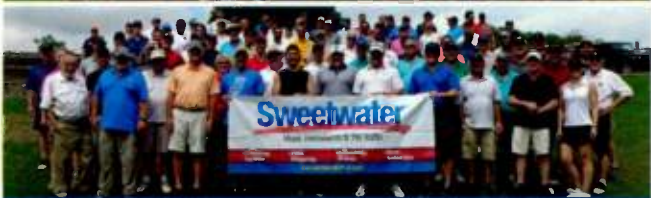


pro sound news

Volume 40 No. 6

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June 2018



LENDING A HELPING HAND—The annual AudioMasters Benefit Golf Tournament, held annually to benefit the Nashville Engineer Relief Fund, took place May 17-18, 2018. The two-day event included the “JBL Professional AudioMasters Live Day,” focusing on the live-sound industry, with JBL Professional returning as the title sponsor, and the “Sweetwater AudioMasters,” the studio community-focused day under the banner of perennial title sponsor Sweetwater Sound.

Audio Exhibitors Flock to InfoComm

BY CLIVE YOUNG

LAS VEGAS, NV—For most of the country, June brings to mind the start of summer and kids getting out of school. For the pro AV industry, however, this month means it’s time to head to InfoComm. Held this year June 6-8, InfoComm will welcome 44,000 attendees from 110 countries as they hit the

show floor at the Las Vegas Convention Center to discover an estimated 10,000-plus products presented by 1,000 exhibitors.

Those thousands of attendees come from all across the AV space. “Over the past few years, we’ve noticed that there’s also a higher number of end users and IT professionals at Info-

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Getting Modern in Dallas

20

In an era in which many large metropolitan studios have closed, Modern Electric Sound Recorders in Dallas is not only flourishing but recently opened a new room to accommodate more business.



On the Road with TTB

40

The Tedeschi Trucks Band typically plays 200 gigs a year, which keeps the group’s audio team busy taming the stage volume of 12 people musically flooring it without an IEM in sight.



AES67, AVB/TSN, Dante Power AoIP’s Rise

BY STEVE HARVEY

With live sound, post-production and, increasingly,

music production facilities now routinely utilizing audio-over-IP networks, 2018 looks like it could be the year that the broadcast world reaches

the proverbial tipping point and joins them. As the recent NAB Show demonstrated, several foundational standards have now fallen into place, instilling much-needed confidence throughout the industry, while the introduction of new audio products that don’t incorporate some form of networking has become a rarity.

Key to the proliferation of networking throughout the pro audio business is the AES67 high-performance streaming audio-over-IP

interoperability standard, which has come to provide

SPECIALREPORT

the common thread—the one ring to rule them all, if you will—between the many and various networking schemes available. For example, AES67 has been adopted for audio transport by the SMPTE ST 2110 suite of standards for professional media over managed IP networks, critical to

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Yamaha Acquires Ampeg from Loud Audio

BY CLIVE YOUNG

NEW YORK, NY—Yamaha has acquired Ampeg from Loud Audio. The manufacturer of bass amplifiers and pedals founded in 1942 will become part of a newly created U.S. subsidiary, Yamaha Guitar Group Inc.

Ampeg will be headquartered at Yamaha Guitar Group's offices in Calabasas, CA, following a transition in the coming months. Shoji Mita and Marcus Ryle are co-presidents of the subsidiary, which also includes the Yamaha guitar and Line 6 brands.

"There is enormous respect for Ampeg within Yamaha," said Mita. "Both Yamaha and Ampeg have histories in the guitar market that stretch back over 70 years, so we see the two brands as great companions for one another. We intend to maintain the outstanding quality and commitment to tone that the Ampeg brand has long exemplified."

Announcing the sale, Loud ex-

ecutives characterized the move as one made in order to place more internal focus on its pro audio efforts. "Simplifying the Loud business so that the Mackie brand in particular could be free from the constraints of a complex organization was always a cornerstone of our thesis for the Loud acquisition," said Ty Schultz, managing partner at Transom Capital Group, Loud's parent company.

Loud Audio's former iteration, Loud Technologies, acquired Ampeg in March 2005 as part of its purchase of St. Louis Music. Last October, Loud and its various brands—Mackie, EAW, Martin Audio, Blackheart, Crate, Ampeg and Tapco—were sold to Transom Capital Group, and the

company was renamed Loud Audio LLC.

Alex Nelson, president and managing director of Music Gear brands at Loud Audio, noted in a statement, "Ampeg is loved and respected by both customers and by our Loud employees, so we are happy to see it move into the hands of a company like Yamaha. We are confident that we have found Ampeg the best possible home."

Ampeg
www.ameg.com

Loud Audio
www.loudaudio.com

Yamaha Guitar Group
www.yamahaguitargroup.com

briefs

Leon Speakers Acquires Terra

ANN ARBOR, MI—Custom audio/AV solutions manufacturer Leon Speakers (www.leonspeakers.com) has acquired Terra Speakers, a Maine-based manufacturer of all-weather speakers, with the intent of expanding its residential and commercial product offerings. The two companies have collaborated for more than a decade; Terra's All Climate FIVE line of all-weather loudspeakers was designed in partnership with Leon President Noah Kaplan, and Leon's Boundary Series outdoor speakers are made with drivers manufactured by Terra at its Maine plant.

AES Readies Hearing Conference

CHICAGO, IL—The Audio Engineering Society's (www.aes.org) Third International Conference on Music-Induced Hearing Disorders will be held June 20-22, 2018, at Columbia College in Chicago, IL. The event will cover topics including safe and effective mixing of in-ear monitors for live performance and raising the public's awareness of hearing conservation. The event's keynote address, "Music for Brain Health," will be presented by Nina Kraus, Ph.D., Northwestern University.

Audinate Adds to InfoComm Event

LAS VEGAS, NV—Audinate (www.audinate.com) is introducing a new interactive track, "Optimizing Your Dante Network," during its annual Dante Networking World event at InfoComm 2018. The eighth annual Dante AV Networking World will take place June 5 at the Las Vegas Renaissance and will feature three educational tracks as well as the annual manufacturer showcase featuring Dante-enabled products from various audio manufacturers.



London's AIR Studios Up for Sale

BY CLIVE YOUNG

LONDON, ENGLAND—One of the UK's largest and most storied recording facilities, AIR Studios, has been put on the market by co-owners Richard Boote and Paul Woolf. Famed producer George Martin founded the original AIR Studios on London's Oxford Street in 1969, but moved the business to its current-day facility, Lyndhurst Hall, in 1992, where it has since hosted the likes of Sir Paul McCartney, Katy Perry, Adele and George Michael, as well as countless scoring sessions. No asking price has been disclosed.

The four-studio facility's stock-in-trade is mostly film and television scores, as its main room, the hexagonal Lyndhurst Hall studio, is reportedly one of just two facilities in the UK large enough to host both a full orchestra and chorus at the same time.

Feature film scores recorded there include *Darkest Hour*, *Wonder Woman*, *Interstellar*, *Casino Royale*, *Les Misérables*, *Atonement*, *The Life of Pi*, *Batman Begins*, *Harry Potter and the Goblet of Fire*, *Pride and Prejudice*, *The Da Vinci Code* and *The Grand Budapest Hotel*. The list of television scores recorded on site includes *Doctor Who*, *Sherlock* and *Black Mirror*.

Equipment would be included with the facility purchase; the owners estimate that the gear alone has a value of £3 million or higher. The Lyndhurst Hall control room houses a 96-channel automated Neve 88R with SP2 film panel; 48 channels of Neve AIR Montserrat remote mic preamps; a slew of monitors from Dynaudio, Genelec, Yamaha, ATC, B&W, KRK, HHB and others; and



Lyndhurst Hall control room

recording options such as Avid Pro Tools and Studer and Ampex tape machines.

Elsewhere at AIR, Studio 1 houses a 1980 72-channel Neve/Focusrite desk with AIR Montserrat mic preamps and GML automation, while Studio 2, a sizable mix room, is home to an 80-channel SSL 8000 G+ with Ultimotion, and Munro/Dynaudio 5.1 monitoring. Studio 3, another mix space, is centered around a 48-channel AMS DFC Gemini digital film console.

Lyndhurst Hall was originally a church and missionary school designed in 1880 by Victorian architect Alfred Waterhouse, best known for his work on the Natural History Museum in London. After retrofitting the edifice as AIR Studios, Martin opened the facility in December 1992 with a performance of *Under Milk Wood* that was attended by Prince Charles.

Boote purchased the Grade II-listed facility in 2006 from Chrysalis Group and Pioneer; Woolf later partnered with him on the studio in 2010.

Martin, who died in 2016 at the age of 90, chaired the facility until it

was sold to Boote in 2006. He commented at the time, "AIR Studios has been in existence for nearly 40 years, during which time we've recorded some of the finest artists in the world and most of the memorable film scores. What I love about AIR is that as well as being a great studio, it has a well-deserved reputation for friendliness and efficiency. People who record here always want to come back."

Boote placed the studio on the market in 2012, but ultimately didn't sell it. In 2015, the facility garnered headlines when it was announced the studio might have to close for six months or longer due to noise and vibrations that would be caused by the proposed construction of a luxury basement swimming pool on a nearby residential lot. A petition signed by 8,700 people—along with public outcry from the likes of Queen guitarist Brian May, playwright David Hare and Oscar-winning composer Hans Zimmer—led to an extended battle before the local council, which ended last October when the neighbors dropped all appeals and applications for the pool.

AIR Studios
www.airstudios.com

PHOTO BY AIR STUDIOS



SOUNDRECORDING

Inside Cut Chemist's Album *Alchemy* 18

A mere 12 years after his solo debut, Cut Chemist—formerly of Ozomatli and Jurassic 5—follows up with *Die Cut*, recorded over the course of eight years at L.A.'s Comp-ny studio and mixed at Studio 4 West in Venice, CA.

Police Reveal Prince's Legendary Tape Vault 18

For decades, rock star Prince was rumored to have a tape vault filled floor-to-ceiling with unreleased tracks. Now police photos taken during the investigation of his 2016 death reveal the room once estimated to contain 1,200 unheard recordings.

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Bryan Hinkley, who has toured with Gang Green, Clutch and 311, created production music company Gratitude Sound in Boston; now he's expanded with a new West Coast office.

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Wireless microphone operators have some new tools that use crowdsourced data to see if T-Mobile's 600 MHz or Band 71 LTE services are active in their area.

Live Sound Showcase: The Tedeschi Trucks Band 40

The Tedeschi Trucks Band typically plays 200 gigs a year, which keeps the group's audio team busy taming the stage volume of 12 people musically flooring it without an IEM in sight.

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Craig Anderton asks if pro audio software can sustain in the long run.

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getting recording professionals heard on Capitol Hill, developing best practices for a fast-moving industry and more.

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Jacques Sonyieux talks with The Record Company about its sophomore album, surpassing expectations, and how a Fleetwood Mac song got the band out of the living room and into a commercial studio.



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How Pro Audio Trade Shows Rebounded

Trade shows are a crucial part of the pro audio ecosystem—at each one, manufacturers release new gear, pros take advantage of educational offerings, and standards groups hammer out plans for the future. The shows are key, and this month will see one of the biggest, InfoComm, take place in Las Vegas.

As a whole, the various pro audio conventions are riding a wave—a nice change of pace from the early 2010s, when they were slammed by the one-two punch of the recession and the rise of social media. With fewer attendees and exhibitors due to economic belt tightening, plus social media providing a new way for users and manufacturers to interact, some feared the shows' days might be numbered.

Today, trade shows have rebounded, and in some cases are bigger than ever. Exhibitors are aware of that more than anyone, so I asked a number of companies that will be at InfoComm for their take on how the conventions found their way back.

"Trade shows in general have returned to the forefront," said Darius Seabaugh, vice president of marketing, ProCo Sound. "I feel that during our recent economic uptick, people in our industry are more eager to meet face-to-face and see new technology and innovations firsthand."

That face-to-face, real-world connection was a key factor for every company I talked to. Francesco Fan-

icchi, Powersoft's brand and communications director, explained, "With social media, companies can create their lead generation program while creating and building relationships with customers. On the other hand, trade shows are places where those relationships can become real, stronger and longer—a place where people can turn a post or a 'like' into a more authentic brand experience."

John Monitto, director of business development at Meyer Sound, agreed: "I think perhaps social media has had the effect of making people want to get to know companies up close. It's still important to hear the product, to engage with the technology and to get to know the people you will be dealing with."

Meeting in person isn't the only factor, of course; the shows also bounced back because they innovated. "They've adapted and changed," said Christopher Currier, manager, trade marketing Americas/pro audio solutions, Sennheiser. "The organizations that manage these events are spending a great deal of time and effort trying out new things, tweaking their formats, adjusting their focus and so on—and both end users and exhibitors are taking note of this effort."

Not all pro audio trade shows have recovered at the same rate, of course. "I don't think that trend is across all our shows; some have clearly

showed drops in attendance," noted Jack Kelly, president of Group One Ltd., the U.S. distributor for DiGiCo, KLANG:technologies, XTA and others. "InfoComm is a strong show because the technology on display is being used across many markets, including corporate and retail."

Also, while pro audio at its core is about communicating with others, trade shows allow the industry to communicate with itself. Discussing InfoComm, Laurent Vaissé, CEO of L-Acoustics, suggested, "I know that our technical and education teams look forward to sharing our progress with other members of the AVNU Alliance and getting familiar with more of AVIXA's curriculum."

The key word in Vaissé's comment is "sharing," because that's what people do in a community. The industry is spread out around the globe, but a few times a year, the conventions bring thousands of pros together who talk the same lingo and face similar issues—and perhaps have a few solutions. As Fred Morgenstern, product director for Neutrik USA, pointed out, trade shows help foster a sense of communal spirit: "The community aspect of trade shows is wonderful. No matter how sophisticated technology gets, nothing virtual will ever match the satisfaction of face-to-face interactions with subject matter experts, peers, mentors and up-and-comers."

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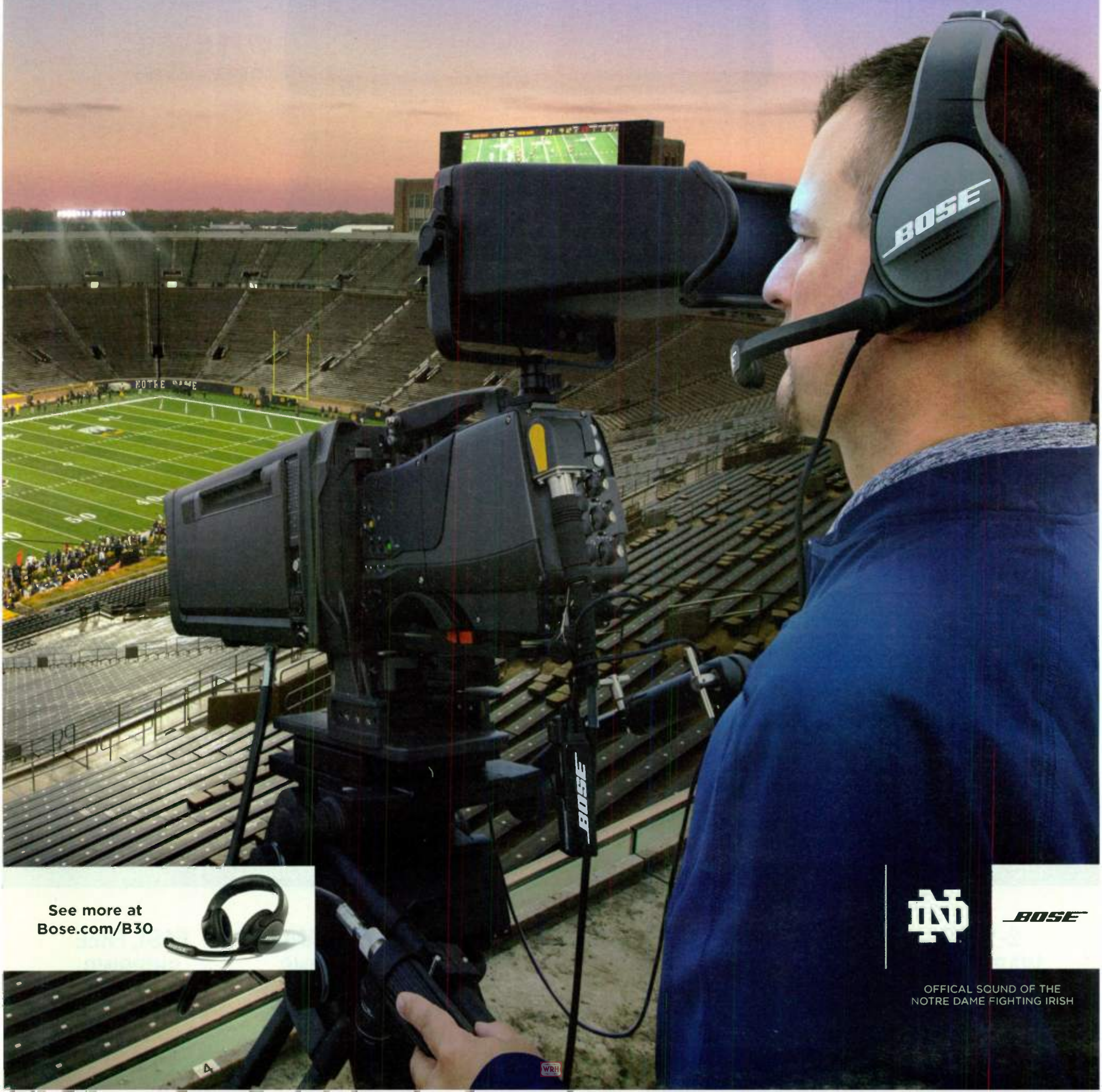
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The Next Generation of Genelec Celebrates 40 Years



BY BARNEY JAMESON

Left: A young Ilpo Martikainen, hard at work on Genelec's first studio monitor, the S30. Right: Today, Genelec's board includes (l-r): Ritva Leinonen, Maria Martikainen, Mikko Martikainen, Juho Martikainen, Topi Partanen, Lasse Aho and Siamäk Naghian.

IISALMI, FINLAND—Four decades ago, two childhood friends from a remote Finnish town started a company that, at the time, seemed to have little hope of success. This year, Genelec celebrates its 40th anniversary by honoring its history as a new generation prepares to lead it into the future.

Genelec's founders, Ilpo Martikainen and Topi Partanen, had a rough road at first in establishing the Genelec brand, today a mainstay of the professional audio industry. The 15-year-old Partanen and 17-year-old Martikainen met at school, attracted by their common love of electronics. Growing up in the forests of Finland's Savonia province, they built loudspeakers to break the silence.

Years later, they found themselves looking for inspiration in the Finnish capital city of Helsinki. Martikainen in particular was determined to become an entrepreneur—all he needed was an opportunity. His chance came in the form of chief acoustician Juhani Borenus of Yleisradio (YLE), Finland's national broadcaster.

"We met him at an acoustic seminar in Helsinki and he told us that [YLE] needed monitors for their headquarters," recalls Partanen, adding that the monitors had to conform to the country's then-new N12-B regulations, which specified that they be active monitors, with a flat frequency response and room response controls. Without hesitation, Martikainen declared, "We can make them!" It was only later, after the meeting, that

Martikainen turned to his old friend and asked, "What's an active monitor?"

The answer was the S30, the first Genelec monitor, and a turning point for the two friends. The first customer was Italy's RAI, quickly followed by YLE. With this success, Martikainen had the opportunity to demonstrate his belief that a company could be based in the deepest forests of Finland and hold firm to the values of sustainability, yet still export products worldwide.

This month, luminaries of the audio world will gather in the small town of Iisalmi, where the Genelec factory sits beside the serene Porovesi Lake in Finland's Northern Savonia region, and they will toast the success of that vision.

The journey has been anything but simple. In the early years, the en-

tire endeavor was supported by systems integration work for the Soviet Union, including the creation of a sound system for the Moscow State Circus, and there are plenty of early stories of studio engineers asking if they could use their own amplifiers with their brand-new active monitors.

A string of notable products began in 1989 with the 1035A, quickly followed by the compact 1031, the 1038, the 8000 series and, most recently, the coaxial 8331, 8341 and 8351, collectively known as The Ones. Each model sports technologies such as the Directivity Control Waveguide, Minimum Diffraction Enclosure, Laminar Spiral Enclosure (whose aim is improving low-frequency reproduction), and Smart Active Monitoring (SAM), at the heart of which is Genelec Loudspeaker Manager (GLM) software.

Ilpo Martikainen passed away in January 2017, having achieved more than perhaps even he imagined, but the lessons he learned remain vivid in the minds of those who now lead Genelec into its next phase.

Among them are his three children: Juho, the classically trained double bassist and Genelec brand ambassador; Mikko, the software engineer whose work has spurred Genelec to new levels of efficiency; and Maria, the youngest, who now occupies her father's old office. All three have sat on the board since 2001.

"It is always a challenge in family-owned companies for the next generation to keep the best parts of the past," says Maria, "but what Ilpo and Topi and all of the others achieved was to keep on growing, keep on developing, and that is what we must also do. There is a risk of admiring too much. For the next generation, it's about combining our heritage with the way we want to run this company."

Genelec managing director Siamäk Naghian agrees. "Ilpo was a humble and actually very shy man, but he was also a leader. He never gave up, and I think that's very important. This new generation has a similar passion. They don't want to just copy something somebody else has done—they want to make things better."

Genelec
www.genelec.com



The Genelec factory sits beside Porovesi Lake in Finland's Northern Savonia region.

Tony Award Sound Categories Return

BY CLIVE YOUNG

NEW YORK, NY—Among the nominations announced in 26 competitive categories for the 72nd Annual Tony Awards were selections in the categories of Best Sound Design of a Musical and of a Play. Significantly, they are the first nominations in the newly reinstated award categories following their controversial elimination in 2014.

The nominees for Best Sound Design of a Play are:

- Adam Cork, *Travesties*
- Ian Dickinson for *Autograph, Angels in America*
- Gareth Fry, *Harry Potter and the Cursed Child, Parts One and Two*
- Tom Gibbons, *1984*
- Dan Moses Schreier, *Eugene O'Neill's The Iceman Cometh*

The nominees for Best Sound Design of a Musical are:

- Kai Harada, *The Band's Visit*
- Peter Hylenski, *Once on This Island*
- Scott Lehrer, *Rodgers & Hammerstein's Carousel*
- Brian Ronan, *Mean Girls*
- Walter Trarbach and Mike Dobson, *SpongeBob SquarePants: The Musical*

Awards for the two sound design categories were first presented during the 2007-08 theatrical season, but were halted in 2014 when the Tony Awards Administration Committee voted to cancel them, just three days after that year's ceremony.

While no reason was initially given for discontinuing the categories, numerous Tony voters said at the time that they didn't know how to gauge and measure achievement in the field.

The reinstated award category winners will be determined using a new method. While all Tony nominators vote to create the nomination shortlist, the award winners will be determined by a subset of the voting pool based on their professional affiliation.

The Best Sound awards were reinstated in late April 2017, with the announcement that the categories would return this year with nominations for the 2017-18 theatrical season.

That reinstatement came after an 18-month review by the Administration Committee in conjunction with numerous industry professionals, including sound designers. As a result of the effort, another category—Best Orchestrations—will also be determined using this voting method.

The American Theatre Wing's 72nd Annual Tony Awards will take

place at Radio City Music Hall in New York City on Sunday evening, June 10, 2018, and will be broadcast live on CBS.

Tony Awards
www.tonyawards.com



PHOTO BY JOAN MARCUS

SpongeBob SquarePants: The Musical

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Adam Hall NA Merges with MDG

RIVERDALE, NJ—Germany-based Adam Hall Group recently founded a U.S. subsidiary with Adam Hall North America and purchased key assets from its New Jersey-based North American distributor, Musical Distributors Group (MDG). As a result, the two entities will merge under the brand Adam Hall North America.

The deal will bring together Adam Hall's brands—LD Systems, Camco Lighting, Gravity Stands, Palmer and Defender Cable Protection—and MDG's exclusive distribution brands, including Höfner, Ultrason, EBS, Mad Professor and Lock-It Straps.

Steven Savvides, president of the new Adam Hall North America, sees the merger as an opportunity for Adam Hall NA to hit the ground running. "Combining our strategic New Jersey-based location, 32 years of industry experience, substantial

resources, expert staff and a well-established network of customers, the partnership will further improve business growth for our existing customers as well as for new ones," Savvides said.

"The merger with Musical Distributors Group adds to our capacity and geographic presence to reach and service customers in the North American market," said Alexander Pietschmann, CEO of the Adam Hall Group.

"Steven and his passionate team have done a fantastic job for us over the last years in building a strong customer network and gaining valuable market insights. I'm looking forward to this new challenge and opportunity working together with the team in order to advance our growth plans and ensure that North American customers will gain from improved service and experience," said Gabriel Medra-

no, COO, North America.

The deal was signed and completed in the early first quarter of 2018, and the new corporate entity is making plans for exhibiting at InfoComm 2018 this month.

Adam Hall Group
www.adamhall.com

Musical Distributors Group
www.musicaldistributors.com



Steven Savvides (left) and Gabriel Medrano of Adam Hall North America

Shure to Exit Phonograph Cartridge Market

BY CLIVE YOUNG

NEW YORK, NY—Shure has announced it will stop producing phonograph cartridges by this summer, quietly ending its 85-year presence in the phono category.

In a statement, the company acknowledged that this was a "difficult decision," citing issues in

in 1933 and is said to have produced as many as 28,000 cartridges a day during the heyday of vinyl records. Some of Shure's notable achievements in the field included creating the first needle able to play both 33 1/3 and 78 rpm records and the first stereo moving magnet cartridge.

