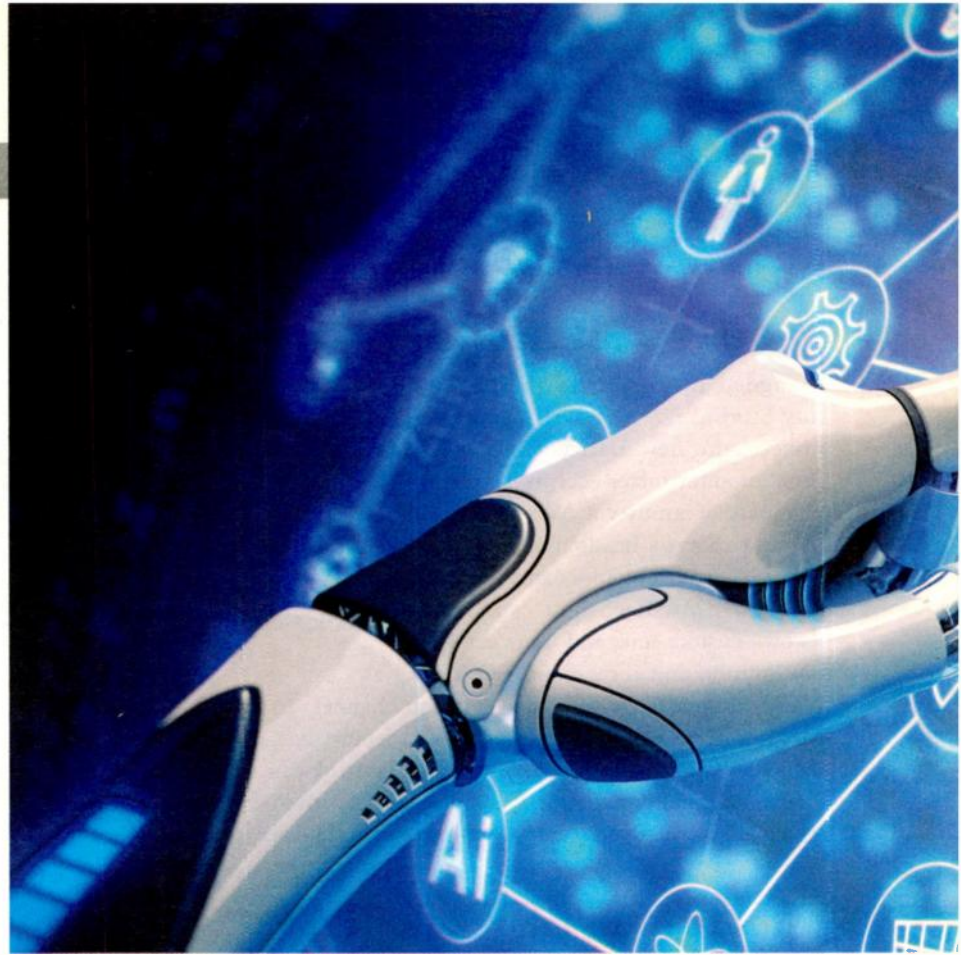
They're all using some form of AI, with the intention of bettering their customer's experience, enhancing their financial opportunities and—unseen externally—improve their efficiency in workplace.

AI FOR ALL

"We are at the cusp of a new revolution, one that will ultimately transform every organization, every industry, and every public service across the world," commented Ralph Haupter, president, Microsoft Asia. "I believe 2018 is the year that this will start to become mainstream, to begin to impact many aspects of our lives in a truly ubiquitous and meaningful way."

You may be forgiven for thinking the implementation of AI is something exclusively for the Fortune 500's of this world...but you'd be wrong. Today, things are so advanced that there is unlimited growth potential with AI companies designed to support business like yours.

In essence, AI is something that can be packaged up and purchased on a monthly basis, like your broadband or phone. This model reduces



Companies deploy AI with the intention of improving the customer experience and improving efficiencies in the workplace.

significant costs associated with more bespoke in-house solutions.

It also means the complexity is significantly removed (the 'it doesn't matter how it works as long as it works' approach), meaning you won't necessarily need to go and employ a qualified and expensive computer scientist.

"You don't need to be a mathematics genius or have a PhD in software engineering to make sense of AI for your business," said Gartner analyst Whit Andrews. "You don't have to make massive investments in infrastructure and personnel in order to start applying AI's potentially transformative technologies.

"These technologies will transform the nature of work and the workplace itself," he added. "Machines will be able to carry out more of the tasks done by humans, complement the work that humans do, and even perform some tasks that go beyond what humans can do. As a result, some occupations will decline, others will grow, and many more will change."

COMPETITIVE ADVANTAGE

So, why should you and your business consider implementing AI? Could it be just a fad? Will it really benefit you?

The answers are wide, extremely varied, and will be largely unique to your own business. There may be some obvious areas of your business you'd like to improve upon—be it financially or operationally motivated.

The magnitude and inevitability of AI cannot be ignored, nor underestimated. Many AI experts and professionals have described the potential impact of AI on businesses as being equivalent to the invention and adoption of the personal computer and email.

Some suggest that AI can help boost revenues by around 20 percent, whilst others warn that any business currently not at least thinking about adopting some form of AI could already be two years behind a rival. Further delays could even result in their demise further down the road due to losing a competitive advantage.

GETTING STARTED

The first thing to remember is what the purpose of AI actually is and identifying how it can benefit your business. From speaking to various professionals in the field, it can be narrowed down to two core reasons: solving existing problems and discovering/identifying new opportunities.

At its core, AI is fueled by data,



JONGHO SHIN/THINKSTOCK

which can come in many different forms for many different uses. Emails, newsletters, subscriptions, views to your website, downloads, and sales are just some examples of where data can be collected.

On its own, that data may not seem useful. However, contained within, it could be the difference between success and failure or profit and loss. This is where AI comes into play, and where it would be able to—in many instances—do the job of a human.

A famous quote within AI circles comes from Michael Palmer of the Association of National Advertisers sums it up well: “Data is just like crude [oil]. It’s valuable, but, if unrefined, it cannot really be used. It has to be changed into gas, plastic, chemicals, etc. to create a valuable entity that drives profitable activity; data must be broken down and analyzed for it to have value.”

Today, the bulk of that potentially valuable data held in companies is still not being utilized. “If we look at the amount of data which is actually being analyzed today, only 20 percent of the data we have is searchable and being used productively,” said IBM chairman, president, and CEO Ginni Rometty during a discussion on the subject. “The other 80 percent is held inside companies, generally not being used.”

IMPACT ON JOBS

One of the more universal drivers for AI is centered around automation—a word often which spreads fear when discussing the risks to people’s professions. Areas like administrative work (such as data processing and data collection) are widely seen as function where AI will support—or even replace—humans.

“If your work is repetitive and not creative, you will be gone very

soon,” was a stark warning Dr. Roman V. Yampolskiy, a professor in the department of computer engineering and computer science at the Speed School of Engineering, University of Louisville.

Bart Selman, a professor of computer science at Cornell University, was quoted as saying: “A lot of large companies have middle management jobs where people manage other people at a very low-level in terms of keeping track of things like vacations and sick days. Those jobs I believe are at risk. Jobs that involve a large routine component. If you’ve made the proper investment, you can develop an AI system that can take over a good fraction of those jobs. A lot of big companies have a lot of those positions and will be looking at it.”

Examples of automation and loss of jobs can be seen all over the world today. Some of the headline grabbing stories include that of a Japanese law firm, Fukoku Mutual Life, which invested more than \$1.7m building an AI platform with IBM Watson, has used the technology to replace more than 30 staff members. The annual savings for the firm is predicted to be around \$1m a year.

“The next wave of economic dislocation won’t come from overseas,” President Obama stated in 2017 during his farewell address. “It will come from the relentless pace of automation that makes many good middle-class jobs obsolete.”

SPOTTING AN OPPORTUNITY

Another major area for AI adoption is within sales. There are now examples of where AI, using natural language processing software and specific algorithms, is able to spot patterns (in

data), to identify new opportunities and provide a level of analysis on in just a few seconds.

This can vary greatly. Examples include gaining greater knowledge on customer’s viewing and buying behavior—i.e, what they’re looking at and when they most likely buy (such as pay day).

Another might be identifying the best time to send bespoke marketing and promotional materials or newsletters to specific customers rather than en masse as part of a one-size-fits-all strategy. Another could be automatically identifying cold customers that haven’t transacted with you for a while and send them updates, reminders, or special offers to help get things over the line.

THE FUTURE OF AI

These are just a handful of examples on how and where AI is already proving significant benefits and opportunities for businesses all over the world.

