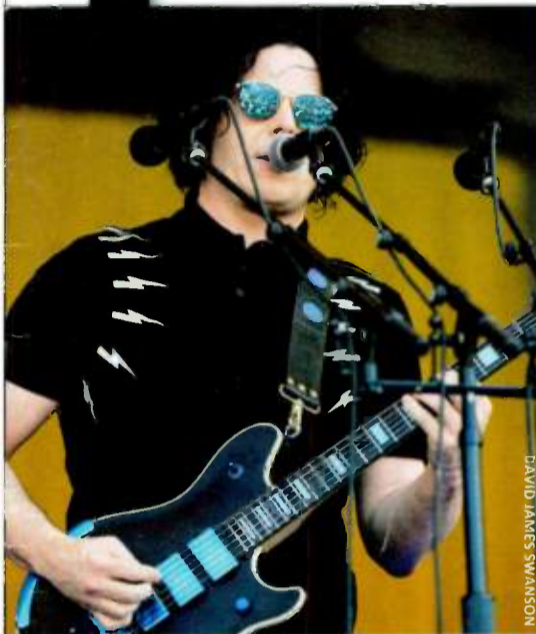


# pro sound NEWS

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August 2018



DAVID JAMES SWANSON

**SERPENTINE SOUND**—On his first tour in four years, Jack White is playing to a mix of arenas, clubs and festivals, including the New Orleans Jazz & Heritage Festival, seen here. In tow is a three-headed hydra of a mic stand with a center Shure SM58 for standard vocals, flanked by two Audix OM7s, which feed into distortion and other White-controlled pedal effects. For more on the tour, see page 40.

## European P.A. Brands Eye U.S. Market

BY CLIVE YOUNG

NEW YORK, NY—The pro audio industry has always been based on relationships, and nowhere is that more apparent than when you walk the floor of an audio convention like AES, InfoComm or, increasingly, the NAMM Show. On every aisle, manufacturers and their clients go over the latest gear offerings,

exploring how products might fit upcoming projects. There's always going to be certain well-known companies from around the globe to visit at these conventions, but in recent years, there's been a steady uptick in the number of European-based loudspeaker manufacturers on hand, a turn of events that's part of a larger trend.

(continued on page 47)

## Management Buys Out Martin Audio

Loud Audio has sold its high-end pro loudspeaker brand, Martin Audio, in a management buyout backed by UK-based private equity firm LDC.



## Pros Seek Hyde Street Studios

Once the home to legendary studio Wally Heider Recording, San Francisco's Hyde Street Studio has flourished since 1980, having hosted everyone from the Grateful Dead to Tupac. Now it's just opened a new second facility in the Sunset District and has finished a two-year refurbishment of a classic console as well.



## DAWs Broaden Reach, Deepen Feature Sets

BY STEVE HARVEY

The last few months have been momentous when it comes to digi-

tal audio workstations aimed specifically at the pro audio world. Most of the DAWs commonly used by profes-

sional operators in recording and post applications have had major new editions released, some followed by a stream of smaller supplemental updates that have nonetheless gifted users with significant new features.

Collaboration to Pro Tools First, the company's no-cost introductory software. By the release of Pro Tools HD 12.8.2, Avid had also included VR workflows, with the ability to work with 1st, 2nd and 3rd order Ambisonics (4-, 9- and 16-channel tracks and buses, respectively). Integration of the Facebook 360 Spatial Workstation (originally developed by Scotland's Two Big Ears startup)—a plug-in collection for creating spatial audio

(continued on page 47)

### AVID PRO TOOLS

The 800-pound gorilla of the pro audio DAW world remains Avid's Pro Tools. In late 2017, Pro Tools 12.8 introduced integrated Dolby Atmos workflows to Pro Tools HD for audio post pros and brought Cloud

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# Martin Audio Sold in Management Buyout

BY CLIVE YOUNG

WOODINVILLE, WA—Loud Audio has sold its high-end pro loudspeaker brand, Martin Audio, in a management buyout backed by UK-based private equity firm LDC.

Characterized as having “invested £12m for a significant stake in the

company,” LDC, the private equity arm of Lloyds Banking Group, will “provide a step change for the business, injecting capital into key growth areas and bringing on board additional expertise to help guide its strategy,” said Troy Harris-Speid, investment director at LDC in London.

Loud purchased Martin Audio in March 2007, which, at the time, made it one of four different loudspeaker brands under the Loud umbrella, the others being EAW, Mackie and Tapco. (Tapco was essentially shuttered in 2011.)

The sale of Martin Audio is intended to enable the loudspeaker manufacturer to further develop its product range, sales and marketing capabilities, build up its global distribution network and bolster software development.

To that end, Dom Harter, managing director of Martin Audio, said, “Our focus is now on developing our product line even further and ensuring we have a rock-solid infrastructure in place to extend our global reach and drive market share.” The company currently has a turnover of around £20m and employs more

than 60 people.

Mark Graham, CEO of Loud, noted, “Bringing some of the technical and operational expertise of the Loud enterprise to Martin Audio and drawing on Martin’s fanatical passion around sound quality created a nice marriage of capabilities. While we are sad to see them go, we believe this change will benefit both businesses by allowing for simplicity and focus. We wish the brand and all the Martin employees the very best of luck.”

For Loud, the deal is part of an overall push to narrow its focus; the company cited a similar intention when it sold Ampeg, the MI-oriented bass amplifier and pedal brand, to Yamaha in May.

James Oh, partner at Transom Capital Group—which includes Loud Audio in its portfolio—explained, “Reducing the complexity of the Loud business and refocusing on high-quality audio delivery from consumers to professionals has always been our focus. We are very happy to have found a great owner for the Martin business and wish everyone involved much success in their pursuits.”

As part of the deal, Harris-Speid



Dom Harter, managing director of Martin Audio, led the management buyout.

and fellow LDC investment director Philip Weston will join Martin Audio’s board, alongside James Browning, who will join as non-executive director.

Martin Audio  
www.martin-audio.com

Loud Audio  
www.loudaudio.com

## briefs

### Thomas Dolby to Keynote AES

NEW YORK, NY—While Thomas Dolby’s 1988 album *Aliens Ate My Buick* has been used to demo loudspeakers at audio conventions for decades, AES attendees will get to hear from the man himself this year when he delivers the keynote address. Revered for ‘80s hits like “She Blinded Me with Science,” Dolby pioneered music on the web during the first dot-com boom, and today leads the Music for New Media program at John Hopkins University’s Peabody Institute. The AES Convention (aes.org) will return to the Jacob Javits Convention Center in New York City on Oct. 17-20, 2018.

### Avid Wins Microsoft Award

BURLINGTON, MA—Avid won the 2018 Microsoft U.S. Partner Award for the communications and media industry. The award recognizes “leadership in customer impact, solution innovation, deployment and exceptional use of advanced features in Microsoft technologies over the past year,” according to the latter company. In April 2017, Avid and Microsoft announced a strategic cloud alliance focused on cloud-based solutions for media and entertainment.

### GameSoundCon Turns 10

LOS ANGELES, CA—GameSoundCon (gamesoundcon.com) will mark its 10th anniversary this year as it returns to Los Angeles on Oct. 9 and 10, 2018. The event will include more than 50 panels and educational sessions, as well as speed mentoring. The event will once again offer Game Audio Essentials, Game Audio Pro, Audio for Virtual Reality and Wwise Special Training Sessions, and will introduce a new Academic track this year.



# Fire Destroys Soundsphere Factory, Offices

BY CLIVE YOUNG

STRATFORD, CT—The Stratford home base of loudspeaker manufacturer Soundsphere was gutted by a massive fire on July 9. The company builds omnidirectional speaker systems for the commercial installation market.

Firefighters responded to the early-morning blaze, arriving at 10 Research Drive in Stratford at 6:30 a.m. An hour into the fire, the roof collapsed. The 12,500-square-foot building that housed the company’s offices, manufacturing facility and warehouse is considered a complete loss.

Soundsphere had five employees who worked at the Stratford facility; only one was on site when the fire broke out and was unaware of the flames until police knocked on the door.

With the Stratford facility in ashes, Soundsphere parent company MSE Audio has announced it will move manufacturing to its Jacksonville, FL, facility, aiming to ramp up quickly and hit full capacity within 12 weeks. Company spokesperson Morgan Roush later clarified to the



Every firefighter from Stratford, CT, was called on to help extinguish a fire that demolished Soundsphere’s main facility on July 9.

A company statement to customers noted that Soundsphere currently has “limited inventory across the country.” Further, “If the product you ordered is not available, we can recommend a similar product to meet your audio needs for your specific application. We want to assure you that we are doing everything we can to make sure you can finish your jobs as promised.”

In the meantime, MSE is working with every employee—some of whom had worked for the company for more than 20 years—to retain them or transition their duties elsewhere.

Soundsphere was acquired in late December 2013 by Overland Park, KS-based MSE Audio, which also owns the brands Phase Technology, Induction Dynamics, SolidDrive, SoundTube and Rockustics.

Soundsphere is best known for its ceiling-mounted, globe-shaped omnidirectional speakers designed for use in offices, government facilities, warehouses and shopping centers  
Soundsphere  
soundsphere.mseaudio.com

STATFORD MAYOR LAURA HODDICK



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## SOUNDRECORDING

**Modern Mastering Evolves . . . . . 18**  
 Stephen Marsh has been a top mastering engineer for decades and is still handling everything from soundtracks to singles, but recently his sideline—servicing and restoring Studer A80 tape machines—has grown to become 40 percent of his work.

**Big Bad Sound Flourishes . . . . . 18**  
 Big Bad Sound L.A. cohorts Zach Fisher and Jack Ruley created their facility specifically as a “middle ground studio” and it has taken off as a result, drawing the likes of Rancid and others as its reputation has steadily grown.

## SOUNDPOST/BROADCAST

**Temp Love Breaks Out in Bay Area . . 25**  
 In business for the last five years, full-service music company (scoring, music supervision and far more) Temp Love recently moved to a new facility in San Rafael—a room formerly part of George Lucas’ renowned Industrial Light & Magic complex.

**AC-4 Audio Delivery Picks Up Pace . 25**  
 This year has seen a significant uptick in activity for AC-4, Dolby Laboratories’ end-to-end audio solution for next-generation broadcast and streaming services—and here’s why.

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**Sound Innovations: Calrec Audio’s Type R . . . . . 35**  
 The rise of streaming services and increased competition for the attention of listeners is forcing radio to look for innovative ways to engage audiences. Modern stations are finding that they need to operate in a multitude of ways to connect with different target audiences, and Calrec is aiming to facilitate that with its new Type R console.

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## SOUNDREINFORCEMENT

**Roger Waters at BST . . . . . 38**  
 Roger Waters has put on massive rock spectacles throughout his career, performing the music of Pink Floyd with over-the-top theatrics, both visual and aural. When he played London’s British Summer Time festival in July, that meant Capital Sound had to field more than 300 loudspeakers for the show.

**Live Sound Showcase: Jack White . . . 40**  
 On his first tour in four years, Jack White is playing arenas, clubs and festivals. In keeping with his championing of retro audio, which includes his Third Man Records label and vinyl pressing plant, the tour is carrying all-analog FOH and monitor rigs.

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## SPECIAL REPORT

**Dante in Education . . . . . 27, 28, 29, 30, 31**  
 It’s one thing to teach networking to students—most audio schools do, as a basic knowledge of networking is essential to what they will see in the real world. It’s even better, however, when educators can explore how a Dante network is used within their own facilities, as the real classroom meets the real world.

## COLUMNS

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<b>viewfromthetop. . . . . 45</b>
For most people, accessories are what you buy after your main purchase. For CEO Mike Belitz, accessories are the main purchase—in the form of Ultimate Support Systems, purchased in 2006, and Radial Engineering, purchased earlier this year.
<b>music,etc. . . . . 50</b>
Jacques Sonyieux talks with Matt Rollings of Blues Traveler about finding the right studio, being open-minded during recording and, most of all, staying focused.



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# Sonic Aging: Pro Audio's Next Untapped Market?

BY CLIVE YOUNG

As a college student, I interned at some record companies and MTV, so when I graduated, I was certain I'd jump headfirst into the music business. Instead, my first real job was working for a wine magazine—which turned out to be a little bit rock 'n' roll anyway. Our art director regaled us with wine-inducing stories about hanging out with Kiss when she was young; one of our freelance writers was the late, legendary radio DJ Dan Ingram, who was quite the connoisseur; and every Friday ended with a 5 o'clock tasting of exotic wines we'd been sent for review. It wasn't quite as staid as you might expect, as all the while loud music would blast from some far-off office and we'd joke that the racket might shatter the bottles. Those days came to mind recently when I heard about one of the latest trends in distillation.

Over the last few years, a movement has sprung up within the spirits industry championing a process called "sonic aging" or "sonic maturation," which uses loudspeakers to both speed up alcohol's aging process and affect its flavor. While the booze is still stored and aged in a traditional wooden barrel, most often oak, the sonic aspect comes from having a

loudspeaker—more often than not a sizable subwoofer—right next to it, pointed directly at the side of the barrel.

Theory has it that the emanating music causes vibrations inside the wooden container, helping agitate the liquid so it accumulates more taste. The highest-profile practitioner of the process is Joe Heron, owner of Copper & Kings, a distillery based in the Butchertown neighborhood of Louisville, KY. As he explains it on his website, "We have five major subwoofers in our basement maturation cellar. The principle is not vibration but pulsation. We pulse (a bass note in particular) music through the cellar. The alcohol molecule, being less dense than a water molecule, starts to move and collide with other alcohol molecules inside the barrels, which eventually collide with the barrel wall, which starts to create a 'distillate wave' inside the barrel, resulting in increased frequency of contact over time between the distillate with the barrel walls and [which], in our opinion, enhances maturation."

He's not alone in subscribing to this methodology. Other distillers using the process include Spirit Works Distillery in Sebastopol, CA; Tuthilltown Spirits in Gardiner, NY; and Dark Island Spirits in Alexandria Bay,

NY. While they're united in their support for the concept, their applications of the idea seem to vary. Copper & Kings has five large subwoofers in its aging room, variously blasting different Spotify playlists (though less loudly during the day so employees can still think). Meanwhile, Spirit Works' approach has white oak barrels with headphones stretched around them, each getting imbued with the vibes of different genres via staff-curated playlists variously focusing on bluegrass, classical music, Michael Jackson, Led Zeppelin, Prince, Daft Punk and others.

Of course, using popular music of the last 100 years might be a questionable call since it can be repetitive, which in turn might affect the process, and there's also the inevitable debate of how much of this trend is science versus marketing. For Dark Island Spirits, that's no argument, however; the distiller has developed what it calls the Tactile Immersed Isolated Maturation Engine (TIIME), a patent-pending device that it says will "musically mature"—a term it has trademarked—its bourbon, brandy, rum, whiskey and specialty spirits.

Will sonic aging catch on, or is phasing alcohol with loudspeakers merely a, um, phase? While these distillers may be looking to save time in the maturation process—and perhaps enjoy some tunes as well—only time will tell whether loudspeaker-enhanced aging is the next untapped pro audio market.

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# SSE Acquires Capital Sound

REDDITCH, UK—UK live sound powerhouse SSE Audio Group has acquired London-based SR provider Capital Sound Hire. The move follows a strategic partnership between the companies that began earlier this year.

Led by founder/managing director Keith Davis, Capital Sound has provided audio for tours and festivals for more than 35 years, most recently garnering headlines for providing more than 300 Martin Audio loudspeakers for Roger Waters' appearance at London's BST Festival. The company's inventory also includes systems from d&b audio-technik, Meyer Sound and Outline.

Capital Sound will continue to operate as a separate brand, serving its own client base as it sees fit, but will be able to access SSE's resources and inventory, which includes L-Acoustics and d&b audiotechnik systems and reportedly the largest rental stock of digital mixing consoles in the UK.

For SSE Audio Group, the move is the latest in a string of acquisitions that began with the purchase of London sound reinforcement company Canegreen in 2008, followed



Following a short strategic partnership, SSE Audio Group has purchased Capital Sound.

by Manchester-based audio provider Wigwam in 2013. That history is expected to help ease the transition as Capital comes under SSE's wing, as SSE Audio Group MD John Penn explained. "We now have a clear template for joining forces with other leading players in the industry," Penn said. "With Wigwam, we were particularly keen to maintain its distinctive brand, while providing it with backup and support, and that is what we have done."

Retaining Capital's culture and methods was key to Davis' decision to explore acquisition. He said, "SSE's successful takeover of Wigwam has shown that they will look after the staff and the brand, and continue to let the business grow and flourish, which is really important to me and my lifetime's work."

Discussions for the acquisition be-

gan earlier this year, Davis noted. "We approached John Penn at SSE at the beginning of the year to assist us on a project that required a larger pool of equipment, knowing that we could trust SSE not to nick the gig. Through projects like this, we were able to access a larger

pool of equipment and talent, and we could offer clients options that were unavailable to us on our own.

"This has worked out so well that, after many conversations, I asked John if they would be interested in purchasing Capital Sound. I'm not getting any younger and I've been wondering about the long-term future for Capital for some years. After a lot of soul searching, I realized that SSE was the best bet."

Davis will remain as a consultant to the group, while Paul Timmins, currently operations and development director at Capital Sound, will continue to be responsible for Capital's day-to-day management.

**Capital Sound**  
[www.capital-sound.co.uk](http://www.capital-sound.co.uk)

**SSE Audio Group**  
[www.sseaudiogroup.com](http://www.sseaudiogroup.com)

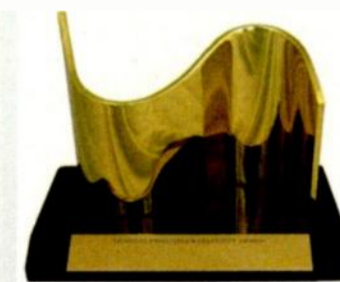
## TEC Awards Nominees Announced

NASHVILLE, TN—At Summer NAMM, nominees for the 34th annual NAMM TEC Awards were announced at a pro audio reception held at Nashville's Music City Center. It was the first time TEC Award nominees were named at Summer NAMM, marking a shift from the traditional September timeframe.

Presented annually during the NAMM Show by the NAMM Foundation, the 23 Technical Achievement and eight Creative Achievement categories of TEC Awards recognize the individuals, companies and technical innovations behind the sound of recordings, live performances, films, television, video games and multimedia. At the ceremony, the Les Paul Innovation Award, honoring musical artists whose work has exemplified the creative application of audio technology, and the Hall of Fame Award, recognizing audio masters and engineers, are both presented.

The voting period will commence on November 14 and continue through December 31, 2018. Additional information on the voting period and eligibility will be released in November.

The TEC Awards will return to the 2019 NAMM Show on Saturday, January 26, 2019, at the Hilton Anaheim Pacific Ballroom. Ticket sales for the annual event will open in September.



The TEC Awards will return to the NAMM Show in Anaheim on January 26, 2019.

THERE'S MORE ▶ For a complete rundown of the nominees in all 31 categories, visit <https://tinyurl.com/tecawards2019>.

## Jim Malloy, Grammy-Winning Elvis Engineer, Dead at 87

BY CLIVE YOUNG

NASHVILLE, TN—Jim Malloy, a Grammy-winning engineer who worked with the likes of Elvis Presley, Willie Nelson, Miles Davis, Henry Mancini and dozens of other household names, died July 5 at age 87.

Over the years, he worked on records by the likes of Johnny Cash, Roy Orbison, Hank Williams Jr., Ike & Tina Turner, Willie Nelson, Waylon Jennings, Dolly Parton, George Jones, Jerry Lee Lewis, Charley Pride, the Statler Brothers, Homer & Jethro, Al Hirt, Louis Armstrong, Benny Goodman, Chet Atkins, Duke Ellington, Nelson Riddle, Duane Eddy, Neil Diamond, Gary Burton, Linda Ronstadt, Eddy Arnold, Doris Day, Frank Sinatra, Ray Stevens, Bing Crosby, Sammy Davis Jr., Paul Anka, Ricky Nelson, Dean Martin, the Carter Family, Jack Benny, Perry Como and many others.