Shure's most revered cartridge was the V15, which debuted in 1964; the company continued developing it with periodic updates, releasing seven models over the years until its final edition, the V-15Vx-MR, was discontinued in 2004 "due to scarcity of exotic materials essential in the manufacturing" of the stylus. So highly regarded was the line that the Library of Congress is said to have purchased all remaining stock of the V15 line in 2009.

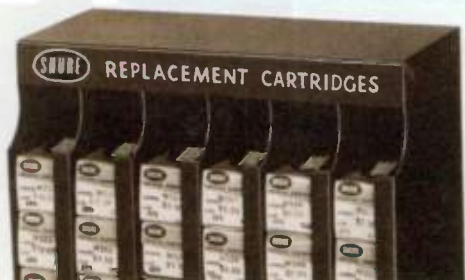
The company's statement said that Shure would continue to move "into new markets and product categories for audiophiles." It would appear that that's no platitude, as just two days earlier the company introduced the KSE1200 Electrostatic Earphone System. Similar to its KSE1500 system, which provides DSP and an amplifier, the KSE1200 skips the DSP—a move that brings its price down considerably. The KSE1200 is expected to ship this month.

Shure
www.shure.com

Shure has manufactured phonograph cartridges since the 1930s.

maintaining "consistency in materials, processes and testing, as well as the capacity to react to fluctuations in demand." As a result, the company came to the conclusion that "the proud legacy of Shure Phono is best served by exiting the category rather than continuing production under increasingly challenging circumstances."

While best known today for its microphones and various IEM/headphone products, Shure began manufacturing replacement pickups



Gibson Files for Bankruptcy

BY KATIE MAKAL

NASHVILLE, TN—Burdened by unmanageable debt arising in part from its 2014, \$135 million acquisition of Philips' audio and home entertainment business, Gibson Brands, home to the iconic Les Paul electric guitar company and numerous pro audio brands, filed for bankruptcy on May 1.

Gibson's pro audio brands include KRK Systems, TASCAM, Cerwin-Vega, Stanton headphones, Integra, TEAC, TASCAM Professional Software and Esoteric. Gibson sold its music software company Cakewalk to BandLab in February.

Once it emerges from bankruptcy, according to a statement by Gibson, the company will focus on its core musical instrument and audio businesses. The bankruptcy filing included a turnaround plan that hands control of Gibson's musical instrument business to bondholders, led by private equity firm KKR & Co.

During restructuring, the company's Gibson Innovations business will be liquidated.

Following its emergence from bankruptcy, the company plans to refocus on "the manufacturing of world-class musical instruments and professional audio products and the continued development of the company's portfolio of iconic, globally recognized brands including Gibson and Epiphone, by reorganizing around its core businesses."

As part of the restructuring, Gibson will receive a \$135 million operating loan ("debtor-in-posses-

sion" financing) from its existing shareholders, which will provide the company with funds to maintain normal operations—including paying vendors and employees, among other obligations—during bankruptcy proceedings.

During the Chapter 11 process, the company's musical instruments and pro audio businesses will continue to design, build, sell and manufacture Gibson and Epiphone guitars, as well as KRK and Cerwin-Vega studio monitors and

loudspeakers.

According to Reuters, Gibson expects to emerge from bankruptcy on Sept. 24.

Henry Juskiewicz, chairman and chief executive officer of Gibson Brands, and David Berryman, Gibson's president, will both continue with the company afterwards to facilitate the refocusing transition.

Juskiewicz said in a statement, "Over the past 12 months, we have made substantial strides through an operational restructuring. We have sold non-core brands, increased earnings and reduced capital demands. The decision to refocus on our core business, musical instruments, combined with the significant support from our note-holders, we believe will assure the company's long-term stability and financial health."

Other brands currently owned by Gibson include Epiphone, Dobro, Valley Arts, Kramer, Steinberger, Tobias, Slingerland drums, Maestro, Baldwin piano, Hamilton, Chickering and Wurlitzer pianos.

Gibson
www.gibson.com



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Gibson
www.gibson.com

Clear-Com Marks 50 Years

BY CLIVE YOUNG

ALAMEDA, CA—Clear-Com has spent the last few months celebrating as it marks its 50th year in business. Since its founding in 1968, the company has grown with the times and technologies to become a global provider of professional real-time communications solutions and services.

Clear-Com can trace its 50-year history back to the beginning not merely through its products but by its personnel as well. Chatting on the NAB Show floor in April, Bob Boster, president of Clear-Com, pointed out, “Charlie Button was our founding technologist and he’s still working for us as an engineer; he works on our products every day! The

person who invented the belt pack as we know it in the industry—which is just one of his claims to fame—is still part of our business 50 years later.”

Boster noted that Clear-Com’s links to its heritage don’t end there. “The business is still thriving under the same brand name, serving the marketplace in the same kind of way, albeit we’ve expanded into new market areas and new opportunities,” he said. Likewise, how it conducts business hasn’t changed much either: “Our user community and our partners who address the marketplace, they’re part of that 50-year story; we sell through partners and we always have.”

While anniversaries provide an opportunity to look back, Boster and Clear-Com are focused on moving

with—and maybe even a little ahead of—the times. “For the last five years, we’ve released an average of 12 new products a year,” he shared. “We always have a lot of things going on. We’re continuing to invest in development, focusing on bringing new things to market that solve problems for people in ways that best meet their requirements. Our customers are interested in IP, new frequency areas for wireless, how artificial intelligence can be involved in intercom operation, 3D and other immersive environments, and standards and standards adoption within



Clear-Com’s NAB Show booth was busy as the company celebrated its 50th anniversary.

the audio business—and all of those things are on our radar.” It sounds like mapping out the next 50 years has already begun.

Clear-Com
www.clearcom.com

AES@NAMM Extended Through 2021

ANAHEIM, CA—This year’s NAMM Show in January catered to the pro audio world more than ever before with the debut of a new educational event—the AES@NAMM Pro Sound Symposium: Live & Studio—that saw the Audio Engineering Society providing classes and professional development opportunities throughout the convention. Now AES and the National Association of Music Merchants are cementing the event with a three-year agreement for AES@NAMM to return in January 2019, 2020 and 2021.

AES@NAMM’s educational offerings include expert speaker sessions, technical presentations and hands-on training aimed at current and future industry professionals. AES@NAMM also serves the wider music-making ecosystem and supplements the AES’ ongoing calendar of international conferences and traditional conventions.

David Scheirman, president of AES, explained, “With the professional audio industry growing and changing rapidly, we believe it makes sense for our society’s in-person gatherings to evolve as well. Considering the rapid advances that are taking place in the technologies and tools we use as audio professionals, there is nothing like direct, in-person exposure to the latest advances in audio equipment and workflow processes. We look forward to serving our growing West Coast membership and future members by bringing AES@NAMM to the NAMM Show in January 2019 and beyond.”

Joe Lamond, NAMM president

and CEO, concurred, noting, “AES and NAMM share in a member-focused mission to offer important and affirming professional development opportunities to keep the industry strong. We look forward to continuing our work with AES in this space, and in building a bright future for the industry at large.”

The inaugural AES@NAMM Pro Sound Symposium took place over the course of four days at the NAMM U Education Campus in-



Joe Lamond, NAMM president and CEO (left), and David Scheirman, president of AES

side the Anaheim Hilton in January. The symposium offered multiple themed training academies and a variety of tutorials and expert presentations, with more than 300 sessions in total.

The NAMM Show will return to the Anaheim Convention Center Jan. 24-27, 2019. Program and registration details for the 2019 AES@NAMM program will be available in the coming months.

Audio Engineering Society
www.aes.org

National Association of Music Merchants
www.namm.org

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Nicolson Brings Lectrosonics to Bear on *Artemis Fowl* Film

WORCESTER, UK—UK-based production sound mixer and recordist Colin Nicolson has expanded his Lectrosonics kit. He's been using a pair of SSM micro belt-pack transmitters for his current production, Walt Disney Pictures' *Artemis Fowl*, directed by Kenneth Branagh.

Nicolson, whose credits include *Murder on the Orient Express*, *T2 Trainspotting* and *The Theory of Everything*, purchased Lectrosonics Digital Hybrid Wireless equipment initially for Edgar Wright's *The World's End*, in 2013.

According to Nicolson, his initial two SSM transmitters proved useful in recent productions that included some tightly tailored costumes. He says, "The SSM transmitter was useful for hiding on Alicia Vikander when I mixed the UK part of *Tomb Raider*—so much so that I bought another two for my current production, *Artemis Fowl*."

The film, which started principal



Colin Nicolson on the set of *Artemis Fowl*

photography in March and is scheduled to shoot in England, Northern Ireland and Vietnam's Ho Chi Minh City, stars Judi Dench, Josh Gad, and newcomer Ferdia Shaw in the lead role. Based on the young adult fantasy novel by Irish author Eoin Colfer, it is set for release in August 2019.

Before Nicolson reunited with Branagh—who starred in and direct-

ed *Murder on the Orient Express*—for the *Artemis Fowl* production, he acquired a third SR Series dual-channel receiver for his most recent shoot. "A third SR allows six channels in portable mode, which [proved] very useful on *The Kid Who Would Be King*, when we filmed at several locations with very difficult access," he reports. That film is being released in the beginning of 2019.

Murder on the Orient Express featured a very large cast—including Branagh, Tom Bateman, Penélope Cruz, Willem Dafoe, Judi Dench, Johnny Depp, Josh Gad, Derek Jacobi and numerous others—that placed even greater demands on his location sound kit, he adds. "I had to increase my channel count. I invested in a Venue 2 receiver and more SMB transmitters, another HMA and two SSMs."

Lectrosonics
www.lectrosonics.com

Epah Takes a Leap with System T

SÃO PAULO, BRAZIL—Epah Estúdios, which provides live mixing, recording and production services to the Brazilian broadcast industry, has launched UMA-5, a new vehicle featuring a Solid State Logic System T broadcast audio production system.

Epah has long been part of notable Brazilian music events like Rock in Rio, Lollapalooza and Monsters of Rock, and the company provides all audio services for the Prêmio Multishow de Música Brasileira (Multishow Brazilian Music Awards), including sound reinforcement and broadcast sound.

Marcelo Freitas, technical manager at Epah, explains that before settling on SSL's System T for the UMA-5 truck, they already had a notion of what they wanted, and the place they wanted their services to occupy in the marketplace: "We needed something different, something new in the broadcast world. We wanted to put the best sound and the latest technology to work for us—to make a leap forward."

UMA-5 now has System T at its core. The main control surface is a three-bay, 48-fader S500, connected to dual redundant T80 800-path Tempest audio engines, with Dante I/O connected to primary and secondary (redundant) Ethernet networks via COTS 52-port Cisco switches in the truck. There are two stage racks available, each with three SSL Network I/O: SB.i16 and two SSL Network I/O SB 8.8 stageboxes, with dual redundant Ethernet connectivity. This gives a total stage capacity of 128 inputs and 32 outputs.

Solid State Logic
www.solidstatellogic.com



Epah Estúdios director Marcio Schnaidman in front of the SSL System T console in the Epah UMA-5 truck.

La La Land Live Show Hits the Road

LOS ANGELES, CA—Last year saw the film musical *La La Land* take home a slew of Oscars and clean up at the box office; now the film has its own roadshow. At stops in *La La Land*'s worldwide tour, the film is screened and all of the music is performed live by a local symphony orchestra, jazz band and choir. Mixing the show at most stops is Troy Choi, who's been requesting a DiGiCo SD7 or SD10 desk each time.

The only recordings are stem files for general dialogue, plus sung vocal tracks for stars Ryan Gosling and Emma Stone, some background vocals, which are mixed with the live choir, effects and a click track to keep everyone in sync.

"Most of the time, I mic every single musician, so total channel count is easily between 90 and 100 inputs," Choi said. "Many times I don't have enough time to check and tweak each input individually, so it's important to have a mixer that always sounds good 'as is.' I use SD7s and SD10s, and both of those consoles are 'gain up, fader up, sounds great with minimal processing.' The sound is fat, smooth, and never harsh. Many channels run with no EQ changes other than a high-pass filter. That's helped bring a lot of success to this tour."

One of the features that Choi uses to manage inputs is Control Groups,



Troy Choi mixes on a pair of DiGiCo SD7 desks for *La La Land in Concert*'s performance at Jamsil Olympic Stadium during the Slow Life Slow Live festival in Seoul, South Korea.

of which he uses 24 in total. "Control Groups mixed with the ability to customize fader layers is crucial to wrangling all of these inputs. I'm a bit of a micromanaging kind of mixer," Choi said, "so I need to have a pretty significant level of control over workflow. The faders in the center of the SD7 allow me to set up a workflow that makes it super-easy to control all of the Control Groups."

The challenges go beyond just the music. The whole character of the music portion—and Choi's mixing decisions—can change based on a variety of influences. "When we did the shows in South Korea with the full band from the soundtrack, for example, I ran the band inputs hotter because the people who came to those shows came to see that band,"

he explains.

In shows outside of the United States, where the film was presented with subtitles, audiences wanted to hear more orchestra, while audiences in the English-speaking world may want to hear more dialogue. Choi, who has a background as a drummer and reads music, did the first shows of the tour with a copy of the score next to him to keep track of their place in the story.

"The score has so many musical parts that bleed right into dialogue," he describes. Eventually he memorized the score. "For the first gig, I had the score open right in front of the desk, but I had it memorized by about show 22."

DiGiCo
www.DiGiCo.biz



Ashby Turns to Audient for VOs

NORFOLK, UK—Recording for international clients like Costa, Microsoft, Clairol and Twitter from her home studio, voice artist Caroline Ashby has been using two Audient audio interfaces, iD22 and iD4, to capture parts for numerous TV commercials, game characters, radio promos, corporate training clips and children's toys.

"I use my iD22 hooked up to my main computer in my studio. That's my workhorse that sits on the desk next to me. I have another monitor in my recording booth and use the iD22 mixer software to control any levels or outputs I want to from within the booth," she says, explaining her setup.

"The -10 dB pad is really useful and I use it quite a lot, as it saves me from having to mess around with my levels too much when I go from, say, narrating a corporate e-learning script to singing a jingle. I just flick a switch, get in the booth and start singing, safe in the knowledge that I won't be clipping. Then I flick the switch again and can usually go back



Caroline Ashby with her Audient AD22 interface.

to a regular speaking level without messing with the gain again.

"I also love that there are two inputs, so I can have different mics hooked up at the same time; I use a Neumann and a Sennheiser, both great mics that I use for different reads, and they're both plugged in and ready to go."

Remote clients have been able to hear sessions live via the Audient audio interfaces as well, she says. "Using the mixer software for the iD22, I've been able to set up a mix-minus so clients can listen in to the session if they like and direct live. They get to hear exactly what the Audient hears, but the computer doesn't record their voice, only mine—so useful."

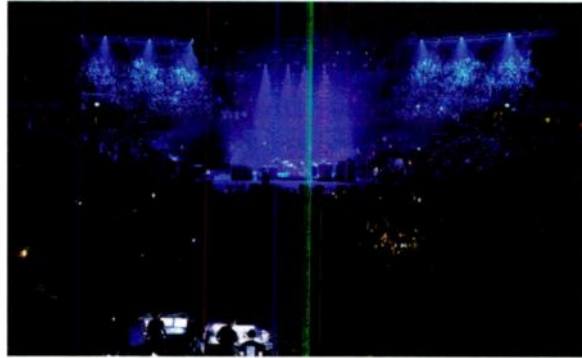
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JoeCo Captures Teenage Cancer Trust Concerts for Posterity

LONDON, UK—The Teenage Cancer Trust (TCT) fielded a lineup of concerts in March that included UB40 (featuring Ali, Astro and Mickey), Nile Rodgers & CHIC, The Courteniers, Kasabian, Def Leppard, comedian Russell Howard and TCT patron Roger Daltrey of The Who.

Gareth Johnson from music production company Stand Alone Productions undertook the search for a portable recording system that would be able to record the shows for possible stereo and surround mixing, broadcast and commercial release—meaning that 48 kHz/24-bit audio capability was essential. Ultimately, he opted for a pair of Blackbox BBR64-MADI recorders,



This year's TCT shows were preserved by a pair of Blackbox BBR64-MADI recorders.

each of which can record and replay up to 64 channels of MADI data.

"Shortly before the concerts, everything was shipped down to the Royal Albert Hall, we pressed record, and I am glad to say that everything worked out well," said Johnson. "I am very happy with the quality of these recordings."

At the conclusion of each night's concert, Johnson used the BBR64-MADI's USB port to drop recordings onto Stand Alone's drives. "There was no long waiting around for a backup; it was just 'grab the drive and go,' which was great."

Johnson estimated that the units "saved the charity a lot of money and made my life easier." Accordingly, he plans to try the forthcoming JoeCo Cello desktop audio interface, with the goal of using it in his own room at Metropolis Studios in West London. "If it sounds as good as JoeCo's other stuff, I can't wait to give it a whirl."

JoeCo
www.joeco.co.uk

LipSync Upgrades to Dolby Atmos with Avid, AMS Neve

LONDON, UK—Post-production house LipSync Post has upgraded its Soho facility, enlisting the help of HHB Communications' Scrub division to create a hybrid, dual Avid S6 and AMS Neve DFC-3D desk, and also upgrade to Dolby Atmos mixes with an HE-RMU Rendering and Mastering Unit.

The new setup allows full access to the classic Neve DFC sound while also bringing more hands-on control of Avid Pro Tools automation via the S6 desks.

In order to streamline the workflow as more projects are mixed exclusively "in the box," LipSync installed the S6s within the same frame as the DFC, with custom furniture created by Frozen Fish Design. The aim of the dual-operator configuration is to free the



Custom furniture from Frozen Fish Design allowed LipSync Post to install its new Avid and AMS Neve desks in the same frame.


mix engineers to work on separate Pro Tools systems simultaneously to speed up turnaround times as needed.

Rob Hughes, senior re-recording mixer for LipSync Post, commented, "The move into extended surround formats like Dolby Atmos is very exciting. We have now com-

pleted our first feature mix in the re-fitted theater. It has a very detailed, involved soundtrack; the new system handled it with ease."

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Inside Cut Chemist's Album Alchemy

BY STEVE HARVEY

VENICE, CA—"I hope I never make another record like this again," says Lucas McFadden, otherwise known as Cut Chemist. "If you had told me before I started that this is what it would take to make this record, I would have gone into a different business."

McFadden's *Die Cut* album, his second as a solo artist, has just been released on his own A Stable Sound label, 12 years after his solo debut, *The Audience's Listening*. It features guest appearances by Biz Markie, members of Tune-Yards, Chali 2na, Hymnal, Laura Darlington, Edan, Mr. Lif and others.

"My first album was made in isolation; I was running away from group dynamics to make something that no one else had a hand in," says McFadden, a DJ and producer who was a founding member of Jurassic 5 and Ozomatli and co-created Brainfreeze with DJ Shadow. "For this record, I was running away from isolation and back into a group dynamic. I wanted many people to have a hand in this—to sound like a band, a collaborative effort."

The project began with McFadden recording his sample-based ar-

rangements into Pro Tools. In 2010, he started playing the mixes to various people, including Carlos Gabriel Niño, a multi-hyphenate polymath with an extensive Rolodex who helped call in some live musicians.

"Drummer Deantoni Parks was the first studio session we did, over at Comp-ny in Burbank," says McFadden. "Most of the live stuff was done there, to tape." Subsequent sessions included Merrill Garbus and Nate Brenner of Tune-Yards, Farmer Dave Scher, Lonnie Marshall, Dexter Story, and Comp-ny owner Be Hussey, among others.

Industrial music is at the core of the album, which leans heavily on samples and live performances by French artists Vox Populi! and Pacific231 and is also layered with elements of psychedelic folk. Where it references hip-hop, it's from McFadden's favorite era, the early '90s. "I wanted to make a songwriter/hip-hop record," he says.

Benjamin Tierney did the initial mixes. "I did a round of mixes, but I'm never confident enough," says McFadden. "So I said, who else can I get? Benjamin would bring his laptop over and do these incredible mixes."

McFadden sat with the mixes for a year. "Then I said, what else can I



Lucas McFadden, aka Cut Chemist (left), and engineer Andy Kravitz inside the latter's Studio 4 West.

do to this? Carlos said, 'I got a guy.' That's his line!" he laughs.

That guy was Andy Kravitz, owner of Studio 4 West, located in an apartment building in Venice, CA. McFadden knew he was in the right place as soon as he saw the discs on the walls—Jazzy Jeff and Fresh Prince, Cypress Hill—and discovered Kravitz's pedigree. "He's from Philadelphia; he engineered a lot of early Philly hip-hop, records that I bought growing up, like Schoolly D, Cool C. He helped found Ruffhouse Records.

This is somebody who has had his hand in hip-hop history. To have that touch on my album was an honor," he says.

"And when I met Andy and saw this stuff," he continues, looking around Kravitz's control room, "I thought, of course this is where it's going to end, with that drum kit and that board and those mics and that compressor and those Motown EQs. I'm surrounded by history here. The vibes and the energy coming off these

(continued on page 26)

Police Reveal Prince's Legendary Tape Vault

BY CLIVE YOUNG

CHANHASSEN, MN—In April, two years after Prince's death, Minnesota's Carver County Sheriff's Office released investigation photos originally taken at the artist's Paisley Park compound just days after his untimely demise. The photos included the first-ever public look inside Prince's legendary tape vault, purported to contain hundreds of unreleased songs.

Investigators took hundreds of photos on May 10 and 11, 2016, documenting their exploration of offices, bedrooms, studios, rehearsal spaces and other rarely seen areas of the \$10 million, 55,000-square-foot Paisley Park complex, custom-built in 1987 in Chanhassen, MN. When police got to the legendary tape storage facility, however, they were stopped in their tracks by a massive locked door; it turned out that the legendary home to hundreds of tape reels was an actual vault—and only Prince knew the access code. On May 15, investigators returned with a specialist who



Prince's tape vault, estimated to contain more than 1,200 unreleased songs, was revealed to the public in police investigation photos taken in the wake of his April, 2016 death.

cracked the vault, revealing a room packed with analog tapes.

A wildly prolific musician, Prince wrote and recorded endlessly throughout his career, usually at Paisley Park, and simply threw tape after tape into storage. As rumors of the vault circulated over the years, it became something of an urban legend—a modern-day Aladdin's Cave,

said to be filled floor to ceiling with untold musical riches. And in more recent times, former employees began verifying that the vault was no myth.

As engineer Robert "Cubby" Colby, who worked variously as Prince's FOH and monitor engineer, and Paisley Park audio tech from 1980 to 1988, told *Pro Sound*

News in 2016, "They estimate there's over 1,200 unreleased songs in the vault; that's an album of 12 songs every year for 100 years." He added, "It's going to be a huge job to go through it."

That's no understatement; in 2014, Prince himself discussed the vault with *Rolling Stone*, saying, "I didn't always give the record companies the best song. There are songs in the vault that no one's ever heard. There are several vaults; it's not just one vault." But in that same interview, even he acknowledged that not everything gathering dust was his best work: "You know how Woody Allen does flicks all the time, and every three you get a masterpiece? You've got to go through the process and download it from your head. It's all there; I can hear it all right now. I can hear five albums in my head right now."

Prince's admission that the vault's contents were of varying quality aligns with what Colby told *Pro Sound News*: "[Prince] never cut corners with his live performance; that

(continued on page 26)

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History Repeats Itself at Modern Electric Sound Recorders

BY STEVE HARVEY

DALLAS, TX—For a couple of decades beginning in the 1950s, Dallas was the radio jingle capital of the world. The global leader, PAMS Productions, closed its studios in 1978, but 40 years later, the facility's current occupant, Modern Electric Sound Recorders, has brought things full circle, opening a new room to serve Dallas' still vibrant advertising market.

"I was looking on Craigslist and found a posting with some pretty terrible pictures," recalls owner Jeffrey Saenz, who relocated to Dallas from Los Angeles in 2010 and moved into the facility in 2012. "I was really surprised when I came to check the place out that it was in such proximity to some key parts of the city, and so near the center and the heartbeat of Dallas." Located in Upper Dallas, Modern Electric Sound is a stone's throw from Cityplace Market.

The big live room was built in 1968 and echoes West Coast studio designs of that era. It was instantly familiar to Saenz, who has worked in many classic Hollywood facilities. "When I walked into this room ... it really captured my heart," he says.

The building had been neglected by successive previous owners and was in disrepair when Saenz took it over. "You could tell people were wasting this beautiful tracking room," he says.

But he soon had the place fixed up and rewired and was able to move his gear in. "I'd been collecting for quite some time," says Saenz, who'd had a small overdub studio in California, "and I worked for a producer, Dave Cobb, who is constantly trading gear, so I was picking up things whenever I could from him."

The period-appropriate 24-channel MCI JH-416A—the desk that helped popularize the inline monitoring design—was purchased specifically for the A room, Saenz says, as was the Studer A80 MKII 24-track 2-inch tape machine. "But most of the outboard, a good amount of the mics and a large portion of the instrument collection came with me from California."

Although a Pro Tools HDX rig is the studio workhorse, the Studer machine, recently refurbished, does get used for basic tracking, he reports. "We'll run takes to tape and dump to Pro Tools. We all love the way it sounds."

There is a second Studer 2-inch: "We have an A820 that we need to get serviced and figure out what to do with."