It’s important to realize these are all current technologies, with this article designed to demonstrate and educate you as a businessperson, what is available today, rather the stargazing into the future.

The AI revolution is here and it will—if it doesn’t already—play a key role in the future of the way your business runs and perform. When you decide to get on board is up to you. I’ll leave you with this quote from Gartner: “As vendors exploit AI software capabilities within business suites, enterprise applications, infrastructure support services, and the customer experience, your organization will need new or updated strategies. Ready or not, AI is coming to you.”

AI in Pro Audio

By Tom Kenny

Any discussion of early efforts into the study of artificial intelligence—not just in pro audio, but in general—must include a section on music and technology pioneer Ray Kurzweil. His accomplishments range from the invention of the first omni-font optical character recognition devices to the first text-to-speech synthesizer to the K250, which was the first commercial synth to emulate the sounds of a grand piano and other orchestral instruments to an acceptable performance. He has written extensively on machine learning, including 1999’s worldwide bestseller, *The Age of Spiritual Machines*.

In 1963, while a teenager, Kurzweil wrote his first computer program, analyzing the works of classical composers and then creating its own songs in similar styles. In 1965, he famously appeared on CBS where he performed a piano piece that was composed by a computer he also had built. Later that year, he won first prize in the International Science Fair for the invention. His work

set off a flood of efforts in AI-based composition that continues to this day in Web-based apps that will create original music for a project based simply on length, genre, tone and style.

Composition became the focus of AI in music and audio over the ensuing 50 years, ranging from developments like Orb and MAX in the early 1980s to Morpheus and even recent developments with the Tab Editor for the Reaper DAW. In the past couple of years, companies like Amper Music have emerged to offer free AI-based composition services to web developers and media pros, and research projects like Flow Machines out of the European Research Council have set out to produce the perfect pop album, all based on machine learning.

Concurrently in pro audio, efforts have been made to employ AI to speed up the production process and make it more efficient. Early room tuning exercises, where monitors incorporated feedback circuits to electronically correct for room anomalies, can be considered a primitive form of AI, as can systems like Smaart and SIMM for live-

sound room correction.

More recently, pro audio software developers have started to include “artificial intelligence” in their marketing materials. Gullfoss has released a plug-in dubbed an “intelligent automatic equalizer,” which can, essentially, handle EQ decisions based on the music and your taste. Zynaptiq has released Intensity, which the company says is built on facial recognition algorithms to bring out a sound’s inherent detail and allow fine-tuning from a single knob.

While still in its most primitive forms, AI is coming to pro audio. There are shades of the advent of MIDI in that there have been predictions of composers being put out of work, and the emergence of LANDR, an “AI-based, automated mastering service” must strike some fear in mastering engineers.

But for now, in an industry still coming to grips with how to properly create a true 3D sound experience, the promise of AI is exciting while the threats to jobs and creative contributions are minimal. Pay attention, though: AI is coming.

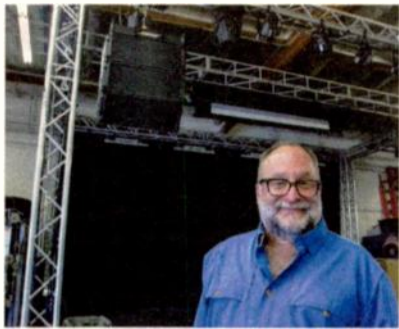
Hooray for Hollywood

BY STEVE HARVEY

BURBANK, CA—"We're not the place somebody generally goes for a touring product," says Les Harrison, president of Hollywood Sound Systems. "I sometimes say we're like a hardware store: We're the place you go when you're a successful professional and you need some more of something, or you're missing an item."

Paul Barreras, soundman at the Coconut Grove nightclub at the Ambassador Hotel in Los Angeles, founded the company in 1960, initially running it out of his garage. In the decades since, Hollywood Sound Systems has been—and continues to be—many things to many different people.

The company has designed and installed audio systems at Disneyland, Knott's Berry Farm and Magic Mountain. It handled audio for the Academy Awards ceremonies from 1963 through the mid-Seventies, as well as for the Grammy Awards, and originated the sound for many television shows, including *Saturday Night Live*. In 1975, Hollywood Sound developed the NFL's wireless referee system.



Les Harrison, president of Hollywood Sound Systems, with his new Bose ShowMatch DeltaQ line array system

In 1972, Allen Byers, Hollywood Sound's wireless specialist, left the company and started Audio Rents, with support from Salvatore "Tutti" Camarata, owner of Sunset Sound Recorders. Byers and Harrison agreed to co-locate their businesses, on a handshake, in 1985. Byers passed away in 1998 and Audio Rents was acquired by chief engineer Bob Burton, who remains at the helm. Three years ago, the two companies relocated from Hollywood to share a building near Burbank Airport.

Audio Rents began by supplying equipment to recording studios, later expanding into post production. "Be-

cause of the relationship between us and Audio Rents, we can cover a very broad range," says Harrison, who has been with Hollywood Sound for 42 years and was a customer for some years before that.

The warehouse that the companies share is a veritable Aladdin's cave of live and studio sound products. You name it and they probably have it, from the biggest cabinet to the smallest microphone clip, and most likely in excellent condition. "I generally spend more money on cases than other people do because the cases get beat up, not the systems," says Harrison.

The warehouse workbenches are networked over Dante, including a Whisper Room where mics are tested. The booth is also wired to a Yamaha NUAGE system in a demo room. "So we can do a voiceover in here," he says.

The company's recent purchase of a large ShowMatch DeltaQ line array system from Bose Professional has been used by a series of bands since it was delivered in late June—but that's because the system hasn't moved since Hollywood Sound installed it in downtown Los Angeles for the city's annual summer-long outdoor concert series. This year's program at Pershing Square, produced by the City of

(continued on page 42)

Monitor Engineer Michael Mule, Dead at 57

BY CLIVE YOUNG

LAS VEGAS, NV—Monitor engineer Michael P. Mule died in his sleep on August 16 in Las Vegas, having returned just days earlier from working on Iron Maiden's summer European tour. Across a nearly 40-year career that began at CBGB's, Mule worked with everyone from Anita Baker to Iron Maiden, and had just returned from a European stadium tour with the latter five days earlier. He was 57.

Born May 21, 1961, Mule (pronounced Mu-lay) grew up in Flushing, Queens in New York City, where he started working with friends' bands while attending Bayside High School, and later while at New York University. As those groups began to land gigs in Manhattan, he made inroads into the city's audio scene.

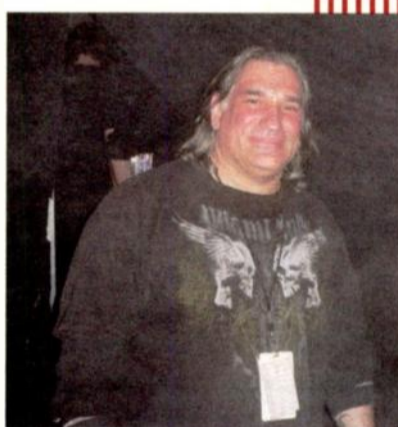
"I used to bug the hell out of the house engineers," he told Pro Sound News in 2003, "and eventually my first real, sort of paying sound gig was doing audition nights at CBGBs in the late Seventies...it was 10 bands a night, no waiting. All the knobs you could twist, with no consequences of

twisting the wrong one!"

Eventually Mule hit the road in 1982, landing his first touring gig mixing front-of-house for Iggy Pop. "I was 21 years old and it was pretty interesting," he recalled with a laugh. "He had a great band—Carlos Alomar on guitar, and from Blondie, Gary Valentine and Clem Burke playing drums. Great band, good experience for a 21-year-old."

From there, Mule went on to make his mark in the touring world, mixing monitors over the years for artists in pop, rock, metal and R&B, including Guns N' Roses, Cyndi Lauper, Nickelback, The Roots, A Perfect Circle, Alice In Chains, Bel Biv DeVoe, Van Halen, Boz Scaggs, Engelbert Humperdinck, Rush, Macy Gray, Richard Marx, The Alarm, Adam Ant, Anita Baker, Adam Sandler, New Edition, ELP, The The, Cheap Trick, Aerosmith, Donna Summer, Boyz II Men, Peter Murphy, Dashboard Confessional, Whitesnake, Paula Cole, Brandy, Was (Not Was), Pat Benatar, Blondie, Freddie Jackson and Julio Iglesias, to name only a few.

"The way I did it was perseverance, hard work, patience and lis-



Over a nearly 40-year career, Michael Mule tackled monitors for everyone from Engelbert Humperdinck to Rush.

tening to the people who have been doing it a long time," he said. "Listening to the experienced people until you've formed your own basic way of doing things, because obviously nothing is set in stone in the audio industry—there's 1,000 ways to do the same thing, as far as I'm concerned."