Born in 1931 in Dixon, IL, Malloy moved to Los Angeles in 1954,

entering the electronics trade, working at NBC. He eventually shifted into the recording world with a position in studio maintenance at Radio Recorders. Mentored by Columbia Records executive Alan Emig, Malloy's first mix was a Mahalia Jackson track. From there, he never looked back.

Malloy won a Best Engineered Recording Grammy Award for his work on Henry Mancini's soundtrack for the classic 1963 thriller *Charade*. He nabbed five other Grammy nominations across his career for engineering *The Latin Sound of Henry Mancini* and *The Pink Panther* for Mancini; "How Great Thou Art" for Presley; "The Last Word in Lonesome Is Me" for Eddy Arnold; and "The Addams Family Main Theme" for the ABC television series.

Presley is quoted as having called Malloy the "best engineer anywhere, as far as I'm concerned." Malloy's 2005 autobiography, *Playback* (now hard to find, used copies of the fairly technical book start

at \$300), recounts how The King tried to get the engineer fired—so that he could hire Malloy full-time for himself. Elsewhere in the tome, Malloy recalls working with Sam Cooke on the night he died, refusing to record Benny Goodman's 10-piece band with only two mics despite the bandleader's insistence, and recording Ike and Tina Turner while bodyguards watched over his shoulder.

Chet Atkins eventually drew Malloy to Nashville to record hits for RCA, and the engineer later branched out into producing, creating hits for Sammi Smith and others, and music publishing as well, founding DebDave Music, named after his children. Other highlights of the era included work as the recording engineer for *The Johnny Cash Show* TV series, which ran three years, taped at the Ryman Auditorium in Nashville.

Malloy remained active, producing other artists over the years including a number of Eddy Arnold albums.

## Yorkville Sound to Distribute HK Audio

TORONTO, CANADA—Yorkville Sound has become the North American distributor for German pro audio manufacturer HK Audio, noted for its cabinets, subwoofers, stage monitors and P.A. systems, including its Lucas, Elements and Linear 3 lines.

Yorkville Sound has been the distributor for HK Audio's sister company, Hughes & Kettner Guitar Amps, for the better part of a decade, and last April, Hughes & Kettner awarded Yorkville with "Best GrandMeister Sales" for 2017.



Yorkville Sound will distribute HK Audio in North America.

Jeff Cowling, Yorkville Sound's vice president of sales and marketing, is pleased to grow the HK family within North America: "For the last 20 years, HK Audio has become a name in Europe associated with high-quality live sound reinforcement systems. We have a longstanding track record with Hughes & Kettner that spans most of a decade. Now with HK Audio under the same roof, we can offer our North American retailers the opportunity to work with our trusted team for all HK Audio brands."

Meanwhile, HK Audio CEO Nils Stamer remarked, "By teaming up with Yorkville Sound, HK Audio has found a veteran partner with over 55 years' experience distributing P.A. and lighting products in North America. Yorkville Sound has a vast dealer network, a highly experienced rep force and proven success with their own manufactured P.A. products." Yorkville Sound [www.yorkville.com](http://www.yorkville.com)

## Grammy Nomination Rules Change for 2019

BY STEVE HARVEY

SANTA MONICA, CA—Recording Academy president Neil Portnow announced changes in the Grammy Awards nomination process in a letter to the organization's 20,000-plus members on June 26.

"Because the Grammy Awards reflect what's happening in the ever-changing landscape of music, the Recording Academy works diligently to make sure our awards process continually evolves to meet the needs of the music community," wrote Portnow. The new rules were reportedly ratified at the trustees' meeting in May in

board magazine, Portnow says this change will provide "more flexibility to our voters when having to make the often challenging decisions about representing excellence and the best in music for the year."

The remaining 80 Grammy categories will continue to be capped at five nominations each. In 2011, on Portnow's watch, the number of categories was reduced to 78 from 109—the total has since increased to 84—and gender categories were eliminated. As *Billboard* observes, since the telecast endeavors to spotlight nominees in the Album of the Year category, it is currently unclear



Recording Academy president Neil Portnow announced changes to the Grammy Awards nomination process in June.

top 15 selected by the general voting membership's first ballot in the World Music category, bringing it into line with certain other categories, including Album of the Year.

The selection criteria for Best Alternative Music Album has been expanded. Any "music that embraces attributes of progression and innovation in both the music and attitudes associated with it," which the statement also describes as a less intense version of rock or a more intense version of pop, may now be nominated.

The new rules take effect immediately, in time for the 61st Annual Grammy Awards ceremony, which returns to the Staples Center in Los Angeles in 2019.

Recording Academy [www.grammy.com](http://www.grammy.com)

Best New Artist and the Record, Song and Album of the Year awards will be chosen from eight nominations each.

Hawaii. Since Portnow's contract with the Recording Academy ends in July 2019, these are likely to be the last awards show changes he will oversee.

Taking a page from the Academy of Motion Pictures Arts & Sciences' playbook, perhaps, the new rules include an expansion of the number of nominations from five to eight in the prestigious Record, Song and Album of the Year categories and for Best New Artist. In the email statement, a copy of which was obtained by *Bill-*

board magazine, Portnow says this change will provide "more flexibility to our voters when having to make the often challenging decisions about representing excellence and the best in music for the year."

Other rule changes are largely clarifications or fine-tuning. Music supervisors have been added to the nominee groups in the category of Best Compilation Soundtrack Album, and restoration engineers will now be eligible in the Best Historical Album category.

A nominations review committee will pick five nominees from the

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## GearFest Goes Big

FORT WAYNE, IN—Sweetwater Sound's homegrown MI/audio event, GearFest, returned for its 17th edition on Friday, June 22, and Saturday, June 23, 2018, drawing more than 15,000 attendees. Attracting them to the internet retailer's Fort Wayne campus were more than 200 workshops, exhibition booths—and in some cases, gear debuts—by many major manufacturers, and performances by artists including Greg Koch, Peter Erskine and John Scofield.

This year's Producer's Panel covered what it takes to be a producer, ways to get the best out of an artist and more. The panel was made up of Sylvia Massy (Tool, Prince), Neal Pogue (TLC, Pink), Kevin Killen (Shakira, U2), Fab Dupont (Jennifer Lopez, Bon Jovi), Chris Lord-Alge (James Brown, Prince) and Rich Chycki (Dream Theater), along with Sweetwater's own Mitch Gallagher



GearFest 2018 included numerous panels and performances for the 15,000 attendees.

moderating the panel.

Among the more popular of the events was "Getting Great Electric Guitar Tone," which featured Butch Walker (Taylor Swift, Panic! at the Disco), Buddy Miller (Emmylou Harris, Robert Plant), Tim Pierce (Bon Jovi, Bruce Springsteen), Lyle Workman (Bourgeois Tagg, Todd Rundgren) and panel moderator and Nashville session player Corey Congilio. During this session, the group dug deep into capturing tones and demonstrated Universal Audio's OX.

Other sessions among the more than 200 workshops and seminars covered topics like getting discovered on YouTube, music creation with computers, and tips on improving technique and theory.

But visitors were also there to see gear, and in that regard they were not disappointed. Perhaps unsurprisingly, this year's event reportedly saw a 15 percent increase in music equipment sales.

Steve Dwyer, senior director of brand at Sweetwater Sound, re-

marked, "Through GearFest, Sweetwater is reaching today's music creation community and bringing them the opportunity to learn and interface with some of the brightest minds in the music industry. We are certain that anyone who attended GearFest walked away with a new piece of knowledge and are ready to take their passion for music to the next level."

GearFest 2019 will be held June 21-22.

Sweetwater  
www.sweetwater.com

## QSC to Build EMEA Headquarters and Experience Center

SINSHEIM, GERMANY—Pro audio manufacturer QSC has broken ground on a new headquarters for its operations in Europe, the Middle East and Africa, which will be located in Sinsheim.

The new office, located near the company's current space, will house QSC Systems business development, sales, technical support, operations and marketing for the EMEA region and a dedicated training center devoted to Q-SYS education.

"This kicks off the next phase of growth in an effort to strengthen

customer relationships and provide even deeper levels of support," said Markus Winkler, senior vice president, QSC Systems. "Part of our systems growth strategy is expanding our reach in Europe and focusing on the end user experience, along with providing our channel partners additional support and best-in-class training."

The new facility will total nearly 700 square meters across two floors, and QSC EMEA plans to use it for demonstrating to clients and channel

partners Q-SYS, networked amplifiers and loudspeakers.

While construction on the facility isn't expected to be completed until December 2019, the company isn't waiting until then to find new ways to showcase its offerings. "Over the last six months, we have made major investments in expanding our reach throughout EMEA, including a new showroom and training center in London," Winkler noted.

QSC  
www.qsc.com



An artist's rendering of QSC's new EMEA facility, which is expected to be completed in December 2019.

## Sound Productions Founder Retires

IRVING, TX—Forty-five years after founding Sound Productions, Charles Kitch has announced his retirement.

Over that time, the company has grown from a startup to a respected dealer and distributor for the pro audio, video and lighting industry, as well as a backline rental specialist on a regional basis.

Throughout the years, Kitch placed an emphasis on valuing his team, providing growth opportunities and continually re-investing in SoundPro's future and people. Underscoring that leadership, 40 percent of the company's employees have been with SoundPro more than 15 years.

That effort in turn has led to a focus on professional customer service and support, and the company often works with vendors to offer free workshops, clinics and hands-on training for customers covering a range of products. Customers can also see, hear and operate digital mixers, speaker systems and lighting in the privacy of SoundPro's product demo and training room.

Kitch leaves SoundPro under the leadership of former president, now CEO, Joshua Curlett, an eight-year veteran with the company. Going forward, the directive for SoundPro from Kitch is simply to "honor the past while building the future."

Sound Productions  
www.soundpro.com

# Former Flyte Time Studios to Be Demolished



BY CLIVE YOUNG

EDINA, MN—For years, stars beat a path to 4100 West 76th Street in Edina to record at Flyte Time Studios, the home base of mega-production team Jimmy Jam and Terry Lewis. Artists kept coming when the facility changed hands in 2003, but now the music is ending. Today known as Runway Studios, the recording facility will be demolished later this year to make way for an apartment building.

Jam and Lewis operated the studio for 15 years before moving to Los Angeles in the early 2000s; during that era, the facility was used to record more than 100 gold and platinum albums with artists including Janet Jackson (“Scream,” the duet with her brother Michael, came to life there), Mariah Carey, Sting, Boyz II Men and others. Today, the 18,000-square-foot facility is owned by Richard McCalley and Matt Hanson.

The facility’s calling card has always been Studio A, built around a 1,000-square-foot tracking room with 13-foot ceilings and diffused walls, abutted by a 250-square-foot isola-



PHOTO COURTESY RUNWAY STUDIOS

The control room of Studio A in Runway Studios, formerly Flyte Tyme

tion room for recording acoustic instruments. Today the control room is centered around a 24-input Universal Audio Apollo 8P system with a custom center section.

Runway Studios is expected to close in late October and the site will begin redevelopment in the spring. Until then, the studio remains open for business; an Etta James tribute project has been recording on site.

Likewise, Prince’s former backup

band, the New Power Generation, recently used the rehearsal room to prep for shows. Studios A and C remain up and running, and Studios B and D still have functioning mic lines, cue systems and monitors for use as needed for overdubs and mixing.

McCalley told Minneapolis’ Fox9 News that he and Hanson will try to remove and sell or preserve as many studio fixtures as they can before the coming closure. The facility still

sports many artifacts from its Flyte Tyme era, including a neon-lit receptionist desk, seating in the lobby and portraits of famous musicians commissioned from local artists.

Tweeting a link to the online version of this article, Jimmy Jam summed up the feelings of many dismayed by the news, simply stating, “All good things must come to an end.”

Runway Studios  
www.runwaystudiosmpls.com

# Jünger Audio Enters Insolvency

BERLIN, GERMANY—Jünger Audio has entered insolvency proceedings as part of its efforts to reorganize the company. Founded in Berlin in 1990, the company develops and manufactures digital audio dynamics solutions intended for use in broadcast, MI, automotive and OEM markets.

While the company began restructuring last year, the latest move is intended to speed up the process. “We are working to make the business model of Jünger Audio more future-oriented,” said managing director Martin Schlockwerder. “In the future, along with our hardware, we also want to focus more on software-based solutions for audio technology in order to account for the major changes in the market.”

According to the company, reorganization is underway, but the process could not be completed without declaring insolvency. “Ultimately we were lacking the liquidity to bring the new concept to fruition,” reports Schlockwerder.

With approximately 30 employees, the company generates around \$4.1 million in sales per year. According to court-appointed provisional insolvency administrator Stefan Ludwig, the company’s current orders will be fulfilled as promised and the employees’

jobs are safe through the end of August under the insolvency payment.

In the meantime, Jünger Audio wants to attract an investor that can

equip the company with the financial resources needed to support its reorientation. Schlockwerder noted, “With fresh funds, we can present

our world-renowned development work in the form of innovative products, offering them as platform-independent software in the relevant future markets.”

Jünger Audio  
www.junger-audio.com

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## Mixing Monitors for *Bowie in Berlin*

MALMÖ, SWEDEN—Scandinavian conductor and arranger Hans Ek has been paying tribute to David Bowie by shifting music from the Thin White Duke's famed Berlin Trilogy of albums (*Low*, *Heroes* and *Lodger*) into a classical setting and performing it with a full symphony orchestra, band, choir and vocal accompaniment. The result is a complicated audio production to pull off live, according to live sound engineer Peter Fredriksson.

Fredriksson has worked repeatedly with Ek, and for the *Bowie in Berlin* concerts, he has been using an Allen & Heath dLive S Class S5000 Surface and DM64 MixRack to handle monitors.

Fredriksson notes, "If you are going to do an engineered crossover concert like this, it's better to mic the whole orchestra instead of just parts, so we have as many as 100 live microphones on stage."

To manage these inputs, Fredriksson uses a pair of DX32 Expanders for the choir and the band, and six DX168 Expanders for the orchestra, providing a measure of flexibility while minimizing mic cable length. The DX32 and DX168 Expanders connect to the DM64 MixRack. Fredriksson sends a split via Al-



Hans Ek conducts *Bowie in Berlin* with the Malmö Symphony Orchestra and Allen & Heath S5000 monitors.

len & Heath's gigaACE network to FOH engineer Hans Surte Norin, who mixes on another Allen & Heath dLive S5000.

Many of the vocalists and band members wear in-ear monitors. Fredriksson often adds reverb to the in-ear mixes to give the performers the feeling that they're in the room with the orchestra. He notes, "Our next goal is to try to do the whole orchestra with in-ear monitors, with groups of musicians sharing monitor mixes. This will give us lower volumes

on stage and reduced leakage from monitors into open microphones, resulting in a tighter and better sound experience for the audience."

Fredriksson added, "The dLive is a really flexible system. You can patch anything to anywhere and I found it quite easy to get into the menus and the workflow with the drag-and-drop. And it sounds great. The artists say they can hear everything—all the small details."

Allen & Heath  
www.allen-heath.com

## Adamson Makes Waves in South Korea

ICHEON, SOUTH KOREA—Adamson Systems Engineering has an international footprint when it comes to audio providers who have chosen the loudspeaker manufacturer's equipment. Case in point, South Korean distributor Sound Solution has sold a slew of E-Series systems to sound reinforcement companies like Sound Mate, Jun Sound, Seki Sound, Sound

Soul and BL Company within the last year.

Jun Sound in Icheon has been using its system to provide audio for Korean and international touring artists and a number of major music festivals. Hyunuk Kim, CEO, explained the decision, remarking, "Adamson's E-Series met all of our requirements and exceeded our expectations in

terms of sound quality and performance."

Noting that South Korea always has been one of Adamson's strongest installation markets, Adamson's David Dohrmann, technical director for the Asia-Pacific region, explained, "Now they're setting the same standard for the rental segment, which is reflected globally in leading K-Pop tech riders asking for our systems. Clearly this is a major achievement beyond what we could expect from a regional distributor."

Adamson Systems Engineering  
www.adamsonsystems.com



The team from Jun Sound in Icheon, South Korea, with its Adamson E-Series inventory.

## Cabling Manufacturer Klotz Expands

MUNICH, GERMANY—Munich-based cable manufacturer Klotz AIS has expanded its production and storage facilities in order to meet rising product demand, according to the company.

Klotz's new space adds 1,200 square meters to its current facilities for a total of 4,000 square meters of usable space. The new area includes a cable manufacturing hall at its center. The space includes 18 cable assembly workplaces designed to meet ergonomic standards, supplied by a new roller conveyor that brings in materials from the cable cutting hall next door.

LED lighting and radiant tube heating were added to create a pleasant working atmosphere. The site also includes high-efficiency extraction systems at the soldering stations.

By merging cable cutting and assembly operations, the com-



Visitors examine Klotz's Verpackungsabteilung (packaging department) during the company's summer fete.

pany says its production capacity has doubled. Part of the upgrade includes a new rewinding unit, a new cutting attachment and a new semi-automatic packaging unit.

The expansion was introduced to the public at the company's annual summer party, where guests embarked on tours of the facility to learn how the 100 person-plus workforce produces cabling and gets it out the door.

Klotz AIS  
www.klotz-ais.com



# Paris Couple Keeps Studio Running Hot

PARIS, FRANCE—Making a name for itself in the competitive Parisian recording scene, Jolokia Studio (named after a scalding type of chili pepper) has been steadily growing since its start in 2014.

Studio owner and sound engineer Dany Maatouk runs the place with his girlfriend, Katia Pereira de Almeida. “I look after recording, mixing and mastering, while Katia manages the studio planning and accounts, and often helps with some of the technical stuff,” Maatouk explains.

That team effort is beginning to pay off, with the genres that the studio tackles growing—“We’re producing a metal band, a funk band and a pop rock project right now, and work worldwide with a number of international artists,” Maatouk says—and more artists returning to create new work within its confines.

Maatouk says he loves it “when I finish producing a project with a band or artist and they come back to do some more—even if they had bigger opportunities. The compliment we get a lot is that the musicians feel great with us in the studio and they



Audient’s ASP4816 at Jolokia Studio, along with owner, engineer and musician Dany Maatouk

can’t see themselves recording in another place.”

The studio’s mix room is centered around an ASP4816 console from Audient, which Maatouk chose after extensive deliberation. “This many possibilities in a 100 cm by 100 cm console is pretty amazing,” he says. “It is the only console that offers 16 channel strips with inline architecture, giving you the option to use it as a 40-channel mixing desk. In addition to all that, you add an

amazing bus compressor, some very high-quality preamps and a ton of monitoring possibilities.”

Describing Jolokia as a hybrid studio, Maatouk prides himself on being able to offer both fully analog as well as “in the box” mixing services, the studio itself boasting analog gear to complement the Audient desk, along with plug-ins and an Icon Control Surface: “What I really like to do is use the best of both worlds. I’ll start a mix entirely analog-style out of the

box, and then continue it in the box using some crazy effects and automations.”

For the couple, running their own studio their own way is a dream come true, he adds. “It wasn’t always easy, but today, when we see our work being appreciated by so many artists and know that we are managing to make a living out of it, we could not be happier.”

Audient

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

## EM Acoustics Grows

SURREY, UK—According to EM Acoustics operations director Mike Wheeler, the British loudspeaker manufacturer has been on an upward swing in recent years, moving into its current manufacturing facility in Surrey in 2014 and expanding within the building since.