Modern Electric serves as home base for a group of producers, engineers and musicians who frequently play on each other's records and in each other's bands. Most notable, perhaps, is Beau Bedford, ringleader of the Texas Gentlemen, the facility's Wrecking Crew—or, more aptly, Muscle Shoals Swampers. Another resident producer, Jason Burt, is part of Medicine Man Revival. The studio's client list also includes Leon Bridges, Reverend Horton Heat, Nikki Lane and Paul Cauthen.

Saenz brought Bedford on as a creative partner a while back, and he has played guitar with the Texas Gentlemen, but he isn't in the cur-

rent slimmed-down touring lineup—someone has to mind the store, he says. Bedford's family started the Bedford Advertising firm in the '80s, which helped inspire the build-out of the new B room for voiceover recording.

But, as Saenz explains, "The main motivation was to help keep everyone here as prolific as possible with their workflow." The calendar is so full, he says, that the addition of the B room, in combination with a small C room, an editing suite, "allows us to decide what projects belong where. It gives us a lot more flexibility."

That said, "I know by talking to people at Dallas ad firms that there's quite a bit of work they're having to turn down, because they can only take on so much. We're hoping to catch some of that spillover," he says—especially weekday mornings, before the rockers roll into work.

The B room, unveiled in late January, is outfitted with an MCI JH-428B mixing console and racks of classic outboard gear, and offers tielines to studio A. But Saenz is looking for one more piece. "I need to shop for a really clean channel strip for our voiceover side because most everything we have here is colorful," he says. Current contenders include a Grace Designs Channel Strip, Avalon 737 or Manley VoxBox.

Directly below the B room, in A's control room, Saenz has just added some mic preamps and EQs that have been racked from an old Quad Eight console. "We also have some Warm Audio stuff that one of the guys brought in and have been trying out, a pair of their Pultec-style EQs. We have some real Pultecs, so we've been having fun A/B-ing them. I also have the Purple Audio MC77s, which I've loved for years. It's been fun hearing those against



PHOTO BY TIM O'KEEFE

Jeffrey Saenz

the Warm Audio interpretation of probably a different circuit of the 1176," he says.

The main live room, with its 20-foot ceiling and decades-old acoustic treatments, is great for tracking, he says. "I can't say that it's dead, but it's tight and controlled. Drums sound great in there; any acoustic instrument sounds fantastic. You can put a singer just about anywhere in that room and you're ready to go."

The room lends itself to tracking a group live, he says. "We have such control from source to source with how the room is naturally that it allows us to get the most out of those takes and still be able to punch in or do an edit. There's an energy about catching a take of, say, a keyboard player, bass player and a drummer just locking together. And one thing I learned from Dave Cobb is [to not be] afraid to comp full band takes—say, a section from take three into take seven—with no click track."

Sure, there's bleed between mics, he says, "But the right kind of bleed, for me, is like glue; it pulls everything together. I'm of the mind to track everything with as much vibe as possible."

Modern Electric Sound Recorders
modernelectricsound.com



Modern Electric Sound Recorders' Room A.

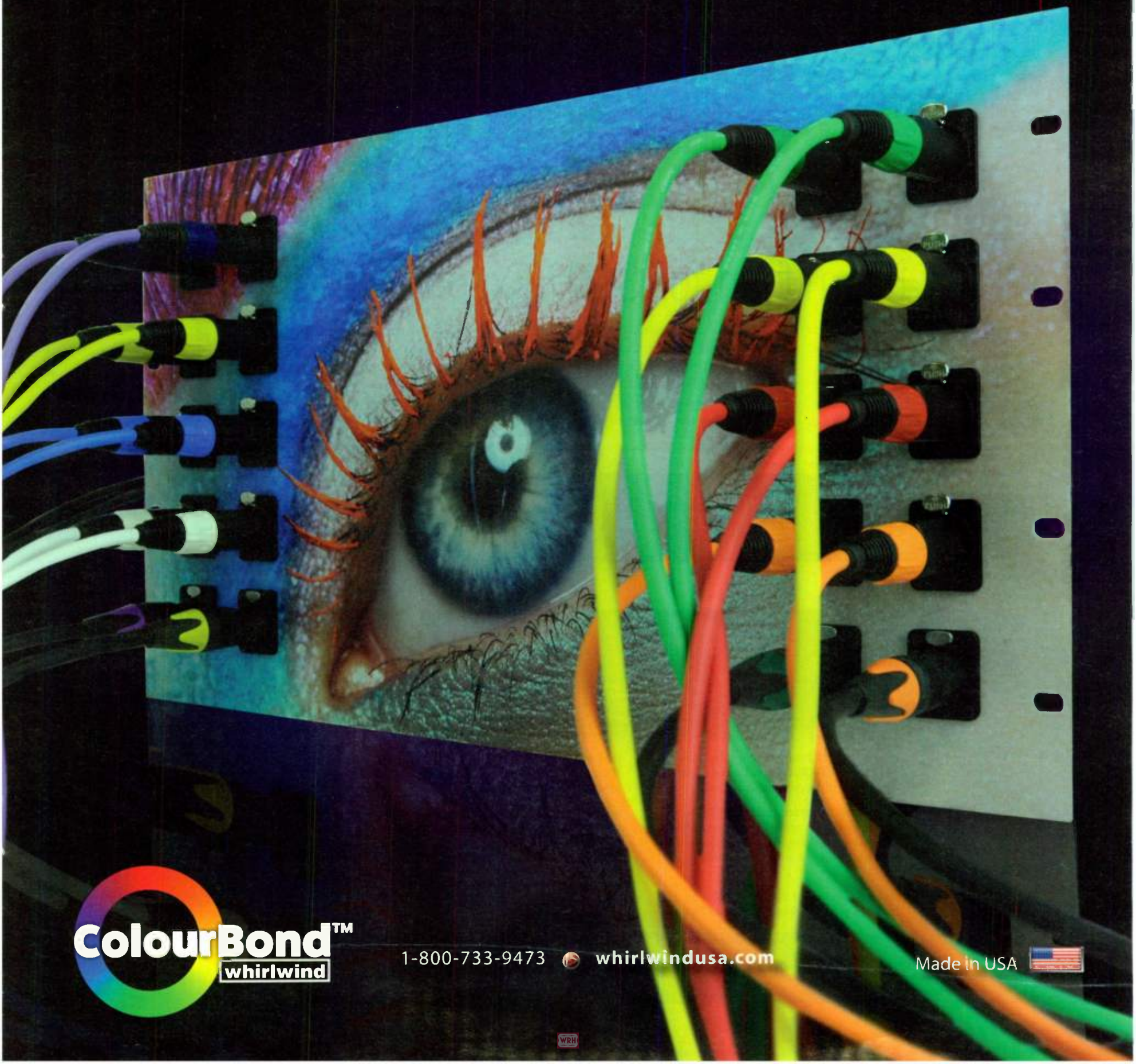


The main live room at Modern Electric was originally built in 1968.

PHOTO BY RICO DELEON

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Sweetwater Studios Records Hometown Songstress

FORT WAYNE, IN—Last year saw Fort Wayne teen Addison Agen grab national attention on NBC's talent reality show *The Voice*, as she became the runner-up of season 13. The 17 year old may have returned home to Indiana, but Agen still has her sights set on building a musical career. Helping make that happen is another part of the Fort Worth musical community: Sweetwater and its Sweetwater Studios recording facility.

Agen has availed herself of the pro audio/MI retailer's professional resources to record her first album and see it through to completion. "We are proud to support Addison with our best-in-class recording facilities and staff," commented Mark Hornsby, vice president of operations, Sweetwater Studios.

"As an Indiana-based company, we're hugely supportive of our local region," concurred Thad Tegtmeier, vice president, campus sales operations and artist relations, Sweetwater. "We knew the scope of what we would be able to offer Addison to



Producer Mark Hornsby's dedication to making Addison Agen's debut album perfect included traveling to London to record strings at Abbey Road Studios.

ensure her first recording was a success." That turned out to be use of Sweetwater's three Russ Berger-designed recording spaces, access to a warehouse containing over 150,000 square feet of pro audio gear and musical instruments, and more.

Teaming up with co-producers

Hornsby and Phil Naish, Agen began planning the album, backed by a support package that connected her with on-staff session talent and key manufacturer sponsorships. "At Sweetwater Studios, we have the ability to do something very different than what the rest of the industry can offer,"

said Tegtmeier. "We are able to bring our manufacturer partners to the table to share in the support of our recording artists, with the gear used during the recording process, as well as the promotion of the project."

As a result, Agen was soon connected to manufacturers such as Shure, Martin Guitar and Universal Audio. For the recording, a full complement of Shure microphones was utilized, including the KSM44A, which proved the choice microphone for Addison's lead vocals. Meantime, Martin 00-28 and a D-28 were the go-to choices for acoustic guitar, while a Universal Audio Apollo interface was used for its AD/DA conversion and mic pre technology.

Agen's album is due to be completed by June 1, and a video documentary is in the works that captures the recording process from start to finish, including string sessions that were also produced by Hornsby and recorded at Abbey Road Studios in London.

Sweetwater Studios
www.sweetwaterstudios.com

Mixing Elton John for 360° Experience

LOS ANGELES, CA—Helping kick off Elton John's upcoming four-year farewell tour, effects company Spinifex was recently tasked with putting together *Elton John—Farewell Yellow Brick Road: The Legacy (VR360)*, a

career-retrospective project enhanced by modern storytelling technology. While the CGI brought to bear was impressive, getting the music element of the endeavor just right was crucial.

Through a turn of events, engi-

neer Brian Yaskulka wound up mixing most of the project on a pair of AKG K702 reference headphones with a Waves Nx Head Tracker attached, providing information to Nx Virtual Mix Room plug-in. While he



Brian Yaskulka working on the mix for *Elton John—Farewell Yellow Brick Road: The Legacy (VR360)*.

was originally supposed to mix in the theater room at Spinifex, schedule conflicts meant he had to work in his own studio—which was in pieces at the time, as he'd just relocated the facility to Sound City in Van Nuys, CA, and hadn't reassembled his 5.1 setup yet.

"I had heard good things about Waves Nx technology for 3D audio on headphones, so I thought I'd give it a try; nothing to lose," he said. "I ended up mixing 90 percent of the project on headphones. The remaining 10 percent was done in the Spinifex theater, and I was amazed, as it sounded almost exactly the same in that acoustically magnificent theater as it did on my headphones with Nx. Everything—the localization, the spaciousness—matched, and I ended up just making a few tweaks here and there, mainly to be able to work with the producers, in order to dial in sound design elements."

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Producer/Songwriter Reggie Lucas, Dead at 65

BY CLIVE YOUNG

NEW YORK, NY—Producer, songwriter and guitarist Reggie Lucas, who worked with Madonna, Miles Davis, Roberta Flack and many others, died of complications from heart disease on May 19 in New York City. He was 65.

Launching his professional career as a guitarist at age 14, Lucas quickly started gigging around New York City and Philadelphia, and soon hit the road with Billy Paul (“Me and Mrs. Jones”). That led to joining Miles Davis’ band at age 19, where he spent the next four years touring the world and performing on numerous recordings with the jazz legend, until Davis went on hiatus in the late 1970s. In the years that followed, Lucas began collaborating with James Mtume; the pair wrote their first hit, “The Closer I Get To You,” for Roberta Flack and Donny Hathaway in 1977.

More co-written hits followed, including “Back Together Again” for Flack and Hathaway, and Stephanie Mills’ “Never Knew Love Like This Before.” The two songwriters also produced the latter single, which won a Grammy for Best R&B Song



PHOTO COURTESY REGGIELUCAS.COM

Reggie Lucas joined Miles Davis’ band at 19 and went on to produce Madonna’s first album.

in 1981, and went on to produce numerous acts together, including Lou Rawls, The Spinners and Phyllis Hyman.

Going their separate ways in the early ’80s so that Mtume could become a solo artist, Lucas had his own short-lived act, Sunfire, but focused primarily on production; among his earliest solo efforts as a producer was

the first album by a fledgling dance artist, Madonna. Lucas produced six of the eight tracks on her debut; released in 1983, it went five-times platinum in the U.S. and sold more than 10 million copies worldwide. Additionally, Lucas wrote two songs for the record, “Physical Attraction” and “Borderline,” the latter of which became Madonna’s first *Billboard* Top 10 hit. The artist and producer had musical differences as to the direction her tracks should take, however, and Madonna ultimately brought in Jellybean Benitez to remix some of the songs.

In ensuing years, Lucas worked with the likes of Rebbie Jackson, Randy Crawford, The Weather Girls and The Four Tops. In 1986, he founded Quantum Sound Studios in Jersey City, NJ, located in a 19th century building that had formerly been a chandelier factory. Initially outfitted with a 48-input SSL 4000 console with Total Recall, the studio hosted acts including the Pet Shop Boys, Jodeci, Jeff Buckley and Sepultura over the years. It also proved to be a favorite mix room for producer/engineer Andy Wallace, who put together various Helmet and Rage Against the Machine tracks there in the late

1980s and early ’90s. Lucas eventually left Quantum in 1994, doing some recording for personal projects and teaching for a short time at Montclair State University in Montclair, NJ.

Lucas is survived by his mother, Annie Wolinsky; his wife, Leslie Lucas; his brother, Gregory; and son, Julian.

Former Neil Young Home/Studio for Sale

BY CLIVE YOUNG

TOPANGA, CA—Every artist needs a place to retreat from the world and recharge; some wind up turning those sacred spaces into their workplaces as well. That was the case with Neil Young’s former Topanga Canyon home, where he built a studio 50 years ago. Today, that retreat is up for sale with a decidedly 2018 price tag of \$1,800,000.

Built in 1965, the Art Moderne building at 611 Sky Line Trail sports three bedrooms and is a mere 1,532 square feet. However, it’s built for those who prefer to be outside anyway, with many windows and multiple outdoor decks for taking in the

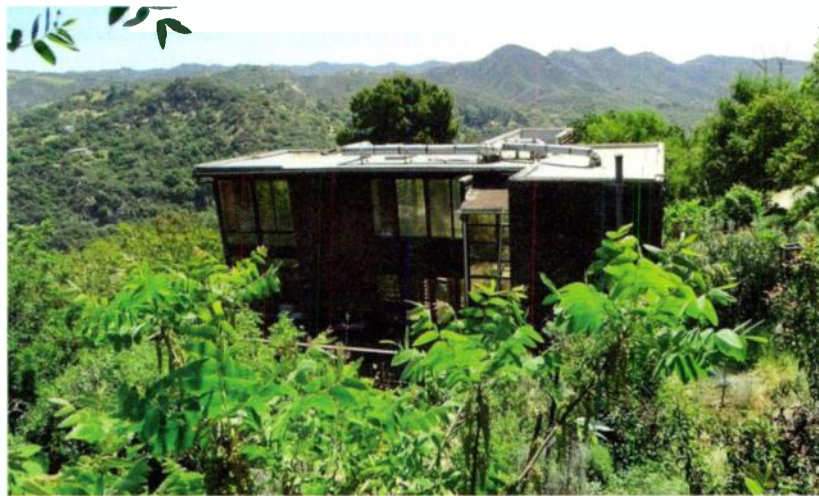


PHOTO BY MALS

Neil Young’s former home/studio in Topanga, CA, is on the market for \$1.8 million.

view. The current owners, who purchased the 5,067-square-foot lot in 2007 for \$780,000, still maintain a two-room studio on site. Additionally, many parts of the house, particularly the kitchen, appear to date back to when Young lived there.

Inspired by the setting, Young used the house as a recording studio, with many of those resulting recordings collected in 2009’s *The Archives, Vol. 1 1963-1972* box set, with three of its nine CDs reserved for output from the house, one of which—*Topanga 1 (1968-1969)*—sports the edifice on its cover.

In his 2012 autobiography, *Waging Heavy Peace*, Young reminisced about the house, recalling, “Morning on the deck began with coffee overlooking the canyon, watching everything start to move below as the day unfolded.”

When Young moved out, the building’s musical adventures weren’t over, however—eventually Bernie Leadon of The Eagles owned the house and lived there with President Ronald Regan’s daughter, Patti Davis, who recalled the home in her own book, offering, “There are so many windows in this house, it’s like living outside.”

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ARTIST: ARCTIC MONKEYS
ALBUM: TRANQUILITY BASE HOTEL + CASINO
LABEL: DOMINO RECORDS
PERSONNEL:
Produced by: James Ford and Alex Turner
Engineered by: Jimmy Robertson, Nico Quéré, Antony Cazade and Jonathan Ratovoarisoa (La Frette Studios, Paris), James Ford (London), Michael Harris, Loren Humphrey and Alex Turner (Los Angeles)
Mix Engineer: James Ford
Mastered by: Matt Colton at Alchemy Mastering (London)
EQUIPMENT NOTES: Neve A646 console; Avid Pro Tools; ATC SCM25A studio monitors



ARTIST: MATT MAHER
ALBUM: ECHOES
LABEL: PROVIDENT
PERSONNEL:
Produced by: Jason Ingram, Paul Mabury, Mitch Parks, David Garcia, Ed Cash and Matt Maher
Engineered by: Buckley Miller
Mix Engineer: Sean Moffit
Studios: Echo House and Glovebox (Nashville, TN), 1971 Sounds (Atlanta, GA)
Mastered by: Dave McNair at Sterling Sound (Nashville, TN)
EQUIPMENT NOTES: Barefoot and Yamaha studio monitors. Apple Logic; Avid Pro Tools



ARTIST: GIN, CHOCOLATE & BOTTLE ROCKETS
ALBUM: LEAN

LABEL: INDEPENDENT
PERSONNEL:
Produced by: Jake Johnson
Engineered by: Jake Johnson, Shawndell Marks, Beth Kille
Mix Engineer: Jake Johnson
Studios: Paradyme Productions (Madison, WI), Studio Gusto (Verona, WI) and Blue Piano Studio (Reedsburg, WI)
Mastered by: Chris Mittlesteadt at Journeyman Mastering (Reedsburg, WI)
EQUIPMENT NOTES: Mackie HR824 and Yamaha NS-10M studio monitors. Steinberg Nuendo; Apple Logic Pro X; GarageBand



ARTIST: THE MOUSE OUTFIT
ALBUM: JAGGED TOOTH CROOK
LABEL: TMO RECORDS/HHV RECORDS
PERSONNEL:
Produced by: Chini, Metrodome, Defty
Engineered by: Chini and Metrodome
Studio: The Mouse Outfit Studio (Manchester, UK)
Mastered by: Sappo at Advisory Studios
EQUIPMENT NOTES: Apollo Twin Duo USB console, Mackie 624 studio monitors, Ableton 9



ARTIST: CHARLIE LOOKER
ALBUM: SIMPLE ANSWERS
LABEL: LAST THINGS RECORDS
PERSONNEL:
Produced by:
Engineered by: Alexis Berthelot, Garrett De Block (second engineer)
Mix Engineer: Alexis Berthelot
Studio: Strange Weather (Brooklyn, NY)
Mastered by: Alex DeTurk at Strange Weather (Brooklyn, NY)
EQUIPMENT NOTES:

API Legacy AXS console; Dynaudio M3A, Bryston 4B SST, Yamaha NS-10 monitors; Avid Pro Tools; BURL Audio Mothership



ARTIST: TAMI NEILSON
ALBUM: SASSAFRASS!
LABEL: NEILSON RECORDS/OUTSIDE MUSIC
PERSONNEL:
Produced by: Ben Edwards and Tami Neilson
Engineered by: Ben Edwards
Studio: The Sitting Room (Lyttelton, New Zealand)
Mastered by: Chris Chetland at KOG Studio (Auckland, New Zealand)
EQUIPMENT NOTES: Avid Pro Tools; Chris Pelonis Model 4288 monitors



ARTIST: MIDGE URE
ALBUM: ORCHESTRATED
LABEL: BMG
PERSONNEL:
Produced by: Ty Unwin
Engineered by: Ty Unwin and Midge Ure
Mix Engineer: Ty Unwin
Studios: BooBoo Studio (Oxfordshire, UK), Environment Studio (Bath, UK). Orchestral sessions at Sofia Session Studio (Sofia, Bulgaria)
Mastered by: Jason Mitchell at Loud Mastering (Taunton, UK)
EQUIPMENT NOTES: Yamaha Nuage and Euphonix MC Pro consoles; Barefoot MM27 and K&H O300D monitors; Steinberg Nuendo; Avid Pro Tools



ARTIST: JESSICA MEUSE
ALBUM: HALFHEARTED
LABEL: WARRIOR RECORDS

PERSONNEL:
Produced by: Jim Ervin
Engineered by: Dave Dominguez
Mix Engineer: Dave Dominguez and Jim Ervin
Studios: Capitol Records Studio B (Hollywood, CA), Warrior Records (Hollywood, CA)
Mastered by: Mike Bozzi at Bernie Grundman Mastering (Hollywood, CA)
EQUIPMENT NOTES: Neve 8068 56 input console; Avid Pro Tools HDX; PMC QB1-A, Tannoy Ellipse iDP 10, Yamaha NS-10, Roland DS-90A, Avantone studio monitors



ARTIST: PEGGY JAMES
ALBUM: NOTHING IN BETWEEN
LABEL: HAPPY GROWL RECORDS
PERSONNEL:
Produced by: Jim Eannelli
Engineered by: Jim Eannelli
Studio: Happy Growl Studio (Milwaukee, WI)
Mastered by: Gary Tanin at Daystorm Music (Milwaukee, WI)
EQUIPMENT NOTES: (Daystorm Music) Avid ProTools, custom Yamaha NS-10M with JBL SB-1 subwoofer, Klipsch Heresy, Auratones



ARTIST: GINKGOA
ALBUM: ONE TIME
LABEL: INDEPENDENT
PERSONNEL:
Produced by: Antoine Chatenet
Engineered by: Antoine Chatenet
Mix Engineer: Yonatan Goldstein
Studio: Studios 16-18 (Paris, France)
Mastered by: Benjamin Weber at Studios 16-18 (Paris, France)
EQUIPMENT NOTES: Focal Trio monitors; Ableton Live; Avid Pro Tools

White Mark Builds Sanctuary

SUFFOLK, UK—UK studio design consultancy White Mark Ltd. (www.whitemark.com) helped with equipment choices, studio design and acoustics—alongside Danish architects Bjarke Ingels Group (BIG) and studio director Ann Mincieli—at The Sanctuary at Albany in the Bahamas, which features a 48-channel SSL Duality Delta console, custom Exigy monitors and a host of outboard gear in the main studio, plus five smaller rooms.

Metric Halo Makes Music

MILWAUKEE, WI—Chris Hanson, guitarist, executive producer and owner of MidCoast Music, uses Metric Halo (www.mhlab.com) hardware, including four LIO-8 converters, a ULN-8 preamp/converter, a 2882 interface and a ULN-2 pre/converter, plus Metric Halo Production Bundle plug-ins, in the studio and on the road to produce his company's two main catalogs.

Zobler Mixes with Manley

LOS ANGELES, CA—Two-time Grammy-winner Erik Zobler has been using Manley (www.manley.com) gear for decades, starting with a Stereo Pultec EQP-1A, then a Massive Passive. Recently he has been mixing FOH for Kenny Loggins tours, recording Romanian *X Factor* participants, mixing music for the 2018 film *The Little Mermaid*, and mixing a new funk/jazz album for Byron Miller.

Mackie Gets Paranormal

KUALA LUMPUR, MALAYSIA—John Jeevasingham, music director for Paranormal Records in Malaysia, recently updated the label's studios with Mackie (www.mackie.com) XR824 8-inch powered monitors.

Can Pro Audio Software Sustain?



BY CRAIG ANDERTON

Last November, the demise of Cakewalk—a software company that introduced many technological advances over its 30 years in business—caused ripples documented in my January column. But things change fast in the software world.

In late February, BandLab—which combines social media with music-making—acquired Cakewalk’s intellectual property. BandLab is a platform for collaboration, learning music and getting music out into the world; the company decided to release what had been Sonar as a new program, Cakewalk by BandLab, *for free* (albeit without third-party add-ons that required royalty payments). Clearly, this concept has nothing to do with pro audio—or does it?

Face it, we’re at the mercy of companies that make computers and software. Shudders go through our community when Apple appears to have lost interest in desktop computers, or Microsoft decides that everything really should be stored in the cloud. Pro audio software companies are vulnerable. They aren’t very profitable, have to battle software theft, and they depend on someone else’s operating system. Even a stalwart like Pro Tools is part of Avid, whose stock price has been declining steadily since its high in 2005; it’s gone down almost 12 percent in the past year, despite a small bump in Q4 2017.

I sure hope pro music software isn’t going to go away, but the les-

sons of Cakewalk, Emagic, Steinberg, Digidesign and Syntrillium are instructive because each presents possibly sustainable economic models for pro audio software.

The “We Need these Guys” model: Yamaha acquired Steinberg after the latter’s failed attempt to go public, thereby filling a hole in its product portfolio. Yamaha became a player in pro music software, and Cubase/Nuendo could complement its keyboards by using them as control surfaces. Furthermore, the robust notation capabilities fit Yamaha’s hold on the educational space.

Similarly, by acquiring Emagic (and hiring some of Opcode’s brain trust), Apple became a player in music software, lending credibility to its pitch that the Mac is the computer for artists and creators. This acquisition also spawned GarageBand. Ultimately Apple standardized on the Core Audio and AU plug-in formats to replace the antiquated pre-OS X options. While music software likely makes money for Yamaha and Apple, it provides value beyond the products themselves.

The “First One’s Free” model: Many users saw releasing Cakewalk software for free as idiotic, but I saw it as smart. BandLab is part of a much larger business entity, and offering Cakewalk for free is probably about marketing as much as it is about profits (and it provides a “next step” for BandLab users to take their music further). But it can also make money once the company offers add-ons to the free core program—the “sell the razor blades, not the razor” concept, which is the model for Microsoft and Apple’s operating systems.