Over the years, Mule lived in California, Tennessee, Colorado and Arizona, but in recent times, had settled in Las Vegas. His girlfriend, Judy Meyer, announced his passing on Facebook, writing, "I will miss him more than words can express. I know he was loved deeply by many. We will all miss him. He was truly unique. His sister Emily, best friend Juanita and I will have a memorial at some point. Our hearts are broken."

briefs

Miking Paramore

ASIA—Currently touring through Asia mixing FOH for Paramore, Will Markwell has put the band on a slew of Telefunken (telefunken-elektroakustik.com) mics, including M80-SHs on the snare and guitars, M82 on kick and bass guitar, and M81-SHs on Toms. Singer Haley Williams is on a H M8C with a matte black finish and gold head grill. "From the first moment she sang into the Telefunken M80, she loved it," said Markwell.

Heil's Sizzling Sound

NEW YORK, NY—There's no word if they angled the vocal mic six degrees off Kevin Bacon, but we do know that since the Bacon Brothers hit the road this summer, FOH engineer Jimmy Ace has put the band on Heil (heilsound.com) mics, with vocals getting captured via FR35s, while PR31s are used on guitar cabinets and drum overheads, PR28s are used on percussion and a PR48 is used for the kick drum.

Church Monitors in 3D

GULF BREEZE, FL—Liberty Church's 200-seat Gulf Breeze campus recently integrated a KLANG:fabrik 3D IEM mixing system (www.g1limited.com) for its musicians and singers. Configured for 32 inputs by six stereo outputs, the system lets performers hear themselves spatially in relation to the other performers on stage. Operated from a laptop at the back of the church, the KLANG:fabrik unit is connected to an Allen & Heath GLD-80 FOH console and connects to the 36x10-foot stage via Dante over a Cat 6 cable.

Audix Out and About

WILSONVILLE, OR—Audix (audixusa.com) had a busy summer, hitting the road on the last Warped Tour as its official microphone sponsor; adding Morgan Beatbox to the Audix family of artists; and cheering on the Audix Porsche as it won first place in two out of three races at the SCCA Triple Regional Blowout at Portland International Raceway in mid-August.

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The FOH position at *Sleep* centered around a DiGiCo SD10 console. Pictured at the console is Chris Ekers

This Immersive Concert Put Everyone to Sleep—On Purpose

BY STEVE HARVEY

LOS ANGELES, CA—The audience, some dressed in pajamas, arrived carrying blankets and pillows for the world outdoor premiere of Max Richter's *Sleep* in downtown Los Angeles on July 27 and 28. The composer's "personal lullaby for a frenetic world" is an eight-hour minimalist instrumental piece intended, through an overnight performance, to accompany the sleeping mind.

Sleep was presented for the first time using d&b audiotechnik's immersive Soundscape object-based processing, together with a large, distributed d&b loudspeaker system. "It's an ideal way to present the work—I'm always looking for a sense of being immersed in the sound," says Richter. "A lot of the time you're telling a lie to achieve a truth, but this is very impressive in the way it manages to transmit real spaces. It's quite magical."

Sleep is about creating an atmosphere, says British sound designer and mixer Chris Ekers, who has known Richter for 20 years, working with him since 2004. Since its world premiere at Kraftwerk Berlin in 2016, the piece has always been presented indoors in naturally reverberant spaces. Consequently, says Ekers, "The idea of doing *Sleep* outdoors was incredibly challenging."

The piece features Richter on piano, joined by the five-piece American Contemporary Music Ensemble (two violins, viola, two cellos) and soprano Grace Davidson. Richter

has also developed 16 to 18 channels of playback stems of elements originally recorded for the multi-disc CD release.

"Natural sound reinforcement demands that you place the sound where the source is," says Ekers. But as people doze off, he says, he likes to take those static images and manipulate them, bringing them off the stage and enveloping the audience.

His initial draft proposal was for a d&b system with speakers at the front and rear of the audience, but as Soundscape was being publicly rolled out, Ekers took the opportunity to attend the 2018 NAMM Show and visit the site with representatives from d&b. He also consulted with Fred Vogler, principal sound designer and mixer at the Hollywood Bowl, who works with the L.A. Philharmonic and the Music Center, the presenter of the event in L.A.'s Grand Park.

"The bottom line for me was the ambient noise floor," says Ekers. A visit to the park at midnight confirmed that it would be quiet enough.

The next challenge was figuring out how to deliver the same experience to each audience member slumbering on the 500-plus cots spread throughout the park. "*Sleep* is a very quiet piece. You can't make it loud; we don't want to take it loud. It sits there at 75 dB all night. How do you project and give everybody the impression of 75 dB over a 200-meter [218-yard] space?"

Ekers and Vogler drew a plan of the site on a piece of paper. "We went away with that document," says Ekers, "and I put [the system] together in ArrayCalc," d&b's simulation software. "It was obvious at the start that I needed a main and delay systems. How any surrounding system within those would work, I didn't know. They are also three very different zones."

The stage, on a cement platform in front of a grassed area at the lower end of the park, designated Zone 1, was off-center, necessitating an asymmetrical front speaker system comprising seven flown arrays, including three across the stage. Each of four



Delay 2 between Zone 2 and 3: flown Y10s plus J-Subs

d&b Y8 modules was accompanied by a single J-Sub topped by a T10 for fill.

Farther up the grassy slope, two delay systems in the transition areas between Zones 1B and 2 and Zones 2 and 3 included nearly a dozen V10P arrays with additional J-Subs. Another 40 T10 speakers around the perimeter of the three zones ensured even, immersive coverage.

Zone 3 covered an upper paved area. "In many ways, the symmetry has allowed us to really use the capabilities of Soundscape extremely well; it sounds really nice up there because we can get the loudspeakers in the right place," says Ekers.

Audio West of Placentia, CA, supplied the sound system, Vogler reports. "It's not like we're putting up a few sizable arrays; we have a lot of small arrays and single boxes. Each of those requires a special clamp or yoke and special attention to how to mount and locate it. Glenn Hatch from Audio West has as much experience and knowledge of the product as anybody. He's also been a d&b user for several years and is a great resource."

For any *Sleep* presentation, says Ekers, "My analogy is that we're trying to build a church wherever we go. We're trying to immerse people in that idea of being surrounded by a big, reverberant space."

In developing the playback stems, Richter generated two channels of sends to the reverb unit he also used on the recording, TC Electronic's System 6000. "It becomes a sonic signature of the piece," says Ekers.

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Dave Wakling and the English Beat (inset) performed through Hollywood Sound Systems' Bose ShowMatch DeltaQ line array system at Pershing Square in Los Angeles.



Alpharetta HOW Mixes on the Move

Hollywood Sound

(continued from page 38)

Los Angeles Department of Recreation and Parks, included the Bangles, Psychedelic Furs, Ozomatli, the English Beat, Pat Benatar and Neil Giraldo, and Smash Mouth.

At the Downtown Stage, Hollywood Sound flew 12 ShowMatch modules per side with 16 Bose SMS118 single-18-inch subs distributed below the stage lip. Each hang comprised three SM70x05 (70-degree horizontal by five-degree vertical dispersion) modules, seven SM100x05, a single SM100x10 and an SM120x20. Additional SM120x20 boxes provided lip fill.

Harrison and his staff tested the system, powered by six Powersoft Audio eight-channel X Series amplifiers, in the warehouse before trucking it downtown. "That's a quarter-million

watts of power," he marvels. "It was wonderful, like a big hi-fi."

Even with the rig deployed downtown, there were still enough boxes in Hollywood Sound's system to also fly three mid/top modules over a single sub on each side of a stage in the warehouse. "We sell staging and trussing, so we set this stage up for demonstrations," says Harrison. "We have the Bose system set up over Dante with a Yamaha QL console. Nothing has been EQ'd. We just plugged it in and turned it on—and it sounds gorgeous."

The stage has enabled Hollywood Sound to host a variety of product demonstrations by visiting manufacturers, training sessions and other events in the past few years. "We did an event with Yamaha and DPA Microphones, with a DPA artist up there and about 70 people," Harrison offers as an example. Another recent event featured Fulcrum Acoustic and Ashly products.

But the focus for the foreseeable future is ShowMatch. Harrison has his own opinion of the system: "It's like I'm not listening to a speaker. I feel like I hear depth, dimension."

Now, with the Pershing Square concert series over, he would like to hear what others think of the Bose system. "I have invited people whose opinions I respect to come and listen," he says.