“We’ve gradually expanded as space has become available, and we now occupy just over 15,000 square feet, which is three times our original surface,” he noted. “We’ve also tripled staffing levels since 2014 as our operations have expanded. The building now houses just about every part of the production process, from woodworking at one end of the factory, through warehousing, crossover assembly, final production, QC and shipping.” Wheeler added that a sizable CNC router added to both the expansion and increased R&D efforts.

With the enlarged space, EM Acoustics has been able to bring all of its woodworking in-house and is maintaining greater stock of all components, enabling the company to anticipate demand more efficiently and react much more quickly, including for custom products when required.

“There is no doubt that we are now more efficient and more streamlined at every level of the manufacturing process than ever before, from R&D right through to final shipping,” said Wheeler. “The investments we’ve made in space, machinery and manpower continue to prove their worth every day, and it’s exciting to see the company grow and develop as a result.”

EM Acoustics

[www.emacoustics.co.uk](http://www.emacoustics.co.uk)

# Funktion-One, MC2 Attend World Cup

VOLGOGRAD, RUSSIA—Home to 1 million people, Volgograd in Russia was host to the World Cup last month, presenting four matches in Groups A, D, G and H in the newly built Volgograd Arena. Constructed on the site of the previous Central Stadium, the new venue is, despite its name, is a stadium, complete with open ceiling and a massive 43,713-fan capacity. To cover all those people, it sports a massive audio system based around 638 Funktion-One loudspeakers and 50 MC2 Audio amplifiers.



Capacity crowds in Russia’s newly built Volgograd Arena heard World Cup games via a Funktion-One/MC2 audio system.

The stadium project began in spring 2017, with both UK-based Funktion-One and local counterpart Funktion-One Russia coordinating to complete the installation.

The loudspeakers are arrayed and aimed using custom metalwork: 24 C-shape clusters along the sides and 12 Y-shape clusters for the corners. Each array features Evo 6SH loudspeakers with 50-degree horizontal dispersion for the closer seats and Evo 7SH loudspeakers with narrower dispersion and resulting higher intensity for the further seats. Alternate clusters are supplemented with either two F215 Mk2 midbass or single

F221 enclosures. Under-balcony coverage is provided by Funktion-One’s compact F81 and F101 loudspeakers.

Amplification comes from 50 OEM Delta amplifiers from MC2 Audio. The amplifiers are all quad output, providing 200 channels of DSP and amplification, and a total power just short of 500 kW.

Richard Fleming, the sales and applications manager who was involved in drawing up the specification of the amps, explains, “All the amps are connected via Ethernet and configured using our ‘AudioCore: Amped Edition’ software with grouping architecture. This allowed channels to

be logically grouped and sub-grouped to minimize the apparent complexity of the system, simplifying it from 200 channels down to just eight sets of grouped controls.”

Funktion-One sales director David Bruml recalled, “John Newsham and I visited Volgograd in May 2018, ahead of the World Cup, to help finalize tuning. The system performed fully as modeled and predicted during the design phase. The sound feels perceptibly close to the audience, with an intimacy and accuracy rarely heard from stadia sound systems.”

Funktion-One

[www.funktion-one.com](http://www.funktion-one.com)

# Modern Mastering Evolves in the Hollywood Hills

BY STEVE HARVEY

HOLLYWOOD HILLS, CA—Mastering engineer Stephen Marsh has become a self-avowed Swiss tape machine nerd. True, he worked on tape when he first started in the business, in 1995, at Sony Music's West Coast studios. But nearly a quarter-century later, he's developed quite a sideline in repairing and restoring machines, which accounts for one-third of his business.

"My first few years were all analog tape. I came in at the very end, and at the tail end of people cutting on lathes," says Marsh, who operates Marsh Mastering out of his house in the Hollywood Hills near Los Angeles.

In truth, he has never been far from an analog tape machine. At Sony, he says, there were Ampex ATR-102 and ATR-104 machines, refurbished by Mike Spitz, the late former Ampex technical services representative whose legacy continues at the company he founded, ATR Services in Pennsylvania. There were also several Studers, and between those and the Ampex machines, the Sony engineers could access any configuration of tape.

Marsh went independent in 2001. "I needed a tape machine to continue

my mastering work, so I picked up an ATR from Tom Murphy over at Track Record" in North Hollywood, he recalls. "I ended up picking up a second ATR to do 4-track/3-track work, which we were getting quite a bit of."

But then, he says, "I had a need to play back some old tapes and I couldn't put them on those machines, so I got a Studer A80. It was in disrepair. Asking advice from people who knew better than me, I wound up getting it really dialed in. The A80 is simple enough that when I look at the schematics, I understand what I'm looking at. The logic is not necessarily straightforward," he adds, "but it makes sense."

He learned through trial and error, working on his machine over the course of a year. One thing led to another, he says, and a friend called looking for help with a machine. Word got out. "Next thing I know, people started bringing their tape machines by. And they keep doing it, so much so that it's turned into 30 or 40 percent of my work. I never expected it to happen and it's happened very quickly, within two or three years."

Marsh's technical interests date back to growing up in New York state. "We were a DIY family. My dad is



an EE [electrical engineering graduate] and he put a soldering iron in my hand when I was 7 or 8. When I needed a guitar amp to join a band, he ordered a Heath kit."

The A80 was manufactured between 1970 and 1988 in a multitude of variations, and different iterations of each of those, including the VU, the RC and the QC. "I have a specific set of knowledge for this one type of tape machine," he says, "but it's really

seven or eight different machines."

Indeed, the ML-5 version developed by Mark Levinson—Marsh has one currently in his shop—is a very different machine. "It has its own set of schematics. It's an A80 transport with Mark Levinson custom audio electronics, and a Dean Roumanis custom meter bridge with a buffer amp."

The new sideline business dove-  
*(continued on page 24)*

## Big Bad Sound Flourishes in Mid-Market Niche

BY STEVE HARVEY

LOS ANGELES, CA—A couple of years back, Tim Armstrong, frontman of veteran California punk band Rancid, stopped by to check out Big Bad Sound L.A., mistakenly thinking it was a different studio. He liked what he saw, decided to record some personal tracks there, then brought in Rancid to track what would become the band's 2017 *Trouble Maker* album.

"That was a big moment," says Jack Ruley, Big Bad Sound's manager, a validation of the studio's abilities. "This isn't just someone's home studio—it's a great studio that happens to be in a home."

"Rancid was a fluke but allowed people to see that we could get a really good sound. That allowed us to do more," says owner, chief engineer and musician Zach Fisher, who built Big Bad in his home in the Silver Lake neighborhood of Los Angeles. Epitaph Records, Rancid's label, continues to bring them projects, he adds.

Fisher and Ruley have been



Owner, chief engineer and musician Zach Fisher, who built Big Bad Sound L.A. in his home in Silver Lake

friends for 18 years. In 2013, Ruley had quit his job at a non-profit in Washington, D.C., when Fisher called to see if he wanted to join him in the studio business. "I said, I'm free," recalls Ruley, who jumped in his car and drove cross-country.

Over the years, a series of mixing consoles has passed under Fisher's hands at Big Bad. He had been using

a Toft Audio desk. "But after Rancid, Jack said, 'What can I get that would really help the studio?' I did my Craigslist and Reverb hunt and saw this Neve BCM," says Fisher.

Picking the classic console up was an adventure—a late-night transaction with Ruley handing "a Mercedes of cash" to a man on a Vespa scooter. "He puts the enve-

lope of cash under his arm and rolls off. But it was perfect," Ruley recounts.

"One of the things we focused on to grow was 'engineer porn,'" he continues. "We looked at what the popular plug-ins were, and we got the hardware."

For example, he says, "We got a pair of Trident A Range modules. I couldn't mix a song for my life and I can't hear the difference between gear, but the second Zach ran a guitar through them, a lightbulb went off. I said, cool, I collect these now. So now we have four pairs.

"Sanford Parker, a buddy of ours, an extreme metal engineer, started working with us solely because we had the Tridents. Just finding gear that people want to use has been so big," Ruley says.

Installing an SSL AWS 900 console, another Craigslist bargain, took things up a notch. "I didn't realize how little headroom the Toft had until I went to the SSL," says Fisher. "I'll clip Pro Tools before I clip the board. That's a new experience."

*(continued on page 24)*

# Nocturne

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## Pros Continue to Seek Hyde Street Studios

BY STEVE HARVEY

**SAN FRANCISCO, CA**—Hyde Street Studios in San Francisco's Tenderloin neighborhood, originally built by legendary recording engineer and studio owner Wally Heider and opened in 1969, has launched a new annex facility, Rancho Rivera, about five miles away. Located in the city's Sunset district, the new facility is, well, not actually new.

Built in a house on the Avenues, Rancho Rivera was the genesis of Hyde Street Studios, reveals Michael Ward. In 1980, along with partners Tom Sharples and Dan Alexander, Ward acquired and renamed the former Wally Heider Recording facility on Hyde Street in the city. Ward has been the sole proprietor since 1985.

Ward initially built out what is now the Rancho Rivera tracking room—for 20 years, his bedroom—around 1978 as a rehearsal space for his band. Sharples, who lived upstairs, hand-built a console for the room. “He was an electronic whiz kid,” says Ward. It was replaced by a discrete Electrodyne board shortly thereafter.

Sharples went on to become head of R&D at Otari. “One thing led to another,” says Ward. “We went from quarter-inch 4-track to half-inch 8-track to 1-inch 8-track to 2-inch 16-track in about 10 months. The first [Otari] MTR-90 [24-track tape machine] was tried out in that downstairs room.”

Constructed in the basement, with the garage at the front offering 11-foot ceilings, the 20- by 18-foot tracking space, with a 17- by 17-foot control room, has always been ideal for recording four- or five-piece bands, he says. For a time, the power pop band Tommy Tutone (“867-5309/Jenny”) used the room for rehearsals, and frontman Tommy Heath was studio manager for a few months.

“When they got signed, all these bigwigs in long black cars would pull up, clap their hands and say, ‘Oh, it’s magic.’ We put a lot of effort into the acoustical design. It’s a great sounding room.”

San Francisco has always been a secondary market, and until the early 1970s, even Bay Area bands typically gravitated to the Los Angeles studios. To the best of anyone’s recollection, the first LP to be completed at Heider’s Hyde Street facility was Jefferson Airplane’s *Volunteers*, produced by Al Schmitt and recorded in April 1969. It was the

band’s fifth studio album, but the first to be recorded in its hometown. In the decades since, a who’s who of artists—including the Bay Area’s



Independent engineer Will Chason at the classic 38-input Neve 8038 with Flying Faders automation installed in Hyde Street’s flagship Studio A



The control room at Hyde Street’s Annex, Rancho Rivera, is centered around a new API The Box console.

Grateful Dead, Creedence Clearwater Revival, Santana and, later, Dead Kennedys, Green Day, Cake, Train, Tupac and Digital Underground—have passed through the double doors at 245 Hyde St.

“When we had Studio A open in the early aughts, it was a hard sell; I never understood it,” Ward says. “I’ve seen rate cards from the late-’70s where they were getting \$130, \$140 bucks an hour in Studio A. Now it’s hand to mouth. You get what you must to keep your doors open, is my general experience.”

In 2000, Ward bought a former long distance telephone switching

substation that had survived the 1906 earthquake, intending to build out multiple digital audio suites with a control room and live space on the upper floor. “I had figured that the only way to succeed in the studio business was to own the building I was in,” he says. But he ran afoul of the city’s planning department and subsequently sold the land.

“I ended up with this money sitting in the bank,” says Ward, so he sank some into Rancho Rivera. It can now comfortably accommodate up to eight musicians simultaneously in multiple rooms interconnected by

Former Hyde Street partner Dan Alexander’s name will be familiar to many as an equipment broker specializing in vintage gear. Indeed, on his website, he suggests that he may have coined the term “vintage recording equipment” in 1977, when he began importing large quantities of German-manufactured tube mics.

No surprise, then, that Hyde Street Studios has long possessed an enviable collection of microphones. And as it says on Hyde Street’s website: “All of our tube and other mics are vintage originals. No reissues or re-creations.”

The outboard equipment collection, both at Hyde Street and Rancho Rivera, is no less enviable. A succession of sought-after mixing desks, including Amek, API, Neve and Trident models, have also come and gone over the years.

Referring to that post-real estate windfall bank balance, Ward says, “We’ve been collecting the best equipment over the years, and maintaining it is an expensive and relentless chore. As my last gasp in the studio business, I thought, let’s fix everything.”

The main recipient of that care and attention is the classic 38-input Neve 8038 with Flying Faders automation installed in Hyde Street’s flagship Studio A. It came from Sarm Studios in the UK, where it was used for ADR, he says, so only the first two input channels had seen any use.

Two years ago, Kevin Ink and Dave Dick, Hyde Street’s maintenance techs, began refurbishing the desk, replacing every electronic component possible. “We’ve done a lot of work on the noise floor; the whole grounding structure got improved,” says Ward. “We restored a late-’70s masterpiece of a tracking console into the condition it was in when it was new, in 1978.”

Ward is well aware that owning a recording studio is no get-rich-quick scheme. “It’s a stupid business that you can’t explain to your mother,” he says, wryly. “I suppose that there are people who have made money, but I never met any.”

That said, still in business nearly four decades after acquiring the former Heider facility, Ward believes he may already be seeing a return on his most recent investment. “Business has really picked up over the past year,” he reports. “I attribute it somewhat to the work that we’ve done.”

Hyde Street Studios  
www.hydestreet.com

# Machine Learning: Ready for Prime Time?



BY CRAIG ANDERTON

When people said synthesizers would replace musicians, my standard reply was, “Who do you think plays them? Accountants?” And now some engineers wonder whether they’re going to be replaced by machine learning—but those machines may become our assistants, not our masters.

Machine learning is a machine’s ability to analyze data, learn from it and derive outcomes based on what it learns. It is essentially an application of the broader concept of artificial intelligence, or machines being able to carry out tasks in a way that simulates human intelligence. Machine learning comes in two main flavors. With *supervised* learning, a machine analyzes what it’s learned so it can predict future events. It can also compare its predictions to what actually occurs and modify its future behavior accordingly. *Unsupervised* learning is more about making sense of a set of data, but not necessarily drawing conclusions. It is supervised learning that will likely have the most impact on pro audio in the short term.

Adobe VoCo, a prototype of which was showcased at Adobe Max in November 2016, is a good example of technology on the edge of machine learning. Consider this: You’ve recorded and edited narration for a commercial, but the client decides that “King Rex” dog food needs to be changed to “King Canine” dog food. Unfortunately, your talent is on vacation and unavailable for an ADR session. Fortunately, you’ve got access to VoCo, which is theoretically able to generate new audio to change words in a voiceover. (Adobe VoCo is not a commercially available product.)

Reduced to basics, you type “canine,” VoCo searches through the existing audio takes, finds the phonemes (individual sounds that make up words) needed to create “canine,” and substitutes them seamlessly for “king.” Because the sound comes from the original speaker, the generated word sounds far more natural in context than, for example, Siri. Of course, an engineer could spend hours trying to do the same thing. But VoCo can analyze massive amounts of data and create speech that never existed before—not just edit existing

speech—because it has been trained to recognize phonemes.

To take this idea farther, I was recently on a panel with an engineer who couldn’t conceive of a world where we don’t comp vocals. Neither can I—but how we *assemble* those takes into a final vocal might

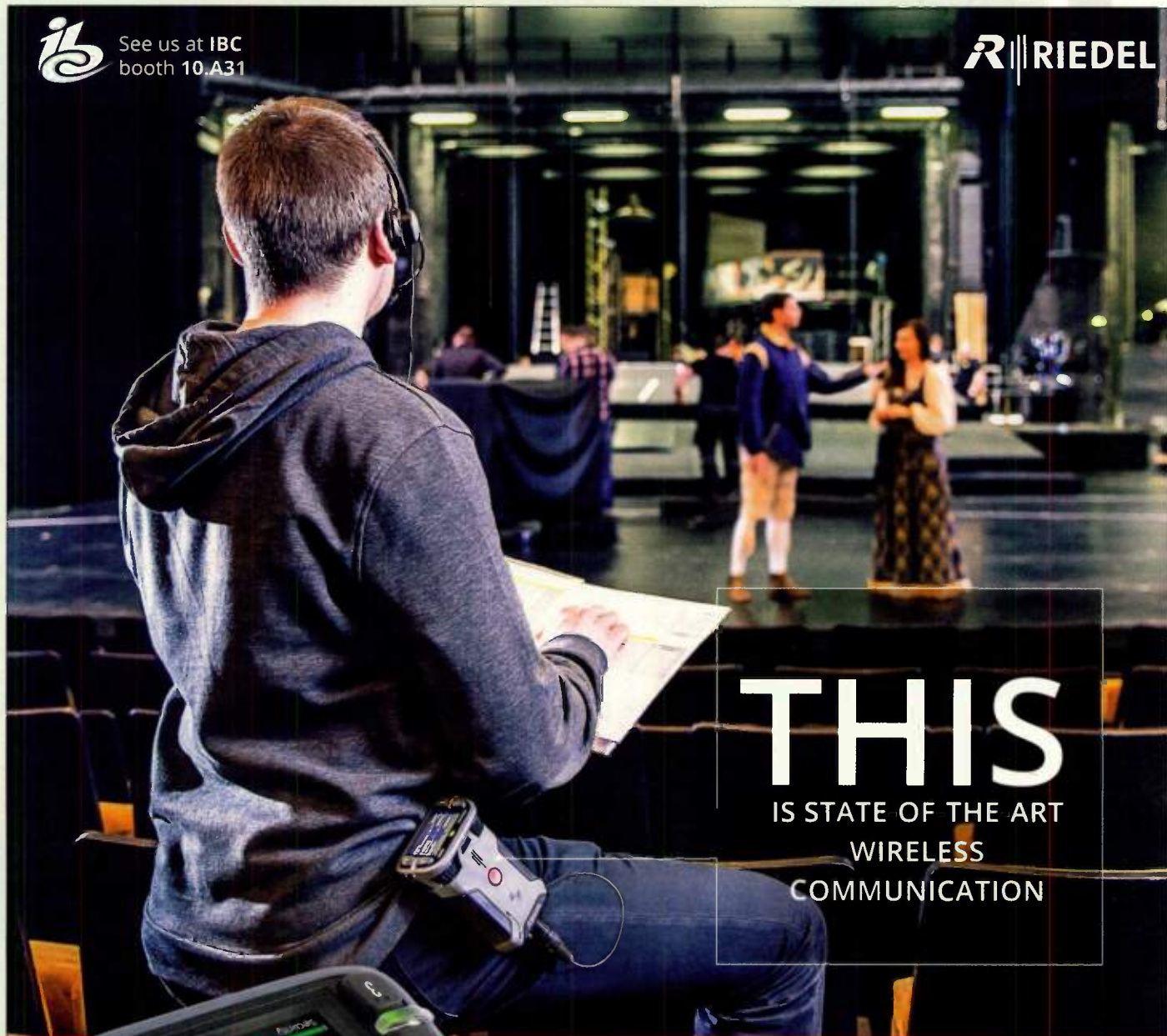
be a job for machine learning. Such a machine could analyze the various comps, then pick the parts that are the most intelligible, have the best pitch, include spaces between words to allow for seamless transitions, and offer consistent timbres. Furthermore, it could present a few

options and you could pick your favorite—which would become part of the data it uses to make future decisions regarding your preferences when stringing vocals together. You could set constraints—any phrases need to be at least three seconds

(continued on page 48)



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**ARTIST:** DE'ANZA  
**ALBUM:** COSMIC DREAM  
**LABEL:** FUSION BEATS

**PERSONNEL:**  
**Produced by:** Andre De Santanna, De'Anza Paredes  
**Engineered by:** Andre De Santanna

**Studios:** De Santanna Studios, artist's home studio (both North Hollywood, CA)

**Mastered by:** Dave Locke, JP Masters (Seattle, WA)

**EQUIPMENT NOTES:**  
 Trident console, Avid Artist Mix surface. Yamaha NS-10, Pelonis 4288 MKII, ATC SCM25A monitors. Avid Pro Tools