The “Subscribe or Die” model:

In return for becoming addicted to the software, you have reasonable assurance that the software will continue to exist because the company will enjoy predictable cash flow from it. A subscription model also means the company will provide some degree of updating and bug fixing to make sure users don’t jump ship. Also note that larger companies (Avid, Adobe) have been most successful with subscriptions, and this alone provides a sense of security.

The “It Makes No Sense Not to Do This” model: When PreSonus introduced Studio One, the company had a growing audio interface business, and bundling software from other companies required a licensing fee. Creating its own software saved the company money, but because the software came with PreSonus interfaces and worked with its mixers, users were exposed to the software and many adopted it. Similarly, Adobe had no audio solution to complement its own video programs and create a suite, so it made sense to buy Syntrillium’s Cool Edit Pro—regardless of whether it sold on its own or not.

What these models have in common is that music software is not significant enough to exist as a major, profitable entity without the backing of a bigger company that has a wider vision. (An exception is Ableton, but that company basically created a market; until very recently, only its software really addressed it. Ableton has also created custom hardware for that market.)

Will music software go away? I certainly hope not. Increasingly, though, it seems that pro audio software not only rides on the coattails of the computer industry, but

it needs the corporate equivalent of patronage from the Medici family. Fortunately, the Medicis need audio software.

Author/musician Craig Anderton updates craiganderton.com every Friday with news and tips. His latest album, *Simplicity*, is now available on Spotify and cdbaby.

Rarefied Recording Grows Organically

SAN DIEGO, CA—Studio owner Roy Silverstein built his facility, boutique studio Rarefied Recording, as something of a passion project over the years. Silverstein initially built a home studio that eventually took over his house, so in 2010 he knew he wanted to build a proper recording studio, so he enlisted studio designer Wes Lachot to help envision his facility. After two years of planning and another year of construction, Rarefied Recording was finished. Silverstein has been recording regional bands there ever since, as well as hosting guest engi-



Rarefied Recording is centered around a 32-channel Neve Genesys G64.

neers like Brian Scheuble (Aimee Mann, Leann Rimes, Elton John, Tom Petty) and Danny Kalb (Beck, Jack Johnson).

Most recently, Silverstein up-

graded the facility with a 32-channel Neve Genesys G64. “I loved the quality of the sound, of course,” he said, but added, “I wanted something with a definite sonic stamp that could impart some magic to my recordings, so the 1073 mic pre and 1084 EQ were a no-brainer in that regard. Second to the sound is the board’s functionality; having Total Recall is a godsend. I have a feeling that my Genesys will be holding court at Rarefied Recording for a very long time.”

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Cut Chemist

(continued from page 18)

museum pieces made their way into my record. It really brought it all together. And the vocal chain here is one of the best I've heard."

For vocal overdubs at Studio 4 West, says Kravitz, "We were using the M 49 mic, the magical EMI France 1093 Neve modules, Pultecs, the Collins tube limiter." The centerpiece of the room is a GML-automated Neve 8036 desk, originally from Romania. The drum kit, Jeff Porcaro's from his time with Boz Scaggs, made it onto the record courtesy of Kravitz, who is also a drummer.

Early in the process, at his previous Venice facility, The Bunker, Kravitz put Parks' drum tracks through his black-faced germanium Neve modules. "They were Roy Thomas Baker's, used on the Queen records. It's a really powerful EQ. When you push them, they sparkle and ignite," he says.

Biz Markie's rap was recorded in a closet at McFadden's house through his Neumann M 149 mic. "We spent a lot of time cleaning up the grit of the M 149," says McFadden. "It was the perfect mic—it gave him an underground, distorted feel. It really gave it an edge."

Part of the album's lengthy gestation period was spent figuring out how to seamlessly bring together sample and live musicians, says McFadden. "I spent a couple of years trying to marry the two worlds together. I'm very finicky about how those worlds collide."

For instance, "How do my live drums sit on top of my sampled drums? If there's any flaming, you're

out of here. It had to be right on top—and Deantoni Parks was. It was a dream come true to collaborate with a musician of that type," he says.

Kravitz enjoyed the collaborative process. "Lucas brings you in to do what you do. One of my favorite dynamics of how we worked together was, he would be tweaking some edits and would hold the mouse up and hand it over. I'd go in and sizzle it up and do my 'Andy' thing. And 10,000 edits later, it's a Cut Chemist record."

The back and forth continued into the mastering process. McFadden has been working for about 12 years with mastering engineer Mike Marsh, who recently opened his own facility after 28 years at The Exchange in London. "But I'd never worked with Andy before, so these were different mixes than Mike was used to getting. He nailed most of them, but there were a couple where Andy said, 'Let me give it a shot.'"

"Sometimes we were mastering the masters," says Kravitz. "Then going back and tweaking the mix and re-mastering it. We checked it on multiple end-user formats—iTunes, an iPhone, on a laptop—uploading, then playing it back, all while watching the 'scope.'"

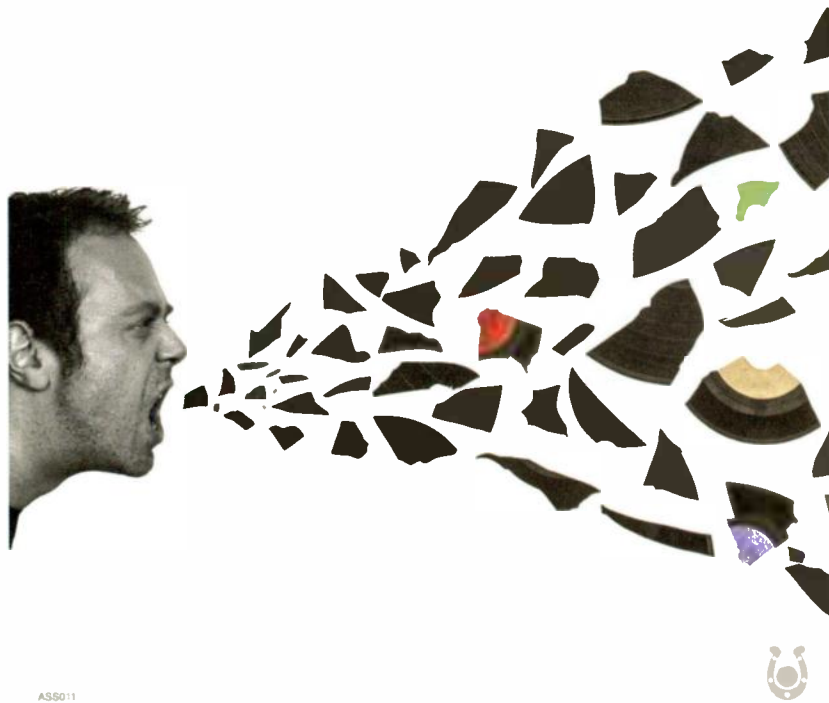
"I said, 'We have to try everything to find out what works,'" says McFadden. "I was happy we did. It was a long process, but, in the end, I want to know that it is absolutely the best version that we could put out."

The final step was the vinyl mastering, performed by Simon Davey at The Exchange. "He did a great job," Kravitz reports.

Initially the album was too long to fit onto four sides. Then Davey pointed out that the results would be brightest at the start of each side and would start

Cut Chemist

Die Cut 



ASS011

Cut Chemist's sophomore album took eight years to record.

to lose some of the high frequencies 10 minutes or so in, says McFadden.

"All the songs where I had dialed in the sparkle, the hi-hat goodness, were in the dead zone," he says. "So I took 'Die Cut (Wrap)' off and it freed up all this room. Then I had to rearrange everything so that the songs that needed the sparkle were first on each side."

When he received the recut sides, McFadden says, "On first listen, it sounded like his cutting needle was bad. He said, 'That's impossible, it's brand new.' I said, 'But it's different than the one you used the first time.' He called me back; they'd sent him a bad one."

"I can attest to the fact that Lucas hears everything," Kravitz says. "I

would move a dial one-tenth of a dB at 11k and he'd hear it."

"Finally, we got the vinyl cut. I'm very proud of it. It sounds so good," says McFadden.

But it was important to get the record—and not just the vinyl version—right, he says. "This record is going to be around a lot longer than I am. It's got to stand the test of time and be relevant now and later. It was made over the course of so many years that it's not rooted in one period. I think that helps it stay timeless."

"I'm glad I did it. But it goes to show how crazy I am, trying to be perfect."

Cut Chemist
www.cutchemist.com

Prince

(continued from page 18)

was what he really, really worked so hard at. In the studio, he would cut corners on quality in order for everybody else to keep up with how much stuff he was writing at the time."

The vault itself was the brainchild of Susan Rogers, who was Prince's go-to studio engineer throughout the mid-'80s. She told *The Guardian* in 2015, "I joined Prince in 1983 when he was preparing to do *Purple Rain*. I realized it would be smart for me to get his tapes together in one place. I was aware there were a lot of pieces missing. It became an obsession. I wanted us to have everything he'd ever recorded."

The hundreds of police investigation photos released by the Carver



County Sheriff's Office bear that out, documenting the overstuffed storage room, the floor area immediately outside the vault covered in tape boxes, and multiple filled storage closets throughout the facility—with little if any security, much less vault doors—jammed with shelves of

audio- and videotapes.

Today, the contents of the vault have been moved to the Los Angeles bureau of entertainment media storage company Iron Mountain. According to the *New Yorker*, that change of venue came just time, with the magazine citing court documents

that state there were "several indications of damage and degradation due to poor humidity and temperature controls" inside the vault, so much so that there was "evidence of water intrusion on the walls and ceiling" and that some tape boxes "adhered to shelves and had to be peeled off."

Whether all—or even a small portion—of the vault's contents can or will be released remains to be seen, but Warner Bros. Records has announced two new Prince albums, with the first due out on Sept. 28, and streaming service Tidal will unveil a new collection in 2019, finishing off a three-album deal it had with the artist at the time of his death.

THERE'S MORE ▶ To see more police photos of Prince's vault and studios, visit <https://bit.ly/2rfXQ3S>.

briefs

Newman Installs Yamaha

LOS ANGELES, CA—After consulting with 20th Century Fox in Los Angeles about a monitor console for the Newman Scoring Stage, Hollywood Sound Systems delivered a Yamaha (www.yamahacom) Rivage PM10, which has since been used on such films as *The Greatest Showman* and *The Mountain Between Us*, and TV shows including *The Orville*, *American Dad*, *Family Guy* and *Empire*.

Tascam Captures Pensado

LOS ANGELES, CA—Chongor Goncz, production assistant and audio engineer for the online show *Pensado's Place*, uses Tascam's (www.tascam.com) DR-10L digital audio recorder with lavalier microphone and DR-701D linear PCM recorder/mixer for DSLR cameras when capturing content that will be streamed.

Avid Dances with KMK Audio

LOS ANGELES, CA—J. Mark King, freelance audio mixer and co-owner of KMK Audio, and business partner Butch McKarge, who have used Avid Venue live sound systems to mix the music for ABC's *Dancing with the Stars* for eight years, have chosen dual Avid (www.avid.com) Venue S6Ls—purchased through Jan Landy at SoundBroker.com—for the 26th season of the show, which premiered on April 30.

Shure's a Little Bit Country

LAS VEGAS, NV—ATK Audiotek provided dozens of channels of Shure (www.shure.com) wireless equipment, including 24 channels of Axient Digital, 10 channels of UHF-R and 22 channels of PSM 1000, for the recent 2018 Academy of Country Music (ACM) Awards, broadcast live from the MGM Grand Garden Arena in Las Vegas, while Soundtronics provided wireless antenna system design and infrastructure.

Gratitude Sound Grows Cross Country

BY STEVE HARVEY

BOSTON, MA—"I didn't set out with the grand scheme of starting this company," says Bryan Hinkley, founder and executive producer of Boston-based original music company Gratitude Sound. "It was almost out of necessity, because I really didn't know what else to do."

Hinkley had been touring the world for a couple of decades with a succession of hardcore bands, working as a guitarist, guitar tech and stage manager with bands such as Tree, Gang Green and Clutch. But the excitement of the road began to wear off, he says, and he joined up with some friends he had made during his touring days who were in similar situations—with families and mortgages—and fell into the world of advertising. "It just kind of happened; it was not a planned-out thing," he says.

Hinkley had already established himself as a songwriter, recording several of his compositions with Clutch and producer Joe Barresi at



Gratitude Sound founder Bryan Hinkley (left) has appointed Scott Feldman, a 10-year veteran of the L.A. music scene, to establish a West Coast office.

Sound City in 2006. As an auxiliary guitarist, he says, "I also did a live record in Australia and another at the BBC with Clutch."

Off the road, he turned for a time to composing for film, TV and advertising in Nashville before returning to his hometown of Boston, where he established Gratitude in early 2014. In just four years the business has grown to such an extent that he has charged Scott Feldman, a 10-year veteran of the L.A. music scene, with establishing a West Coast office.

"I brought Scott in as a partner

because I was trying to do everything and manage the business side of it all myself. It became too much for me to handle," he says.

"Plus, I needed someone to bounce ideas off of. My wife will only listen to so many of my theories."

The two had previously worked together as composers. Feldman has his own music company, Darkbloom Productions, having gotten into the business as an assistant and music supervisor on FX's *Sons of Anarchy*.

"The other thing I knew was that he's a people person. When I met with him in a bar in L.A., I could tell that everyone he knew there genuinely liked him. That's more important to me than a lot of things because that's not a teachable trait."

Despite Feldman's proximity to Hollywood's film community, there are no immediate plans to stray from the core commercial music business, according to Hinkley. "When I first started, I was naive and thought we would do both, but I realized that

(continued on page 28)



The Audio Offerings of VRLA 2018

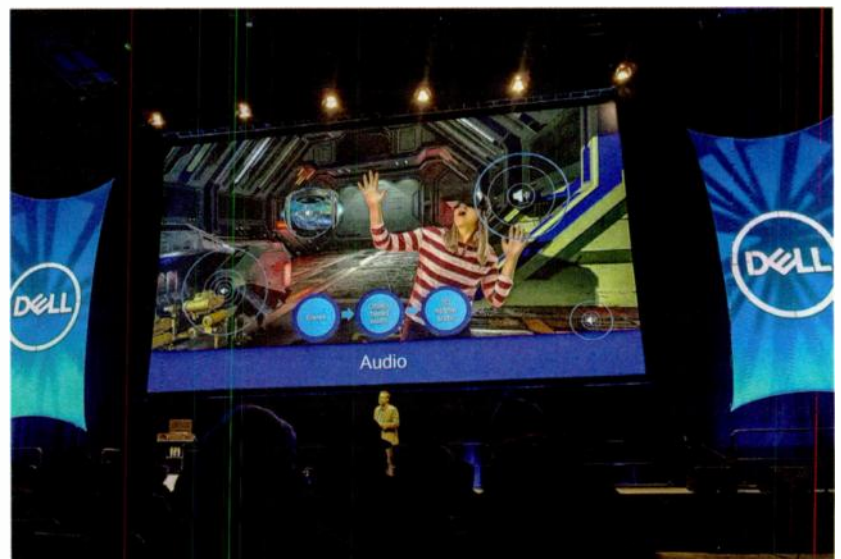
BY STEVE HARVEY

LOS ANGELES, CA—"Five years ago, VR was still a pipe dream," commented Jonnie Ross, co-founder with Cosmo Scharf of the annual VRLA immersive technology festival. VRLA started in 2015 with a meet-up of about 150 people; this year's two-day conference, which took place May 4-5 at the Los Angeles Convention Center, featured more than 200 exhibitors, sponsors and media partners.

"We've gravitated toward VR [virtual reality] and immersive computing for different reasons, but we share this common desire to use technology to change our reality for the better," said Ross, introducing the first day's keynote speakers.

VR has come a long way in those five years, but "this race is not a sprint—it's a marathon," said Hugo Swart, Qualcomm's team leader for XR.

"XR," or extended reality, is an umbrella term that encompasses virtual reality (VR), augmented reality (AR) and mixed reality (MR). Qualcomm is now on its third generation of XR-enabling microprocessors, Snapdragon 845, which allows 6DoF,



Audio—one of three pillars of XR, along with interactivity and video—has evolved from stereo to object-based to 3D spatial sound, said Hugo Swart, Qualcomm's team leader for XR, during his keynote at VRLA 2018.

or a range of movement by the user in six directions: left/right, forward/backward and up/down. The latter is generally accomplished with head movement. The ability for the user to change position with 6DoF is crucial for a successful mixed reality experience.

Noting parallels between the development of XR technology and smartphones, which iterated through

better processors, better displays, improved power consumption, more GPU capabilities and more content during their evolution from a "brick" to today's devices, he continued, "It's a multi-year cycle where we get better and better, and then, over the course of five, 10 years, we get to something truly amazing."

There are three pillars to immer-

(continued on page 28)

Gratitude

(continued from page 27)

they're very different worlds. Advertising is like a machine gun. Film scoring is like fly fishing."

Feldman has his own project studio, and Gratitude Sound will shortly be opening an office in the L.A. area. "I like to be around other music-related businesses," says Hinkley. "I think community is a good thing. Having a network and being able to share resources, and conversation, usually sparks creativity."

He speaks from experience. Having outgrown his own home studio, several years ago Hinkley moved into an office at The Record Company, near Boston's Newmarket Square. Founded by Berklee College of Music graduate Matt McArthur, the nonprofit organization offers recording facilities to the community at an affordable rate (and at a higher rate to commercial ventures). The Record Company—which

"I like to be around other music-related businesses. I think community is a good thing. Having a network and being able to share resources, and conversation, usually sparks creativity."

Bryan Hinkley

lists iZotope co-founder and CEO Mark Ethier on its board of directors—reportedly hosted 1,219 subsidized recording sessions for more than 3,500 emerging professionals in 2017.

"They really liked the idea of a music-related business renting the office," says Hinkley. "It's a great symbiotic relationship. I get to see and work with a lot of the bands and musicians who come through there. If I need to hire musicians for a session, sometimes I'll find people that I've met there."

There are two studios in the building: one outfitted with a Sound Workshop Series 34 mixing console, Pro Tools HDX rig, MCI JH-24 tape machine and a wide selection of plugins, microphones and outboard gear, and a smaller B room with a vocal/voiceover booth, also nicely equipped.

"We use both of those studios for different projects," he says.

It's an ideal situation for his company, says Hinkley: "We do a lot of work with different composers and I don't always need a studio. Not having the overhead is a benefit to me, but I still have the luxury of having a studio right there when I need it."

Indeed, Gratitude can call on collaborators across Europe, he reveals. "We've got a composer in Paris who is the ultimate EDM guy, one in Italy who is a film score guy, one in Berlin, in Spain, and a few in the UK. We'll reach out to them for specific things, or if a client asks for a specific style."

The company has built an impressive client list of local, regional, national and international brands in a short time, such as Reebok, Dunkin'

Donuts and GMC. Recent projects have included spots for Wawa, Gulf States Toyota and Wrangler Jeans.

A current project, for a health-care plan, offers a welcome change of pace. "It's fun," he says, "because we're doing a whole song with lyrics. It's cool when you get to do that and not just background music."

And that's what it's all about: fun. "I just want to continue to have fun," he says. For a while, Gratitude Sound's expansion was causing him some stress. But, he says, "I'm not trying to become so big that it's not fun anymore."

Gratitude Sound
www.gratitudesound.com

The Record Co.
www.therecordco.org

VRLA

(continued from page 27)

sion, said Swart: interactivity, video and audio. "In VR, for the user to feel immersed, sound needs to match exactly what you see—and what you don't see." Audio has evolved in virtual experiences from generic stereo to object-based audio to, now, 3D spatial audio with Ambisonics, he said, revealing that Qualcomm recently released a 3D Audio Plugin developer's kit, a binaural spatial audio plug-in for Unity.

Audio within the XR experience also includes voice commands, said Swart, noting, "You want to interact in the virtual world with your voice." Qualcomm has leveraged background noise elimination, multi-mic capture and other features gleaned from its work with smartphones to ensure clean voice input to NLU algorithms, he said. NLU, or natural language understanding, falls under the umbrella of AI (artificial intelligence).

Out on the VRLA show floor, CTO Greg Morgenstein and CEO Matt Marrin, co-founders of Hear360, had some news: the company's 8ball "omni-binaural" microphone has just been awarded a U.S. patent. The doughnut-shaped device, which captures eight channels of audio via four pairs of microphones, incorporates a stand mount that allows it to be positioned directly beneath—and therefore out of sight of—a VR camera.

The 8ball mic began shipping at the end of February and has already reached more than 100 customers, Marrin reported. The package includes a software suite that, with the mic, provides an end-to-end workflow for recording and streaming spatial audio. The H360 web player works on major web browsers and Android mobile devices, while 8ball audio works natively with Samsung Gear VR, and can also be encoded and exported for use in Facebook, YouTube and Unity.

Founded 15 years ago, Swedish audio technology company Dirac Research initially offered room correction products before expanding into automotive and smartphone audio optimization tools. (Reportedly, 250 million smartphones ship with embedded Dirac products annually.) Its spatial audio business unit was formed less than a year ago, said Nadeem Firasta, vice president of product strategy and business development for North America, and the group has just begun to design products based on results of its research. VRLA was only the third public showing for the Dirac VR product following its launch at CES in Las Vegas in January.

Central to Dirac's approach to spatial audio is its dynamic HRTF (head-related transfer function). Rather than attempt to individualize HRTFs, a time-consuming, resource-intensive and costly process typically involving a dummy head, Dirac has built a library of measurements of real heads, captured to 1 degree of angular motion, according to Firasta;



Greg Morgenstein, CTO and co-founder of Hear360, revealed at VRLA 2018 that the company's 8ball "omni-binaural" microphone, which began shipping at the end of February, has just been awarded a U.S. patent.

the company then took the essential parameters and added its secret sauce. Leveraging its background with smartphone CPU optimization and memory usage, the company's newly available second-generation Dirac VR 3D audio platform provides localization with smooth rendering, even under extreme head-tracked movement, in both the horizontal and vertical planes.

Audeze (pronounced aud-a-zee) has established a reputation in the video game world for its planar magnetic technology headphones and is now moving into the world of XR, revealed company co-founder Sankar Thiagasamudram. The Mobius Creators Edition headphone, which incorporates a head-tracker, comes bundled with the latest 3D audio plug-ins from Waves: the B360 Am-

bisonics Encoder and the Nx Virtual Mix Room. Mobius Creators Edition enables stereo or multichannel audio mixing with room emulation and head-tracking capabilities in any DAW.

Mobius operates standalone with hardware processing or with the plug-ins. As hardware, it appears as an 8-channel sound card to which tracks may be appropriately routed. Together, the Audeze and Waves products enable content creators to combine mono, stereo, 5.1, 7.1 and Ambisonics elements, work on a project while monitoring in Ambisonics with real-time head tracking, then render for Oculus Rift/Go, HTC Vive, YouTube 360, Facebook 360 and other platforms.

VRLA
www.virtualrealityla.com

The Really Fast Rise of Really Slow Motion

BY STEVE HARVEY

LOS ANGELES, CA—It takes a village to produce a Really Slow Motion movie trailer music track—or, more specifically, a global community. The company, founded five years ago by Agus Gonzalez-Lancharro, has been working with a worldwide pool of composers and musicians to create tracks that have been used on campaigns for films including *Solo: A Star Wars Story*, *A Quiet Place*, *Rampage* and *Deadpool 2*—to name projects from just the last couple of months.

“I’ve worked with over 200 people in the last five years on at least one track,” says Gonzalez-Lancharro. “With some, it has been 30 tracks, and some just one track.”

Really Slow Motion (RSM) hit the ground running in 2013, scoring the company’s first music sync license with “Shredder,” a track produced with Hungarian composer and musician Attila Áts. The track, released on RSM’s first collection, was snapped up for the promotional campaign for Universal Pictures’ *Oblivion*, starring Tom Cruise. Word began to spread that there was a new trailer music talent in town.

“In a matter of a month, everybody was requesting the album,” says Gonzalez-Lancharro. The track was soon licensed for several more trailers, including *World War Z*, *Star Trek Into Darkness*, *Pacific Rim* and *Maleficent*. “So we started to produce more and more,” he says.

It was a typical overnight success story ... many years in the making. Gonzalez-Lancharro had been studying engineering and telecommunications back home in Spain, he recounts, with the idea of going into air traffic control. “But guitar was too powerful, so I quit,” he says, and instead enrolled at one of Spain’s premier music conservatories.

But he had even greater aspirations, so he applied to several institutions in the U.S. and U.K. “I got accepted by all three, but I was 20 years old with no money. I went for the cheapest,” he laughs. He moved to London to get a degree at the Guitar Institute (later renamed the Institute of Contemporary Music Performance, or ICMP), practicing during the day and learning English by watching television at night.

Part of his second-year studies included scoring to picture. “I found it interesting,” he says. “I did the assignment and it was really successful.” His teacher, Maurizio Malag-

nini—who has substantial TV credits, including *Call the Midwife* and an Emmy-nominated score for *The Paradise*—recognized his potential and offered to provide extra instruction on the finer points of orchestration.

Thinking he would remain in England, Gonzalez-Lancharro decided he wanted to teach—but to teach at university level, he needed a master’s degree. He was accepted to the Royal College of Music but couldn’t get a scholarship, so he again took the least expensive option, enrolling at Kingston University.

Adopting Really Slow Motion as the alias for his composition work, he scored some short films—his first gig coming from an online ad—and commercials. “Then I came across trailer music randomly on YouTube. I thought, I could have a shot at that; I have a contemporary music background.” With his training, he was adept at telling a story in a short length of time, he says. “You have to condense whatever you are going to say and sell into 15, 20, 30 seconds, or two minutes.”