Bill Jenkins, a former employee who left to manufacture his own speaker designs, heard ShowMatch rig before it went downtown, says Harrison. "He said, 'That's the best sounding thing you've ever had in here,' and we've had all kinds of systems in here. I said, that's what I thought. I think it's pretty impressive—enough so that we bought it."

Hollywood Sound Systems
www.hollywoodsound.com

Bose Professional
pro.bose.com

ALPHARETTA, GA—First Baptist of Alpharetta, Georgia holds four services every Sunday—recording and streaming them to parishioners—as well as events both indoors and out in the community. To help answer all those audio needs, the church uses a pair of Allen & Heath dLive digital mixing systems.

The Allen & Heath dLive duo is part of a complete audio upgrade designed and installed by Velocity Productions of Atlanta, GA. Brian Morrison, director of AV Design & Integration at Velocity says, "First Baptist's outside events often include their band, so we installed both of their stage racks in road cases. This way, they can take the smaller C3500 Surface and CDM32 MixRack out and recreate the same experience and sound they have in their services."

For normal worship, a dLive S Class S5000 Surface and DM64 MixRack serve FOH while the dLive C Class C3500 Surface and CDM32 MixRack mix the church's streaming broadcast, its recorded audio and in-ear monitors for the band and vocalists. The two MixRacks are connected with Allen & Heath gigaACE cards and include AES cards to feed the church's main system.

Allen & Heath
www.allen-heath.com

American Music & Sound
www.americanmusicandsound.com

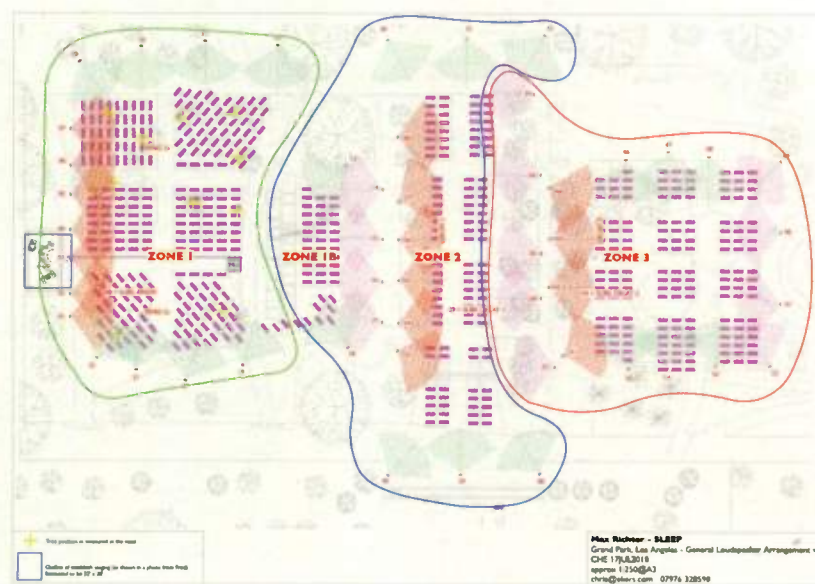
Sleep

(continued from page 40)

He also had d&b's En-Space, an optional convolution reverb software tool within Soundscape. "Soundscape's world allows us to go into a different domain with another layer of reverberation. The fidelity of the space that we can create with this is quite astonishing."

Eckers had control of object positioning via the Soundscape software on a laptop, but his DiGiCo SD10 console featured an OSC (Open Sound Control) plug-in with controls that could be mapped as desired. "In this instance," he says, "we decided we wanted to be able to handle the control of En-Space. The shape of the piece needs to go somewhere, then come back. I wanted the opportunity to start with a particular level and then be able to adapt that, move it more into reverberation or less."

It was Eckers' first time hearing microphones rather than playback tracks through the Soundscape processor. "They started playing, I noo-



Sleep loudspeaker arrangement in L.A.'s Grand Park

dled around a bit, then we opened it up and—oh, my god—I could not believe how the separation was so extraordinary. You hit that button, En-Space kicks in—we've decided which hall we want to use—and suddenly we're in it," he says.

"In a way, this piece, performing it here, reminds me a little bit of John Cage's '4'33'," a silent piece, performed in Times Square," says Rich-

ter. "There's a lot of ambient noise, things going by, traffic.

"However, there is something about music performance that builds community, I think. It's a shared ritual; we're going on a shared journey. And obviously the immersive feeling of the sound presentation is a big part of that."

d&b audiotechnik
www.dbaudio.com



Mike Smith, technical director for First Baptist of Alpharetta, Georgia, working on the church's Allen & Heath dLive C Class C3500 surface.