**ARTIST:** GRANT  
**ALBUM:** IN BLOOM  
**LABEL:** SONY MUSIC SWEDEN

**PERSONNEL:**  
**Engineered by:** Peter Kvint  
**Mix Engineer:** Johan T. Karlsson

**Studios:** Studio Brun, Karlssons Musikkontor (both Stockholm, Sweden)  
**Mastered by:** Henke Johansson, Masters of Audio (Stockholm)

**EQUIPMENT NOTES:** SSL AWS 900+ console, API 3124+ mic pre, Avid S3 control surface. Dynaudio BM6A, PSI Audio A17-M, Focal SM9 monitors. Avid Pro Tools



**ARTIST:** TOM BAILEY  
**ALBUM:** SCIENCE FICTION  
**LABEL:** MIKROKOSMOS/BFD

**PERSONNEL:**  
**Produced by:** Tom Bailey

**Engineered by:** Robbie Bronnimann, Wez Clarke (tracks 1-2)

**Studio:** The Old Hit Factory (London)

**EQUIPMENT NOTES:**  
 Neve 1073 (DPX), Chandler REDD.47 and TG2, SSL E Series, Klein & Hummel 310 studio monitors, Apple Logic



**ARTIST:** TALEEN KALI  
**ALBUM:** SOUL SONGS  
**LABEL:** LOLLIPOP RECORDS

**PERSONNEL:**  
**Produced by:** Kristin Kontrol

**Engineered by:** Sarah Tudzin

**Mix Engineer:** Brad Laner  
**Studio:** Sunset Sound Studios (Hollywood, CA)  
**Mastered by:** Carl Saff

**EQUIPMENT NOTES:** API 312, Neve 1066, Sunset Sound 1960s-era pre's. PMC twotwo.8 studio monitors, Avid Pro Tools



**ARTIST:** SUN JUNE  
**ALBUM:** YEARS  
**LABEL:** KEELED SCALES

**PERSONNEL:**  
**Produced by:** Sun June, Evan Kaspar

**Engineered by:** Evan Kaspar  
**Studios:** Estuary Recording, Evan Kaspar's studio (both Austin, TX)

**Mastered by:** Carl Saff, Saff Mastering (Chicago, IL)

**EQUIPMENT NOTES:**  
 Quad Eight Coronado, Yamaha PM2000 consoles. Focal Twin6 Be monitors. Otari MTR90 mkII recorder, Avid Pro Tools



**ARTIST:** SAM LLANAS  
**ALBUM:** RETURN OF THE GOYA—PART 1  
**LABEL:** LLANAS RECORDS

**PERSONNEL:**  
**Produced by:** Sean Williamson

**Engineered by:** Sean Williamson

**Studios:** Subsidized Housing Records, Crow's Nest (both Milwaukee, WI)

**Mastered by:** Gary Tanin at Daystorm Music (Milwaukee, WI)

**EQUIPMENT NOTES:**  
 Monitors: KRK ROKIT 6, IK Multimedia iLoud Micro Monitors, Yamaha NS-10M with JBL SB-1 subwoofer, Klipsch Heresy speakers, Auratone speakers. Avid Pro Tools



**ARTIST:** DONALD LAWRENCE AND THE TRI CITY SINGERS

**ALBUM:** GOSHEN  
**LABEL:** SONY RECORDS

**PERSONNEL:**  
**Produced by:** Donald Lawrence

**Engineered by:** Mark Williams, Eddie Z.

**EQUIPMENT NOTES:**  
 Sytek Audio Neotek Élite II console, AudioKinesis monitors, Avid Pro Tools, Steinberg Nuendo



**ARTIST:** BRIAN BROMBERG  
**ALBUM:** THICKER THAN WATER  
**LABEL:** ARTISTRY MUSIC

**PERSONNEL:**  
**Produced by:** Brian Bromberg  
**Engineered by:** Tom McCauley, Brian Bromberg, Tomi, Deiske Ono

(assistant)

**Studios:** Be Squared Studios (Los Angeles, CA), Slice of Heaven Studios (CA), Sound Ninja Recording Studios (Tokyo, Japan)

**Mastered by:** Tom McCauley, Be Squared Studios (Los Angeles, CA)

**EQUIPMENT NOTES:** Avid Pro Tools 24/96



**ARTIST:** RUE SNIDER  
**ALBUM:** CITY LIVING  
**LABEL:** SELF-RELEASED

**PERSONNEL:**  
**Produced by:** Andrija Tokic, Jon Estes (co-producer)  
**Engineered by:** Andrija Tokic, Jon Estes

**Mix Engineer:** Andrija Tokic  
**Studio:** The Bomb Shelter (Nashville, TN)

**Mastered by:** TW Walsh  
**EQUIPMENT NOTES:** MCI JH600 console. Monitors included Altec Lansing 9842-8A, Yamaha NS-10, Optimus ProAv, Pioneer CS-G301WA, B&W 602 S3. MCI JH16 recorder, Apple Logic, Avid Pro Tools



**ARTIST:** DUO ELEVATION  
**ALBUM:** OMAR'S LAMENT  
**LABEL:** BLUE CANOE RECORDS

**PERSONNEL:**  
**Produced by:** Chris Burroughs, David Ellington, Spencer Garn

**Engineered by:** Spencer Garn

**Mix Engineers:** Spencer Garn, David Ellington  
**Studio:** Diamond Street Studios (Atlanta, GA)

**Mastered by:** Aria automated mastering (www.ariamastering.com)

**EQUIPMENT NOTES:**  
 16-channel TOFT console, Yamaha NS-10 monitors, PMC monitors, Avid Pro Tools via UAD Apollo 16

## Dual Dualities for Ty Fy

ORLANDO, FL—Ty Fy Studios at Disney's Roy E Production Center in Orlando has specified a 48-channel SSL (www.solidstatellogic.com) Duality Delta Pro-Station with winged frame for Studio A and a 24-channel Duality Delta for Studio C.

## Jacquire King Treats with Primacoustic

VANCOUVER, BC—Multiple Grammy Award-winning producer Jacquire King's new personal studio, LBT, benefits from an acoustic treatment plan drawn up by Jay Porter, product manager for Canadian-based Primacoustic (www.primacoustic.com), including Nimbus clouds, 2- and 3-inch-thick Broadway panels, MaxTraps, Cumulus corner traps and Radiator panels.

## T-funk Captures Leo-Z

HOLLYWOOD, CA—For his debut solo album, *Materia Prima*, composer and pianist Leo-Z, with engineer Mike Tacci, recorded various Steinway grand piano models—D, B and upright—using his Telefunken (www.telefunken-elektroakustik.com) ELA M 260 Stereo Set of small diaphragm condenser microphones. He also used Copperhead mics on the upright piano and upright bass.

## Enemies Befriend Radial

VANCOUVER, BC—Canadian band Your Favourite Enemies took their Radial Engineering (www.radialeng.com) gear to Morocco, where they spent several months writing and recording new material. The gear list included the Key-Largo keyboard mixer and performance pedal, a ProD8 for acoustic guitars, and Radial ISO Twin Isolator to meet potential power supply challenges.

# Producer/Musician Richard Swift, Dead at 41

BY CLIVE YOUNG

TACOMA, WA—Noted producer and indie musician Richard Swift died July 3 in Tacoma after being admitted to a hospital last month for an undisclosed medical condition. He was 41.

Born in California, Swift was a self-taught multi-instrumentalist, engineer and producer who owned National Freedom, a recording studio in Cottage Grove, OR. Behind the board, Swift produced two albums by Nathaniel Rateliff & The Night Sweats and four by Damien Jurado, as well as records by acts like the Mynabirds, Foxygen, Sharon Van Etten and Guster.

A former member of indie rock acts The Shins and The Arcs, Swift also toured as a part of the Black Keys' live band in recent years as the



In addition to a busy career producing, Swift was a touring musician with the Black Keys.

group's bassist. He also had a considerable solo career, recording seven albums, three EPs and several stand-alone singles.

In the wake of Swift's passing, numerous artists tweeted remembrances of him, such as the Black Keys, who wrote, "He was the funniest person

we ever met, one of the most talented musicians we have ever worked with, and we feel so honored to have known him. RIP Richard. —Dan & Pat."

Sondre Lerche recalled Swift online as a "great producer, instrumental to so many strong artists, but also a wonderful songwriter himself. Hear his double opus, *The Novelist / Walking Without Effort*. He will be missed and heard for times to come."

Elsewhere, Dave Depper of Death Cab for Cutie tweeted, "Richard Swift was the most talented person I've ever met, some impossible amalgamation of Harry Nilsson, Paul McCartney and Levon Helm, beyond soulful on any instrument he picked up, and a writer of hilarious, heartbreaking, funky, psychedelic songs."

Swift is survived by his wife, Shea, and three children.

# Producer, Q Division Founder Mike Denneen, Dead at 54

BY CHRISTOPHER WALSH

WATERTOWN, MA—Mike Denneen, an influential producer, engineer and co-founder of Q Division Studios who worked with artists including Aimee Mann, Fountains of Wayne, Guster, Morphine, the Click Five, Gigolo Aunts and Letters to Cleo, died of cancer on July 10. He was 54.

"He was a sort of music director at his core," said Jon Lupfer, Q Division's co-founder and Denneen's longtime business and creative partner. "He had that gene for organizing other people and hearing past his own stuff into how to make parts work together, listening to records deeply, trying to work out not only what he was doing but what everybody was doing. Mike had a good sense for what was important and what wasn't."

Denneen and Lupfer met in a jazz improvisation class at Milton Academy in Milton, MA. While still in high school, they recorded and produced their group, Busload of Nuns, in the basement of Denneen's parents' house in Quincy, MA. "The equipment we were using and the way we were making it work probably made the record suffer," Lupfer remembered, "but from the point of view of a learning experience, it was probably really good."

"At that point, Mike was quite

sure he was going into music," said his brother, Bill Denneen. "The only question was [if it would be] in a band or recording."

"We had talked about doing music," said Lupfer. "The studio kind of seemed like where the action was."

Upon graduating from college in 1986, Denneen and Lupfer founded Q Division in a warehouse in Boston's South End, which "was not hip at all," Lupfer said, but centrally located amid Boston's thriving indie music scene. "We were subletting from a basket importing company," he continued. "The craziness of building a studio in not just a rental but a sublet was like, 'Are you kidding me?' But it was cheap, and the building had other artists in it, there were people living in the building." It was the kind of environment "that doesn't exist in Boston or Cambridge anymore, that engenders artist communities."

Q Division's founders "had to build out the space themselves," Bill Denneen said. "They had no money to hire professionals, so they rounded up friends and musicians, people they could find who had some level of skill, and traded studio time for labor. I was one of them."

"We were pretty much content to work for any amount that it took," Lupfer said. "And we were going out to see shows whenever we weren't in the studios. You make friends with

the people your age who are going to shows. It fed on itself."

The "guerilla" feel of Q Division's early years worked in its favor, he said. "The dominant studio vibe

"Mike was a beacon. He was a father figure. We trusted him."

—Brian Rosenworcel, Guster

was like, 'We're super high-tech, very professional,' and our attitude was, 'We're like you. Come in and hang out and have fun and work.' It wasn't precious at all, but good enough."

By 2000, the studio had built a reputation and credits sufficient to move to its present space in Somerville, a two-room studio featuring the Neve 8068 Mark I-equipped Studio A and Studio B, which houses a Solid State Logic XL-Desk.

Among Denneen's credits as engineer, producer or both are Fountains of Wayne's *Utopia Parkway* and *Welcome Interstate Managers*, the latter featuring the hit "Stacy's Mom"; Mann's *Lost in Space*, *Bachelor No. 2* or, *the Last Remains of the Dodo* and *I'm with Stupid*, featuring the hit

"That's Just What You Are"; Gigolo Aunts' *Minor Chords and Major Themes*; Howie Day's *Australia*; and *Season of Rain* and *Little Steps* by Merrie Amsterburg.

"A lot of people loved him," Lupfer said of the artists Denneen produced and recorded. "It wasn't just, 'We worked with that guy.'"

Michael Denneen was born on August 27, 1963, in Boston. He grew up in Quincy, in the house where his parents still live. In addition to his parents and brother Bill, he is survived by his wife, the recording artist Jen Trynin, and their daughter, Gracie. Two other brothers, Mark Denneen and Jeff Denneen, also survive.

Upon his passing, the Paradise, a renowned Boston music venue, posted a remembrance on its marquee. A diehard fan of the Boston Red Sox, Denneen was honored by the team, which played his music between innings upon his passing.

Brian Rosenworcel of Guster posted a moving tribute to Denneen on Instagram in which he recalled working with the producer while he and his bandmates were still in college. "Mike was a beacon," he wrote. "He was a father figure. We trusted him. He took the time to record between midnight and 6 a.m. with a bunch of aimless college kids with acoustic instruments and harmonies. He brought real musicians into our orbit, and he even let us bring our Tufts friends out to play violin solos."

Q Division will continue, Lupfer said. "That will be a question for another day, but we're still here," he said. "We're doing okay."

## Marsh Mastering

(continued from page 18)

tails with the evolution in the mastering process. “Everything is unattended for me now,” says Marsh, who typically communicates with clients by email, text or, less frequently, phone.

And that’s a good thing: “In my studio right now, I have three different tape machines all in random pieces across the room, but I don’t need to clean it up because a client is coming in. I just turn around, it’s all behind me and I go about my work.”

That work has recently included a YouTube series executive produced by LeBron James for Warner Bros. These days he finds himself doing more singles work, he says, and a lot of soundtrack projects, increasingly for documentaries, which are typically longer than a traditional album. “I work with a lot of composers,” he says, singling out Dan Romer, who scores ABC’s *The Good Doctor*, for mention.

Marsh also gets calls to align machines for recording or playback. “There’s a segment of audiophile



Among the ancillary services offered at Marsh Mastering are Studer A80 tape machine service and restoration. Marsh maintains a deep stock of in-house spares and parts unique to these machines.

guys that have A80s. They like to set them up for quarter-inch 15 ips CCIR, as a lot of the pre-recorded tapes are that format.”

There’s now a sideline to the sideline. “I’ve put together a massive stash of spare parts and assemblies. People will pay good money if you have the right part at the right time and it works. I realized that if I put most of my spare parts stash online, I might be able to help other people keep their machines running.”

Working on tape machines offers Marsh a respite from mastering. “After sitting in a chair and listening to music professionally for 20 years or so, I was ready to do a little something different,” he says. “I love mas-

tering records, but stepping away—I spend about one day a week working on machines and four days EQing—helps ground me and helps me accomplish better mastering work.”

He’s been working long enough that some of his gear now needs re-capping, he says, which he does himself. “I’ve always valued understanding what’s behind the front panel, not just what the knobs make things sound like.”

It’s no surprise, then, that Marsh reports, “I have the cleanest desk I’ve ever worked on, with tube stages, discrete stages, transformers. It’s very wide, deep and tall. Even if everything runs through flat and I use the amplifiers and gear as line stages, it

has a ‘thing.’ It’s an extension of 24 years of R&D. I call it the plane that doesn’t crash.”

He and his family now have a second home in rural Virginia, complete with a mastering room. “It’s a smaller studio, but anything I start here I can finish there, and vice versa. I’ve done sessions across both studios already and it works really well. And the quality of life is great.”

Still, he’s bemused by the success of his ancillary services. “I’m working on repairing and restoring one model of one brand of tape machine and it’s an entire business. That kind of blows my mind.”

**Marsh Mastering**  
www.marshmastering.com

## Big Bad Sound

(continued from page 18)

Crammed with equipment, Big Bad’s 12-by-15-foot control room had become too small. After a 10-month search, the pair found a small warehouse building whose owner was retiring to Cuba and they made him an offer. Now, nearly two years later, they have opened Studio A at their new two-room facility.

Constructing a commercial facility is not the same as building a home studio, as the pair soon discovered, but they’re quick studies. They eventually negotiated the city’s permitting requirements. Along the way, they learned a few things. “The main lesson was that we will never build another studio again,” laughs Ruley.

For the new location, they needed a mixing console that would set them apart. “Zach and I aren’t famous. We’re just two dudes,” says Ruley. “We



Control Room A was designed by JSX Audio for sonic accuracy with a combination of both absorptive and diffusive materials.



Control Room A offers a hybrid approach, making use of a 48-channel API Legacy Console and vintage Neve BCM10 sidetar, along with outboard gear from manufacturers including Shadow Hills, Pultec, Empirical Labs, Universal Audio and Tree Audio.

didn’t want to be another Neve room in L.A., so we had to differentiate ourselves. And API stuck out as the sound of America—it’s rock ‘n’ roll.”

Nashville-based equipment broker Joe Bean found them a 48-channel vintage 1970s API Legacy, driving it out to L.A. himself. The API is the centerpiece of Studio A’s 20-by-22-foot control room, designed by Jerry Steckling, CTO and owner of JSX Audio.

Lately Fisher has been putting acoustic guitars and vocals through the Neve BCM, but for everything else, he says, “I’ve been going straight into the board. It’s an API—it sounds great, it’s punchy, fast and has a little bit of cool color.”

But it was some time before Fisher could even work in his own room:

“The first thing we booked, before we’d finished building it, was a seven-week project with their own engineer and producer. I hadn’t even gotten a drum sound yet and they were doing an album in here.”

Fisher and Ruley intend for Big Bad Sound L.A. to flourish in a position between the city’s high-end facilities—Sunset, United, The Village—and the area’s many home studios. They believe that market niche is underserved.

“We can make young bands’ records sound like they hear them in their heads,” says Ruley. “If you’re an indie band with a little bit of success, you can get a budget together to be in here.” Several recent projects have been funded through GoFundMe, he reports.

“All the middle ground studios died when the music industry collapsed, so we built that room,” he continues. “The A&R of a very large label, whose job is to send bands to studios, said as much, unprompted: ‘A place like this does not exist.’ To hear that was very cool.”

Studio B has been laid out by designer Steven Klein with a similarly sized control room to A and floating floors; construction should be finished early next year. It will add flexibility to Big Bad’s business model, enabling artists to record basic tracks in A’s larger live space before moving to B, which will be outfitted with the SSL desk and outboard gear still in use at the old location.

The new facility was a major undertaking for the pair. “But if you’re not scared to do it, you’re probably not dreaming big enough,” says Fisher. “If we had been as safe as possible about the financial risk, we would have built a crappier place and attracted a less strong clientele.”

It’s early days so they’re still in the red, he says. But the studio stays booked and the rate card is priced right to make Big Bad Sound a successful venture.

That said, “This isn’t a business you go into to become rich,” says Fisher. “You do it because you love doing it.”

**Big Bad Sound L.A.**  
www.bigbadsoundla.com

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briefs

### Stage Tec Celebrates 25 Years

BERLIN, GERMANY—Berlin-based professional audio equipment manufacturer Stage Tec ([www.stagetec.com/en](http://www.stagetec.com/en)), a pioneer of digital audio technology, celebrated its 25th anniversary on July 1. The company's first product, launched just four months after Stage Tec was founded, was Nexus, the first digital audio router with a distributed concept and entirely fiber optic cabling.

### Let Them Hear Cakes

LAS VEGAS, NV—Las Vegas-based independent production sound mixer Neil Curschman of NC-Sound used his Lectrosonics ([www.lectrosonics.com](http://www.lectrosonics.com)) Digital Hybrid Wireless equipment, including SMQV belt pack transmitters, bagged SR Series receivers and a pair of racked Venue2 receivers, for the Food Network reality show *Vegas Cakes*, for which he was the audio supervisor.