But how could he break into the business? “I couldn’t do it overnight alone, so I went to SoundCloud and YouTube and tried to find people who I thought were at a higher stage of production quality and compositional skill. I had the ideas, but I thought, maybe if I produce with



Agus Gonzalez-Lancharro founded Really Slow Motion five years ago.

them, I could get to the standard I wanted. And that’s what I did for a couple of months.”

Collaborating with composers and musicians in Australia, Hungary, Spain and Germany to produce RSM’s first collection, he says, “I had nothing to offer, no money. I was asking them to invest their time and patience with this random dude they didn’t even know.”

With the collection complete, he used the last of his money from a recent European tour to buy a plane ticket to Hollywood. After his quick success with “Shredder,” work flowed in. “Our first custom music job was for Marvel’s *Captain America: The Winter Soldier*,” he recalls. “The premiere of that trailer was during Super Bowl 2014. That was quite different from what had been done before, and it became the trend for the next Marvel trailer; it became a reference.”

As Really Slow Motion celebrates its fifth year in business, Gonzalez-

Lancharro, a Los Angeles resident since 2017, has just released his 65th collection of trailer music tracks and has sub-publishing arrangements worldwide through Warner/Chappell Music, BMG, BeatBox and others.

The custom work continues to pour in. “We did 12 pieces just this weekend,” he reports. “This week we’re going crazy with superheroes and *Star Wars*, custom, from scratch.”

While RSM’s main focus is movie trailers, the company has more than 3,000 tracks of production music available for television and advertising campaigns and other promo work, and has deals in place with U.S. television and cable networks including CBS, Fox and HBO.

“I got an email last week from a radio station owner in Nigeria who wanted to do a radio commercial with our music. We’ll license anything, anywhere,” he says.

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After the Rope-a-Dope...

ULTIMATE EARS IPX CABLE CONNECTION SYSTEM

BY MIKE DIAS

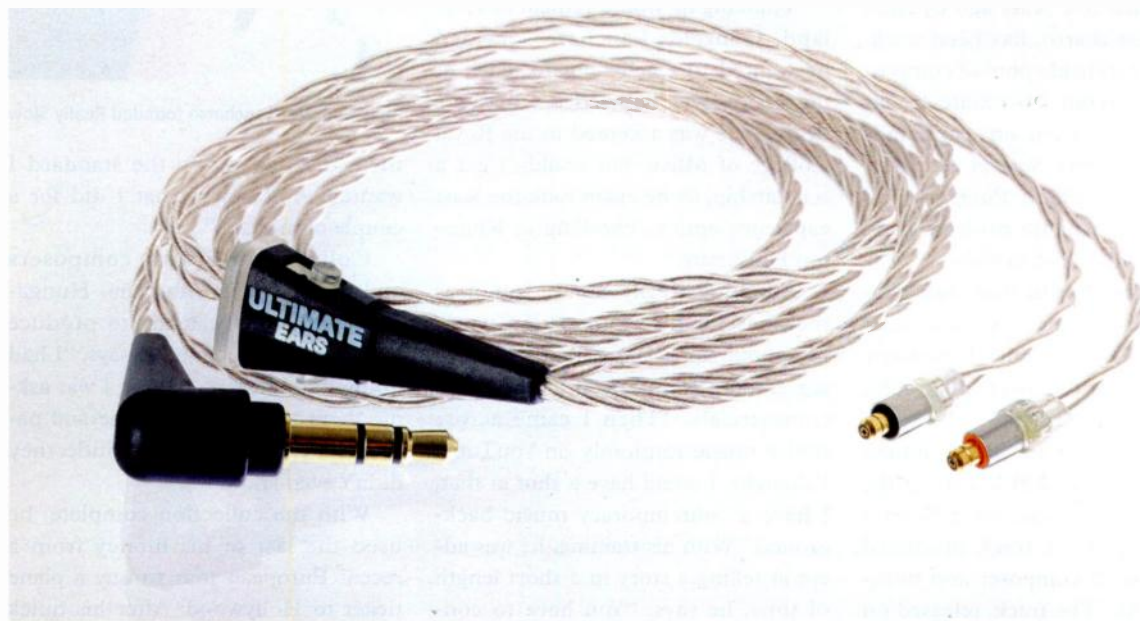
For the past five years, Ultimate Ears has been focusing inward on process improvements and refinements rather than solely on product introductions. We made a conscious decision to ensure that reliability, dependability and stability were the core tenets of all design choices.

In that spirit, we recognized that what our users needed most was a failsafe product they can trust for the entire tour. And while this sounds good and easy on paper, implementing that vision was anything but simple.

In-ear monitors are unique in our industry in the sense that they are an instrument that actually enters the body. They go in your ear canal, which means they are constantly exposed to sweat, earwax, makeup, hair-spray and all other forms of gunk. Imagine for a moment what it would be like if you were to spill soda onto your console at every show. Or if you were to pour a bucket of water onto your guitar and amp nightly. Bad things would happen.

Historically, we would accept the harsh realities of IEM use and compensate users with top-shelf customer service. When something failed and needed repair, we'd accommodate. We've made over 100,000 pairs of in-ear monitors throughout the last 20 years, so we've seen it all—every type of issue you can think of. We've seen monitors that have been stepped on. We've seen monitors so chock-full of earwax that the drivers could no longer even move, let alone resonate. And we've seen sweat corrosion quite literally eat away the metal within the interconnect sockets.

After a thorough assessment of all possible points of failure, and with the goal of making a tour-proof, rugged in-ear monitor that engineers don't need to worry about, we made a strategic plan and a business commitment to address each issue. We've been slowly chipping away at that goal ever since. When other manufacturers would announce new products with an ever-expanding number of drivers per monitor, we stayed on the ropes, focusing on 3D modeling for maximum shell wall thickness. When stories went around that we don't innovate, we kept experiment-



The Ultimate Ears IPX Cable Connection System

ing with precision-tooled PVC driver housing. And when we lost a long-term customer because something failed in the field, affecting the sound engineer's reputation because they had recommended Ultimate Ears to management and to their musicians, we apologized, made it right, and doubled down on our transition to cell manufacturing with total accountability, transparent visibility and built-in real-time learning to minimize product issues.

None of these changes alone is sexy or headline-worthy. There's no pizzazz in continuous process improvement. But we stuck to it because we knew that the industry needed this. We knew we could slowly and surely raise the bar on quality while simultaneously increasing manufacturing productivity.

Of course, we also made refinements to our existing products when better technology became available. When we were able to get our high-frequency balanced armatures to push out past 18k at +/-3 dB, we took that to our partners at Capitol Studios to refine our Reference monitors so that they could take full advantage of high-resolution audio recordings. Once we established that protocol, we went even further and doubled up, putting two True Tone drivers in our UE 18 stage monitors.

We were comfortable with evolving our products because we had committed to solving real-life chal-

lenges first. Of course, we were cooking up something special—our recent Ultimate Ears LIVE monitors—but before launching the new flagship, we still needed to address one real pain point.

What still remained were the cable and socket problems, the most common point of failure for an in-ear monitor. For that, we had to look for expertise outside of our industry. We sought out a medical-grade cable manufacturer that specializes in hearing aid interconnects for cochlear implants. If those connections can work in that environment, then we knew they'd work for rock 'n' roll!

About 18 months ago, we began our co-development process with estron a/s for the brand-new Ultimate Ears IPX Connection System. Our design parameters were simple: We needed a cable and socket system that was sweatproof, weatherproof, lightweight, wardrobe-friendly, comfortable, ridiculously strong and capable of high-resolution audio reproduction.

We also needed testing, validation and stringent tolerances.

We knew that one of the biggest industry concerns was intermittence, so we needed failsafe double redundancies in the wiring schematics. We also knew that in order to combat the fear of intermittence, engineers will routinely disconnect cables after every show in order to clean the sockets and ensure integrity. The problem

with this approach is that while all in-ears have user-removable cables, none have been designed for multiple disconnects—so we made sure to test for over 3,000 disconnect cycles.

With all of these realities in mind, we released our new cable and connection system, the IPX Connection System, rated IP67 for waterproofness. They are tested separately for sweat resistance. And they are self-cleaning. At .75 ohms, they deliver enough power to properly drive balanced armatures, which really helps open up the low and high frequencies.

The IPX Connection System is now offered as standard on every in-ear we manufacture because each and every customer is deserving of the quality that this system provides. It shouldn't be an optional add-on; it should be standard. We expect this connection system to cut in-field service needs down to a fraction of what they have been, putting artists and engineers minds' at ease, day in and day out.

While most headlines and chatter will focus on our new flagship monitor—the UE LIVE, a hybrid dynamic that captures the pure raw energy of playing an 80,000-seat arena—all of us boxing fans will know that the real knockout punch is the cable.

Mike Dias is director of sales and marketing for Ultimate Ears Pro.
Ultimate Ears
www.ultimateears.com

APOGEE/SENNHEISER AMBEO SMART HEADSET ■ EARTHWORKS SV33 CARDIOID CAPACITOR MICROPHONE ■ MOJAVE MA-1000 LARGE-DIAPHRAGM TUBE CONDENSER MICROPHONE ■ ROYER R-10 RIBBON MICROPHONE

SENNHEISER/APOGEE AMBEO SMART HEADSET

I was introduced to Sennheiser's VR recording technology at the 2017 Grammy Awards broadcast, when superstar broadcast engineer John Harris used the Sennheiser AMBEO VR 3D microphone to capture stage ambience during the show. While the technology in the mic is masterfully applied, the \$2,000 price tag places that mic in a category well beyond the reach of the casual user.

Sennheiser's more recent use of the technology in the AMBEO Smart Headset, a joint development with Apogee, is equally impressive, yet completely affordable and a perfect solution for engineers and videographers looking to record high-quality immersive binaural audio. The \$300 AMBEO Smart Headset provides connectivity via an Apple Lightning connector and is compatible with iOS 10.3.1 and higher. Look for an Android version in the near future.

The concept of the AMBEO Smart Headset is a high-quality pair of earbuds that integrate a microphone on the exterior, allowing for easy monitoring and simultaneous picture-perfect microphone placement. The user's head becomes the ideal binaural dummy head. (And in my case, that isn't far from the truth!) The omni-directional microphones sit behind inconspicuous silver grilles on the earpieces, whose design allows them to hook over the ears. Attached to the headphone cable is a small inline remote enclosure that contains an Apogee-designed high-quality Soft Limit-equipped A/D converter and stereo mic preamp.

The remote also gives access to the various headset controls, including the Situational Awareness slider, which allows the wearer to control how much of the outside world's sounds are shut out via Active Noise Cancellation (ANC) or let in via Transparent Hearing (TH). TH has three presets: Reduce Level, which lowers the sound in a loud environment in a manner similar to earplugs; Natural Level; and Amplify Level, which amplifies the surrounding sound so you can hear every nuance.



Settings can be further customized via the free Smart Headset iOS app, which allows the recording level to be set (two settings: Natural or Reduced) and the playback EQ to be inserted (there are four preset EQ curves as well as a customizable curve).

The majority of the recording I've done with the headset has been audio only. In the time I did spend using it while recording video, I quickly realized the importance of keeping your head pointed in the same direction as the camera—which is not always the

natural thing to do. Turning your head independent of the camera creates an audio track disconnected from the picture. As long as your head matches the camera, the headset captures a rich, smooth, natural binaural soundfield at a quality far superior to the device's internal mic. At first I was disappointed that there are only two record levels, but between the level control and the Apogee Soft Limiting, I never had a problem making it work. If it's loud (at a concert, in traffic, on an airplane, etc.) set the record volume to Reduce Level. Otherwise, set it to Natural Level. That's all there is to it.

The 24-bit, 96 kHz audio-only recordings I've made with the AMBEO Smart Headset

are exceptional. It's run the gamut from busking on the street to a rock band's sound check to random street noise, and in every instance it's been fantastic. Anyone involved in capturing video with an iPhone for VR applications should strongly consider incorporating this headset into their workflow. Both Apogee and Sennheiser have some great examples of audio recorded with the headset on their websites.

The longest I've recorded with the headset is approximately 45 minutes, though in that time I experienced



BY RUSS LONG

Russ Long lives and works in Nashville, engineering and producing a wide variety of music and film projects. russslong.ws

no fatigue whatsoever, so I anticipate that having it on for two or three hours would not be a problem. From what I can tell, the headset works with any video app. I tried it with several and did not encounter problems.

Audio-only recording requires the Apogee MetaRecorder app (free, \$4.99, \$9.99 or \$14.99 depending on features), which works flawlessly with the headset. MetaRecorder supports audio recording in the WAV or CAF format up to 24-bit, 96 kHz. Audio recorded with video is limited to 128k AAC.

The earbuds themselves are quite impressive. They offer a 15 Hz–22 kHz frequency response with 112 dB max SPL and are an ideal option for listening on the go. The headset includes three earbud sizes and a carry bag. Users wanting a bit more protection for the headset should consider the Pelican 1010 Micro Case, as it is waterproof, provides very good protection, and can be purchased on Amazon for \$10.

Apogee Digital
www.apogeedigital.com

EARTHWORKS SV33 CARDIOID CAPACITOR MICROPHONE

I've owned, used and loved Earthworks Audio microphones since I first encountered them more than 20 years ago. They are stunningly accurate (often boasting a flat frequency response extending up to 50 kHz!), extremely well made and, while not cheap, are still an amazing value considering their performance and build quality. Primarily a manufacturer of instrument microphones, Earthworks introduced a handheld vocal mic (the SR40V) for live performance a few years back. Now the company offers the SV33, a \$2,399 discrete Class A cardioid capacitor microphone designed specifically for vocal recording.

While it bears no sonic similarity, the 8.3-inch SV33 has an appearance with regard to size, shape and weight similar to the Electro-Voice RE20. But the similarities end there, as the SV33 is a sonically pristine, full-range microphone that offers exceptional, ultra-high-fidelity performance. The mic, which weighs 2.5 pounds, has a dark matte gray suede-like finish. Its small, 0.55-inch (14 mm) diaphragm provides a stunning 30 Hz–33 kHz frequency response. The mic can handle a hefty 145 dB SPL and has a self-noise of only 15 dB A-weighted.

Included with the SV33 is a pivot arm mic mount and a beautiful cherrywood box. While it doesn't provide shock absorption, the pivot arm gives you full vertical or horizontal rotation, allowing the mic to be precisely positioned quickly and easily. The mic is internally



shockmounted, which I found totally adequate during my testing, but if you need additional isolation, Earthworks sells a shockmount as an accessory. The box is handcrafted from solid cherry and provides both aesthetic appeal and serious functionality.

Between the capsule's capabilities and the way the design team incorporated it into the microphone body, the SV33 performs astoundingly well. It provides an amazingly flat and extended frequency response with a far larger than normal sweet spot and extremely good off-axis rejection, especially with low frequencies. The microphone's large sweet spot (you can move 70 degrees off axis in either direction with virtually no change in sound) makes it a pleasure for vocalists to sing into and easier for an engineer to record. The mic performs incredibly well on-axis and offers exemplary off-axis rejection, for pure, uncolored reproduction with minimal mic bleed. Handling noise is nomi-

nal, eliminating the need for a shockmount in nearly every circumstance, and the dexterity of the built-in pop filter makes external filters virtually unnecessary.

It's no surprise that Earthworks is marketing the SV33 as a vocal mic, as this is no doubt the microphone's forte. I used the microphone to record multiple male and female vocals and enjoyed stunning results in each instance. The mic's proximity effect is quite subtle and smooth, allowing rich, full vocals to be captured further from the microphone than is typically possible. The vocal still sounds amazing at 18-24 inches from the mic, but more of the room can be heard, which is great when recording in a sonically inspiring space.

I've never noticed this with any microphone I've recorded with before, but vocals recorded with the SV33 are easier to mix than vocals from other microphones. This is likely because of the extra octave the SV33 provides in comparison to other vocal

mics.

Besides excelling at vocal recording, the mic's natural sound character makes it a perfect option for instrument recording. I've had great results using it to record solo classical guitar, violin and cello. I used the mic with a Focusrite mic pre to record the legendary Jeff Coffin's sax for a *Jazz Night in America* radio program and it sounded simply stunning. The mic does a fine job capturing electric guitar and upright bass as well. Acoustic guitar also records wonderfully with the SV33. In fact, an SV33 coupled with the Gordon Microphone Pre-amplifier System has become my new favorite path for this application.

The one thing you don't get from the SV33 is coloration. The mic is pure, natural and smooth. I've used it to capture plenty of edgy rock vocals, though, and in those instances, I rely on the mic pre (typically a Neve 33115) or Compressor (typically a Distressor) to provide the coloration needed to fit the song.

The Earthworks SV33 is a stunningly good microphone that provides solid performance in a reasonably priced package. Vocals and instruments recorded with the SV33 have wide-open, pristine highs, smooth, punchy mids and a full, tight bottom-end. Anyone in need of a no-compromise microphone with an ultra-pure signal should give it top consideration.

Earthworks Audio

www.earthworksaudio.com

MOJAVE MA-1000 LARGE-DIAPHRAGM TUBE CONDENSER MICROPHONE

The Mojave family of microphones has become a studio staple around the world. The company's philosophy has been simple: make fantastic mics and make them affordable; but the newest mic in the Mojave family incorporates a slightly different approach: make a world-class microphone with absolutely no compromise whatsoever. The result is the \$2,795 Mojave MA-1000, which is truly an audio gem that can hold its own against any microphone manufactured today.

Designed by David Royer (who won a Technical Grammy Award for designing the Royer R-121) in the sonic vein of the classic Telefunken ELA M 251, but with the best possible performance based on today's technology, the MA-1000 is a low-noise, continuously variable multi-pattern tube microphone that ships

in a rugged Pelican-style flight case. This is a serious case, too, unlike the many mics offered today that include a case that's nearly as fragile as the mic they're protecting.

Included with the microphone is a Royer Sling-Shock shockmount (arguably the finest shockmount ever produced), power supply (internally switchable between 110 and 220 volts) and Mogami microphone cable equipped with Neutrik connectors to connect the microphone to the power supply. When fully loaded with the mic and accessories, the case weighs 13 pounds.

The MA-1000 itself is roughly 1 pound, measuring 7 5/8 inches long by 2 inches in diameter. It is assembled at the Mojave headquarters in Burbank, Calif., utilizing a 1-inch diameter, gold-sputtered, 3-micron thick Chinese-made capsule that is



faithful to the original CK-12 used in the ELA-M 251. Other elements include a NOS 5840 tube and a custom-designed Coast Magnetics output transformer, which no doubt plays a strong role in the rich low-

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ROYER R-10 RIBBON MICROPHONE

The release of a new Royer microphone is always a reason for celebration, but that is perhaps even more the case with the new R-10 ribbon mic. Although you wouldn't guess it from the mic's exceptional sonic performance and build quality, at \$499 (or \$1,048 for a matched pair), the R-10 is the most affordable Royer mic to date. The stereo pair (which is what I had for my review period) includes two microphones with consecutive serial numbers, two swivel-mounts, and a pair of cloth storage pouches packed in a foam-lined carry case.

The R-10 is a mono, bidirectional (figure-8), passive electrodynamic pressure-gradient ribbon microphone that uses Royer's patented offset-ribbon transducer and a 2.5-micron ribbon element. The offset ribbon provides a slightly different frequency response on the backside of the mic than the front (The front side can handle a higher SPL, but the back side has slightly more top-end). This is almost like having two mics in one, as it allows the side of the mic to be switched depending on the sound source. As is the case with the R-121, I default to using the front side of the mic when recording electric guitar, brass and drums, and I use the backside when recording acoustic guitar, piano and drum overheads. The ribbon is formed with Royer's direct-corrugation process, increasing the ribbon's sturdiness and making it less prone to sagging and stretching. Similar to other Royer R-series microphones, the R-10 is perfectly suited to handle high SPLs (135 dB @ 50 Hz or 160 dB @ 1 kHz), making it ideal for capturing loud sound sources.

Like all Royer mics, the R-10 is built by hand in Royer's beautiful and impressive Burbank facility. (I've been there and it's amazing!) The work done at that facility by Royer's craftsmen and women exhibits the greatest precision and care. Outsourcing the manufacturing of some of the microphone's components—primarily the mic body—to

China allows Royer to build a more affordable microphone. Keeping the ribbon fabrication and installation—and manufacture of other key components—in-house ensures consistency and uncompromised quality.

In many ways, the R-10 is a second-generation R-101 (now discontinued), but it does have its own sonic character—and just because it's affordable doesn't mean it's an entry-level microphone. The R-10 is physically smaller than the R-101. It is slightly narrower, nearly 2 inches shorter and weighs 3.5 ounces less. Mounted on the front of the R-10 is the classic green Royer badge, with "R-10" engraved below. The mic includes a modest black swivel-mount that screws directly onto the mic's threaded stem. The mic's low residual noise makes it perfectly suited for recording quiet sound sources. It has a frequency response of 30 Hz–15 kHz ± 3 dB and a sensitivity of -54 dBV (re. 1V/pa). The mic includes a five-year warranty, and the first re-ribbon (within the first year) is free.

The mic incorporates a shock-mounted ribbon transducer with a built-in windscreen and custom David Royer-designed step-up transformer. The R-10 employs the same three-layer wire mesh windscreen used in the R-101, but in contrast to the slotted grille found on other Royer mics, the R-10 has an open front and back. In addition to lowering manufacturing costs, this configuration minimizes standing waves and comb-filtering effects, helping the mic deliver a smooth, open, uncolored high-frequency response.

The R-10 is perfectly suited for capturing drums and percussion. I used a pair to capture stereo drum overheads (using the backside of the mics) and room. The results were wonderful in both instances. I did end up brightening the overheads slightly in the mix using the Waves Q10 plug-in, but it was nothing substantial. I used the mic on hi-hat when recording a drum kit and the results were fantastic. I used the high-pass filter on the AEA RPQ500 to

dial out the drum kit's low-frequency rumble and the result was smooth and clear—but not brittle or crisp, as is often the case with a poorly recorded hi-hat. Hand percussion records equally well with the mic, which I used to successfully record shaker and tambourine. Again, the result was a smooth, natural sound.

The mic does a nice job capturing vocals, sounding good on both male and female singers. The built-in windscreen was all I needed, as it does a superb job of protecting the ribbon element from plosives and wind damage without any sonic coloration.

I used the mics to record a Baldwin upright and again had great results. Most people would say the biggest strength of Royer-121 is its ability to accurately capture the electric guitar, and I've found that is also the case with the R-10. The mic is extremely versatile and works well in nearly every instance, but it truly shines when it's placed 3 to 6 inches in front of a screaming guitar cabinet, halfway between the rim and center of one of the speakers. Whether it's a clean, chimy 12-string through an AC30, an over-the-top distorted Marshall JC900 or anything in between, the R-10 kills it. While the mic doesn't seem to have the same low-frequency clarity as the R-121, it's extremely close, and its top-end is lush. The mic couples perfectly with a Neve pre (33115 in my case) when recording louder sources, or the Gordon Microphone System (70 dB of extremely quiet gain) when recording quieter sound sources such as a fingerpicked acoustic guitar or quiet vocal.

Another strength of the R-10 is capturing brass and strings. I used the mic to record both trumpet and trombone during the review period, placing the mic about 12 inches from the bell, and had fantastic results in both instances. The microphone beautifully records violin, capturing every nuance of the instrument without ever sounding harsh or brittle.

The Royer R-10 has a smooth,



natural sound coupled with an impressive frequency response and substantial headroom, making it an excellent option for virtually any sound source, especially guitar amps, drums, brass and other exceptionally loud instruments. The R-10 is surprisingly affordable and is in the same sonic class as ribbon mics costing two or three times as much, making it a great option for project and professional studios alike, as well as live use.

Royer Labs
www.royerlabs.com

Mojave

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frequency clarity and detail apparent when recording male vocals, upright bass, piano and other sound sources with significant low-frequency information. The mic includes a 15 dB pad and a high-pass filter (6 dB per octave attenuation below 100 Hz).

Beyond vocals, the mic is well suited for recording virtually any instrument. During my review period, I was able to use the mics—I had a pair of MA-1000s—to record piano, violin, upright bass, acoustic guitar, percussion, drum overheads and, of course, vocals, and in every instance, the results were fantastic. The mic provides a smooth, pristine, highly accurate sound that is reminiscent of classic recordings but with less noise,

better low-frequency detail and an extended top-end. Male and female vocals both shine on the MA-1000; you'd be hard-pressed to find anyone who doesn't sound spectacular on this mic.