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ACT / STATISTICS	CREW	EQUIPMENT
1 TAYLOR SWIFT EIGHTH DAY SOUND	David Payne (be); Jordan Kolenc (Swift me/cc); Scott Wasilk (Band me); Dan Bluhm (se); Eoin Collins (mtech); Chase Usry (ae); Ike Zimbel (rf coordinator); Turner Pollari (rf tech); Andy Dudash (rf comms); Liam Von Elbe (lead pa tech); Sam Balk, Mike Vultaggio, JP Kearney (pa tech)	HC: DiGiCo SD7; MC: (2) DiGiCo SD7; HS: d&b audiotechnik J Series Array Processed, J-Sub, B22, V8 front fills; IEM: Shure PSM 1000, Wisycom MTK952; HA: d&b audiotechnik D80; HARDWIRED MICS: Telefunken; Shure; Sennheiser; WIRELESS MICS: Sennheiser Digital 9000, 6000; Shure Axient Digital; FOH EQUIPMENT: Neve Portico, Masterbuss; Lexicon PCM 92; Bricasti M7; Waves; Soundcraft Realtime Rack; MONITOR EQUIPMENT: Eventide Eclipse; TC Electronic System 6000; SPL TD4; Waves; Soundcraft Realtime Rack; OTHER: Radial JS2, JS3, J Rak 4, Tonebone Mix Blender
2 BEYONCE / JAY-Z EIGHTH DAY SOUND	Stephen Curtin (he); James Berry, James Corbin (me); Arno Vortman (se); Chris Bellamy (ae); Greg Horning, Clinton Reynolds, Emily Valentine, Peter Mesaros, Dan Buckley, Nils Knecht, Dom Thorne (techs)	HC: DiGiCo SD7; MC: DiGiCo SD7; HS: d&b audiotechnik J Series; MS: d&b audiotechnik; IEM: Shure PSM 1000; HA: d&b audiotechnik D80; MA: d&b audiotechnik D80; HARDWIRED MICS: Sennheiser; Shure; DPA; WIRELESS MICS: Sennheiser 9000, 6000; FOH EQUIPMENT: Bricasti M7; Yamaha SPX2000; Neve Portico; Sonic Farm Creamliner; MONITOR EQUIPMENT: Wes Audio; Klang; OTHER: Radial SGI, Twin Iso, SW8
3 KENNY CHESNEY MORRIS	Chris Rabold (be); Bryan "Opie" Baxley (me); Phill "Sidehill" Robinson (me-Chesney); Chris "Sully" Sullivan (se); Rich Rossey (patch); Phil Spina (cc); Carl Schmidt, Tanner Freese, Ryan Lewis, Justin Curtiss (techs); Ed Wannebo (pm)	HC: SSL LS00 Plus; MC: (2) Midas ProX; HS: d&b audiotechnik GSL; MS: d&b audiotechnik M4; IEM: Shure PSM1000; HARDWIRED MICS: Shure SM91, Beta 52, SM57; AKG C414; Telefunken M60, M80-SH; Sennheiser MD 421; Beyerdynamic M 88 TG; Royer R-122; Radial SW8, J48, SGI, DM1; WIRELESS MICS: Shure AXT400 Axient, AXT200 J5 Handheld, AXT610 Axient; sE Electronics V7 MC1 capsule; FOH EQUIPMENT: Empirical Labs EL8-X Distressor, EL7 Fatsso Jr; Rupert Neve Designs 5045 Primary Source Enhancer; Sonic Farm Creamliner; Eventide H3000; API 2500 Bus Compressor; Tech 21 SansAmp PSA 1.1; Overstayer M-A-S, Stereo Field Effect, Stereo Voltage Control; Universal Audio UAD-2 Live Rack; Waves Extreme Server
4 JOURNEY / DEF LEPPARD BRITANNIA ROW / SOUND IMAGE / VER TOUR SOUND	JOURNEY: Keith (Meaux) Windhorst (he); Maxie Williams (me); Jonathan Winkler (cc/se); Shannon Fitzpatrick (m tech); James Ellison, Mark Leeper (pa techs); DEF LEPPARD: Ronan McHugh (be); Ted Bible (me); Chris Houston (cc); Brooks Jackson (se)	HC: Avid S6L; DiGiCo SD5; MC: Avid S6L; DiGiCo SD5; HS: L-Acoustics K1, K2, Kara, K1-5B, KS-28, Arcs, Kara; MS: Sound Image MA 212, MA 112; Vue Audiotechnik h-15, s-25; Meyer Sound; IEM: Shure PSM 1000; JH Audio; HA: L-Acoustics LA12X; MA: Crown 3500HD; HARDWIRED MICS: AKG, Shure; Audio-Technica; Palmer; WIRELESS MICS: Shure AD4D, AD-2 with 58A capsules; FOH EQUIPMENT: Waves; Empirical Labs Distressors; MONITOR EQUIPMENT: Waves
5 DEAD & COMPANY ULTRASOUND	Derek Featherstone (be/se); Matt Haasch, Ryan Cornelious (me); Lonnie Quinn (mse); Michal Kacunel (cc/se); Sean McAdam (se); Michael Bollella, Cody Scott (techs)	HC: Gamble EX56; Avid S6L (96 Ch. drums) with Pro Tools 12.7; MC: Avid Venue D-Show (96 Ch.), Venue Profile (96 Ch.); HS: (36) Meyer Sound Leo, (22) 1100-LFC, (16) 700-HP, (32) Milo, (16) Mica, (6) Leopard; MS: Meyer Sound MJF-212, MJF-210, 1100-LFC; IEM: Sensaphonics; JH Audio; Future Sonics; HARDWIRED MICS: Milab LC-28, LSR3000; Shure KSM8, KSM9, Beta91, Beta2, SM57; Sennheiser 421, 409, 904, 935; Neumann KMS104; Helpinstill model 280 piano pick-up system; AKG 414, 460; Telefunken M-80; Radial JD7, SGI, DM1; FOH EQUIPMENT: Summit DCL-200, TLA-100; Empirical Labs Distressor; TC Electronic M5000, D-Two; Aphex 622 gates; KNAS Das Ekdahl Quad Massager; UltraSound DRSE Quad Panners; Metric Halo UNL2; TubeTech LCA-2B; UREI 1176; MONITOR EQUIPMENT: Sennheiser EW300G3
6 LUIS MIGUEL CLAIR GLOBAL	Markus Meyer (he); Brian Evans, Steve Walsh (me); Frank Principato (cc); Frank Principato (se); Maurice Young, Luke Murphy (tech)	HC: DiGiCo SD5; MC: DiGiCo SD7, SD5; HS: Clair Cohesion CO-12, CP-218, CO-6; MS: Clair CM-22; L-Acoustics Kudo, -dvSub; IEM: Sennheiser 2050XP; Shure PSM 1000; HA: Lab.gruppen PLM20000; MA: Lab.gruppen PLM20000; HARDWIRED MICS: Shure Beta91, Beta52, Shure SM57, SM58; Beyerdynamic Opus 88, Opus 87; Earthworks SR30; AKG 451, 414/XLS; Audio-Technica ATM350; Sennheiser MD-421; DPA 4099; Royer R-121; Milab DC-96c; Neumann KMS-104; Radial J48, JDI; Countryman DT85-FET; WIRELESS MICS: Sennheiser SKM5200; FOH EQUIPMENT: Waves Mercury bundle; MONITOR EQUIPMENT: Waves Mercury bundle, Pro Show
7 BILLY JOEL CLAIR GLOBAL	Brian Ruggles (he); Josh Weibel (me); Rich Schoenadel (cc/se); Jay Yochem (m tech); Tom Ford, Bryan Darling (tech)	HC: DiGiCo SD5; MC: DiGiCo SD10; HS: Clair Cohesion CO-12, i-3, P-2, R4, CP-218; MS: Clair CM-22, SRM, ML-18; IEM: Sennheiser 2050; HA: Clair StakRak (Lab.gruppen); MA: Lab.gruppen; HARDWIRED MICS: Shure; AKG; Sennheiser; Audio-Technica; Radial J48, JDI, SW8, Firefly; WIRELESS MICS: Shure UR Series; FOH EQUIPMENT: Waves
8 ROD STEWART MAJOR TOM	Lars Brogaard (he); Sven Jorgensen, Charlie Bryson (me); David Vinnicombe (cc/se); Olly Twiby (ae); Juan Villa, Parker Vandenberg (tech)	HC: DiGiCo SD7; MC: (2) DiGiCo SD7; HS: Meyer Sound Leo; IEM: Sennheiser; HARDWIRED MICS: AKG, Neumann; WIRELESS MICS: AKG 5900; FOH EQUIPMENT: Rupert Neve 5045; MONITOR EQUIPMENT: Rupert Neve 5045; OTHER: Radial JX62, Headbone VT, PZDI, J48, BigShot, DM1
9 PAUL SIMON CLAIR GLOBAL	Michael "Coach" Conner (he); Kevin Glendenning (me); Don Baker (cc/se); Erick Rodstol (stage e); Robert Taylor (tech)	HC: Yamaha Rivage PM10; MC: Yamaha Rivage PM10; HS: Clair Cohesion CO-12, CO-10, CO-8, CP-6 Front Fill; MS: Clair 12AM, SRM, CP-6; IEM: Sennheiser 2000; HA: Lab.gruppen; MA: Lab.gruppen; HARDWIRED MICS: Shure Beta 91a, SM57, SM58, SM81, Beta 56a, Beta 98, KSM8, KSM32, KSM44, P6W/PSM 600; Sennheiser e855, MD 421, MKH-416; AKG C-414 B-ULS; Neumann KM 185; Audio-Technica; DPA 4099; Heil PR-48; Earthworks PM40; Countryman E6, DI; Radial DI; WIRELESS MICS: Shure Axient; FOH EQUIPMENT: Bricasti M7; Alan Smart C2; Summit TLA-100; TC Finalizer; Ferrofish A32; Universal Apollo 16; MONITOR EQUIPMENT: Allen & Heath AH-ME; OTHER: Radial SGI, J48
10 RADIOHEAD FIREHOUSE PRODUCTIONS	Robb Allen (he); Austin Stillwell (me); Ross Anderson (ab); Brett Taylor (cc); Michael Gazdziak (se); Lloyd Williams (s tech); Adam Bannister (pa tech)	HC: Avid S6L-32D; MC: Avid S6L-32D; HS: L-Acoustics; MS: d&b audiotechnik; IEM: Shure PSM 1000; Sensaphonics; HA: L-Acoustics LA12x; MA: d&b audiotechnik D80

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

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

DiGiCo Digs World's Largest Festival

MILWAUKEE, WI—Over 800 artists? More than 1,000 gigs? 766,000-plus fans? It's all in a summer's work for Milwaukee's annual Summerfest. The festival, certified by the Guinness Book of World Records as the largest in the world, hit all those numbers and more as it fielded acts like Halsey, James Taylor, Florida Georgia Line, Dave Matthews Band, Jason Isbell, Journey, Arcade Fire, and hundreds of others between June 27 and July 8 at Henry W. Maier Festival Park. Clearwing Productions, the longtime sound reinforcement provider for Summerfest, was on-hand at all 12 stages.

Clearwing fielded PA systems from L-Acoustics and JBL, and had a DiGiCo SD or S-Series console at each of the 12 stages for the entire 11-day run. Helping ensure every engineer was properly prepped, Group One Limited—DiGiCo's U.S. distributor—also had an SD10 console set up in a demo tent backstage for artists and mix engineers to check out.

On the seven largest stages, the festival featured two SD5 consoles at FOH positions, two SD10 desks used for FOH and one for monitors, two SD12 consoles for FOH and four for monitors, one SD9 each for FOH and monitors, and one SD8 for monitors, while five smaller S21 provided



DiGiCo desks provided by Clearwing could be found all over the stages of Summerfest.

the combined FOH/monitor mix for the smaller stages.

Clearwing additionally deployed an SD12 for Halsey's performance at the American Family Insurance Amphitheater, and an SD11 as a production desk on the Harley Davidson Roadhouse stage.

"There were also many other DiGiCo consoles at the 25,000-capacity American Family Insurance Amphitheater—the ones that the artists brought as part of their tour sound systems," notes Jeff Schauer, Clearwing's audio operations manager for company's Milwaukee office. "DiGiCo has been the exclusive

provider of audio consoles for Summerfest for the past four years, and has been part of the event for twice as long. Not only has the sound been awesome, but DiGiCo's service and staff have been outstanding. When we talk to the engineers who staff the stages, they all tell us that the SD desks are a pleasure to work with."

Summerfest
www.summerfest.com

Clearwing Productions
www.clearwing.com

DiGiCo
www.digico.biz

Sight and Sound and Comms

BRANSON, MO—Sight & Sound Theatres' 2,000-seat auditorium in Branson, Missouri presents Bible-themed stage shows and recently installed a Riedel Communications Bolero wireless intercom system for its production team.