### Sony Sound Team Posts Superfly

CULVER CITY, CA—The sound team at Sony Pictures Post Production Services ([www.sonypictures.com/studios](http://www.sonypictures.com/studios))—supervising sound editor Steven Ticknor, supervising sound editor and re-recording mixer Kevin O'Connell, re-recording mixer Greg Orloff and sound designer Tony Lamberti—recently tackled Director X and writer Alex Tse's reimagining of Gordon Parks Jr.'s classic 1972 crime drama *Superfly* for Columbia Pictures.

### House Hunting with Wisycom

FORT MYERS, FL—When sound mixer Randy Sparrazza was tasked with capturing audio for the HGTV network show *House Hunters*, he employed his Wisycom ([www.wisycomusa.com](http://www.wisycomusa.com)) MCR42S dual diversity wideband UHF mini receiver system and MTP40S wideband bodypack transmitters, along with Sanken COS-11D, Schoeps CMIT 5U and CMC641 mic elements.

## Temp Love Breaks Out in Bay Area

BY STEVE HARVEY

SAN RAFAEL, CA—Currently celebrating five years in business, “professional knob twister” John McDermott and “chief chord plucker” Christian Hanlon, co-owners of music company Temp Love, have moved into new digs in San Rafael in San Francisco's North Bay. And what digs. Once known as The Pit, their new room oozes history, having previously been part of George Lucas' renowned Industrial Light & Magic complex.

The move out of San Francisco, where the pair previously maintained a studio in the Jackson Square neighborhood, was in response to the difficulties—especially the cost and the traffic—of being in “the city,” says Hanlon. “This puts us not so far out of the city and close to our homes, but also in a very creative environment with a 40-year history of making wonderful stuff. After being in a very techy, client-based world in San Francisco, we've found ourselves in a far more creative world up north.”

Hanlon adds, “John lives in San Rafael and I live in Oakland and have a studio in my house. It's fun to be in both areas because there's quite a



Christian Hanlon (left) and John McDermott are celebrating five years in business at music company Temp Love.

bit of music happening, and film and venues; Oakland is having an explosion of media creation.”

The new room is at what is now known as 32Ten Studios, a production community on the former ILM lot on Kerner Boulevard that still houses the shop where models for *Star Wars*, *Indiana Jones* and *Pirates of the Caribbean* were created. “One of the things that sold John and me specifically was that there's a theater

here that we can use that seats about 250 people,” says Hanlon. The theater was reportedly the first to receive THX certification, meeting the sound playback specification initially developed for the facility's re-recording stage by Tomlinson Holman, Lucasfilm's chief engineer.

“Great rooms sound great a lot of times because great music was in them, and there was a lot of cool stuff

(continued on page 26)



## AC-4 Audio Delivery Picks Up Pace

BY STEVE HARVEY

SAN FRANCISCO, CA—This year has seen a significant uptick in activity for AC-4, Dolby Laboratories' end-to-end audio solution for next-generation broadcast and streaming services. Offering improved compression efficiency, immersive audio and features including dialogue enhancement, intelligent loudness and advanced dynamic range control, Dolby AC-4 is already standardized with the European Telecommunications Standards Institute (ETSI) and has been adopted—alongside the MPEG-H TV Audio System—by the Digital Video Broadcasting Project (DVB) and ATSC 3.0.

The year kicked off with the ATSC 3.0 transmission of various



Mathias Bendull, vice president, Multi-Screen Services Audio, Dolby Laboratories

Winter Olympics events, including the closing ceremonies, in a trial at WRAL-TV in Raleigh, NC, reports Mathias Bendull, vice president, Multi-Screen Services Audio, Dolby Laboratories. “It was the first AC-4 transmission over ATSC 3.0, delivered over the air to a very small number of receivers in the market—but it was a proof point.”

More significantly, perhaps, is the Phoenix Model Market, a trial of next-gen broadcast services being led by the Pearl TV group of network and broadcasters currently underway in Arizona. “Phoenix is very interesting because it has a very high percentage of households watching television sets over the air, so ATSC 1.0 is very important there,” Bendull explains.

(continued on page 26)



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## Temp Love

(continued from page 25)

that happened within these walls,” says Hanlon of The Pit. The room was once home to Dr. Andy Moor, inventor of SoundDroid, a prototype DAW developed in 1980. He later programmed the iconic THX “Deep Note” sound logo in the room. The Pit was subsequently occupied by Canadian computer whiz Steve “Spaz” Williams, the CGI innovator who animated *Terminator 2*, *Jurassic Park*, *The Mask* and other titles.

At their new studio location, “probably 80 percent of our work is done through Pro Tools,” says McDermott. “More recently, we’ve really fallen in love with Ableton as a creative source. On a lot of projects, we will start playing around and get inspiration and ideas down in Ableton, then move to Pro Tools to finish.”

The workflow in their respective Pro Tools systems is identical: “If one of us drops dead, we can pick up the other person’s sessions immediately,” says Hanlon cheerfully.

“We had this massive light go off in our heads with the 2018 version of Pro Tools and using track presets. We created a huge number of track presets that we can drag and drop into

our sessions as needed so that our I/Os and everything are the same.”

Using track presets also reduces setup time, Hanlon continues. “There’s no real downtime anymore; you need to work really quickly.”

Hanlon and McDermott have standardized on Focal monitor speakers, and both use Spitfire Audio, Symphobia and Cinesamples orchestral virtual instruments and Universal Audio products. “We are huge believers in Focal. We both have Solo6 Be monitors with the matching sub,” says Hanlon.

The pair don’t just collaborate with each other, also working with a roster of composers worldwide on custom music and library cues. Again with an eye to synchronized workflows, they insist on certain conventions.

“File naming and asset management are huge for us. When we get stuff from our composers, we mix and master it. For the most part, we make sure we have a cohesive product so clients know what to expect—you’re going to get stuff with very similar levels and that has a [specific] sound,” Hanlon says.

Being in the Bay Area has given Temp Love the opportunity to work with a lot of different ad agencies and clients, McDermott says. “The agency scene is really big, and flourishing.

We have several clients we work with regularly. One is Old Navy and Gap; we’ve done a bunch of ads for them in the past year.”

“We just did an interesting back story for Adobe about using Premiere for the show *Atlanta*,” Hanlon reports. “And we’ve worked with Google, Reddit, Twitch—a lot of tech companies, because they’re creating so much content.

“On the agency side, we work with a lot of the major names: Muhtayzik|Hoffer, BBDO, AKQA. There’s such an agency presence here and we’re local, which has helped a lot. Having relationships directly with the companies has opened up opportunities.”

Hanlon spent the first six months of this year working on *Quarter Life Poetry*, a 10-episode television series for FX, launching this fall, from director Arturo Perez Jr. and writer Samantha James, who is also his wife. “It’s based on a musical,” Hanlon says. “I wrote these pieces, modern pop songs; got the talent in and recorded them; then went to L.A. and filmed everything to the music. Then we brought it up here and did lots of location work. We



wrote music for it and did the post, sound design and mixing here. We run a music library and they used quite a few cues; I was also the music supervisor. So we offered them a start-to-finish product.”

McDermott may be familiar to some as songwriter and guitarist with Bay Area alt-rock band Stroke 9. They still play occasionally, he says, typically for charity.

Temp Love also gives back to the community, McDermott says. “We specifically donate to Sunset Youth Organization in San Francisco, which gets instruments for kids and teaches them how to record; Oakland Children’s Hospital, which has a music therapy program; and the BMI Foundation.

“It’s becoming tougher for young people to get access to music as budgets get cut. We’re big believers in helping kids with music.”

Temp Love  
www.templove.com

## Dolby AC-4

(continued from page 25)

“We are happy to report that the signals that are on the air in Phoenix, which are two channels, are encoded in AC-4.” The broadcasts are 5.1, he notes, “but we now have equipment out there that runs 24/7 and will expand beyond those configurations.”

Since ATSC 3.0 is IP-based, “We need to make sure that the audio part, which in many instances is just a small piece of the overall broadcast chain, is very well integrated with all the other pieces, whether that’s advertising, scheduling or just the connection with the video stream. That’s why we are very supportive and strongly involved in the Phoenix Model Market.”

The AC-4 codec is a tool to deliver next-generation audio (NGA) experiences, Bendull comments. And NGA is reinventing how audio is produced, moving from a channel-based to an object-based paradigm. “That allows us to separate individual sound sources as objects, and only at the playback device do we combine them into what the listener would like to listen to.”

One benefit of objects is that they can be used to deliver alternate lan-

guages or commentaries, or potentially enable viewers to adjust the relative background and dialogue levels. “That brings benefits to the consumer as well as to the service provider or broadcaster,” he says. Which NGA features are adopted first will depend on the operational costs, commercial value or content availability relevant to individual broadcasters, TV stations or streaming companies.

“If I start producing object-based audio—and very few do that today in the way where you separate the dialogue, for example—that changes the production workflow. Unless the industry comes together and really creates tools that make that easy, this may be an obstacle” to wider or faster NGA adoption, Bendull cautions.

The value of Dolby Atmos to service providers currently is typically in attracting top-tier subscriptions, he notes. “Netflix makes Atmos content available only to their highest tier. They use that as a differentiation.”

But there is certainly plenty of content available. There are some 600 Dolby Atmos movie titles today, says Bendull, and BT Sports and Sky in the UK produce 250 English Premier League games every year, plus other content, in Dolby Atmos.

For all the hoopla surrounding immersive audio’s potential, dialogue in-

telligibility remains high on the list for many consumers. “Even if you take existing content and run it through an AC-4 encoder, we are able to identify the dialogue frequency band and can flag it so that an AC-4 decoder will boost the dialogue a little bit,” he says. He adds that dialogue enhancement is a feature unique to the codec.

It’s all very well being able to broadcast using AC-4, but there must be receivers in the market for consumers to experience the benefits. Currently 18 TV manufacturers support AC-4 in their sets, says Bendull, but they have been slow in also integrating ATSC 3.0 tuners. “Because TV sets are not just used for broadcast services,” he observes.

He adds, “The greater the population of devices that support AC-4 out there in the market, the more likely it is that streaming services will launch in AC-4.”

One attractive feature of AC-4 is its efficiency, Bendull believes. “When you think about today’s networks, MVPDs and TV stations, they want to reach as many devices as possible, and they want to deliver in the most efficient way. Therefore, by having low data rates, specifically for streaming, they can start, in an adaptive way, at the lowest possible bitrate that delivers quality.” In a

multi-device household, for instance, “efficiency becomes something that allows access to services faster without compromising the quality.”

In Europe, Italy’s broadcast standards body has selected AC-4 as a mandatory feature in the next-gen UHD terrestrial specification; it’s the only NGA codec specified, says Bendull. A second European body is expected to announce AC-4 support soon, he reveals.

Dolby is also excited about two of the Big Three smartphone makers supporting AC-4, he says. “Huawei is shipping mobile phones with AC-4 decoding capabilities and Dolby Atmos, and Samsung has announced AC-4 support on their mobile devices in addition to the availability of Dolby Atmos rendering. You can have a Dolby Atmos experience on your headphones or through the built-in speakers on some of their models,” he says.

“This is what Dolby has done again and again: working with the industry to solve complex problems and roll out ecosystems, from the content creation representing the artists’ intention all the way to delivering the most authentic listening experience to the consumer in the home or on the go,” Bendull says.

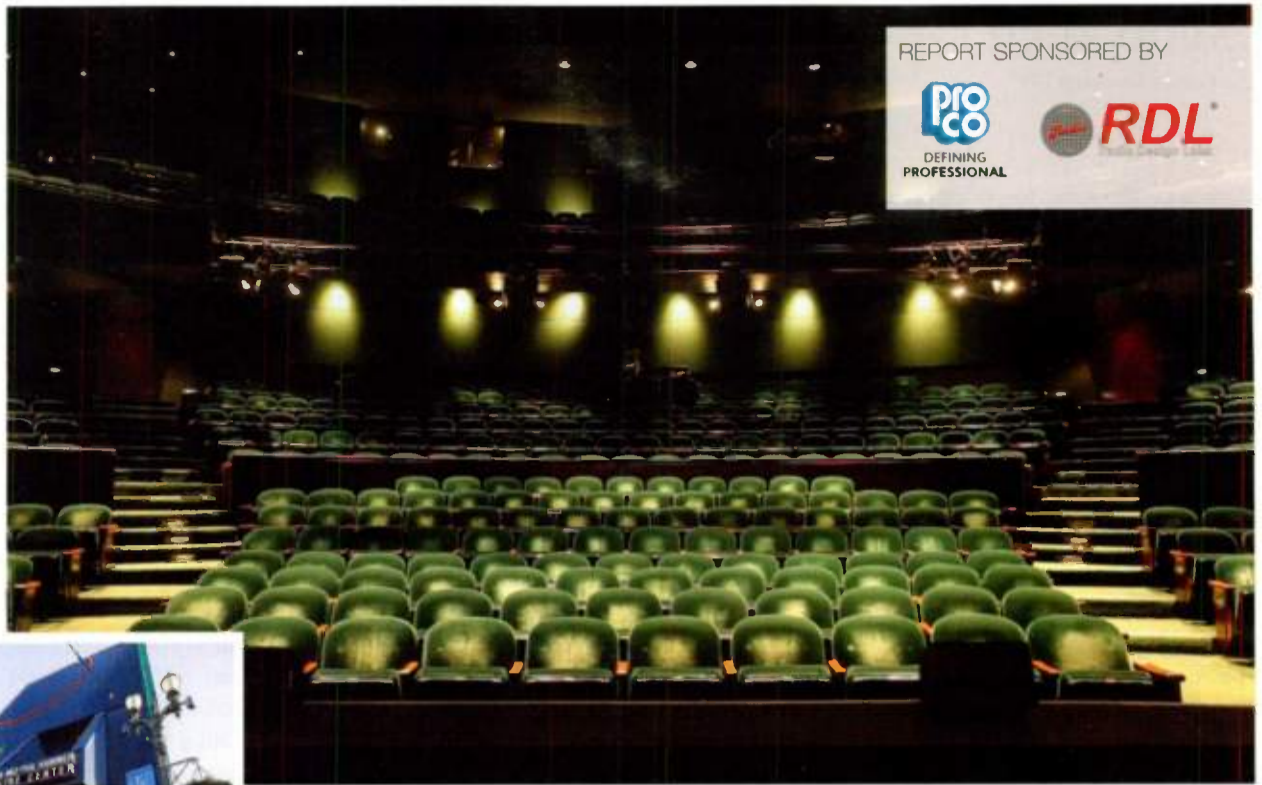
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# Dante in Education

## FACILITIES AND FEATURES MAKE FOR THE IDEAL MARKET

Think about a typical large public university. There are stadiums, arenas, theaters, performance halls, recital halls, lecture halls, video production studios, editing suites, recording studios, music labs, radio stations, HD broadcast facilities, conference rooms and dozens of other spaces that need to pass audio signals. And there are students who need to learn about the state-of-the-art in production. It's a perfect match, a test bed for audio-video connectivity.

While a number of audio manufacturers have been involved in audio-over-IP from early on, two companies deserve particular credit for paving the way for Dante integration on college campuses.



REPORT SPONSORED BY



San Jose State University's Hammer Theatre Center

The first is Yamaha, from the live sound/performance side. One of the first audio companies to partner with Audinate, in the early 2010s, Yamaha placed CL5 consoles, stageboxes and

other products in a number of college programs, and did double-duty in educating customers and educating the market. It still does, and continually updates, adding product lines and device support.

The second is Focusrite, coming

from the recording studio side. The company had introduced Dante integration into the RedNet line, focusing first on recording studios and post-production facilities. Kurt Howell, whose father was a college presi-

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## Dante in Ed

(continued from page 27)

dent and who grew up on campuses, joined the company about four years ago as national sales manager. Within a few months, the primary focus shifted from studios to schools, and the product took off.

"It's just the perfect solution for these types of institutions," Howell says. "There are so many needs for audio connectivity on even a small campus, and the infrastructure is already there: Cat 5/6, fiber, Cisco 10-gigabit switches. You plug into the network and it's all Level 3 security. Dante Domain Manager is just getting started. This is an exciting time if you're in audio-video presentation."

Following are brief profiles of three academic institutions—a community college, private university and state university—that recently installed a Dante audio network system. Universities and students alike have reaped the benefits.

### SAN JOSE STATE UNIVERSITY, SAN JOSE, CA

The San Jose State University Department of Television, Radio, Film



Liberty University

and Theatre (TRFT) has a lot of ground to cover in its theaters, studios and video production facilities across campus and around town. The many and varied campus spaces include an educational television studio, the 350-seat University Theater and the 150-seat Hal Todd Studio Theater, all connected through a Dante audio-over-IP network. Recently the university installed another Dante network at the Hammer Theatre Center, a public theater it operates in downtown San Jose. Now they all work together, audio and video.

The Dante audio network was part of a multimillion-dollar renovation of SJSU's campus facilities that included HDTV cameras, a 900-square foot studio with a green-screen, an LED lighting grid in the TV studio, and an adjacent control

room equipped with professional graphics.

Audio from the Hammer Theatre Center, as well as the University Theater and Hal Todd Studio on campus, is mixed using a Yamaha QL live digital audio mixer and recorded onto a Sound Devices PIX 270i recorder that can record up to 64 channels. Live audio of theatrical performances, including ballet, concerts and plays, can be distributed to mixers and speakers, and recorded onto multitrack recorders using the Dante Virtual Soundcard.

Other Dante-enabled components on the network include the Yamaha R-Series I/O RIO Rack stagebox, several Harman BSS Blu-806 digital signal processors and Rane HAL paging multiprocessors with touchscreen controls.



"From an efficiency point of view, we now have all these different devices that we can access and control just by opening up our Dante Controller software," says Anthony Sutton, master electrician and sound tech for TRFT. "This is how we patch audio between Dante-enabled devices, and we only need to run two Cat 6 Ethernet cables instead of 64 strands of analog wire between devices, which saves considerable time and labor."

### LIBERTY UNIVERSITY, LYNCHBURG, VA

Liberty University is the largest private, nonprofit university in the nation and largest Christian university in the world, with more than 110,000 students in 550 programs on its 7,000-acre campus. Liberty deployed a Dante audio-over-IP network from

(continued on page 31)



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# Dante Domain Manager

The release of Dante Domain Manager in early 2018 was a big deal, in the works for a number of years and in preview for nearly a year. By May of 2018, more than 400 of the 1,000-plus commercially available Dante-enabled products were DDM-ready. As audio networking technologies continue to evolve and expand into new markets, it has become evident that there is a need for user authentication, role-based security and audit capabilities for Dante networks, in a solution that allows seamless expansion of Dante systems over any network infrastructure. Dante Domain Manager answers those needs.

The network domain concept was initially conceived for the IT sector to differentiate and manage multiple private networks across a single infrastructure. Audinate states that it is "applying this same approach to A/V, customizing the features to the needs of A/V professionals and end users."

With this merging of tech and AV control, a few key points come to the fore:

**Security and Control:** Dante Domain Manager incorporates user authentication and role assignment, on a per-zone basis, aiming to ensure that only authorized people can operate or alter the system. While all

individual internal systems are concerned with security, this capability will prove especially popular as Dante dives deeper into post-production, which has suffered before from high-profile security breaches.