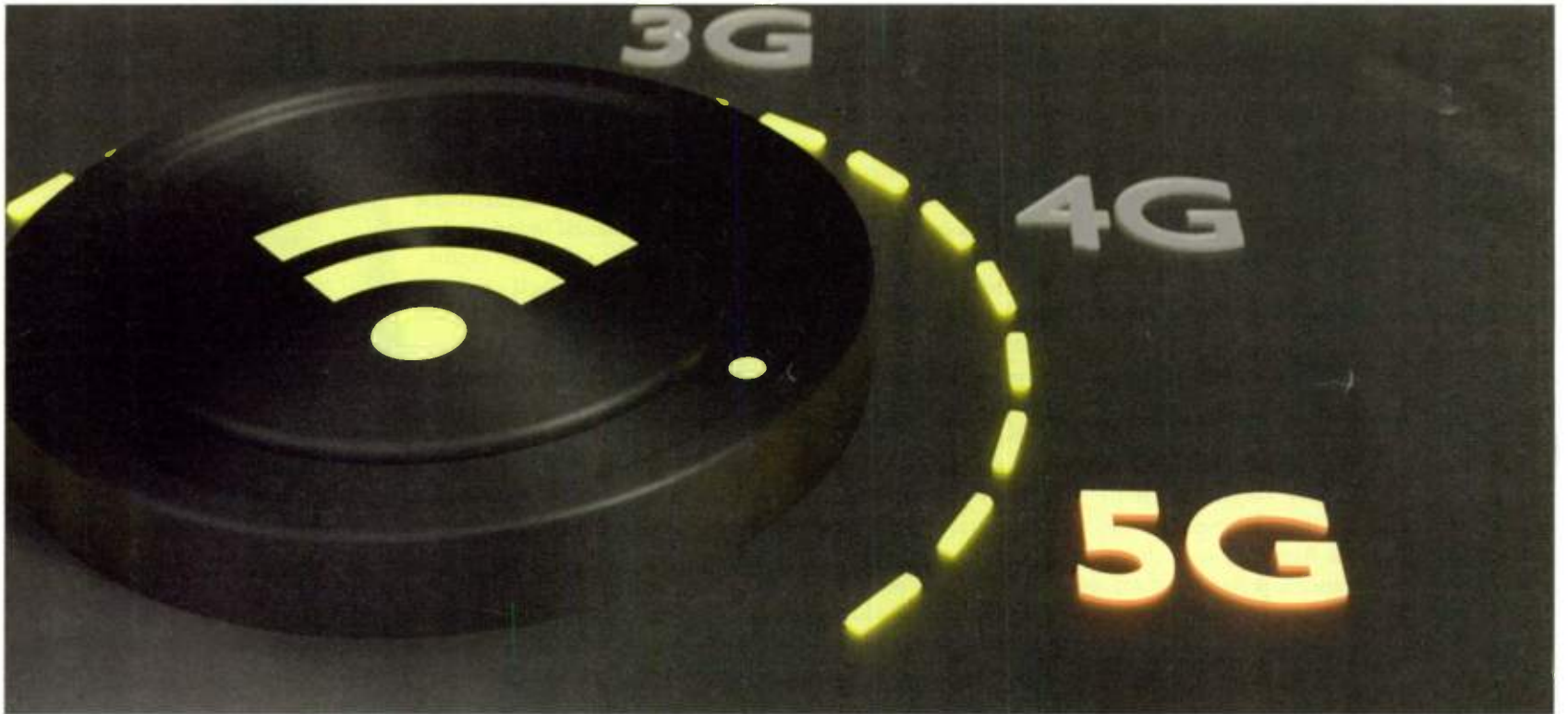
The mic's maximum SPL of 135 dB makes it a good option for recording electric guitar. I had great results recording a Fender Strat through a Vox AC30 with the mic placed 4 inches off the speaker grille, centered

between the rim and the center of the speaker. I used a pair of the mics to record a Taylor 514-CE acoustic guitar and again had stunning results.

Mojave has set the bar high for current production tube mics. The MA-1000 beautifully captures virtually any sound source with a vintage sonic thumbprint and an unnoticeable noise floor.

Mojave Audio
www.mojaveaudio.com

Need to Know: 5G



BY JEFF BAUMGARTNER

The next-gen wireless standard known as 5G is poised to create a new platform that is not just faster, but much more agile than today's state-of-the-art 4G/LTE networks. Expected to debut wide in the next two years, it's the latest in the continuum of innovation in wireless technology, and it promises to disrupt—if not complement—many industries.

Deployments of 5G are already underway using pre-commercial technol-

ogy by the usual suspects—the incumbent mobile network operators—but there are a host of new players, including cable operators, that have become increasingly eager to add mobile and wireless to their service arsenals.

The first apps out of the chute will be fixed wireless services that can deliver gigabit-class speeds to the home or business over the air. The implications for the Internet of Things, in a world where every home appliance and gadget is dependent on robust wireless connections, are enormous. We

are talking about speeds fast enough to download a full movie in seconds.

Further out, 5G will also be mobile, delivering the millisecond-level latency required for self-driving cars to navigate the streets safely.

For now, despite its futuristic reputation of sensors everywhere, 5G is saddled with technical hurdles. For example, 5G signals will need a clear path, as their performance is vulnerable to obstacles such as trees and buildings.

For the cable industry, 5G is

viewed as a threat and an opportunity. While 5G could create a speedy broadband rival, 5G will also require the deployment of millions of small cells—and it so happens that the cable network is well positioned to provide those critical backhaul and powering requirements. That could be a major moneymaker for the cable guys.

But when will all of the pieces fall into place? Though some 5G-based fixed wireless services will take hold in 2018, the big ramp-up isn't expected to emerge until 2020.

5G and Pro Audio

By Clive Young

When the FCC closed bidding in its auction for frequencies in the 600 MHz spectrum in April 2017, the situation didn't look good for the countless audio professionals whose wireless mics and in-ear monitors operated in that frequency band. And then things got worse.

When the dust settled, T-Mobile had spent \$7.9 billion to sew up 45 percent of the 600 MHz band, or roughly 35 MHz. It was quite a coup, too, as nabbing such a large chunk of the 600 MHz range—known in the telecom industry as Band 71—would provide a foundation for the carrier to build a new 5G network across the United States. With exclusive access to a prized parcel of low-frequency spectrum, T-Mobile would be able to offer improved reception and broadband access for its customers, because low-frequency transmissions can penetrate structures four times better and travel twice as far as midband ones. Building out in the 600 MHz range would also provide the company with access to a whole new array of customers, extending the reach of broadband to low-income and rural communities—two groups most commonly without high-speed internet access.

However, what the auction meant for audio

pros whose wireless gear operated in the 600 MHz service band (617-652 MHz and 663-698 MHz) was that they had to get out—and the sooner, the better. Fines would be imposed on those who failed to comply with FCC's eviction notice.

This is not the first time many audio pros have faced this issue; in 2010, the FCC bumped pro audio out of the 700 MHz band (roughly 698-806 MHz) as it requisitioned that range for the use of public safety and some commercial interests. This time around, however, affected pro audio users would have some time to make the transition—for the 600 MHz exodus, the FCC provided a 10-phase schedule of multiple deadlines that would gradually evict all existing users from the range by July 13, 2020.

That plan didn't last. After plunking down nearly \$8 billion, T-Mobile was anxious to move forward and laid down its own timeline, accelerating the FCC's schedule by 16 months as it envisioned an aggressive, fast-paced deployment that would lay the groundwork for the jump to 5G as soon as possible. The carrier fired up its first 600 MHz network site in Cheyenne, WY, in August 2017 and never looked back; by year's end, it had already covered more than 1 million square miles. To help maintain that blistering pace, T-Mobile entered partnerships with FOX Television Stations

and others to assist in repacking stations across the country, speeding up their access to cleared spectrum lanes.

With T-Mobile moving faster than anyone anticipated, audio pros need to replace any equipment that works in Band 71 as soon as possible. The FCC prohibited the sale and leasing of wireless audio gear in that range after Oct. 13, 2018, but you'd be hard-pressed to find any brand-new 600 MHz systems for sale in the U.S. now anyway. Most major wireless mic manufacturers have responded with special discounts and trade-in programs to soften the blow for customers who have to purchase sometimes eye-watering numbers of new systems.

Naturally, some pros will consider taking a risk and continuing to use the 600 MHz gear they already own, since they're being forced to abandon systems that work just fine. While experts in the field admit that the government is unlikely to actively police frequencies, they also note that any entity that shelled out billions for the spectrum range is almost certain to bring violators to the attention of the FCC. That can lead to fines of \$10,000 per violation, or per day for a continuing violation, and \$75,000 for any single act or failure to act—enough money to buy plenty of new, street-legal wireless systems.

Several mobile service providers, cable operators and startups like Starry are already well downstream with 5G-based fixed wireless tests and deployments. The mobile aspects of 5G aren't expected to take hold in a big way until 2020.

In the meantime, initial 5G-based fixed wireless deployments could put some pressure on wireline ISPs.

"The use case [for 5G] I get most excited about is the opportunity to have a nearly nationwide broadband footprint," Randall Stephenson, AT&T's chairman, president and CEO, said on the company's Q4 earnings call, expressing confidence that 5G could serve as a fixed-line replacement for both business and residential customers.

"The capacity is there, the performance is there. There's going to be full gigabit throughput," he said.

But that work isn't stopping progress on mobilized 5G even before there are smartphones and other mobile devices that will support it. AT&T, for example, plans to launch a mobile form of 5G by the end of 2018 in about a dozen markets. However, the initial deployment won't involve direct integration with laptops, smartphones or tablets, but instead it will rely on a smaller router-like device that can connect other devices to the 5G network.

"Think of this as a puck," Stephenson said, reasoning that AT&T wants to push mobile 5G forward before handsets that support the next-gen wireless technology become available.

T-Mobile will be keying its 5G strategy on low-band spectrum. While that will address the mobile opportunity, "it will also open up this massive set of opportunities on 5G in the Internet of Things space, where you can connect everything that can be connected," Neville Ray, T-Mobile's chief technology officer and executive vice president, said on the company's Q4 2017 call in February.

And the phone company plans to be aggressive. John Legere, T-Mobile's CEO, said that 5G, when fully deployed, "will be in every spectrum band, and we will be participating in a lot of ways either through acquisition of spectrum, mergers and consolidation."

But T-Mobile's focus on the wide-area benefits of the 600 MHz band for its 5G rollout amplifies the point

that not all spectrum is created equal. Millimeter wave signals don't propagate well over long distances, have difficulty in the presence of trees and buildings, and require almost perfect line of sight.

"They hardly like air," Robert Howald, Comcast's vice president of network architecture, said at an industry event last year. He was making a joke, but he also makes an important point: it's unlikely that any 5G

strategy will be able to live successfully on millimeter wave spectrum alone.

Still, engineers such as Charles Cheevers, chief technology officer, consumer premises equipment at Aris, have held that 5G doesn't always need direct line of sight.

And Starry, the startup led by CEO Chet Kanojia, claims to be having success with a cap-free 200 Mb/s fixed wireless broadband service that is being delivered using licensed mil-

limeter wave spectrum (in the 37 GHz to 38.6 GHz band). "We are exceeding expectations from a penetration perspective ... and not by a little, but a lot," Kanojia said in a recent interview.

There is news every day about the development of 5G, from government regulation to independent developers, but there is still much to be done before we can all enjoy the "fiber in the sky."



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NEED TO KNOW MORE? ▶ Have a burning question about 5G? Or maybe there's a particular topic you'd like to see us tackle in future installments of Need to Know. Email us at needtoknow@nbmedia.com and we'll put our top minds on it!

Studer Vista 5 Black Edition Console

The Studer Vista 5 Black Edition console, a new addition to the Vista 5 line, is a scalable mixing system with full processing redundancy intended for use in radio and TV broadcast, OB trucks, houses of worship and performing arts applications. Based on the Vista 5 M3 mixing console, it is available in 22-, 32- and 44-fader sizes, and supports an optional TFT meter bridge. Features include Studer's Vistronics interface and FaderGlow technology. Its Studer Infinity Core processing engine enables features such as Dynamic EQ plug-ins and full Core redundancy with up to 1,000 MEQs (Mono Equivalent Channels).



Dynaco ST-70 Series 3 Tube Amplifier

Now shipping, the ST-70 Series 3 tube amplifier from Dynaco is a modern version of the David Hafler-designed Stereo 70, updated to meet the needs of modern audiophiles. Taking inspiration and some design aspects from the original Stereo 70, the ST-70 adds contemporary design techniques and provides 35 watts per channel. The unit is switchable between 4 and 8 ohm outputs, with Class-A push-pull stereo topography. The tube amplifiers sport an updated power supply, employing a larger dual-primary power transformer with improved line regulation, increased filter capacitance and a solid-state rectifier. A set of front-panel recessed trimmers allows the bias adjustment to be fine-tuned for each output tube.



Propellerhead Reason 10.1

Propellerhead Software has released the 10.1 update to its Reason music production software. A free update for Reason 10 owners, it features sample loading in Reason's Europa synth (shown here), and supports Rack Extension SDK 3, allowing developers to create new Rack Extensions, including Player devices. Using Reason 10.1 with Europa, Reason's flagship synthesizer, users can load a sample and use it as a waveform in Europa's engines, or load a sample in the Spectral Filter section and use the sample as the filter's spectral multiplier. Europa is a spectral wavetable synthesizer plug-in with three independent synthesis engines, spectral filtering, modulation options and more than 500 presets.



Lectrosonics PDR Firmware Update

The v2.0 firmware update of Lectrosonics' PDR Portable Digital Recorder adds support for iXML file headers, filesystem protection and an improved menu structure. Other updates: timecode can now be copied from the internal real-time clock; scene and take numbers can now be manually entered, and are embedded in the filenames and iXML headers of recordings; take number automatically increments each time the record button is pressed; file browsing and playback can now be organized by file or by scene and take; and recording segment size has been increased from approximately 200 MB to 4 GB.



Gauge Precision Virtual Mic Lockers

Combining hardware and software, Gauge Precision Instruments has launched the ECM-87 Classic Virtual Mic Locker and ECM-87 Stealth Virtual Mic Locker, which each provide a Gauge microphone and plug-in software to emulate eight vintage microphones: Neumann's M49, U87,

firstlook



Sommer SC-Micro Duo Aramid Cable

The SC-Micro Duo Aramid shielded twin pair cable, to be introduced at InfoComm, offers features that enable the safe hanging of stereo microphones. Aramid is constructed from synthetic polymers noted for their strength and thermal stability, making the cable useful for microphones hung from the ceiling or otherwise exposed to strong tensile forces. To absorb the weight of the microphones, fillers made of braided aramid fibers have been incorporated to act as an additional strain relief. Compared to steel ropes, the aramid fibers have no negative impact on the cable's audio transmission quality. The low-capacitance SC-Micro Duo Aramid is AES/EBU- and DMX-capable (110 ohm).

U67, U47 and U47 FET; AKG's C12 and 414; and Sony's C800. The ECM-87 Classic Virtual Mic Locker is based on Gauge's silver ECM-87 cardioid condenser microphone, shockmount and ECM-87 Mic Clone plug-in. The ECM-87 Stealth Virtual Mic Locker includes the ECM-87 stealth cardioid condenser microphone in black, along with the shockmount and ECM-87 Mic Clone plug-in. The ECM-87 itself is a large-diaphragm, cardioid condenser microphone that is intended for recording voice, drums and all acoustic instruments.



Antares Technologies Auto-Tune Pro

Auto-Tune Pro, the most recent version of Antares Technologies' pitch-correction software, features a redesigned interface that streamlines workflow. The update adds ARA (Audio Random Access) support for compatible VST3 DAWs and incorporates user-requested features such as Classic Mode for creating the legendary Auto-Tune 5 sound. The software offers Automatic Key Detection via its included Auto-Key plug-in, which automatically detects music key and scale and sends those parameters to one or more instances of Auto-Tune Pro automatically. A new settings menu includes commonly used preferences for session-specific settings. Other new features include MIDI CC control of parameters in Automatic Mode and HiDPI support for Retina and other high-resolution displays.



TC Electronic TC2290-DT

TC Electronic announced a modern-day update of its 2290 digital delay, which has earned a spot in many a FOH and studio rack since its debut in 1985. The update, TC2290-DT, is a hardware-controlled dynamic delay plug-in that is expected to ship this month. The plug-in will be bundled with a USB-powered tactile interface, intended to recall the feel of the original units. It will provide custom-designed presets from noted artists and recording engineers, as well as DAW tempo, automation and project recall support. The hardware controller includes high-resolution input and output meters for accurate signal monitoring, plus tone-defining parameters such as delay time, feedback level, modulation and mix settings.



There's more information on all the products featured at prosoundnetwork.com/jun2018.

Adamson IS7p and IS10p Loudspeakers

The IS7p and IS10p are a pair of point source, install-focused loudspeakers introduced by Adamson Systems Engineering. The IS7p is a two-way point source cabinet with two ND7-LM16 7" Kevlar Low-Mid drivers (2x 16 ohm) and one NH3-8 1.4" exit compression driver (8 ohm).



IS10p is a two-way point source cabinet containing two ND10-LM 10" Kevlar Low-Mid drivers (2x 16 ohm) and the same NH3-8 exit compression driver. The loudspeakers' rotatable waveguides are available with nominal dispersion patterns of 70° x 40° or 100° x 50°, respectively. As a result of the varied dispersion patterns, the IS7p and IS10p are appropriate for use as main systems or to supplement larger setups as fill cabinets in mid-sized venue installations.

Io Audio Technologies Cat 5e, Cat 6 Cables

Io Audio Technologies has introduced Professional Series Shielded Cat 5e and Cat 6 etherCON cables for audio techs and musicians. The cables, designed for enacting digital audio connections, are compatible with standard etherCON chassis connectors. They feature eight conductors (four pairs), plus a drain wire. Both cables have a durable jacket that offers flexibility similar to a standard microphone cable. The cables may be fitted with two interchangeable connector options—L-Style and X-Style etherCON connectors—to aid strain relief. The Cat 5e cables are available in lengths of 10, 25, 50 and 100 feet, while the Cat 6 cables are available in lengths of 10, 25, 50, 100, 150, 200 and 300 feet.



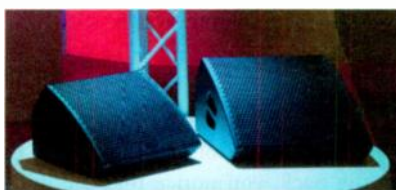
Primacoustic Hercules Panels

Primacoustic's Hercules absorption panels are designed to withstand the rigors of use in public spaces. The impact-resistant panels are manufactured from the same high-density glass wool core as Primacoustic Broadway, but the face of the panel is covered with a rigid fiberglass layer. According to the company, this facing allows the panel to absorb most frequencies, while preventing surface damage from accidental contact. Of note for office settings, the hardened facing allows for the use of thumbtacks in the panel. Square-edged Hercules panels measure 24" x 48" x 2". They are available in beige or grey acoustically transparent fabric. A box of six runs \$699.



Void Acoustics Node 2i, 4i Powered Monitors

The Node 2i offers a 12" and 1.4" coaxial driver combined with a 1,200 W RMS amplifier module, integrated DSP and four configurable presets, reportedly enabling a peak SPL of 133 dB and a frequency response of 60-18 kHz -3 dB. The Node 4i, with a larger 15" and 1.4" coaxial driver, is expected to have a frequency response of 50-18 kHz -3 dB. Each Node series monitor has multiple working surfaces, allowing them to be used as a nearfield booth monitor or conventional stage wedge, as well as having the ability to be pole-mounted or wall-mounted for FOH purposes.



Ehrlund EHR-H Handheld Mic

Swedish microphone manufacturer Ehrlund's new EHR-H handheld condenser microphone is intended for live performance, sporting the same distinctive triangular membrane found in the company's studio microphones. According to Eh-



lund, the triangular membrane dissipates resonances faster than a traditional round membrane, reportedly preventing the buildup of sound impulses that lead to murky audio. Other specs include a frequency range of 7 Hz-87 kHz, a dynamic range of 127 dB, and signal to noise at 85 dBA. The EHR-H is housed in a road-ready aircraft-grade aluminum body with a hardened, nickel-plated stainless steel grille and windscreen. It is available in the U.S. via North American distributor Momentum Audio Sales.

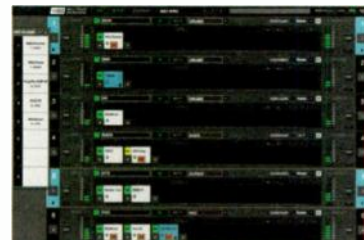
Bose Professional T8S, T4S

The eight-channel T8S ToneMatch mixer and four-channel T4S ToneMatch mixer from Bose Professional are intended to provide simple live control, offering audio processing and a user interface in a format aimed at performing musicians and DJs. The eight-channel T8S includes illuminated, stage-friendly tactile controls, a display and scene recall. The mixer includes ToneMatch processing presets, using the onboard DSP engine to provide effects and Bose zEQ equalization. The mixer is tonally optimized for use with the Bose L1 and F1 portable PA systems. The four-channel T4S offers most of the same features, but also includes dual ToneMatch links, designed to send digital audio to L1 Model 1S/II systems while receiving power on the same provided ToneMatch cable.



Waves MultiRack DiGiCo Compatibility

Waves Audio's MultiRack plug-in host is now available in a configuration that integrates with DiGiCo SD-series consoles. As a result, MultiRack will allow users to mix with Waves and third-party SoundGrid-compatible plug-ins on DiGiCo SD-series consoles. A SoundGrid-certified network switch and Waves I/O Card for DiGiCo SD Consoles, available from DiGiCo, are required. The MultiRack plug-in host software resides on a computer connected to the console. Processing is handled by a Waves SoundGrid server, which handles processing capabilities at a latency low enough to allow plug-ins to run in real time on the live mixing console. The plug-ins can be controlled directly from the console, including touch-and-turn plug-in parameter adjustments and the ability to manage sessions and snapshots.



firstlook

Allen & Heath, Audix Team on Qu Mic Presets

Since Allen & Heath released its Qu series of digital mixers, the company has embarked on a series of collaborations with microphone manufacturers including Shure, Sennheiser, Audio-Technica and sE Electronics to create ProFactory Mic presets that make the most of well-known microphone models. Allen & Heath's latest collaboration is with Audix: newly released



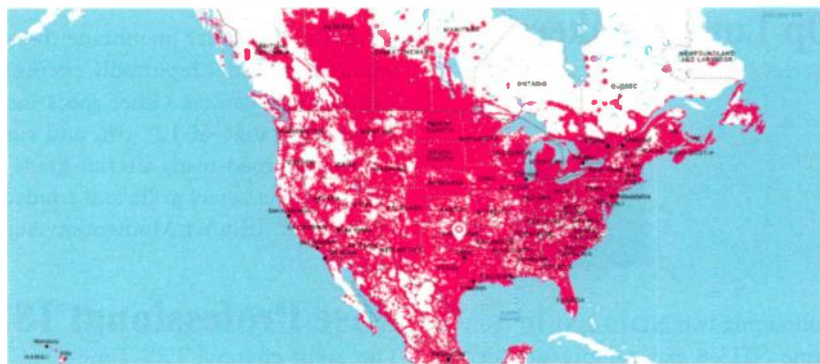
presets cover a slew of mics by the Oregon-based manufacturer, including the D2, D4, D6, i5 and OM range of vocal microphones. Engineers from both companies collaborated to create settings for pairing each mic with Qu's AnalogiQ preamps. The presets are available as a free download from the Qu series product pages on the Allen & Heath website.

Cool Tools Track T-Mobile's 600 MHz Coverage

BY STEVE HARVEY

NEW YORK, NY—Wireless microphone operators have some new tools that that use crowdsourced data to see if T-Mobile's 600 MHz or Band 71 LTE services are active in their area.

T-Mobile recently reported that its Band 71 services, which occupy a chunk of the 600 MHz band auctioned off by the FCC in 2017, are now available in more than 800 cities in 31 states. The carrier offers an interactive coverage map (maps.t-mobile.com) that allows users to check current coverage down to street level and to compare that to the improve-



T-Mobile's coverage map

ments expected from its new Extended Range LTE-600 MHz services for those using compliant mobile devices.

About half a dozen Band 71-capable phones are currently on the market. T-Mobile previously announced plans to launch a dozen by the end of 2018.

Spectrum Gateway also offers comprehensive information on T-Mobile's plans for its Band 71 deployments (bit.ly/2FmafrO).

Also of note, a new report by *PCMag* used crowdsourced data collected since March 1, 2018, by Ookla Speedtest to confirm exactly where T-Mobile subscribers can access Band 71 right now—in other words, where wireless audio equipment users may

no longer operate in the 600 MHz band.

PCMag's maps indicate that Band 71 coverage is concentrated in rural areas at present—central and northern Arizona, for instance—as well as cities such as Santa Fe, NM, Omaha, NE, and large parts of New Jersey adjacent to New York City. But T-Mobile's latest Band 71 service announcements also include major metropolitan areas such as New York, Los Angeles and Las Vegas, so wireless mic users nationwide need to make plans to vacate the 600 MHz spectrum sooner rather than later.

For a recap of T-Mobile's history with the 600 MHz range, see page 34.



Smith Center Updates Meyer Rig

LAS VEGAS, NV—There's more to entertainment in Las Vegas than just the offerings of the Strip. The Smith Center for the Performing Arts—part of a new cultural district that also includes Symphony Park, Discovery Children's Museum and the Keep Memory Alive Event Center—often presents productions by the Las Vegas Symphony, the Nevada Ballet Theatre and other regional fine arts ensembles in its Reynolds Hall. In order to ensure that the building's audio system could keep up with the demands of the various performances, the 2,050-seat hall recently updated its existing Meyer Sound Mica system with a new Leo-based installation.

The new main system comprises left and right arrays of 19-each Leopard compact linear line array loudspeakers with deep bass augmented by three per side ground-stacked 900-LFC low frequency control elements, plus three 900-LFC elements in a flown cardioid center array.

Most fill and delay systems were carried over from the original Meyer Sound installation, with some modifications to conform to the new array coverage. Front infills are UPQ-1P loudspeakers, with nine UPM-1P



John Trace, head of audio at the Smith Center, with Reynolds Hall's new Meyer Leo system

loudspeakers for the full power front-fill configuration or 17 MM-4 for the pit rail in the Broadway configuration. UPJunior and UPJ-1P loudspeakers are mounted as house fills and delays, with four Galileo Galaxy network processors assigned to system drive and optimization. Two 700-HP subwoofers can be added for heavier rock acts, and an assortment of six different UltraSeries loudspeakers

are available for deployment as needed.