The venue features a million watts of lights, 60,000 watts of sound, and a 20,000-square-foot stage that surrounds the audience on three sides, using four-story-tall set pieces, and live animals for its productions.

"Our latest show, 'Samson,' uses a significant amount of automation that requires more comms channels and a wireless intercom that can deliver outstanding voice quality anywhere in the auditorium," said Luke Bates, ESFX supervisor, Sight & Sound Theatres. "Then, from a safety standpoint, it is absolutely essential that the system is rock solid for those working with and around the animals."

In addition to now having six full-duplex channels, crew use Bolero's handover to move throughout the 330,000 square-foot facility without worry of dropouts. A total of 56 belt packs covers an equipment room, a large area under the stage, the catwalks, the animal holding area, and the dressing rooms. One particular requirement mandated that 50 belt packs be able to operate simultaneously on the stage. With the ability to handle up to 10 belt packs per antenna, Bolero was up to the task, and with the addition of a stage lift next year, the addition of another antenna will provide coverage for the entire basement area.

Riedel
www.riedel.net



The audio team at Branson, MO's Sight & Sound Theatre presents the sight of their Riedel intercom system.

Making Audio Appear on a Pier

NEW YORK, NY—The hottest new concert space in New York City is actually adjacent to it, as Pier 17 juts into the waters of the South Street Seaport. The venue opened on July 4 with a Carrie Underwood show, and its summer lineup includes Amy Schumer, Diana Ross, 88 Degrees, Ziggy Marley, Sting & Shaggy and others.

Pier 17 offers dining, retail and entertainment options along with a large 1.5-acre rooftop concert space that can hold 3,400 for its standing general admission shows, or 2,400 seated, with the Brooklyn Bridge as the stage's backdrop. Constructed by the Howard Hughes Corporation (HHC), the venue sports an audio system design from SIA Acoustics that aims to prevent nearby neighborhoods like Wall Street to the west and Brooklyn to the east from getting swamped in ambient sound.



SIA Acoustics specified an EAW Adaptive System, installed by Anderson Audio and TMG Systems, for use at NYC's new Pier 17 concert venue.

SIA teamed with Harrisburg, Pennsylvania-based Anderson Audio and TMG Systems for installation of a sizable EAW Anya system, with left-right single-hang columns of 12 Anya modules each, approximately 35 feet from the ground, along with 24 Otto subwoofers laid out in pairs.

The aim is to have tightly controlled coverage of the space, according to Mark LaBouff, national sales

manager, TMG Systems. "It's very impressive when you walk in and out of the coverage area – the difference is incredible. There are two VIP areas technically 'out of the coverage' and it's quiet enough to make a phone call. There were also some concerns about sound levels behind the stage travelling across the water to Brooklyn. Also, not a problem – the rear rejection of the system is substantial."

Sam Berkow, owner of SIA Acoustics, concludes, "We found that EAW's Adaptive Anya loudspeakers and Otto subwoofers were the combination that would help dramatically control coverage of sound, provide an impactful and tonally balanced sound to the audience, and be acceptable to most touring bands. So far everyone is in complete agreement."

EAW
www.eaw.com



Susan Butera

Full Compass has appointed **Susan Butera** as its new vice president of Marketing. In the new role, she will lead the marketing team, drawing on her background in brand strategy and both digital and catalog marketing as she focuses on acquiring new customers, retaining existing customers, communicating the brand value proposition and more. Butera most recently served as chief marketing officer for AccuQuilt in Omaha, NE. Prior to that, she was the vice president of brand marketing for Edible Arrangements, and previously held executive roles in marketing and e-commerce variously for Olly Shoes, Deb Shops and Ascena Retail Group. She received her BA in Sociology and Theater from the University of Rhode Island, and her MBA from LaSalle University (Philadelphia).



Leland Green

d&b audiotechnik has added **Leland Green** as the newest member of its regional sales team. Based in Los Angeles County, he is responsible for managing the company's footprint in the southern part of the Western US. Green brings more than 25 years of audio industry experience with him, including an extensive background in training and education of professional audio products and systems.

Also new at d&b is **Mark Rush**, who has joined its regional Education and Application Support team. Based in Orange County, CA, Rush is responsible for providing technical and application support and training to integrators and end users the southern part of the Western US. Previously, Rush was Nexo's top systems application engineer for the US and Canada and spent nine years with Yamaha Commercial Audio.

Shure Incorporated has promoted two key executives. **Brian Woodland** has been named vice president of Business Development, and **Pat Knoll** has been promoted to associate vice president of Global Facilities. Woodland joined Shure in 2002 and has held positions of increasing re-



Brian Woodland



Pat Knoll

sponsibility in Strategic Planning and in Global Business Development. During that time, he was responsible for several of the Company's acquisitions and manages Shure's partnerships in joint business ventures. He has a Bachelor's degree in Engineering from the University of Illinois and an MBA in Marketing from the Kelly School of Business at Indiana University.

Meanwhile, Knoll joined Shure in 2005 and leads an international team responsible for all acquisition, leasing, construction, maintenance, disposition, and activities associated with Company offices, manufacturing plants, warehouses and other facilities worldwide. Additionally, she has led other major undertakings, including the design and construction of the S.N. Shure Theater and the Great Hall history exhibit in Shure's Corporate Headquarters. She has more than 30 years of experience in corporate real estate and facilities management, and has studied Business at Morton College and General Studies at College of DuPage.



Bob "Shep" Shepherd

Sweetwater has brought on **Bob "Shep" Shepherd** to fill the newly-created position of vice president of Merchandising. Shepherd will help oversee a team of more than 20 people focused on continuous improvement in category performance and inventory management. He is also an accomplished guitarist and vocalist, and has spent the last 18 years in the music retail industry.



Kyle McMahon

Group One Limited, the US distributor for numerous pro audio manufacturers, has named **Kyle McMahon** as its new training and support associate for DiGiCo and the KLANG:technologies, XTA and MC 2 brands. Previously, he spent the past dozen years serving as monitor

60SECONDS



PETER JANIS

Exit-Plan

Q: Tell us about your new company and what it does.

A: My new business is called Exit-Plan. In simple terms, I assist business owners to prepare their company for an eventual sale when they are set to retire or are ready to make a change. What I do is look at all of the factors that are important to a would-be buyer and work with the client to address each of these over time. Statistics indicate that 85% of business owners do not have a well-defined exit strategy and all too often are forced to sell due to health issues, changing markets and other factors that may be outside of their control. By positioning all of the chess pieces in the right spaces, one can significantly increase the value of a business.

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

A: During my time as the president and CEO at Radial Engineering, in addition to countless music and pro-audio industry awards, my company twice made it on *Profit Magazine's* Top 100 fastest growing companies and in 2015, we won the British Columbia Export Award for Technology. I started my career in the music industry back in 1976, and learned much over 40 years; that culminated when I sold Radial and all of its associated brands in January, 2018. While I was going through the final phases of that, I found myself assisting a friend on redirecting his efforts with his business and I found truly enjoyed the process of mentoring and consulting.

Q: How far in advance should company owners start planning an exit strategy?

A: The reality is that it takes years of preparation. For instance, if you plan a total exit, then you have to make sure that you have all of your people in place so that the business can run without you. Finding people is easy, finding good people is another matter!

You then have to have a solid history of sales growth and profitability; no one wants to buy a sinking ship. I started the process five years before my exit, but really stepped on the gas during the last three years. Keep in mind that what you are trying to do is present an attractive picture for the buyer. Once you decide to sell, if your company has any scale, you can estimate that it will take a year of answering questions, providing background data, years of sales history, financial reports and so on—so you want to make sure your company is running as if it were 10 times bigger! A well-run operation gives investors confidence. Most importantly, they need to see growth down the way.

Q: What is the greatest challenge that your clients face?

A: Time. Think of your parents going into an old folks home. It is much better that they make the decision versus your having to do it for them when they can no longer think rationally. The same applies here. Most business owners have the intention to plan, but usually put it off, and because they are caught in the day-to-day grind of being in the trees, they simply do not see the forest. Waiting until it is too late only leads to disappointment.

engineer and, eventually, FOH engineer for CCM star Chris Tomlin, and has also toured as a freelance engineer with Hillsong Worship, OneRepublic and others. At Group One, McMahon will handle on-site customer trainings following purchases and also expand and develop DiGiCo's Masters Series trainings as well.



Phil Sanchez

Yamaha Professional Audio has appointed **Phil Sanchez** and **Tres Cozad** to its Commercial Installation Solutions (CIS) team. Phil Sanchez has been named market development specialist. A veteran of the musical instrument and professional audio industries, Sanchez has held roles in marketing communications, product



Tres Cozad

development, and product management most recently with Harman Pro and QSC.