**Scalability and Flexibility:** Integrators can define specific AV device groupings by room, building and

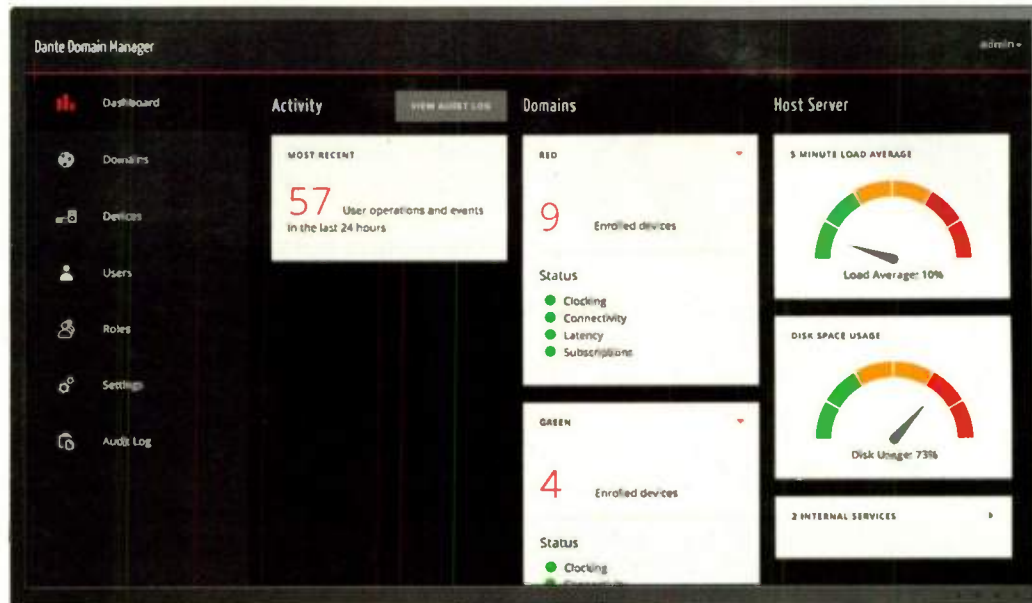
More than 400 of the 1,000-plus Dante-enabled products available are Dante Domain Manager-ready.

site, creating independent Dante Domains. A single Dante Domain can encompass multiple network subnets, deployed across a WAN, with audio routed transparently.

**Visibility and Accountability:** DDM provides at-a-glance reports, audit trails and SNMP-driven alerts, displaying status instantly on a customiz-

able dashboard.

Every week more manufacturers—including Yamaha, Allen & Heath, DiGiCo, Harman Brands, Sennheiser, Focusrite, Powersoft, TASCAM and others—are added to the list of DDM-capable devices, perhaps indicating the audio networking market may be maturing at a Silicon Valley pace. Stay tuned for more.



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## New Dante Products

### AUDINATE DANTE AVIO ADAPTERS

Audinate has announced the availability of a series of network adapters that allow legacy analog and digital audio gear to interface with a Dante network. AVIO adapters are compact audio adapters available in a variety of configurations, including 2-channel analog input (XLR-F), 2-channel analog output (XLR-M), AES3 I/O or USB I/O (Type A), with RJ45 Ethernet. All are designed as a way to port existing gear, including mixers, mic preamps and powered speakers, onto a Dante network.



### CREST AUDIO PB-32 SOUNDGRID-TO-DANTE NETWORK BRIDGE

At InfoComm in June, Crest Audio showed the Versaray Pro powered line array in the United States for the first time and debuted the PB-32 SoundGrid-to-Dante network bridge, which provides the connection between the company's flagship Tactus digital mixing system and the Dante-enabled line array. Housed in a 1U half-rack chassis, the PB-32 provides up to 16 channels of bidirectional audio to be transmitted and received by each network (SoundGrid and Dante) via interchangeable 16x16 networking modules. The unit ships with one Dante and one SoundGrid module as standard, but may be loaded with two Dante cards to link separate Dante systems with different clock sources. The device benefits from full asynchronous sample rate conversion on all channels, and a PoE network source selector switch for when PoE is available. The unit is fitted with XLRnet RJ45 connectors and status LEDs.



### FOCUSRITE RED 16LINE 64X64 I/O, 32X32 DANTE I/O

Red 16Line is a 64-in/64-out Pro Tools HD and dual Thunderbolt 3 audio interface with A-D/D-A conversion, Red Evolution mic preamps, up to 121 dB dynamic range, low round-trip latency and expansion over Ethernet for networked audio. With both DigiLink and Thunderbolt connections, there's no need to reconfigure option cards in the interface. Analog I/O includes 16 line inputs on D-sub, coupled with 16 line outputs and two main monitor outputs. The two digitally controlled Red Evolution mic preamps provide up to 63 dB of gain, along with stereo linking, individual phantom power, highpass filter, phase reverse and Air mode—characterizing the sonic signature of the classic transformer ISA preamp. Audio conversion measures at 118 dB dynamic range A-D and 121 dB dynamic range D-A (A-weighted). Dual-port Dante connectivity allows for expansion over Ethernet (i.e., more channels, higher sample rate) anywhere in the network. It also includes two discrete headphone outputs, and every Red interface comes with Red 2 and Red 3 EQ and compression AAX/AU/VST-compatible plug-ins.



### GLENSOUND AOIP22 DANTE/AES67 2-CHANNEL I/O

British manufacturer Glensound, in conjunction with ASK Sales, has introduced the AoIP22 Dante/AES67 two-channel bidirectional audio interface to bring existing analog equipment to a Dante/AES67 network. The interface offers two balanced analog audio inputs on XLR connectors, two balanced analog XLR audio outputs, and a Neutrik Ethercon RJ45 network connector. When using the free Dante Controller by Audinate, the AoIP22 is automatically identified; users route audio circuits to/from the AoIP22 with a mouse click. The AoIP22 supports all audio sample and bit



rates that one would expect, using the standard 24-bit Dante network resolution and recognizing Dante network sample rates of 44.1, 48, 88.2 and 96 Kb/s. Being AES67-compatible, the AoIP22 supports the AES67 network sample rate of 48 kHz. The AoIP22 is powered by PoE, so only one cable is needed. It comes with a removable belt clip, rubber feet for stability, and cable tie holes for mounting in custom installations.

### LECTROSONICS DUET M2 WIRELESS IEM SYSTEM

The Duet digital IEM wireless monitor and IFB system consists of the M2T dual-stereo half-rack transmitter and M2R diversity belt-pack receiver, and features 24-bit digital audio, low latency, Dante inputs and a compact, diversity bodypack unit. The Duet covers the UHF frequencies of 470-608 MHz (138 MHz) in a single range, uses digital modulation for transmission and can accept analog or Dante digital inputs. Up to four dual-channel carriers can be sent from 1 RU, resulting in either four stereo audio feeds or up to eight mono audio feeds. Both the M2T half-rack transmitter and the M2R belt-pack receiver units have two-way IR sync, so scan data from the receiver can be sent to the transmitter and onto the Ethernet network for use by Wireless Designer software for frequency coordination. The system includes a Flex List mode, where names and frequencies can be stored in the receiver so that a monitor engineer can quickly find and listen to any of the talent's mixes on the stage or in the studio.



### PROCO AODOM DANTE I/O, DROP BOXES, WALL PLATES

ProCo has introduced the AoDoM 2-channel interface, featuring one RJ45 Dante input and two Neutrik XLR analog line-level outputs. It is designed with a 3-foot analog audio tail with black Neutrik XLR connectors. The AoDiMX4 4-channel interface is equipped with one Neutrik Ethercon Dante output and four Neutrik XLR analog inputs, while the AoDoMX4 4-channel interface has one Neutrik Ethercon Dante input and four Neutrik XLR analog outputs. Each can be configured with Audinate's free Dante Controller software. Power is supplied through a standard Ethernet cable via a PoE-capable network switch, or from a separate PoE injector circuit.



For integrators, ProCo has released two enclosure options for its Dante Interface hardware. ProCo's Drop Snake Boxes are portable handheld units for audio transport, while its Dante Wall Plates can be installed into any established pro AV environment. Three configurations of two to four Neutrik analog XLR inputs and/or XLRM outputs are available for each enclosure, along with one Neutrik Ethercon Dante input. Each module is designed with LED indicators.

### RADIAL DINET DAN-TX, DAN-RX DANTE WIRELESS

The Di-NET DAN wireless system from Radial Engineering, allowing users to connect instruments or line-level sources directly to networked audio systems using the Dante protocol, includes the Di-NET DAN-TX stereo direct box (with 1/4-inch, RCA and stereo 3.5mm input jacks) and the DAN-RX 2-channel Dante endpoint (balanced XLR outputs, mic or line-level, plus headphone amp) for outputting balanced audio from a Dante-enabled network. Each features 24-bit/96 kHz analog-to-digital conversion. The 3.5mm headphone output has its own level control to test audio before connection to the P.A. The DAN-RX can be powered from an included external supply or any PoE network switch.



**RDL DD-BN22 WALL-MOUNTED BIDIRECTIONAL MIC/LINE DANTE INTERFACE 2X2**

The DD-BN22 is a wall-mounted Dante audio network interface featuring two XLR mic or line inputs and two XLR mic or line outputs on the front panels. The two XLR inputs are each converted to a separate Dante network transmit channel. Each XLR input provides three switches that may be set from the front of the unit when the cover plate is off. One switch enables or disables P48 phantom power; the second selects the mic or line gain range; the third sets the gain. Three gain settings are switch-selectable for both the mic and line input ranges to match condenser or dynamic mic levels and standard line levels. Each XLR output is switchable between balanced line level or mic level, providing +4 dBu balanced for a network digital audio level of -20 dBFS. Valid PoE power and synchronization to the Dante network are indicated by green LEDs visible from the front of the unit. The DD-BN22 fits a standard U.S. dual-gang electrical box or an RDL WB-2 back box for installations in thinner walls. The DD-BN22 is PoE powered, and is available in multiple finishes with optional customized graphics. No special software is required to configure the DD-BN22.

**TASCAM ML-32D AND ML-16D DANTE/ANALOG CONVERTERS**

The TASCAM ML-32D and ML-16D are professional converters made specifically to insert or extract analog audio into or out of a Dante network using external breakout devices. The ML-32D features 32 analog line inputs (4 D-Sub) and 32 analog line outputs (4 D-Sub) for easy connection to microphone



preamplifiers, large and small format console mixers, audio interfaces, amplifiers and Euroblock connector devices. The ML-16D features 16-in/16-out on two D-Subs each way. Each unit operates at up to 24-bit/96 kHz quality and features dual redundant Ethernet jacks supporting primary and secondary connections. Each also features LED display for signal level and overload per input/output channel, reference level dip switches for selectable DBU level metering, and AES67 and Ravenna compatibility.

**YAMAHA YAI-1 CONFERENCE ENSEMBLE**

Yamaha Unified Communications, known previously as Revolabs, recently announced the Yamaha YAI-1 professional audio conferencing solution. A preconfigured USB audio system that works with an organization's chosen UC platform, the ready-to-install professional audio system comprises an eight-channel Executive Elite wireless microphone package, two VXL 1-16 PoE speaker arrays, a pre-configured digital signal processor, a five-port PoE switch, a Dante AVIO USB adapter and cabling. The bundle, which includes two 16-element PoE powered line array speakers, is available in two microphone options: an eight-gooseneck microphone package for boardrooms, or seven table-top microphones and one wearable microphone for presentation flexibility in conference rooms.



intercom, equipped with OMNEO interface cards, supports intercom communications between different areas of the facility.

## Education

(continued from page 28)

Audinate to transport audio throughout its School of Music facility.

"I'd estimate that we've saved about \$40,000 to \$50,000 on capital and operating expenses since shifting from our legacy networking system to Dante," said Michael Gerringer, AV architect/manager for Liberty University. "We've saved hours and hours of work because there's no need for cumbersome cable runs, hard wiring and patching devices to put them onto the network." A virtual private local area network (VLAN) was established for Dante, keeping it logically separate from the main enterprise LAN.

"Dante gives us enormous flexibility and latitude in how and where we route digital audio throughout our facility, including five classroom/recital

spaces and our performing arts center auditorium," said Gerringer. "Configuration and management is simplified, as systems like the Yamaha CL1 and their companion RIO I/O stageboxes appear instantly when they're plugged into the local area network. We are very picky about low latency and high sound quality, and Dante is exceeding everyone's expectations."

Approximately 15 Dante-enabled products reside on the 1 Gb network, including a DiGiCo SD5 mixing desk in the auditorium, Yamaha CL1 mixers in classrooms, and an Aviom D800-Dante A-Net distributor in each classroom and the concert hall. DiGiCo Orange Box I/O interface units convert MADI signals to Dante, and an RTS ADAM modular matrix

intercom, equipped with OMNEO interface cards, supports intercom communications between different areas of the facility.

One application of educational value that especially excites Gerringer is the ability to use virtual soundchecks as a teaching tool, where students can access recordings of every aspect of a live musical or theatrical performance, then practice mixing and finessing the audio inputs into a finished mix using the Dante-enabled Yamaha CL1 mixer in the classrooms.

**VALENCIA COLLEGE, ORLANDO, FL**

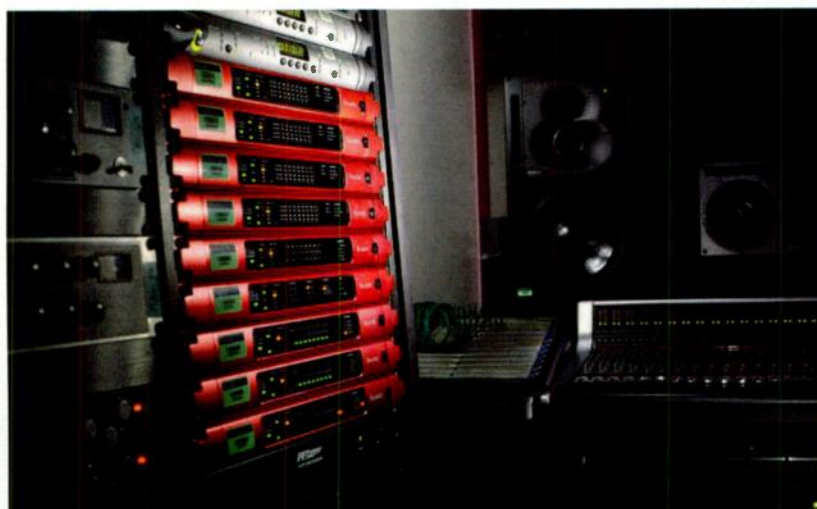
Valencia College can now lay claim to the world's largest educational installation of Focusrite's RedNet range of

Dante-networked audio converters and interfaces. The setup is installed in the college's new film production and sound technology building, which opened in the fall of 2017.

The facility houses 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 on campus.

RedNet A16R 16-channel analog I/O interfaces and RedNet D16R 16-channel AES3 I/Os allow digital and analog signals to be networked throughout the facility, and RedNet HD32R 32-channel HD Dante network bridges allow all of the facility's Pro Tools systems to interface from studio to studio. RedNet AM2 stereo audio monitoring units in every studio allow those in each room to receive their own custom headphone mixes.

"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 Joe McBride, teaching lab supervisor in Valencia College's Sound & Music Technology program. "RedNet gave us not only an incredibly efficient and effective networking solution, but it also provides the networked infrastructure for them to learn on that will ready them for the jobs they'll find when they graduate."



A post-production mixing suite (left) and Focusrite RedNet rack at Valencia College

# Shure Axient Digital Wireless Microphone System

When it comes to audio equipment, looks can be deceiving; however, I was pleased to discover that was not the case with the Shure Axient Digital wireless microphone system. For this review, I used the AD4Q receiver with AD1 bodypack transmitter and AD2 KSM9 handheld transmitter, and my first positive impression of the system was due to its looks, thanks to a sleek four-channel receiver design that packs a lot of punch into a 1U rackmount device. The multicolor LEDs give you tons of real-time information, with Shure providing two rows of five LEDs and one overload LED, giving you a detailed reading on both antennas. The audio LED meter also seems much more fluid in its real-time response.

Shure included a ton of useful displays, meters and controls on the front of the AD4Q: sync, quick channel select, a master display screen with individual channel information, battery life, RF info, and easy access function buttons to quickly glance at other necessary details. It only takes once or twice toggling through the menu to understand the navigation basics. A headphone jack with individual volume control on the front of the panel is also super helpful for an A2 troubleshooting problems that may come up.

I'm heavily influenced by how quickly I can get a piece of equipment working. Since speed is key for most of my setups, I always feel that the less time I need to sit down and read through a manual to do a quick and dirty setup, the better. That was certainly the case for this system: My first application of the Axient system was for a production of *Les Misérables* at Reynolds Auditorium.

I set up the receiver with the two half-wave antennas that arrived with it. I did not cascade or use the Quadversity as I did not have the additional antennas required. But I did look into how useful the Quadversity would prove in high-demand situations. There are four coaxial ports on the back: A through D. A and B are traditional antenna ports; C and D can be configured to cascade to another device or to add two more antennas for even more coverage. In this configuration, the receiver outputs two channels of audio. The AD4Q is set up to maximize its transmission and minimize the potential for drop-outs.

Another significant RF feature



Placement atop an older Shure UR4D receiver during a production of *Les Misérables* inadvertently highlighted the extensive metering of the Axient Digital AD4Q.

is the Frequency Diversity, which transmits audio on two independent frequencies. This can be done using the ADX2FD handheld transmitter or two AD/ADX transmitters. The huge benefit of this feature is drop-out prevention; the system uses two frequencies to output a single channel of audio when one of the frequencies experiences interference. An added bonus to the RF interference management is an alert that responds to signal degradation and gives an option to move to a clean, open frequency. A frequency can be set up for this purpose, or one can be selected automatically through Wireless Workbench. In the setup, you can also determine if you want the mode to allow, warn or block unwanted transmitters that are detected.

We put the AD1 bodypack transmitter with a Countryman E6 element on our lead. The high school senior playing Jean Valjean was challenged with a very intense role that required loud, boisterous singing, as well as intimate whispering. The Axient's built-in limiter allowed some room for this extreme dynamic range. The sound of his voice felt like it was very natural and not squashed with digital compression—a pleasant difference from the transmitter/receiver combinations we were using on the other key actors. We had no drop-outs throughout the run of the show on this unit, which was plugged in via the Dante ports. Primary and secondary network ports are provided (something that has not always been the case with other manufacturers' Dante products).

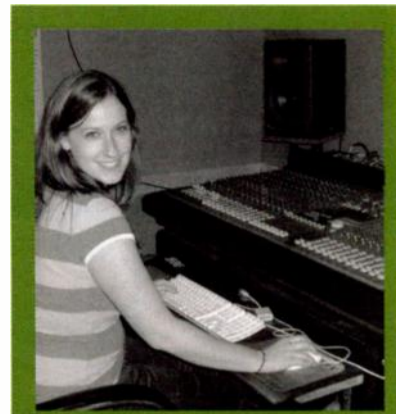
The designer of the show, Jason McGuire (University of North Carolina School of the Arts Design & Production sound design student), observed, "It was a nice, quick and streamlined process. Once frequency coordination was taken care of, I never had any problems with it. The high

level of reliability was nice for using it with the lead role in the show."

If you use the network browser, you can discover other devices on the Dante network. In our case, Reynolds Auditorium is equipped with a Yamaha CL5 console plus four Rio and one Ro stageboxes. We also had a RedNet MP8R and Shure ULX-D on the Dante network. With 32 wireless microphones on stage right, the Dante patching saved us inputs and cabling at the stagebox. We also did not run into issues with frequency space, although if we had, we could have put the transmission mode into the higher-density setting to enable more transmitters in a smaller frequency space. This is done by narrowing the modulation bandwidth, allowing for channel spacing to be reduced from 350 kHz to 125 kHz running at 1 mW RF transmit power.

Next up to test was the AD2 KSM9 handheld transmitter. We hold several a cappella events at Reynolds Auditorium each year, so naturally we were ready to give this unit a spin against our other handhelds. We have a variety of mics, including Sennheiser G3s with both 835 and 935 capsules, Sennheiser Digital 6000s, and Shure ULX-S with SM58 transmitters.