The Smith Center was among the first venues to implement Meyer Sound's new Low-Mid Beam Control (LMBC), a software-based tool intended for spreading low-mid acoustic output to create uniform front-to-back response across the entire system bandwidth.

"LMBC is exactly what we needed for these very long arrays," said head of audio John Trace, "because all line arrays will have a characteristic midrange boost in the center. The difference is subtle if you are sitting in one place, but if you move from the front row to the back, you notice that the midrange is more consistent throughout, from front to back and top to bottom. LMBC does exactly what I needed it to do."

Since the installation of the Leopard system, numerous acts including Jethro Tull, Yes, Postmodern Jukebox, Jackson Browne and the Celtic Woman Homecoming Tour have played the venue, and upcoming touring Broadway productions expecting to use it include *The Color Purple* and *The School of Rock*.

Meyer Sound
www.meyersound.com

briefs

Custer Road's dLive Cluster

PLANO, TX—Custer Road United Methodist Church of Plano, Texas, recently bought a trio of Allen & Heath (www.allen-heath.com) dLive digital mixing desks when it updated its audio system: one to handle front-of-house in its main sanctuary, one for its broadcast room, and a soon-to-be-installed desk that will land in a new contemporary worship space.

OFX Turns to EAW for HOW

ALLENDALE, NJ—Outreach FX of Allendale, NJ, recently designed and installed EAW (www.eaw.com) Radius sound reinforcement systems at the Philadelphia Christian Center in Pennsylvania, and at the new Owings Mills Reistertown satellite campus for Columbia, MD-based Bridgeway Community Church.

VUE Gives Marley Cup Volume

CHARLESTON, SC—For the first Marley Cup, an all-day, all-ages music festival and celebrity soccer event at MUSC Health Stadium, H.A.S. Productions debuted its East Coast VUE Audiotechnik (www.vueaudio.com) al-12 line array system, with two arrays composed of eight al-12 elements per side flown from truss towers, 10 al-12SB ground-stacked subwoofers in an arc delay, and eight ground-stacked al-8 elements as side fills.

PA Hangs Over Overture Hall

MADISON, WI—Clearwing System Integration recently installed more than 100 L-Acoustics (www.l-acoustics.com) loudspeakers inside the flagship hall of the Overture Center for the Arts in Madison, WI, as part of an update that included a K2-based system, all-new DSP and 55 miles of cabling.

Mid South Goes Big with Nexo

GEORGETOWN, DE—Delaware's Mid South Audio recently purchased a 98-box Nexo (www.yamahaca.com) STM (Scale Through Modularity) system with M28, M46, B112 and RS boxes, and nine NUAR amp racks. Since its arrival, the system has been put to use on events including Gullfest at Salisbury (Maryland) University.

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Forever on the Move with the Tedeschi Trucks Band

BY CLIVE YOUNG

NEW YORK, NY—Since its founding, the Tedeschi Trucks Band has released three studio albums and two live ones, but where the group really shines is on stage—and given that the TTB usually plays more than 200 shows a year, well, that's a lot of shining. Since merging their respective groups in 2010, Susan Tedeschi and Derek Trucks have led their 12-piece band to increasingly larger stages; helping fill those venues with the sound of the band's warm blues rock are longtime production manager/FOH engineer Brian Speiser, monitor engineer/stage manager/guitar tech Bobby Tis and system tech Chris Bedry.

"We tour perpetually, so we'll go out for a month, take a week off and go back out again, and we do that throughout the year," said Speiser. "It's an amazing team, and Derek and Susan treat everyone here like a family."

Speiser and Tis are particularly connected, having started their careers at the same regional sound company, SK Systems (Bohemia, NY). As it happened, Speiser was just ending a seven-year run with Indigo Girls, who were going on hiatus, when he got a call from his old friend—the TTB's production manager was retiring and though they were trying out people for the spot, could he fill in for a few dates in Texas? That was six years ago.

Everywhere it roams, the TTB carries full sound production supplied by two companies. VER Tour Sound provides d&b audiotechnik boxes for both the PA and monitors, with a house system based around J8 and J12 array boxes, along with JSubs, Q10 frontfills and Q1 outfills. Meanwhile, much as blues rock is old-school, so is the band's monitor rig: 16 d&b M4 wedges across the stage and no in-ears in sight. Dishing out mixes for all those loudspeakers are a pair of DiGiCo desks—a SD10 at FOH and a SD8 for monitors—and both are provided by Tom Heinisch, owner of SK Systems. "He brought me and Bobby up in the business," said Speiser. "He's always been there for us, so he's one of those people you make sure to do right by."

As might be expected for a 12-member band with a stage full of wedges, things can get loud up there—and that provides another case where Speiser and Tis' shared background comes in handy. "We have a similar ear," said Speiser, "so if I notice something is going on, I'll call him and say, 'Are you

hearing that?'" and he'll say, 'Yeah, I just pulled 300.' We're always making moves the same and that's just because we learned a lot from the same person, but it means the whole thing is organically moving together." That shared instinct often pays off. "If say, Bobby brings his 16 speakers down 1 dB for each person, I find that I now have more headroom when Derek is taking a solo—I don't have to go crazy boosting it to get over that phase-y mess of all the arrival times of different monitors bleeding into all the mics. You feel 'I made very minimal moves but I'm hearing a clarity difference because of it.'"

Nonetheless, the band and audio team have done their best to address the inevitable stage volume that can come from a dozen people musically flooring it. There's Plexiglas in spots around the stage, and custom baffles are built into the set, too. The short walls, made by Trucks' family from reclaimed barn wood and sound-absorptive material, sit behind and between the guitar amps.

The drive to lessen stage spill



PHOTO BY STUART LEVINE

The 12-member Tedeschi Trucks Band plays more than 200 shows a year.

has led to those guitar amps being miked with sE Electronics GuitaRF (Reflexion Filter) isolators surrounding vintage 1960s Sennheiser MDS-1s. ("We used to troll eBay and get them out of the Netherlands or Germany; it's basically a 409 before the 409 happened.") Three further MDS-1s are permanently inside the Leslie cabinet, too.

Elsewhere on stage, horns are miked with vintage Sennheiser 441s, but everything else is heard via Shure mics, with which the band has an endorsement deal. "Susan only sings into a Beta 58A," said Speiser. "Everything is Beta 58s and Beta 57s, and there's other Shure mics on the drums." Further, a Radial stereo DI is used on the keyboard, a Palmer speaker DI is on the clavinet amp, a Fishman Aura DI nabs the acoustic guitar, and the bass is grabbed by a Noble preamp DI, with a Radial passive DI as a backup, and a Beyerdynamic M88 inside another sE Electronics GuitaRF isolator.

While the band's sound may be

traditional, Speiser still takes advantage of the abilities of modern gear. The SD10 at FOH is joined by a Waves SoundGrid system and DiGiGrid MGB MADI interface. Most of the plug-ins put to use are reverbs or slapback delays to augment vocals, but he generally keeps the mix clean, focusing instead on his faders. "I went to a show recently where there was so much production going on; there were two FOH consoles, two lighting consoles and the engineers were staring at timecode," he laughed. "No one was actually doing anything; they were just making sure that all the gear was still working. Nobody had hands on faders on any desks. You can't do that here."

This month will see the Tedeschi Trucks Band kick off its annual summer package, The Wheels of Soul Tour, this time with Drive-By Truckers and The Marcus King Band along for the ride as they knock down 21 shows in 31 days before, rarity of rarities, taking nearly all of August off. Nonetheless, a packed fall season awaits, including the band's annual six-night stand at New York City's Beacon Theatre in October. That incessant road work and dedication has served the TTB and its touring family well.

"It keeps getting bigger and bigger every year," marveled Speiser. "It's been a constant snowball. Every band that I've worked with had already made their way up and were doing their thing, and this is the first time I've been working with a band that's building something—and it's super exciting to be a part of that and help it grow."

VER Tour Sound
www.verrents.com

SK Systems
www.sk-systems.com



The TTB audio team (l-r): production manager/FOH engineer Brian Speiser, monitor engineer/stage manager/guitar tech Bobby Tis, and system tech Chris Bedry

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Mixing Fetty Wap on Tour

DALLAS, TX—Rapper Fetty Wap recently wrapped up his sold-out For My Fans Tour, backing the release of his *For My Fans 3: The Final Chapter* mixtape. Along for the ride was FOH engineer Michael Skatuler of Pittston, PA-based Rockstreet Music.

Skatuler used the in-house consoles and PAs at each venue on the Fetty Wap tour, so his equipment setup was different each night. “This tour allowed me the opportunity to hear and work with a lot of different PAs and consoles,” commented Skatuler.

For a show in Dallas at the House of Blues, that meant mixing on the venue’s Soundcraft console and Bose Professional ShowMatch DeltaQ loudspeaker system—something he’d never done before, despite having mixed many artists, including Little John, Aaron Carter and the Four Tops, in addition to Fetty Wap.

“I’ve had Bose equipment in my house, and it always sounded great, so I could not wait to hear what this PA sounded like. Frankly, it blew me away; I actually was really surprised how good it sounded compared to other systems I’ve mixed on,” stated Skatuler.



Michael Skatuler

“When we did soundcheck, I was really surprised with the crispness and the low-end of ShowMatch,” he said. “The bottom-end was great; it really had a lot of punch to it, which is exactly what I need for Fetty Wap. The vocal clarity was really good, as was the consistency of the coverage area. I was very impressed.”
Bose Professional
<http://pro.bose.com>

Valencia College Builds Largest Educational Focusrite RedNet Installation

ORLANDO, FL—Increasing numbers of educational institutions are turning to Dante networking to bring together the various parts of their facilities, including Valencia College in Orlando, Fla., which has deployed the world’s largest educational installation of Focusrite’s RedNet range of Dante-networked audio converters and interfaces.

The infrastructure is composed of no fewer than 68 RedNet units, installed in the college’s new film production and sound technology building, which opened for classes last fall.

Home to Valencia College’s Sound & Music Technology program, the building houses six studio facilities: two full tracking suites with control rooms, two mix studios, a mastering studio and a film sound studio, which is one of three Dolby Atmos-certified mix facilities at the school. The RedNet systems were installed and integrated by AV systems integrator LMG, an Entertainment Technology Partners company.

“The entire facility is connected through RedNet,” says Joe McBride, teaching lab supervisor in Valencia College’s Sound & Music Technology program. “RedNet provides us with a complete, Dante-ready networked audio ecosystem. RedNet gives us the most flexible system imaginable for connecting all of our studios and the



Racked gear in Valencia College’s Sound & Music Technology program’s film sound studio, one of three Dolby Atmos-certified mix facilities there

systems in them.”

The RedNet AM2 stereo audio monitoring units in each studio allow users to receive custom headphone mixes, and the networked units enable those mixes to be sent to headphones in other studios, allowing multiple rooms to be used simultaneously.

RedNet A16R 16-channel analog I/O interfaces and RedNet D16R 16-channel AES3 I/Os allow both digital and analog signals to be networked throughout the facility, and RedNet HD32R 32-channel HD Dante network bridges allow interfacing of all of the facility’s Pro Tools systems.

“The main focus here is to prepare our students for what the real world is going to be like, and the pro

audio industry is transitioning to a fully networked workflow,” says McBride. “RedNet gave us not only an incredibly efficient and effective networking solution for the entire new film production and sound technology building, but it also provides the networked infrastructure for students to learn on that will prepare them for the jobs they’ll find when they graduate.”

Valencia College’s setup includes 68 Focusrite RedNet units, including RedNet AM2 stereo audio monitoring in every studio; RedNet A16R 16-channel analog I/O interfaces; RedNet D16R 16-channel AES3 I/Os; and RedNet HD32R 32-channel HD Dante network bridges.

Focusrite Pro
pro.focusrite.com

OSA Updates Chicago’s Navy Pier with Harman

CHICAGO, IL—On the shore of Lake Michigan, Chicago’s Navy Pier has been a must-see attraction since its debut in 1916. The location of more than 50 acres of parks, restaurants, retailers and attractions, last year the pier added the Polk Bros. Performance Lawns, a free outdoor concert space, as part of an overall redevelopment initiative.

The highlight of the Performance Lawns are the Lake Stage and City Stage. To outfit them with an audio system that could be used as needed at either stage, the pier hired audio consulting firm Threshold Acoustics, which in turn designed an audio solution based around JBL Professional VTX V20 line-array loudspeakers.

The system comprises two

main hangs of 12 V20 loudspeakers, six VT4886 line-array loudspeakers as front fills, two delay towers equipped with PD6212/95-WRX loudspeakers, and six VTX G28 subwoofers deployed on the ground. Both the FOH and monitor positions feature Soundcraft Vi3000 consoles and a BSS audio processing system

that contains a BLU-806 processor and BLUDIGITAL IN and OUT cards.

The design’s success hinged on the ability to keep audio from spilling out of the park area and into nearby residences. With that in mind, Threshold and OSA aimed the V20s into a raised berm at the far end of the audience area, reducing the amount of sound that escapes the venue. The drawback to the plan was that one area in the back at the berm requires a pair of delay towers with JBL PD6212/95-WRX speakers for coverage.

Given that the system sometimes commutes between the Lake and City stages, a pair of Crown VRack amplification systems loaded with Crown iTech 4x3500HD amplifiers is installed in a central location, accessible from anywhere in the facility via the Pier’s fiber optic network.

Harman
www.harman.com



PHOTO BY ELLIOT MANDEL

Chicago’s Navy Pier

Shepherding Audio for The Lamb's Chapel



BURLINGTON, NC—Faced with the fortunate problem of a quickly growing congregation, The Lamb's Chapel of Haw River, NC, recently opened a second worship facility 10 miles away in Burlington. The new campus spans 36 acres and includes a family life center, recreation facilities and an educational complex with children and student ministries, along with toddler and infant centers, but its center point is the massive 90,000-square-foot main sanctuary, which can seat more than 2,000 between its main floor and balcony. Ensuring that everyone present can hear everything is a considerable AV system designed and installed by Kernersville, NC-based AVL Environments.



Inside The Lamb's Chapel's new sanctuary, an audio system based on RCF HDL20-A line array modules and an Allen & Heath dLive S5000 console ensures that each of the 2,000-plus congregants can hear every word.

AVL Environments owner Brandon Munger aimed to design a system that would bring the pastor closer to the congregation and at the same time provide a broadcast-quality feed to send to their sister sanctuary. That

was accomplished installing a 4K video production system comprising two Sony XDCAM stations coupled with two Sony PXW automated cameras operated with a Vaddio Production Crew camera controller and ATEM 1M/E production studio switcher.

Exploring sound solutions, "I was looking for something in a large format line array and I heard about RCF," says Munger. "When I initially got to hear them, I knew they would be the right solution." AVL Environment's specification called for two line arrays, each with seven RCF HDL20-A dual 10-inch active line array modules with four SUB8006-AS dual 18-inch active subwoofers mounted under the stage.

"We were surprised that the coverage was so even, especially consider-

ing the positioning of the array and the height of the balcony," says Brandon. "We're within 1.5 dB from front to back." The AVL Environment team used RCF Shape Designer software to position and aim the arrays. While there were some minor adjustments, most of that had to do with the repositioning of a roof cloud from its original position specified in the architectural drawings.

"The response from the church congregants has been tremendously positive, with some noting that there is so much more presence than what they previously experienced," said the church's media production director, Brandon Patton, "with increased dynamics as well as intelligibility."

AVL Environments
www.avlenvironments.com

RCF USA
www.rcf-usa.com

QSC Rallies at Raley Field

SACRAMENTO, CA—Baseball is the national pastime, but at Sacramento's Raley Field, catching a game is mainly about having a good time. Home to the Triple-A league Sacramento River Cats, the venue uses every trick in the book—and plenty of technology—to keep the fans entertained. Most of that responsibility falls into the hands of entertainment coordinator Trevor Levine, who looks after everything attendees see and hear that's not game-play itself. At the start of this season, he installed a QSC TouchMix-30 Pro compact digital mixer as the ballpark's audio nerve center.

"I'm in charge of all park entertainment on a game day and I also DJ at games," said Levine. "All the graphics and stats you see on the video boards—including the on-field promotional crew, the P.A. announcer, the ballpark organist and the music playlists—fall under my umbrella."

Throughout the game, Levine looks after a number of inputs: "On a given game day, we'll have, say, the graphics computer, which is feeding audio along with the video or graphics it's displaying. Then, there's the P.A. announcer, both on-field wireless microphones and the stereo inputs from the DJ playlist computer. If we have our organist here for the game, that's another stereo pair. Lastly, when we have fireworks, we've used a CD player for background music. We still have inputs to spare, so we're planning on adding more sources."

Levine has been using the mixer's Wi-Fi remote control feature when

he goes out into the stands and around the concourse, as it allows him to adjust the mix on his smartphone: "While I'm walking through the ballpark, I can control everything from my iPhone or tablet. If someone says, 'Hey, this or that level is too high,' I can go boom, pull it back, EQ it, mute something that's being a problem, whatever I need to do."

"Even with the windows in the



Trevor Levine uses a QSC TouchMix-30 to mix entertainment during River Cats games at Sacramento's Raley Field.

sound booth open, I can't necessarily tell if something in a particular area is too loud or too soft, too effect-heavy or too dry, or EQ'ed ideally, so being able to actually go out there, pull out my phone, and make tweaks is absolutely critical."

At press time, the River Cats were holding down third place in the Pacific Coast League Pacific Northern division.

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ACT / STATISTICS

CREW

EQUIPMENT

1 JUSTIN TIMBERLAKE | CLAIR GLOBAL

Andy Meyer (he); Paul Klimson (me); Phil Kriz, Justin Lenards (se); Hugo Gudino Jr., Elliott Wiley (mse); Paul Manuel (ae); Dustin Chrysler, Carlos Lopez-Olavarria, Rachel Rozzi, Nathan Sonnenberg (techs); Kevin Leas (RF tech)

HC: DiGiCo SD7; MC: DiGiCo SD7; HS: Clair Cohesion CO-12, CO-10, CP-6, CP-118, CP-218; HA: Lab.gruppen PLM 20000Q; MA: Lab.gruppen PLM 20000Q; OTHER: Radial JX44, SGI44

2 ROMEO SANTOS | EIGHTH DAY SOUND

Franklin Espinal (he); Javier Morales (me); Krysten Dean (cc); Danny Paleaz (ae); Jay Butler, Chris Smith (tech)

HC: Avid Venue S6L; MC: Avid Venue S6L; HS: d&b audiotechnik; MS: d&b audiotechnik; IEM: Aviom; HA: d&b audiotechnik; MA: d&b audiotechnik; HARDWIRED MICS: Shure; Sennheiser; WIRELESS MICS: Shure Axient

3 PINK | BRITANNIA ROW

Dave Bracey (he); Jon Lewis (me-Pink); Horst Hartmann (me-Band); Guillaume Burguez (cc); Johnny Keirle (se); Juan Bellin, Shaun Ayles (ae); Jack Murphy (tech)

HC: DiGiCo SD7; MC: DiGiCo SD7; Yamaha PM10; HS: L-Acoustics K1, K2, K15B, KARA, KS28; MS: L-Acoustics X15, Clair CM-2; IEM: Sennheiser 2050; HA: L-Acoustics LA12X; MA: Lab.gruppen; WIRELESS MICS: Sennheiser 6000 series; OTHER: Radial SW8

4 DEMI LOVATO | CLAIR GLOBAL

Chris Aman (be); Tim Coakley (me); Shawn Dier (se); Kyle Fletcher (RF tech); Robert Taylor, James Ellison (techs)

HC: DiGiCo SD5; MC: DiGiCo SD5; HS: Clair Cohesion CO-12, CO-8, CP-6, CP-118, CP-218; HA: Lab.gruppen PLM 20000Q; MA: Lab.gruppen PLM 20000Q

5 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 L500 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 Fatso 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

6 U2 | CLAIR GLOBAL

Joe O'Herlihy (he); Alastair McMillan; Richard Rainey; CJ Eiriksson (me); Jo Ravitch (se); Joel Merrill (cc/se); Niall Slevin; Brandon Schuette; Thomas Birkhead (stage e); Pascal Harlaut; Hannes Dander; Ann Butt, Brian Slevin (tech)

HC: DiGiCo SD-7; MC: (3) DiGiCo SD-7; HS: Clair Cohesion CO-12, CO-10, CO-8, CP-218; MS: Clair Cohesion CP-118; IEM: Sennheiser 2000 Series; HA: Lab.gruppen StakRak; HARDWIRED MICS: Shure SM48, SM57, SM58, SM81, SM98, Beta 58, Beta 87, Beta 91, Beta 52, Beta 52a, Beta 58, PG58; AKG 451EB, A51, C-414B; Sennheiser MD-421, MKH-416, MKH50; Audio-Technica AT4050; DPA 4099, 4088; Countryman DI; Radial SW8, ProD8, J48; WIRELESS MICS: Shure Axient; FOH EQUIPMENT: Lexicon 480L, PCM70; Summit DCL-200; Manley VoxBox; Avalon VT-737SP; Eventide H3500; Klark-Teknik DN6000; Yamaha SPX1000; MONITOR EQUIPMENT: Lexicon PCM80; AMS RMX16; Yamaha SPX-1000, SPX-990; Amek 9098; Antelope Isochrone Trinity

7 CHRIS STAPLETON | CLAIR GLOBAL

Arpad Sayko (he); Johnnie Branham (me); Matt Moser (cc/se); Rachael Moser (ae/m tech); Lisa Morgan (tech)

HC: Midas XL-4; MC: Midas XL-4; HS: Clair CO-12, CP-218, CP-6; MS: Clair SRM, R-4; HA: Lab.gruppen; MA: Crown MA-36x12; HARDWIRED MICS: sE Electronics V7; FOH EQUIPMENT: API 2500, 527; Bricasti M7; Focusrite producer pack, SPL Transient Designer; MONITOR EQUIPMENT: TC Electronic 1128; dbx 160; Lexicon PCM80

8 BON JOVI | CLAIR GLOBAL

Dave Kob (be); Dave Skaff (me); Adam Stuart (cc/se); Dave Ferretti (ae); Ken McDowell (rf tech); Katie Hughes (tech)

HC: Yamaha PM5000, QL1; MC: DiGiCo SD7 with SD Rack; HS: Clair Cohesion CO-12, CP-218, CO-10; MS: Clair CP-118; IEM: Shure PSM 1000; HA: Lab.gruppen; MA: Lab.gruppen; HARDWIRED MICS: Shure SM 81, 91a, 52a, Beta 181, SM 58; Sennheiser MKH 416, MD 421, MD 409; Audio-Technica AT4047; Neumann TLM 103; Radial J48, JX44, Firefly Tube DI; Countryman DI; WIRELESS MICS: Shure Axient AD4D; FOH EQUIPMENT: Bricasti M7; Summit TLA 100; Empirical Labs Distressor; Yamaha SPX2000; Aphex 612 gates; TC Electronic D-Two; dbx 160A; MONITOR EQUIPMENT: Waves Mercury Bundle; API 3124

9 DEAD & COMPANY | PROMEDIA/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

10 ROD STEWART | MAJOR TOM

Lars Brogaard (he); Sven Jorgensen, Charlie Bryson (me); David Vinnicombe (cc/se); Oly Twiby (ae); Juan Villa, Parker Vandenberg (tech)

HC: DiGiCo SD7; MC: (2) DiGiCo SD7; HS: Meyer Sound Leo; IEM: Sennheiser; HARDWIRED MICS: AKG; Neumann; Radial J48, PZDI, JX62 switcher; WIRELESS MICS: AKG 5900; FOH EQUIPMENT: Rupert Neve 5045; MONITOR EQUIPMENT: Rupert Neve 5045

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

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

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Networking

(continued from page 1)

the broadcast industry, which is well on its way to being published in full. Additionally, a growing number of manufacturers that have developed proprietary AoIP networks—such as ALC NetworX's Ravenna, Audinate's Dante, Calrec's Hydra2, Telos Alliance's Livewire+ AES67 and Wheatstone's WheatNet—now offer compliance, while typically also providing the discovery and control features intentionally not included in the AES67 standard.

Yet the publication of a standard such as AES67 is only the start of the process. Initially published in September 2013, AES67 was released with an addendum in 2014, was revised in 2015 and, on April 15, 2018, was revised yet again.

AES67-2018 includes certain clarifications and minor corrections, but most importantly, it adds a Protocol Implementation Conformance Statement, or PICS, as an Annex. As the notification from the Audio Engineering Society states, PICS “is a valuable tool to ensure proper compliance of AES67 implementations.” An AES67 implementation conforming to the published standard must complete a PICS proforma that states which protocol capabilities and options have been implemented.

The PICS serves a variety of purposes. For instance, it can act as a checklist by the protocol implementer to reduce the risk of failure to conform to the standard through oversight, the AES statement notes. Alternately, it may serve as a detailed indication of the capabilities of the

implementation relative to what is understood to be included in the standard PICS proforma. Lastly, it can be used to check potential interoperation with other AES67-compatible implementations. As the AES notes, “While interworking can never be guaranteed, failure to interwork can often be predicted from incompatible PICS.”

The AES has also established a task group, SC-02-12-R, to define a standardized method for transporting metadata associated with audio in parallel to, rather than part of, the AES67 stream. As part of the published scope of work, the AES is suggesting that the task group consider “an open, standards-based framework that supports both static and dynamic, time-synchronous metadata that is optimized for live workflow applications.”