Tres Cozad has been hired as technical marketing specialist for CIS product training, demos, and day-to-day customer support. Prior to joining the team, he served as a technical director for a large, two-campus faith-based congregation where he managed and designed an AVL package for the 27,000 square foot building's refurbishment. Cozad also facilitated an upgrade from an analog audio system to a cross-campus Dante audio system. He also spent several years as a tour sound engineer with Christian recording artists including Sixteen Cities, Remy Drive, John Reuben, Silverline, madeAvail, to name a few.

Following The Master Plan

DOM HARTER, MANAGING DIRECTOR, MARTIN AUDIO

BY CLIVE YOUNG

When Martin Audio was sold in a management buyout earlier this summer, the move kicked off a new chapter in the life of a company that's been a pro-audio mainstay since its founding by namesake David Martin in 1971. While the company initially rose to prominence by creating all-horn-loaded bass designs for touring loudspeaker systems used by Pink Floyd, ELP, Supertramp, and others, today it offers a range of modern products for the installation and touring sound markets.

Previously, Martin Audio had been owned by LOUD Audio since 2007, making it one of a number of loudspeaker brands under the same corporate parent. During those years, the company's flagship MLA loudspeaker line was introduced, but overall, there was "a pause in momentum," as Dom Harter, managing director for the brand, puts it.

He'd know—taking the company's reigns in 2016, Harter set out to discover what had happened and put things right. "After only one day, I could see [Martin Audio] was absolutely ideal," he says. "I could see the company had some amazing technology and a fantastic group of people and loyal customers, but [those resources were] not being turned into output. That's something I've learned how to do."

Indeed. Harter initially broke into live sound mixing bands in churches and school shows at the ripe old age of 15. That knowledge led to a part-time gig during university working on the test team for Broadway, Soundcraft's fledgling late-Nineties digital control surface. Harter's first job out of school in 1999 was in London, working as the Millennium Dome coordinator for Harman. When that effort was completed, he shifted into a string of successive sales roles for Harman's BSS brand before moving to Turbosound, working his way up to R&D director and eventually sales director. "During that time, we revitalized every series we had up to and including Flashline," he recalled—an experience he would draw upon years later at Martin Audio, but that's getting ahead of things.

When Turbosound was sold, Harter moved on, returning to Harman in late 2012 as sales director for Soundcraft and later the entire mixer group, including Studer. "It was a fun period and I got to help drive a lot of the new generation products," he recalls now. "If you had asked in 2013 could I imagine being anywhere else, I'd have said no. I like feeling part of a team and making decisions."

Still, when the opportunity to

helm Martin Audio came along, he jumped at it. Upon assessing the brand, he discovered both problems and potential, and set about making changes. "While the company had some amazing technology, great staff and a fantastic group of loyal customers...too many products were older than seven years and that meant the wider portfolio needed refreshing," he says. "There were also gaps in terms of product suitable for key applications as well as product that would be more competitively priced to win in the marketplace."

What Martin Audio had in its favor, however, were personnel who

were passionate about the brand and its technologies. "I could see that the team was knowledgeable, enthusiastic and wanted to win," says Harter. "My experience across different disciplines meant that I could talk to the various teams about what was required to win and move forward, and they could recognize the inherent truth of the strategy."

"The stars aligned and we are delighted with the outcome."

Dom Harter, managing director, Martin Audio

That strategy was a five-year plan to redevelop the brand and get products out the door. While the company's recent CDD-LIVE! and XE monitors were already in the planning stages before his arrival, since then, Martin Audio has also launched BlacklineX, LE stage monitors, Wavefront Precision optimized line arrays, iKON amplifiers and SX subs. As a result, he says, the five-year plan is currently running ahead of schedule, "with significant growth both last year and this. Surveys are showing we are running to customer expectations; we have a way to go, but we are on track."

While Harter may be the MD, he is the first to point to those around him as the muscle behind Martin Audio's reemergence. "We make decisions as a team, for which we are accountable as a team—and that has led to a very positive culture," he says. "Each department has its lead and they then report into myself, and we have regular meetings to review our execution against plan."

Most of that culture can be found inside the company's headquarters in High Wycombe, UK. With more than 50 employees on site, it houses manufacturing, R&D, marketing, sales and administration as well as service support. Meanwhile, the North American arm—Martin Audio US—handles sales, tech support, administration and warehousing out of

a facility in Glendale, CA.

Being spread across two continents is a fortunate situation as Harter reports the company is seeing growth across all geographical markets as well as product areas, singling out particularly marked growth in Europe. He adds, however, "In the US, we made a significant change in the way we operate with the instigation of a dedicated sales team. That, too, is now proving itself, and we shall soon see record levels of revenue for North America."

"In terms of portfolio, the shining light has been our new optimized line array, Wavefront Precision, which offers the latest technology for coverage, control and consistency, but with a great value price tag. But across the board, all of our product ranges are showing healthy year-on-year growth."

That can only help as the company enters its most ambitious period yet under Harter, going it alone in the wake of the management buyout. Martin Audio first began talks with LDC, the private equity arm of Lloyds Banking Group that backed



Dom Harter, managing director, Martin Audio

the MBO, roughly a year ago. The pace quickened, however, at the start of 2018 when it became clear that Transom Capital, owners of LOUD Audio, was getting ready to sell Martin Audio. "As such, the stars aligned and we are delighted with the outcome," says Harter.

LDC shelled out £12m for a significant stake in the company, so it keeps an eye on that investment—to a point. "We are regularly in contact; we have a monthly board meeting and strategy days planned every quarter," says Harter, adding "However, they trust us to run the business and execute on our plan, because that's the nature of a management-supported buyout."

Now able to chart its own course ("We can now make the decisions wholly for the benefit of Martin Audio rather than a larger multi-brand organization"), the company is sticking to its plan, and with good reason, says Harter: "The plan that was put in place just over two years ago to revamp and accelerate product development has started to deliver, and the brand momentum is there: All our product portfolio is up year-on-year, not just the new products. We have a strong five-year roadmap ahead and we are continuing to invest and indeed increase investment in R&D. In addition, we are investing in our infrastructure to be a stronger and more reliable partner to our customers."

All of that, he says, means the company will be able to improve its portfolio offering, further develop its supply chain and strengthen its brand. "That will make it easier for our partners to make their own ROI," he avers. "We are growing, and growing fast right now."

Martin Audio
www.martin-audio.com

AES Preview

(continued from page 1)

considering the best avenues for expanding its presence in this country.

According to Jim Dugan, president, Wisycom USA, "We anticipate that our attendance at AES will help us to further integrate our brand into the fast-paced culture of the country in addition to establishing relationships with American users. We also feel that the size of the show is ideal for one-on-one presentations to our industry, so much so that I will be using this opportunity to present on a variety of speaking panels." Wisycom will show an array of products, including a new wireless receiver, still under wraps, that the company will unveil in Europe at IBC, he says.

The location is attractive and a contrast to Las Vegas, where Wisycom USA made its debut at the NAB Show in April, Dugan continues. "New York is where all the major broadcasters are located, so we have the chance to meet with everyone from corporate through audio techs. It's also home to the biggest live theater market, which is an equally important market for Wisycom, and again means that we will get to meet with everyone in the production chain. As luck would have it, we have people who live in New York and it's a quick trip up the coast from our office in Washington, DC."

It has been more than 10 years since Universal Audio last had a stand-alone booth at AES, according to a company spokesperson, although it was a part of the AVID Partner Pavilion from 2013 through 2014. UA has "something new and exciting" coming, which has inspired the company to once again strike out on its own. "We felt that the high-end, professional AES audience was best-suited to the news we'll have to share at the time," says the spokesperson.

Ed Capp, VP of sales and marketing at Sound Devices, which is at the AES Convention for the first time since 2013, also appreciates that the show is in New York, and co-located with the NAB Show (October 17-18). "We really like the opportunity to showcase our products in New York and meet professional users from many areas in the region who might not get to attend NAB in Las Vegas or other shows further away from their home base. It's a great benefit for Sound Devices that the NAB Show New York is co-located," he says.

While Sound Devices stepped away from the AES show to focus on other opportunities, adds Capp, "It's great to be back. The timing was right for this year's show, and our prod-

uct offerings are perfect for the AES mix of attendees from broadcast engineers, musicians, sound designers, VR pros and live sound recordists. In addition, we appreciate the effort AES has made to include production sound for TV and film in the curriculum over the past few years."