The feel of the KSM9 is weighty, much like the bodypack, reminding you of its professional capabilities. It has a metal housing, which means endurance through rugged use. The balance of the KSM9 handheld and compact grille allow the microphone to fit naturally in your hand. The microphone sounded amazing—the dual diaphragm really limits the proximity effect that comes so often with handheld mics and is of great assistance when mixing several different a cappella singers using the same microphone but not necessarily the same technique. The openness, clarity and depth of the KSM9 really set it



BY LIZ MAY

Liz May is a live sound mixer, producer/engineer, educator and schooled pianist now serving as production manager of Reynolds Auditorium in Winston-Salem, NC. [twitter.com/soundlizzard](https://twitter.com/soundlizzard)

apart from our other mics. We gave it two thumbs way up!

I used the KSM9 transmitter in a few other live sound applications, two of which were outdoor events using the same P.A., a custom-built system by Blue Maple Design. The handheld had to pass in front of the P.A. during one of the events and we fully expected some major feedback, but we were happily surprised that just ducking down about 5 dB was all that was needed. Another use was for the lead singer of the Jeans 'n Classics band at their David Bowie Tribute concert. The engineers for that show raved about the ease of use, reliability and feedback rejection. They were ready to purchase one after putting it through its paces.

The Axient Digital units can take AA batteries (what I used), or you can get the rechargeable lithium-ion battery packs from Shure. The housing has charging pins on the outside for quick in-rack or in-drawer charging. I like that you have power options.

The KSM9 Transmitter ranks extremely high on my list of preferred wireless handhelds, possibly topping the list. The flexibility of the four-channel receiver being able to pair with AD or ADX transmitters is pretty awesome. The additional features on the ADX units include dual frequency transmission, monitor and control access for up to 24 transmitters through the AD610 ShowLink access point; a micro-body pack transmitter option, and automatic interference avoidance.

The Shure Axient AD4Q with AD1 bodypack and KSM9 AD2 transmitters is a pretty stellar system to work with and is priced to match its abundant features. I would highly recommend this product for wireless users with complex audio needs.

Shure  
[www.shure.com](http://www.shure.com)



# Yamaha Stagepas 600BT Portable P.A. System

Yamaha's Stagepas 600BT all-in-one portable live sound system is built with the flexibility to fill smaller performance venues with quality sound.

With two lightweight speakers, a detachable powered mixer, two speaker cables and a power cord, the Stagepas 600BT portable P.A. can be set up quickly in nearly any environment. It's easy enough to use that adjustments can be made while performing.

Yamaha's Stagepas line has two Bluetooth-enabled models: the 600BT, reviewed here, which consists of a 680-watt portable P.A. with 10-channel mixer and two 10-inch speakers, and the 400BT, a 400-watt model with 8-channel mixer and two 8-inch speakers.

Users can stream stereo audio such as backing tracks, break music, loops or software instruments directly to the Stagepas system thanks to Bluetooth connectivity. Phantom power is available on channels 1 and 2, and Stagepas offers a sub output jack to feed powered subwoofers.

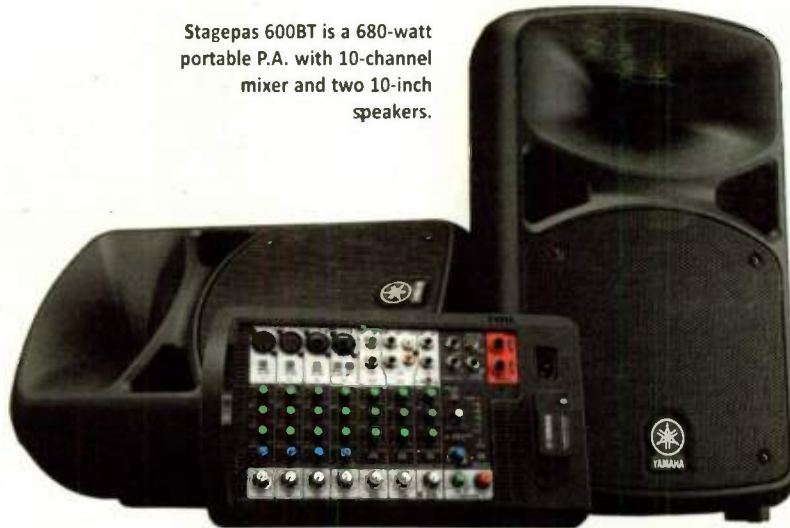
As a gigging musician, I put the Stagepas 600BT to the test in a variety of scenarios, including sound reinforcement for spoken-word presentations, a vocal-harmonizing acoustic guitar duo, and on vocals in a loud heavy metal band. Every test exceeded my expectations.

Portability is the pleasure of this product. The two speaker cabinets, which each weigh 24 pounds, are easily carried one in each hand. The lightweight powered mixer (8.4 pounds) snaps into the back of one speaker enclosure, which I found convenient for transport. The mixer can be operated from the back of the speaker if you're short on space, though mounting the mixer on a microphone stand with the optional mic stand adapter would result in a more functional setup. The other speaker enclosure includes a rear compartment for storing speaker cables and AC power cord, with room to spare for a microphone or two.

There are four channels for mic/line input jacks, supporting both XLR and 1/4" jacks, and another three stereo channels for line-level devices—all with three-band EQ. EQ is managed by turning a single knob to optimize speech, musical performances (mid-range) or "bass boost," making it a quick process to adjust the overall mix when using the system in different performance spaces.

Channels 1 through 4 are equipped with independent sends for the four reverb types (Hall, Plate, Room and Echo), which are derived from Yamaha's SPX series of dedicated effects processors. The reverb

Stagepas 600BT is a 680-watt portable P.A. with 10-channel mixer and two 10-inch speakers.



can be turned on and off using an optional footswitch.

Each speaker unit consists of a 10-inch LF driver and 1.4-inch compression driver which together provide a loud and clear 680 watts. The feedback suppressor, configured with a seven-band notch filter, might be the real star of the show.

I evaluated Stagepas' functionality with a vocal-harmonizing acoustic guitar duo, setting the speakers near the musicians because we weren't using monitors. I kept the sound mix fairly loud; I expected feedback but was pleasantly surprised to find none. The overall sound was very clear.

That said, I felt I'd really be putting the Stagepas 600BT to the test with the heavy metal band's vocals during rehearsal in a hall the size of a small venue. I cranked the volume

to hear the vocalist over a double bass drummer and two guitars playing through Marshall half-stacks. Again, no feedback, and audio was very clear even when I pushed the volume into its upper range; this particular test really won me over.

Lastly, I gave the portable P.A. a run-through at a panel discussion with four speakers who used handheld microphones while moving around a stage—again, no feedback, no doubt due to the onboard feedback suppressor.

When I played recorded music during the performance breaks, I noted the system's exceptional dynamic range. Low end and bass response sometimes suffer in the trade-off for portability, but I thought the bass held up admirably.

I enjoyed the flexibility of the



BY BILLY DAVIS

Billy Davis is a New York City-based musician, and is also an audio visual manager and program director at various conferences and conventions around the United States.

Bluetooth wireless audio connectivity, allowing me to play audio—a band introduction, a backing track or even a mid-song sound effect—from a Bluetooth-paired device from up to 33 feet away. Using the feature, I was able to play intermission music right out of my pocket during breaks.

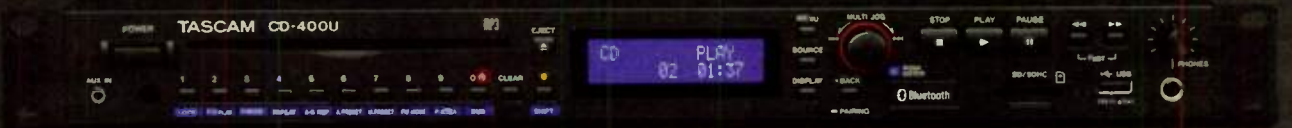
Stagepas is available for an affordable street price of \$899, has impressive sound quality and will be a valuable asset to any gigging musician or presenter who plays small, intimate venues.

Yamaha

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

## TASCAM CD-400U

Delivering superior audio performance from CD, USB memory stick, Bluetooth, SD card and featuring an AM/FM receiver, the TASCAM CD-400U is the ideal audio source for virtually any commercial installation.



Only TASCAM delivers the depth of product, technical innovation, and legendary reliability you need to make every project a success and maintain your hard-earned reputation.

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## Bose S1 Pro Multi-Position P.A. System

Bose has developed a number of portable P.A.s over the years with its L1 series, but the S1 Pro Multi-Position P.A. System, released this past spring, represents the most affordable system yet—and it still offers sound quality worthy of the Bose nameplate on the front.

The unit is intended for solo performers. Putting the S1 Pro through its paces, I was duly impressed. Using it while entertaining small to mid-sized crowds in various settings, the unit delivered in terms of sound quality, range and portability. Over the course of this review, I used it to cover crowded dive bars, private homes and a spacious catering hall. In each case, I was quite pleased with the sound it delivers.

Weighing just under 16 pounds, the S1 Pro measures 13 x 9.5 x 11.2 inches (HWD) and is shaped to allow

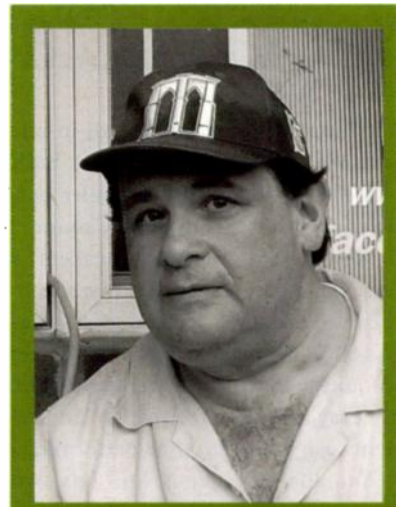


The Bose S1 Pro in Tilt-Back mode.

different uses. Vertically, you can put it on a stand or elevated surface, but the enclosure's rear side is cut so you can also place it in Tilt-Back mode, where it sits at an angle without hav-

ing to be propped up—useful if you have to place the system on the ground, aimed at a close-range audience. Its shape is also conducive to being laid horizontally for use as a monitor wedge. No matter how you're using it, built-in sensors can tell what position the S1 is in and adjust Auto EQ to provide an optimal tonal balance for that use.

Despite its relatively small size and many-angled shape, the enclosure has a three-channel mixer built into its side. Each channel has its own volume knob and signal/clip indicator. Channels 1 and 2 are a pair of clearly defined, user-friendly combo-XLR inputs, which made setting up my keyboard and microphone prior to gigs quick, simple and easy. Both channels have their own reverb, bass and treble controls, along with separate volume knobs for each individual input, mak-



### BY JORDAN KAPLAN

Jordan Kaplan has provided live music for private and public events throughout the New York City area, both solo and with his band, GiftBox, for more than 30 years. [JordanKaplanPianoMan@gmail.com](mailto:JordanKaplanPianoMan@gmail.com)

ing it simple to adjust during and between songs. Each of the two chan-  
*(continued on page 48)*

## Shinola Bookshelf Speaker

BY STEVE HARVEY

Pro audio practitioners are no doubt familiar with the reputation if not the actual audio quality of Barefoot Sound studio monitors, but they may be less familiar with Shinola, a luxury goods company founded in Detroit seven years ago. The company's latest audio offering, a revamp of an earlier product, is named with utilitarian simplicity—the Shinola Bookshelf Speaker—and is the result of a collaboration between the brand and Barefoot Sound, based in Portland, OR.

Marketed to consumers as a Bluetooth bookshelf speaker, the er, Bookshelf Speaker in fact offers a variety of input options (and even an output). And at less than half the price of a pair of entry-level Barefoot speakers, they do an impressive job of slotting into the gap between pro monitors and high-end luxury home bookshelf speakers in terms of features and performance.

Word is that these speakers share the 1-inch dual-ring radiator tweeter found in Barefoot's Footprint 01, but the 6.5-inch high-excursion woofer was designed for this product. True to their name, the speakers are a bookshelf-friendly 12 x 8 x 9 inches (HWD), are available in either a black or natural oak veneer finish and weigh an average 17 pounds each. The black open-weave fabric grille, which attenuates the high frequencies only a little when fitted, to my ears,

attach via embedded magnets.

A class-D amp rated at 100W RMS per channel powers the drivers. The amp is housed in the left speaker box, which features a single rotary encoder—no detents or markings—controlling volume and links to the right (passive) speaker via a cable fitted with banana connectors.

The rear of the left speaker is where all the action takes place. Connect the speakers, plug in the very heavy-gauge power cable, flick the power switch and, after a moment, there is a somewhat disconcerting “bong” that signals everything is ready.

The choice of inputs includes analog (a 3.5mm mini-jack or RCA pair), digital (S/PDIF in and, unusually, out), USB (a USB type-C cable is included), and high-resolution Qualcomm aptX-powered Bluetooth. Input sources are selected by stepping through the options using a single button surrounded by LED indicators, above which is the Bluetooth pairing button. In practice, it's somewhat awkward to change and see the selected source, but it probably gets easier with use.

How do they sound? First, some context. I'm not a professional mixer but I've produced more than a handful of tracks for release on CD and vinyl, as well as numerous tracks for production music library use, all through the same inexpensive 8-inch M-Audio Studiophile monitors, on IsoAcoustics stands, for the past 15



Shinola Bookshelf Speakers are a consumer product resulting from a collaboration with studio monitor specialists Barefoot Sound.

years; they're my NS-10s, if you will. I played some of my professionally mastered material plus a selection of electronica, jazz, pop and rock CDs, old and more recent, through both sets to compare.

The Shinola speakers, which feature a rear slot port, output plenty of low-frequency energy, in keeping with current tastes. It's tight and not too flabby, but some of the lower-mid instruments—electric bass and synth, in particular—gained a little prominence in the mix compared to my usual M-Audio Studiophile monitors..

The published response is 60 Hz – 22 kHz, but the high end, even with-

out the grille in place, lacked the sizzle and air of my old faithfuls, which top out at 20 kHz. If anything, it feels like both speakers cover a similar frequency range, but the Shinolas are offset lower, resulting in less treble and more bass.

I wouldn't choose to mix on the Shinola Bookshelf Speakers, but that's not their purpose. However, for easy listening, in the living room or elsewhere, paired with a Bluetooth-enabled TV, a smartphone tuned to Spotify or a CD playing out of a computer, they offer an enjoyable experience at \$1,500 a pair.

Shinola  
[www.shinola.com](http://www.shinola.com)

# innovations: the manufacturer's view

## The Radio Revolution

### CALREC AUDIO'S TYPE R

BY HENRY GOODMAN

The rise of streaming services and increased competition for the attention of listeners is forcing the radio market to look for innovative ways to engage with their audiences. Modern radio stations are finding that they need to operate in a multitude of ways to connect with different target audiences. The flexibility to dynamically interact with listeners presents opportunities for radio stations, their advertisers and stakeholders.

For both traditional and streaming stations to effectively compete in this evolving marketplace, a product is needed that allows not only the broadcaster but also the individual host to present the show how they want to. With more than 50 years of broadcast experience, that's where Calrec Audio comes into play. Calrec has always worked closely with customers and end-users to learn their needs. During the development of Type R in 2016, we visited various radio stations and spoke to many engineers and radio specialists to study their workflows.

The result of our research and development is a new range of customizable, expandable and flexible radio systems. The desk marks our return to the radio market, which was last addressed in the late 1990s, most notably with the X series and X2 consoles that were designed for the BBC English regions. With Type R, we're entering the market with a fully developed product designed for

any radio station, anywhere across the globe. The conditions are perfect to re-enter the marketplace, as technology is catching up with prevailing market demands. Calrec is ideally positioned to use its knowledge of broadcasting infrastructures to design a console that meets these demands.

This is especially true with the market push toward IP-based systems, as radio has embraced IP quicker than other broadcast sectors. This shifting technological landscape is very exciting to us and we feel it is the perfect time to re-emerge into the market. The widespread acceptance of open IP standards provides the opportunity to create a very stable and flexible backbone that can be used across multiple radio sites. This industry shift has been instrumental in the design of Type R, which is based entirely on this ethos, with AES67-compatible audio transport and panel connectivity utilizing power over COTS PoE+ switches. Type R is equipped to meet the future demands of the AoIP environment, embracing industry-standard NMOS discovery and control as well as utilizing a facility's existing IP infrastructure to accelerate the move toward interoperability.

The main challenge was to create a product that could be molded into a solution that would work for many workflows—from small, simple solutions to large, complex networks. In radio, like television, every station works in a different way. On top of that, setups can be very different from show to show. We wanted to design a product that could work in a variety



Type R is a modular, expandable, IP-based radio system that utilizes standard networking technology and combines it with soft panels that can be tailored to operator needs. Type R's physical control system consists of just three slimline panels: a fader panel, a large soft panel (pictured) and a small soft panel.

of hugely complex environments, yet remain simple and easy to use.

We overcame that challenge by designing a product that is highly configurable and modular, so it can be tailored to the requirements of the station and the talent. Once the soft panels and user-definable elements have been configured and locked down by the technical engineer, the simple GUI ensures that operating Type R is very easy. Different setups can be loaded quickly between shows, so everyone can feel comfortable operating it. This is a key difference between Type R and its competitors. The soft panels can be laid out to present just what the operator wants to see, down to the individual control level.

Type R is capable of presenting operators with a very simple user interface or, for complex applications, all the controls needed for a full production console. This radio system

is a modern and customer-focused radio broadcast console that adapts to a station's needs as requirements evolve. It provides simple customization across networks, control protocols and surface personalization. Type R guarantees stations are not only able to keep pace with changing demands, but it provides the opportunity to excite their audiences with new and innovative programming.

The key challenge for radio stations is to connect in a more personalized way with their audiences. Dynamic interaction with listeners through social media, call-ins and visual radio are enabling radio stations to compete with the growth of streaming services. Radio presenters are a big attraction for audiences, and the ability to configure and tailor the workplace environment to allow them to focus on what makes their show unique is becoming more valuable.

Type R has been designed to be adaptable and expandable for both hardware and software elements, and development will continue in the future. Type R begins shipping in fall 2018, but the initial response from the industry has been extremely positive. It has reinvigorated Calrec's current network of distributors and has attracted new prospective customers and distributors. We are very excited about entering the radio market again, and based on the feedback we have received so far, Type R is going to be a highly competitive radio solution.

Henry Goodman is director of product development for Calrec Audio.

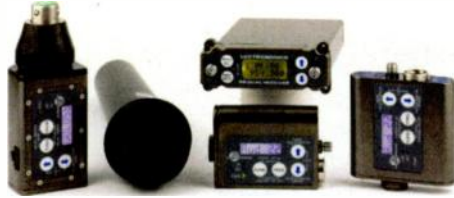
Calrec Audio  
www.calrec.com



Fader panels are small, sleek and simple, with six faders and immediate access to essential controls. Fader panels can be added or removed as simply as plugging or unplugging an Ethernet cable.

## Lectrosonics 941-960 MHz Band Digital Hybrid Wireless Products

Lectrosonics has made available a selection of Digital Hybrid Wireless microphone products, focused on ENG and field/production sound, in the recently expanded 941-960 MHz frequency band for the United



States. Lectrosonics' new products include the SRC-941 dual-channel modular portable receiver; SMV-941 and SMQV-941 miniature belt pack transmitters; the HMa-941 plug-on transmitter; and the HHa-941 handheld transmitter. All transmitter models in this band offer 50 and 100 mW RF power settings, but otherwise are functionally identical to the same units in the traditional UHF frequency blocks and bands.