Standards work requires funding, of course, and the AES has just acknowledged the support of three manufacturers in its AES Standards Sustainer program. Waves has joined at the Silver level, as has PreSonus, and Attero Tech has joined at the basic level.

In mid-April, the AES also announced that, in response to requests from manufacturers implementing the standard, it has introduced an AES67 logo for use on goods and literature to identify products that conform to the specification. “Manufacturers must verify that their product conforms to the requirements of the standard before affixing the logo to their product, its literature or their advertising,” according to the announcement. It promises that further details of the logo and its license terms are forthcoming.

With interoperability the name of the networking game, Audio Video Bridging/Time Sensitive Networking

or AVB/TSN is still something of an outlier. Developed by the Institute of Electrical and Electronics Engineers (IEEE), which originally standardized Ethernet back in the day, AVB/TSN is a Layer 2 open standards protocol and therefore essentially incompatible with AES67, which is a Layer 3 protocol. Nevertheless, AVB/TSN been adopted by various pro audio manufacturers, most notably Biamp Systems. But as Biamp's product marketing manager John Urban noted about a year ago, “AVB/TSN remains on the Slope of Enlightenment in Gartner's Hype Cycle methodology”—that is, while increasingly better understood, it is not yet widely implemented—and added that “it's simply a matter of time until AVB/TSN reaches a status of ubiquity in network design and usage.”

Calrec Audio went some way to bridging the gap between AES67 and AVB/TSN with the introduction of a series of interfaces supporting AES67/Ravenna, Dante with AES67 compatibility, AVB and ST 2022-6 video. “Customers can now interface with multiple protocols at the same time. For example, a signal can be received via AES67 and then sent out via SMPTE 2022, AVB, Ravenna, Dante or AES67,” according to Dave Letson, Calrec's vice president of sales.

Prior to broader adoption of AES67, Audinate perhaps did more to promote AoIP networking than any other organization. According to the latest announcement from the company, there are more than 1,400 commercially available products supporting Dante from 400-plus AV manufacturers.

In May, the company announced that more than 400 Dante-enabled products from various AV manufac-

turers now feature upgraded firmware supporting Dante Domain Manager, which adds such features as user authentication, role-based security and audit capabilities to its scalability and organization of Dante systems over a network topology.

Audinate introduced AES67 support in 2017 in its Dante Brooklyn II, Dante Broadway, Dante PCIe, Dante MY-16, Dante HC and Dante IP Core products. In April of this year, the company announced plans to support SMPTE ST 2110 in the Dante platform by the end of 2018.

Not that there haven't been other advocates for AoIP networking. The Media Networking Alliance (MNA), which has long promoted the AES67 cause, merged its membership with the Alliance for IP Media Solutions late last year under the AIMS brand. Following the 2018 NAB Show, at which AIMS promoted IP interoperability at the IP Showcase alongside other world trade associations, the organization announced that membership has further increased since the merger to 96 with the addition of ALC NetworX, the BBC, Focusrite, Merging Technologies and Yamaha, among others.

“Like AIMS, MNA members were committed to adopting a standards-based approach to interoperability. In their case, it was interoperability between various IP-based audio networks via the use of AES67, and they made tremendous strides toward that goal,” said Michael Cronk, AIMS chairman of the board. “By merging with AIMS, these companies are having even broader impact on the industries they serve—and they're a driving force behind true industry-wide AV IP interoperability across the broadcast, installed systems and live sound markets.”

House Votes to Modernize Music Compensation

BY STEVE HARVEY

WASHINGTON, D.C.—The U.S. House of Representatives has passed H.R. 5447, better known as the Music Modernization Act, a bill that reforms compensation for music licensing, by a unanimous vote; it now heads to the Senate.

“Our industry made history yesterday,” commented Michael Huppe, president and CEO, SoundExchange, in an April 26 statement. “Never have we seen such consensus on an issue of such importance to music creators, and the bipartisan support that we witnessed in the House sends a clear message as music licensing reform moves to the Senate.”

The bill was introduced by co-sponsors Robert Goodlatte (R-VA) and Jerrold Nadler (D-NY). Goodlatte noted that “music is no longer written on piano rolls, and our laws shouldn't be based on that technology either.” The Recording Academy, the RIAA, ASCAP, BMI, the American Association of Independent Music, the American Federation of Musicians and other industry groups threw their support behind the bill. Sirius XM and Music Choice are reportedly the only organizations offering any opposition to the MMA.

The bill offers benefits not just for artists and rights holders but also producers, engineers and mixers, by “formalizing SoundExchange's longtime practice of honoring letters of direc-

tion from artists who opt to share royalties with other creative participants,” according to Huppe's statement.

The MMA also closes a loophole that denied federal copyright protection and royalty payments from digital services for the use of pre-1972 recordings. It additionally establishes a market-based standard rate for writers and artists—a willing buyer/willing seller model long advocated within the industry—and the creation of an organization, similar to SoundExchange, to track credits and distribute royalties.

According to Recording Academy president and CEO Neil Portnow, “Music creators compose the soundtrack to our lives. These creators deserve to be paid a fair wage for their

work. The passage of the Music Modernization Act in the House of Representatives is a historic step forward for all music creators, ensuring that they are credited, paid, and shown the respect they deserve for the impact they have on our culture and daily life. We are honored that Grammys on the Hill helped to pave the way for these long overdue updates.”

The MMA now advances to the Senate, where three similar Senate bills are scheduled for Senate Judiciary Committee hearings in mid-May. Supporters of H.R. 5447 are reported as hoping that the Senate will simply take up and vote on the House bill rather than try to reconcile and combine all four pieces of proposed legislation.



Larry Italia

d&b audiotechnik has named industry veteran **Larry Italia** to two positions: territory manager for the Americas, and president and CEO of d&b audiotechnik Corp. United States. Based in d&b's U.S. office in Asheville, NC, he will oversee all d&b business in North, Central and South America. Most recently, Italia was vice president of the Integration Division of Sound Image (Escondido, CA), where he was responsible for new business development, and management of the day-to-day business and staff. Before that, Italia had a noted career at Yamaha Corp. of America, working his way up to vice president and general manager of Yamaha Commercial Audio Systems, where he was responsible for all aspects of the business in Canada and the United States.



Karl Chapman

Calrec Audio has named **Karl Chapman** as its international sales manager, concentrating primarily on EMEA territories. Chapman is familiar with the television and radio broadcast industries, having spent many years with Neve, Mitsubishi Pro-Audio and Amek before joining Harman Professional Solutions in 1995. He initially worked for Soundcraft as European sales manager, eventually becoming EMEA senior sales manager for Studer.



Noel Larson

Ashly Audio has appointed **Noel Larson** to serve as its vice president of marketing and business development. Building on two decades in the industry, he will develop and execute Ashly's marketing vision and will work with engineers and strategic partners on new product development. Larson will report to Ashly CEO Jim Mack. Most recently, he served as Harman Professional's global director of retail solutions—signal processing, mics and connected PA. At various points, Larson had oversight of the dbx, Lexicon, BSS, DigiTech, AKG and Soundcraft brands during his seven years there.



Shawn London

Shawn London has been named touring sound sales manager for VUE Audiotechnik, where he'll aim to broaden VUE's sound company partner network while also expanding relationships with FOH and system engineers. Previously he was live sound and touring business development manager for Allen & Heath, as well as house audio engineer at the El Ray, Fonda Roxy and Fox Theaters in Los Angeles. With decades of engineering and production experience in both studio and live environments, he has worked on numerous festivals and tackled FOH and monitor duties for Eagles of Death Metal, Neon Trees, Crystal Method and Jane's Addiction.



Mike Trimble

The Business Solutions Group of Guitar Center has brought on **Mike Trimble** and **Marcin Nowak** as design engineers, marking another step in the group's investment and expansion into providing AV/studio design. Trimble gained experience in design of large-scale audio and visual systems while working for various AV integrators, including



Marcin Nowak

Sound Image and Pro Media, as well as JBL. He is professionally trained in a wide range of AV technologies and will work with the GC Pro sales teams to offer clients solutions. Nowak has a background in studio environments and configurations, having been involved with high-end design, implementation and support for various studio environments with Guitar Center and other organizations. His areas of expertise include custom-built workstation solutions, console support and installations.



Kevin Broce

Riedel Communications has chosen **Kevin Broce** to spearhead business development for the company's U.S. West Coast operation. He joins Riedel from Meyer Sound, where he served as

ment coordinator in charge of uncovering and coordinating sales opportunities across the U.S. and Canada. He also held audio department management roles for Third Eye Sound Company and SoCal Productions, where he managed audio, wireless and communications equipment. Prior to that, he served as audio department manager for Centerstaging, where he supervised and scheduled day-to-day operation of 10 live music rehearsal studios.



Mickey Curbishley

Mickey Curbishley has been named president of Solotech's U.S. rental division. Reporting to Martin Tremblay, president and CEO of Solotech, Curbishley will be responsible for Solotech's rental division for touring, special events and corporate market segments in the United States; this role will include overseeing operations in Las Vegas, Nashville, DeKalb and the company's upcoming Los Angeles office. Curbishley's career has included various leadership roles for PRG's concert touring division over the course of 18 years; he eventually took on the role of president and CEO of PRG Music Group. Most recently, he was senior vice president, touring, at live event scenic equipment provider TAIT Towers.



Eric Klein

Prism Sound has appointed two new U.S. sales representatives: **Eric Klein** and **Scott D. Ray**. Klein, founder of Soul Tech Marketing, will handle Prism Sound sales across the East Coast and Canada. Based in New Jersey and a U.S./Canadian dual-national, Klein founded Soul Tech Marketing in 2001 to provide sales and management representation for audio and MI technology products in the Northeast and Canada. Scott D. Ray, who will handle Prism Sound sales on the West Coast, is the founder of S D Ray Associates, a Los Angeles-based rep firm.



Scott D. Ray

API has named **Dave Hintze** as the latest addition to its sales team. Hintze has worked in sales for 15 years



Dave Hintze

and has been part of the music industry in songwriting, performance and live production capacities for nearly 20 years. "I'm excited for the opportunity to bring my skills and experience to an iconic name like API," says Hintze.



Kelly Perkins

The NSCA Education Foundation has named **Kelly Perkins** as its first-ever program director, with a goal of developing, directing, implementing and managing strategic initiatives and programs that align with the charitable organization's mission. Perkins has served on the NSCA Education Foundation Board of Directors since July 2015; she entered the industry in 2008 when she joined Vaddio in a marketing and communications role, eventually becoming the company's marketing and communications manager. In 2014 she joined integrator AVI Systems, leading the marketing and communications team and overseeing the company's strategic integrated marketing approach.



Browning McCollum

Lawo has named **Browning McCollum**, **David Desrochers** and **Stanley Pan** to its North American team of customer support specialists. McCollum joins Lawo as a broadcast technology specialist after a tenure with Viacom Nashville. Desrochers, CBNT, CBTE, was most recently chief engineer and vice president of engineering for the New England Sports Network (Watertown, MA), and Pan will fill the position of junior network architect; he previously specialized in evolving IP technologies, including SMPTE 2110 interoperability testing, during his time with Evertz.



David Desrochers



Stanley Pan

Taking Flight with the P&E Wing

MAUREEN DRONEY, MANAGING DIRECTOR,
PRODUCERS & ENGINEERS WING AND RECORDING
TECHNOLOGY, THE RECORDING ACADEMY

BY CLIVE YOUNG

Breaking into the recording industry has never been easy, and Maureen Droney was no exception to the rule when she began a journey that ultimately led to her current role as managing director of the Recording Academy's Producers & Engineers (P&E) Wing.

While some of her first work experiences were in AV production for corporate events, Droney was determined to become part of San Francisco's recording scene, spending most of her free time knocking on the doors of the city's studios. That persistence paid off when she was hired to be an assistant engineer at The Automatt. "That's where I learned the craft of engineering," she recalled, "and was inspired and mentored by the many extraordinary musicians, engineers and producers I worked with, from Leslie Ann Jones and Jim Gaines to Ron Nevison, Mitchell Froom, Mike Clink, David Kahne, Randy Jackson, Narada Michael Walden and so many more. It was an exciting time. All sorts of great artists, from Santana and Eddie Money to the Whispers, ConFunkShun, Frankie Beverly and Maze, Herbie Hancock, Sylvester, Bobby McFerrin and even Metallica worked there, mostly recording live, and I got to work with all of them as an assistant or a staff engineer."

Eventually The Automatt closed, and Droney became an independent engineer, building a CV that included work on albums with Santana, including the GRAMMY-winning *Blues for Salvador*. She also worked with John Hiatt, Kenny G, Tower of Power, Whitney Houston and Aretha Franklin, along with countless others.

For the last 12 years, Droney has been the managing director of the P&E Wing, a position that finds her drawing on insights gained not only from working as an engineer and musician, but also stints in production and artist management with a globally touring 10-piece band, and time spent observing and reporting on the industry, including an 11-year run as the Los Angeles editor of *Mix* magazine.

All those varied experiences inform her P&E work today: "Having so many different music industry jobs and getting to know so many different people—in the studio, in management, at labels and via the articles that I wrote—gave me a broad

view of the industry. My past experience enables me to understand the challenges today's studio professionals face, and also provides me with skills to be effective in the job that I do now, which involves everything from producing events to working with committees to create technical papers, evangelizing best recording practices and lobbying Congress for legislation beneficial to music creators."

Political lobbying wasn't on anyone's mind back when the Recording Academy and the GRAMMY Awards were founded in 1958. The times have changed, however, so the Recording Academy has too; it still highlights and rewards excellence in writing, performance, musicianship and engineering, but today it also uses its scale and influence to be heard on Capitol Hill.

"I'm privileged to be an advocate for my favorite people: recording engineers and producers."
Maureen Droney

"As our industry has evolved," said Droney, "the Recording Academy's efforts toward protecting the rights of music creators has become one of the most important things that we do. The Recording Academy has become a leader in advocacy in this area, helping to bring our industry together to lobby as a united force for legislation that will improve the lives of our members."

Droney cites some of the Recording Academy's annual events—GRAMMYs on the Hill in Washington, D.C., and District Advocate Day, when members meet with congressional representatives in their home districts—as key opportunities to effect positive change for the industry. "We've been working hard for a long time to get legislation favorable to music creators passed, and today we're making real progress," she noted, detailing those efforts. "The Pro-

ducers & Engineers Wing has always been extremely involved in the Academy's advocacy action programs. We've spent a lot of time interacting with congressional representatives to provide them with a first-hand understanding, directly from the people who work in the trenches and behind the scenes, of the issues facing today's recording professionals."

Not all engineers work in music creation, of course, but the P&E Wing has campaigned for many of them as well. "We've also been active in lobbying legislators and the FCC regarding what's been happening with the sell-off of broadcast spectrum and how that affects the use of wireless microphones and in-ear monitors," she said. (See page 34 for more on the FCC's actions.) "This is an important matter related to the livelihoods of our performer and engineer

members, and also, of course, to the GRAMMY Awards telecast itself."

Creating a presence on Capitol Hill is only part of Droney's work with the P&E Wing, which has nearly 6,400 members. Many members are involved in the organization's dozen chapters across the United States. "It is our members around the country who make things happen by contributing their time and efforts to moving our initiatives forward," Droney pointed out.

Many of those initiatives have an educational bent, and they're not only about bringing politicians up to speed on the concerns of music creators. "We also work within the industry on professional education about best practices related to actual recording," she said, "and also about the importance of proper master delivery, crediting and recording metadata. Something else that concerns us



Maureen Droney, managing director, Producers & Engineers Wing and Recording Technology, The Recording Academy

is very fundamental: education about hearing health and what people can do to protect their hearing."

Two of the P&E Wing's most prominent contributions in recent times have been a pair of recently published guidelines: *Recommendations for Hi-Res Music Production* and an updated version of *Recommendations for Delivery of Recorded Music Projects*. "We have a lot of very dedicated and knowledgeable members who care passionately about the future of our industry," said Droney, explaining how the projects were created. "They worked together to pool their knowledge about best practices for both music recording and preservation. These papers take their real-world experience and provide practical advice and solutions for challenges that people working in music production face today."

Another recent P&E Wing highlight is the publication of the DDEX recording metadata standard RIN (Recording Information Notification) "This standard is a major, breakthrough accomplishment," said Droney, "and it takes us a big step toward solving the industry-wide problem of missing recording credits."

Whether walking the corridors of power or helping educate audio pros on practices that will help present their work in the best light for generations, Droney sees it all as part of a larger mission. "I'm privileged to be an advocate for my favorite people: recording engineers and producers."

Producers & Engineers Wing
www.grammy.com/recording-academy/producers-and-engineers

InfoComm

(continued from page 1)

Comm,” said Chris Merrick, director of global marketing for Integrated Systems at Shure Inc. “For an end user, it’s valuable to be able to source and discover practical solutions directly from the manufacturers and distributors. For IT professionals, this group’s increased participation at the show can be attributed to the convergence of AV and IT, and the pursuit of outstanding solutions for meeting spaces, conference rooms, and so on.... The North American market is vital for the AV industry and enterprise space; this market is full of new adopters and some of the largest businesses in the world, [so] InfoComm is an ideal place for manufacturers to showcase their latest and greatest products.”

There’s far more to InfoComm than just looking at new gear, however, as the show’s parent organization, the Audiovisual and Integrated Experience Association (AVIXA), also provides a slew of important certifications and events that address the changing needs of the industry. All of that has made InfoComm a crucial part of the calendar for many pros; in turn, that drawing power has ensured that exhibitors return year after year.

Having had a booth at InfoComm annually since 2005, Laurent Vaissie, CEO of L-Acoustics, is well positioned to address the show’s appeal to pro audio manufacturers. He said, “InfoComm attracts a wide selection of our key partners and clients—and, of course, potential clients and partners. Visitors from across North America and beyond converge, making it an important moment in our yearly calendar for networking and exhibiting our products. InfoComm is also the perfect opportunity to hold our certified provider meeting for the Americas.”

Meetings at and around the show are a key appeal for some exhibitors and their customers. As just one example, DPA Microphones and Lectrosonics will co-host a masterclass event the day before the show starts at the Hard Rock Hotel, but that and exhibiting at the show itself are part of a larger goal, according to Chris Spahr, DPA’s vice president of sales and marketing, USA: “We might occasionally launch a new product at

the show, but getting in front of current and prospective customers is really the greatest benefit. We’re still relatively unknown to the integration market in the U.S., and the ability to meet end users and integrators who are just learning about us for the first time is the best thing about InfoComm.”

At the other end of the spectrum, there are exhibitors on-hand who are known throughout the pro AV industry. “InfoComm is really fun for us



Chris Spahr, DPA

because its attendees use just about all of our products,” confirmed Fred Morgenstern, product director for Neutrik USA. Given that the company addresses networking, audio, video, live event production needs and more, InfoComm’s broad focus matches his company’s. “It’s wonderful that we get a great chance to talk about the whole breadth

of our product range at the show.”

For manufacturers who serve multiple market segments, exhibiting at a show like InfoComm provides an opportunity to bring definition and context to their varied offerings. Christopher Currier, manager of trade marketing Americas/pro audio solutions at Sennheiser, said, “Not only does InfoComm give us the chance to show our latest products, it also shows our commitment to the install markets and the various verticals within that market, like education, business, house of worship, IT [and more], so InfoComm is one of our best opportunities to meet with the leaders and end users in these verticals.”

Interactions like that are useful beyond simply presenting new products. Derek Badala, director of sales, Americas, at Synthax, the U.S. distributor of RME, finds trade shows to be “one of the most effective ways to gain market feedback, debut technology and build rapport with all of our customers.”

Those interactions are key, said Marc Lopez, director of marketing for commercial audio products, Yamaha Professional Audio. “Trade shows have bounced back, and I believe that this is a result of both the importance of relationships and the technical nature of our industry. Manufacturers like Yamaha are providing more training and hands-on opportunities in our approach to trade

shows.... There is still a large amount of in-person education required for our industry to adopt and become proficient in implementing new solutions. There’s nothing like experiencing new products in person. Viewing products online is only part of the research phase. Seeing and hearing a product’s performance is an essential part of gaining full comprehension of its capabilities—and trade shows are a really convenient place to do so.”

Customers aren’t the only ones doing research at InfoComm. The show’s various panels and educational offerings provide overviews and deep dives into new technologies, emerging trends and more; those insights often prove as useful for manufacturers as they do for attendees because they illuminate end users’ needs and mindsets. “Thankfully, we are really busy at the show and find it difficult to get away from the booth,” said Kevin Booth, national sales manager, Auralex Acoustics. “However, we are eyeing up a few presentations for an hour getaway, like AV design, environments and infrastructure, emerging trends, loudspeaker and amplifier specifications, acoustics for conferencing and collaboration, project management for AV, and project management for sales managers.”

Educational offerings are often a crucial part of what draws industry members to a convention, observed

Richard Nevens, vice president of global sales at Focusrite. “Shows have always been a great source of demand generation for manufacturers, but I think it’s the educational and community aspects that attract visitors, providing them an opportunity to immerse themselves in new technologies, interact with their peers and specialists to improve their

workflows and, of course, see and explore hot new products—all of which keep them coming back year after year.”

For the number of visitors it attracts and the sheer quantity of market segments it addresses, InfoComm has become a must for many of its audio exhibitors. John Monitto, director of business development at Meyer Sound, summed it up, saying, “InfoComm is now the center-point show not only for installed AV but also for some big players in the touring market. It’s a combination of its association with the AVIXA certification and standards groups and the scope of the show itself; putting the two together, it’s become the show for our market in North America.”

InfoComm 2018

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Notes from The Record Company

BY JACQUES SONYIEUX

The Record Company continues its meteoric ascent with its sophomore effort, *All of This Life*, coming out in June on Concord Records. The band started out as countless others have, playing routine blues bars in Los Angeles, but something in the chemistry of this group was different. The debut album, *Give It Back to You*, was entirely self-produced, recorded in bass player Alex Stiff's living room with modest and inexpensive gear—yet it landed a Grammy nomination. This time, with an even more ambitious collection of songs, the band aligned with veteran mix engineer Mark Needham, who took the sonics to a new level. To support the album, the group has embarked on a headline tour of mid-sized venues across the United States. *Pro Sound News* recently spoke to Stiff about harnessing one's sound and playing with guts.

ON THE BAND'S SOPHOMORE EFFORT

The first album was made entirely in my living room on really cheap equipment and I mixed it myself. We didn't really know what to expect and it really blew past everyone's expectations. To have the album go to radio and get nominated for Grammys was absolutely crazy. On this album, we started in the living room again for writing purposes—my house in Los Angeles is a great place, where we are comfortable. We wanted to be able to find that natural progression both sonically and songwriting-wise. During those sessions, I was in a car with my drummer and a Fleetwood Mac song came on. The drums were so good that it felt like Stevie Nicks was right in the room with me, singing to me. At that point, I knew we needed to find a studio with a great drum sound to take this thing to the next level.

ON MARK NEEDHAM

Mark Needham was fantastic—he really got it and started out just by mixing a song. Then we would say, "That was really good. Do you want to do another one?" And this continued until he finished the whole album and did 10 songs. He did some bonus tracks, too. He is a really hard worker, turned things around quickly, and I couldn't recommend him more highly or give him higher praise.

ON SETTING ROOTS IN L.A.

I moved to Los Angeles many years ago with the goal of making a living in music. When this band started, I had a lot of experience with making music, production and composition because I was writing commercial songs for TV and film. There is a lot that I learned in commercial composing, and I did it for well over a decade. I always had bands on the side,

but they definitely weren't paying the bills, so the commercial composing is how I was making a living. It helped having all this experience coming into the band.

ON A "LIFE TO FIX"

The single "Life to Fix" really surprised us. When we got the first mix from Mark Needham, it felt like a train just ran over us. We all kind of went, "Wow—that sounds big and huge, and in all the right places." It also played well in a bunch of sonic environments. Our singer, Chris [Vos], said he was scared that our band made sound like this, that it had this kind of bigness. Not all the songs on the album are like this one—in fact, some are 6/8 ballads—but that particular song had this 'four on the floor chug' that really blew us all away. But that drum sound wasn't right for *all* the tracks. For example, on certain things, we maybe needed a '60s Ringo thing going. We paid close attention to all of that.

ON FINISHING UP

To some degree, you don't ever know that a record is done. But for us, we had a certain number of tracks we really liked, and then we started to think



JEN ROSENSTEIN

After extensive touring behind its first album, *The Record Company* is back with its sophomore effort, *All of This Life*.

only through the grind and the work and the writing and the recording.

ON SURPASSING EXPECTATIONS

Who would think that three guys already in our 30s would make it by starting a blues-based group playing small bars in Los Angeles? What a joke that is nowadays, right? What I tell people is that the minute you really follow your heart on a musical level and go with your gut on how you want to write and play music, that's when it clicks. For us, that is exactly the point when we found our audience. It seemed like an insane thing to venture out on, playing the kind of music we were playing at the age we were, and to think it would succeed. But when

It seemed like an insane thing to venture out on, playing the kind of music we were playing at the age we were, and to think it would succeed.

about sequencing. And then, when we knew we had two or three more tracks to write, we would ask ourselves, "What does the album need? Does it need something about a particular lyrical topic, or do we need a song that goes a more bluesy or gritty route?" By the time we were reaching the last few songs, we were challenging ourselves to make sure we really liked every single track. When we got to a place where we felt we really liked all the songwriting, we were going to start mixing. You get to that place, but

we set up mics in my living room that first day we recorded, we said, "Wow, this sounds like something, and we've only been together for one day." Our sound was harnessed right from the beginning, and it was what we all wanted to do. When we went with our hearts and our guts, that's when things started to work out for us.

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

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