Sound Devices will be showcasing its line of MixPre Series portable recorders/USB interfaces, including a new collaboration within Sennheiser's AMBEO for VR partnership program, Capp reports. Earlier this year, Sound Devices acquired UK manufacturer Audio Limited, so this will be the first AES Convention for that company's new A10 digital wireless microphone system.

Meyer Sound, too, is returning after some time away from the exhibition floor, although it has remained engaged with the convention. "We have continued to attend and participate in the seminars and panel discussions which remain part of our ongoing education and training initiatives," says John Monitto, the company's director of business development.

This year, Meyer Sound CEO John Meyer will deliver the convention's Richard C. Heyser Memorial Lecture and the company will be showcasing its new Bluehorn System. "It's the most linear monitoring system we've ever made, and feel it's perfect for the AES community to experience," he says, noting that the system's mechanical developments are also found in Meyer's LEOPARD and LINA line array loudspeakers.

The northeast is an important market for Meyer Sound, Monitto continues. "We have many systems in the New York area, along with rental companies and integrators. The theatre and network television markets bring many locally based sound designers to AES, which adds value. We also noted the high attendance at last year's show due to the alignment with the NAB show."

Two companies, ALC NetworX and Riedel Communications, are at the AES this year for the first time after previously exhibiting at last year's co-located NAB Show New York. Riedel, which acquired ASL Intercom in 2016, had its license-free Bolero products on that company's booth last year, but this year will be in the AoIP Technology Pavilion, according to Joe Commare, marketing manager for Riedel Communications North America.

"Since AES runs a day longer than NAB New York, we thought it important to have a presence on the AES side of things. When the AoIP Tech Pavilion became available, we thought that the perfect opportunity, as Riedel is very active in IP-based broadcast infrastructures."

Commare continues, "New York is

a great location for a show and, really, the only large show in the northeast. We have participated in NAB New York for many years and have always found that to be a good show—and the fall is good timing."

Bolero, standalone or integrated with Riedel's Artist Digital Matrix, will be the focus, Commare reveals. "We will also be talking about all of the ways our Artist ecosystem can leverage the various AoIP formats."

ALC NetworX is exhibiting under its own name for the first time at an AES, says RAVENNA evangelist Andreas Hildebrand, although its networking technologies have previously been present on other manufacturers' booths and featured in the convention program. "We are promoting the AES67/ST2110-compatible RAVENNA AoIP technology, which has been developed by us, but is implemented by numerous industry partners on a license-free basis," he says.

"While we originally planned to participate in the AIMS audio demo wall at the AES AoIP Showcase, we took advantage of the opportunity to claim an individual pod in that area. This is a perfect match as the whole showcase is focused on AoIP, presenting the RAVENNA AoIP technology right in the middle of this theme spot."

The demo rack will be crammed with products from industry partners, he says, such as Lawo, Merging Technologies, Genelec, Ross Video, Archwave, Riedel, Sonifex and others. "Infrastructure permitting," says Hildebrand, "we may even drop a line to the AIMS AoIP demo wall and run streams across."

The exhibition floor at the AES Convention is only half the story, of course. The METAlliance (Music Engineering and Technology Alliance) panel is a frequent highlight, and this year, if the stars align, will include the six founding members, award-winning audio engineers and producers Chuck Ainlay, Ed Cherney, Frank Filipetti, George Massenburg, Elliot Scheiner and Al Schmitt. "The topic will be the METAlliance mission statement: to further the art and science of recording music," says managing member Jim Pace, president of L.A.-based Audio Intervisual Design (AID). "We'll review our In Session events and other educational activities we've pursued."

Those music production events, held at studios such as Power Station BerkleeNYC and Capitol, can accommodate relatively few attendees and are only fleeting. So that others can share in the sessions, says Pace, "We'll try to play some video captured at one or more of the events."

Audio Engineering Society
www.aes.org

advertiserINDEX

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Pro Sound News (ISSN# 0164-6338) is published monthly by Future US, Inc., 28 E 28th Street - 12th Fl, New York, NY 10016. Pro Sound News is available without charge in the USA to qualified professionals engaged in sound recording, broadcast, video recording, audio-visual, sound reinforcement and associated business. The publisher reserves the right to refuse applications and restrict free copies sent to a company or organization. For subscription information or to email customer service, please visit our online Subscribe Center at www.MyPSNmag.com. Reprints available upon request, call our Reprint Coordinator at Wright's Reprints: 877-652-5295. Periodical postage paid at New York, NY and additional mailing offices. POSTMASTER: Send address changes to: Pro Sound News, P.O. Box 234, Lowell, MA 01853. Please allow 6-8 weeks for address changes to take effect. © Copyright 2018 by Future US, Inc. PRINTED IN U.S.A.



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[50] MUSIC etc. IIII
 Special Delivery

BY JACQUES SONYIEUX

Mikaela Davis' new album, *Delivery*, is a beautiful record that highlights not only her skills as a vocalist, pianist and harpist, but also as a writer. Songs like the title track and "A Letter That I'll Never Send" draw the listener into brilliant, sparse performances—and uncomplicated mixes—that spotlight Davis as a gifted and authentic artist. *Pro Sound News* spoke to Davis just as she was preparing for a handful of European performance dates and an upcoming headlining tour of the U.S. that begins in Massachusetts on October 10.

ON SELECTING A PRODUCER

I chose John Congleton because I really like that every record he produces sounds totally different, and I thought that was really cool. He's also worked with some great artists I admire. I was pretty scared going into the studio and had never worked with a big-time producer before. I was nervous that it wasn't going to be good enough, or that he wasn't going to like my band. I have fought for my band for years, and there have been times when people I am working with suggest that I use session musicians, and I have always stood my ground and stuck by my band. We were all scared, because the boys didn't know if John was going to like them, and I didn't know if I was going to like John.

ON BANDING TOGETHER

I trust my band; they all know what they are doing. We all listen to the

same music, and I have been best friends with my drummer for years, since high school. In fact, we grew up around the corner from each other. He co-wrote some of the songs on the record, but even some of those, we didn't know how they would end up sounding. I think the most surprising change in a song for us was in a tune called "A Letter That I'll Never Send"—I didn't even know if there would be drums on it, and it had been written as a folk song. But then John [Congleton] said, "Maybe you should add a fuzz guitar in the chorus and have Alex do a crazy drum roll." It was all very unexpected, but it works.

ON THE COOL MOMENT

John was really into finding a cool moment, versus finding the perfect take. We were done tracking bass and drums within four days because it was all live; he would grab one specif-



Mikaela Davis

ic take and then move on. I was originally nervous about this because it was going so fast. I had never worked like this before and I thought it might be too sloppy or that the takes might not be enough. Also, when we went to do vocals, I would sing maybe four takes all the way through, and just as I felt that I was getting warmed up, John would say, "OK, we're done." He explained to me that the first take is your warm-up take, and then usually the second or third take is the one, because you are not really thinking about it but you are warmed up.

ON GROWING UP WITH THE HARP

I've always been in love with the harp, but I started both harp and piano around the same time when I was in elementary school. I thought [the harp] was the coolest instrument out of all of them. My mom said I came home one day and just said, "Hi, mom, I'm going to play the harp." Eventually I went to college for harp performance and I have been writing primarily on the harp since I was in high school. But I had a writing block about two years ago when I had to start writing for this record, so I decided to write on the piano again, and that's when I wrote "Delivery" and "In My Groove." I now write on both instruments equally, but I've been writing more and more on piano because a lot of people have pianos—no matter where I go, I can doodle around.

ON KEEPING IT WARM

I always want to make sure the harp sounds warm and not too tinny—that's something that can happen a lot with this instrument. Also you have to be careful when you are playing chords in the lower frequencies, because every note is ringing out and the harmonics can sound muddy. In the studio, we usually record the harp with a condenser mic near the sound-

board, then maybe a mic inside the soundboard in the back. Everyone mics it differently, and it is interesting to see what people's ideas are. John was using a tiny little mic, putting it inside the back of the soundboard—it looked like a small lavalier mic. Then we would run it through effects, including an Electro Harmonix Memory Man pedal.

"My mom said I came home one day and just said, 'Hi, mom, I'm going to play the harp.'"
 Mikaela Davis

ON PLAYING HER PART

I actually ended up playing less than I thought I would. I would be playing through a song, and then John would say, "Why don't you try just playing a chord here and a chord there," because there was a lot going on in drums and bass. So we went back and forth on what the harp was going to do. Do we give it a feature in certain places, or pull it back in others just to make the mix a little more even? I think the sparse arrangements on this record go back to me listening to a lot of John Lennon's Plastic Ono Band right before we went into the studio. Some songs on that album are just piano, bass and drums, and I just love it. John [Congleton] saw how I felt on this and he adapted to it immediately.

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