## MOTU 8pre-es Interface

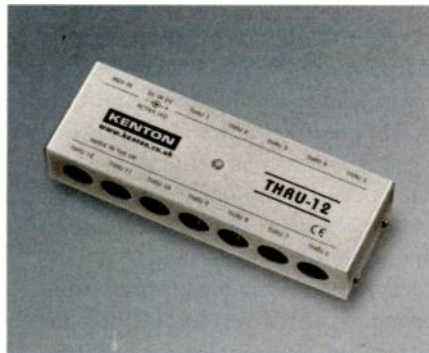
This 52-channel Thunderbolt/USB audio interface for Mac, Windows and iOS features eight mic inputs in a single rack space, ESS Sabre32



DAC technology on eight balanced outputs, low-latency drivers, DSP mixing/effects and a feature set similar to MOTU's 828es. Each mic input provides -129 dBu EIN, 118 dB dynamic range and remote control for individual gain/pad/48V phantom power. ESS Sabre32 DAC technology delivers 123 dB dynamic range on eight balanced, DC-coupled 1/4-inch (TRS) outputs and the same audio quality as MOTU's flagship 1248. MOTU reports the unit's round-trip latency performance runs as low as 1.6 ms at 96 kHz over Thunderbolt and 1.9 ms over USB.

## Kenton Thru-12 MIDI Data Spreader

Thru-12 is a MIDI Thru unit that acts as a central hub and data spreader, taking the data from a single MIDI Out and producing identical copies for its 12 MIDI Thru sockets. Able to spread MIDI information from a single source to 12 devices, the unit can be used to allow a main keyboard to control up to a dozen synth modules, for example. Thru-12 is based around a single opto-isolated MIDI In and



a separate drive for each of the 12 MIDI Thru/Outs. Thru-12 works with all MIDI messages including Clock, SysEx and MTC. It also includes Schmitt trigger logic for signal quality restoration and reportedly creates latency of less than 1 ms.

## Avantone Pro CLA-10 Studio Monitors

Developed in collaboration with mix engineer Chris Lord-Alge, Avantone Pro's CLA-10 speaker system—a pair of two-way passive studio monitors—is a modern reproduction of Yamaha NS-10 nearfields. CLA-10 sports a 10.4-liter sealed design cabinet constructed of non-layered, high-rigidity MDF, finished with an outer layer of real wood veneer. Fine Element



Analysis modeling was used for the custom-designed 180 mm AV10-MLF low-frequency driver. A custom-tooled frame supports the driver/cone combo, aiming to minimize mechanical transfers, while the 35 mm AV10-MHF high frequency silk dome-based tweeter is intended to match the original closely, both as a frequency (60 Hz – 20 kHz) and voicing match.

## firstlook

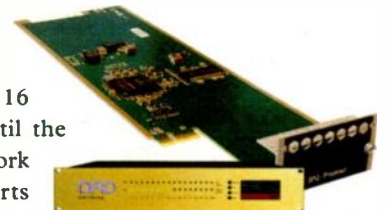


## Calrec Brio Expansion Packs

Calrec Audio's Brio audio console is getting a boost in channel count with expansion packs that increase the Brio12 DSP count from 48 to 64 input channels and the Brio36 from 64 to 96 input channels. DSP expansion packs can be purchased from Calrec's online shop or through Calrec's distributor network. All new Brio consoles can be purchased with the bigger DSP pack already installed. Expansion packs are available for all Brio consoles on v1.1.6 version software and up.

## Digital Audio Denmark SPQ

The SPQ speaker processing DSP card for the AX32 Monitoring System allows users to add up to 1,024 EQ filters across 128 channels at 48 kHz. A maximum of 16 filters may be used on each channel until the 1,024 limit is reached. For users who work at higher resolutions, the system supports 96 kHz (64 channels), 192 kHz (32 channels) and 384 kHz (16 channels). Filters for all sample rates are available natively on the SPQ card when sample rates are changed. SPQ also adds control and Bass Management processing for up to 8 sub channels, and both the Bass Management and speaker channels offer different filter types to tailor a speaker system to its environment.



## Accusonus ERA Audio Repair Plug-In Bundles

Accusonus has released bundles of audio enhancement and repair plug-ins, each based around the use of a single virtual knob to aid in audio cleanup. The Standard bundle includes ERA Noise Remover, ERA Reverb Remover, ERA De-Esser and ERA Plosive Remover; the Pro bundle also includes ERA-D, which provides denoise and dereverberation options. An intelligent joint mode in ERA-D takes natural noise and reverb counter-interaction into account for a better sonic result, while Dual Channel mode enables users to employ a secondary mic to improve the audio repair quality on a primary mic. The Standard and Pro bundles are priced at \$99 and \$299, respectively.



## DHDI ZR Nano Technology

Delta H Design Inc. has added ZR Nano Technology to its ZR Acoustics treatment line. Said to offer more than 9,200 non-parallel surfaces per square foot, ZR Nano Technology is available in three designs: the ZR Nano Hex, ZR Nano CT90 and ZR Nano CT45. The Nano Hex is intended for use in a variety of applications, while the CT90 and CT45 are available exclusively as ceiling tiles. Designed to be lightweight, transportable and reusable, the panels are shaped as symmetrical hexagons and weigh 4 pounds each.

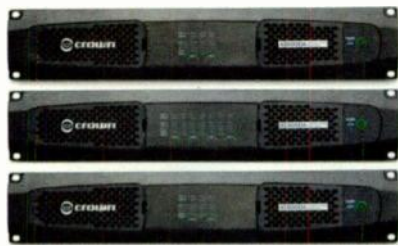


There's more information on all the products featured at [prosoundnetwork.com/archives/aug2018](http://prosoundnetwork.com/archives/aug2018).



## Crown Audio DCi Amplifiers

HARMAN Professional Solutions has expanded its line of Crown DriveCore Install DA Series amplifiers with the Crown DCi 8|300DA, DCi 4|300DA and DCi 4|600DA. The new amps support Dante and AES67 networked audio at lower wattage than existing DA Series amplifiers. The DCi DA Series includes a high-powered DSP with JBL speaker tunings, network control/monitoring and the ability to drive 2/4/8/16 ohm, 70V and 100V speaker loads out of each channel without the need for an external transformer. The DCi 8|300DA is an 8-channel power amplifier with 300W per channel, while the DCi 4|300DA is a 4-channel model with 300W per channel and the DCi 4|600DA is a 4-channel model with 600W per channel.



## Mackie DL Series Mixers

Mackie has introduced two new DL Series digital mixers, both sporting a stagebox-like form factor: the 16-channel DL16S and 32-channel DL32S wireless digital live sound mixers. Both models offer built-in Wi-Fi networking and multiplatform support via Mackie's Master Fader control app. Other features include Onyx+ mic preamps, DSP on each input and output, and four FX processors. Onboard effects include chorus, flanger, rotary and auto-filter, among others, all of which can be accessed via a refreshed interface. DL16S and DL32S feature full multitrack recording via USB and can likewise play back into each channel for virtual soundchecking. The Mackie DL16S and DL32S will be available this fall.



## QSC TouchMix-30 Pro Update

The version 1.3 update for QSC's TouchMix-30 Pro 32-channel digital mixer adds a new Automatic Microphone Mixing (Auto Mix) feature. Providing two independent processors available to all of the mixer's 24 mic/line inputs, the Auto Mix function provides advanced gain sharing capabilities for applications such as conferences, presentations, panel discussions and theatrical sound reinforcement. The TouchMix-30 firmware update is available as a free download at the company's website.



## Alclair Audio Electro IEM

Alclair Audio describes its Electro six-driver electrostatic hybrid in-ear monitor as the first IEM to sport electrostatic drivers with an internal transformer. Intended for both studio and stage use, Electro is based around four balanced armature drivers and dual electrostatic tweeters, as well as dual low-end drivers. The Electro is available now.



## SSL Remote Tile

SSL Remote Tile, which joins Solid State Logic's Live console range, provides an extra 12 faders to use with any SSL Live console, or with a PC running the SSL SOLSA control and configuration application. Like the actual SSL Live consoles, the Remote Tile sports touch-sensitive 100 mm motorized faders. Additionally, it offers solo/mute, query and select buttons, quick controls,



individual channel LCD displays, and a complete set of tile navigation buttons. Up to two Remote Tiles (24 faders total) can be connected to any SSL Live console or SOLSA PC via USB.

## Yamaha YAI-1 Conference Ensemble

Yamaha Unified Communications, known previously as Revolabs, recently announced the Yamaha YAI-1 professional audio conferencing solution. A preconfigured USB audio system that works with an organization's chosen UC platform, the ready-to-install professional audio system comprises an eight-channel Executive Elite wireless microphone package, two VXL 1-16 PoE speaker arrays, a preconfigured digital signal processor, a five-port PoE switch, a Dante AVIO USB adapter and cabling. The bundle, which includes two 16-element PoE powered line array speakers, is available in two microphone options: an eight-gooseneck microphone package for boardrooms, or seven table-top microphones and one wearable microphone for presentation flexibility in conference rooms.



## Meyer Sound UP-4slim Loudspeaker

UP-4slim, an ultra-compact loudspeaker from Meyer Sound, is intended for use in installation settings where audio systems must be understated and able to blend into a space's decor. The UP-4slim is a three-way system comprising two 4-inch cone drivers, a 1-inch metal dome tweeter, a three-channel amplifier and dedicated signal processing. The two cone drivers work in parallel at lower frequencies, with one rolling off in the midrange to prevent comb-filtering effects. The high-frequency driver is mounted on a conical waveguide, and the integral three-channel amplifier produces 500W total output power. The operating frequency range is 65 Hz to 18 kHz. Real-world linear peak acoustic output is 110 dB SPL.



## firstlook



## Audio-Technica 6000 Series Handheld Transmitter

The ATW-T6002x handheld transmitter for Audio-Technica's 6000 Series high-density wireless system is designed to provide low handling noise and features a metal construction body, OLED screen, soft-touch controls and switchable RF power (2 mW/10 mW/50 mW). Its industry-standard thread mount allows for the use of six new interchangeable A-T microphone capsules, as well as other compatible capsules. The new interchangeable capsules include the ATW-C510 and ATW-C4100 cardioid dynamic; ATW-C710, ATW-C3300 and ATW-C5400 cardioid condenser; and ATW-C6100 hypercardioid dynamic. The 6000 Series system allows users to pack 31 channels in 4 MHz of bandwidth, and can all be used simultaneously. The system operates in the 944-952 MHz band, which is free of broadcast TV.

## Roger Waters Show Fields Massive P.A.

LONDON, UK—Roger Waters has put on massive rock spectacles for much of his career, performing the music of Pink Floyd with over-the-top theatrics, both visual and aural. So when he played London's Hyde Park on July 6, kicking off the 10-day AEG Live's Barclaycard Presents British Summer Time (BST) festival, it was fair to wonder if someone in the production mistook loudspeakers for the proverbial bricks in the wall—because there were 318 different Martin Audio enclosures put to work that night, making it the largest single deployment of MLA at a festival ever, eclipsing Rock in Rio and Glastonbury in the process.

Capital Sound has tackled the festival in the past, and once again provided 206 boxes of MLA series cabinets for the main Great Oak Stage, but for Waters' show, the sound reinforcement company was asked to provide an additional 12 hangs of MLA/MLA Compact on towers throughout the concourse.

The auxiliary towers added a further 112 MLA/MLA Compact cabinets to the existing system, making for a jaw-dropping total of 318 enclosures. Making the most of the



More than 300 Martin Audio MLAs were fielded for BST by Capital Sound in July.

extra firepower, the towers provided 12-point surround sound effects at positions set by Loud Sound's Dan Craig and then fine-tuned by Roger Waters' sound team to provide the crowd with an immersive experience.

For the remainder of BST, the Great Oak Stage was equipped with two hangs of 16 MLAs and a single MLD Downfill per side, with 13 MLAs and an MLD Downfill for the sidehangs. The sub-array consisted of 32 MLXs in a broadside cardioid de-

sign (21 front-facing, 11 rear-facing). With a dozen MLA Compact boxes serving as front fills, all MLA components were operating on the same network.

Out in the field, there were nine main delay towers, seven comprising seven MLA and a single MLD Downfill, while at delay positions 10 and 11, eight MLA Compacts were deployed. Four of the positions were supported by a dozen MLX subs.

(continued on page 43)

## Recording Ed Sheeran on the Road

LONDON, UK—Ed Sheeran, who has been playing for massive crowds on his Divide tour, made a four-day stop at Wembley Stadium in June, playing for crowds of 80,000 each night. Any given gig on the tour finds the troubadour belting into a Sennheiser Digital 9000 series wireless mic with a MD9235 capsule for his main vocal, and a separate 9000 wireless with a 934 capsule for vocal looping via his custom Loop Station, which operates off a feed from a matrix on the DiGi-Co SD7 at the FOH position.

Also at the FOH spot are engineer Chris Marsh and audio systems engineer Charlie Albin, who use a JoeCo Blackbox BBR64-MADI multitrack recorder not only to preserve the shows for future reference and use, but also for day-of-show preparations.

The BBR64-MADI records up to 64 tracks at 48 kHz, and throughout the Divide tour the engineers have used it nightly to capture 16 channels of vocal, acoustic guitar and loops. Perhaps its most prominent application, however, has been Albin's use of the unit for virtual soundchecks.

The BBR64-MADI takes a feed of Sheeran's vocals and guitar directly from the SD7 console as dry input



FOH engineer Chris Marsh and audio systems engineer Charlie Albin at the mix position during Ed Sheeran's run at Wembley Stadium in London

channels. For the virtual soundcheck, these come back into the same channels that can then be EQ-adjusted for the venue. "We also take a left-right board mix as a reference," said Albin, "and maintain some sub-groups for various purposes—usually a broadcast pre-mix, because this is not like a regular band. A lot of engineers would struggle to piece together certain details in a short space of time."

Recording shows has helped the

team track down glitches in Sheeran's custom looping rig, and also aided quick content turnaround: "If there's a special guest, we may want the appearance documented or put out online in some way. Chris can actually do that on site—we often carry a pair of studio monitors with us so we can put the recorded tracks back through the board and do a bespoke mix."

JoeCo  
www.joeco.co.uk

### briefs

#### CMT Awards Turn to Shure

NASHVILLE, TN—Audio coordinator Kevin Sanford and his sound crew used 24 channels of Shure ([www.shure.com](http://www.shure.com)) Axient Digital and UHF-R wireless mics with 24 channels of PSM 1000 in-ear monitors for the live broadcast on CBS of the 2018 CMT Awards from Nashville's Bridgestone Arena on June 6. The sound company for the event was PRG (Production Resource Group), led by Mark Boettcher. Rick Shimer handled the FOH mix while Jason Spence mixed monitors for the artists. Jason Lambert was the RF coordinator.

#### Anderson, EAW Visit White House

WASHINGTON, DC—Harrisburg, PA-based Anderson Audio fielded an EAW ([www.eaw.com](http://www.eaw.com)) Adaptive sound system when Anderson provided sound for a concert that was part of the White House's annual Fourth of July festivities. Pairs of Anna modules and flown Anna arrays were used in various ways to cover a 700-foot-deep space; on stage, performers heard themselves via 16 EAW MW12 and six MW15 microwedges.

#### PVRIS Alights with A&H

NEW YORK, NY—Deftly mixing rock and dance grooves, PVRIS (pronounced "Paris") is having a relatively quiet summer, playing just a handful of festivals. Nonetheless, the trio always brings along veteran front of house engineer and production manager Connor Hawkins, who in turn has an Allen & Heath dLive digital mixing system in tow. While he started with a dLive 28-fader S5000 control surface, he's since scaled down to a more compact 12-fader C1500, which sports the same features in a smaller package.

#### Sound Image Covers SF Pride

SAN FRANCISCO, CA—At San Francisco's annual Pride Celebration and Rally in June, more than half of the 20 stages had audio from Sound Image, including the massive City Hall main stage, which featured 12 Vue Audio ([www.vueaudio.com](http://www.vueaudio.com)) al-12 large format enclosures per side, supported with 16 hs-221 ACM subwoofers and al-8s for front fill.

# whirlwind



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## Jack White at Jazz Fest

BY JIM BEAUZEZ

Running a large production at a major music festival can go one of three ways, according to FOH engineer Brett Orrison.

Ideally, your show is the headliner and the crew arrives the night before, giving you plenty of time and access to get the job done. Or you get to the venue the morning of the gig before gates open, run a line check, tune the sound system and still have time to grab a sandwich.

Neither of those scenarios applied when Jack White's tour pulled into the 49th annual New Orleans Jazz & Heritage Festival in May. Instead, it was the third way. As Orrison put it, "The first time we hear the P.A. is when the band hits."

White is currently closing out big festivals on his first tour in four

years, including Atlanta's Shaky Knees, Boston Calling and Governor's Ball in NYC. A late-night drive from Memphis after playing Beale Street Music Festival, though, put them in New Orleans around 10:30 a.m.—too late to get everything unloaded before the grounds filled with people at 11 o'clock (and the first band went on at 11:15).

"We were forklifting gear to front of house while the crowd was in there," said Orrison, who came on board just before pre-production for the tour began.

Local hero Trombone Shorty may have played last that night on the festival's Acura Stage, the largest of 12 stages and tents plotted around the Fair Grounds Race Course, but White was the de facto headliner, drawing the biggest crowd of the final day and the longest set change of the day at 45 minutes.

Within that window, Orrison, FOH tech Taylor Nyquist, monitor engineer Marcel Cacdac and the rest of the crew rolled out the band's preassembled stage modules, ran line check and did final prep before the band hit the stage at 3:35.

On his 2018 run, White is playing to a mix of arenas, festivals and clubs with extensive video and 20 channels of keys on top of his power-trio foundation of drums, bass and guitar, making this his largest and most varied production to date. Two keyboardists roam among Rhodes, clavinet, B3 organ and various synths during the show to re-create the sounds on his latest album, *Boarding House Reach*, and add texture to White Stripes hits like "Seven Nation Army" and "Dead Leaves and the Dirty Ground."

There is no set list, so the band and crew are on their toes during the entire show. Like his preference for analog and penchant for recasting muddy Delta blues into saturated, barbed riffs, White's performance style is unorthodox and unpredictable, making the crew part of the performance.

"He just does it by how he's feeling, which is really fun and exciting," said Orrison. "It's a free-for-all rock 'n' roll show with a punk attitude, which is so cool to see on a big stage."

In this situation, he added, "There's no 'set and forget.' You



DAVID JAMES SWANSON

On his 2018 run, White is playing to a mix of arenas, clubs and festivals—including the New Orleans Jazz & Heritage Festival, seen here—carrying an all-analog-based FOH and monitor rig.



JIM BEAUZEZ

Spiffed up to hold down the FOH position are FOH engineer Brett Orrison (left) and FOH tech Taylor Nyquist.

have to be part of it. You have to ride the faders."

During the performance, Orrison mans a Midas XL4 console, the centerpiece of an all-analog rig White wanted for the tour. He and Nyquist get settings close enough during soundcheck so they're able to ride faders within a few decibels—a technique he's mastered from mixing Widespread Panic's fluid, improvisational shows since 2014.

A rack full of vintage analog processors gives the mix White's signature warm, vinyl-era sound. The fleet includes a UA 1176 tube compressor and an AMS Neve 33609 alongside a pair of Alan Smart C1s and other gates, reverbs and compressors. Orrison enlisted a vintage Roland RE-201 Space Echo and a Fulltone Tube Tape Echo to re-create the vocal sound, with saturation and reverb he can ride as needed.

"If you listen to [White's] records, they're warm," he noted. "Anything he curated is really amazing sounding on the top end. To get that, I'm running that Fulltone Tube Echo with just the most minimal amount of delay."

The vocal situation isn't entirely under his control, though. White has a three-headed hydra of a microphone stand, with his standard Shure SM58 vocal mic in the center flanked by two Audix OM7 mics—one for distortion and the other linked to pedals and effects White controls himself.

Orrison's instrument microphone selection includes a few gems as well. He found a handful of AKG C414 TL2 mics through Firehouse Productions, which he uses on White's Silvertone guitar amp, and a Coles 4038 ribbon mic for underheads on the drum kit. Elsewhere, he's using an Audix D6 on the kick, and Shure SM57s on the snare and bass.

The tour's main loudspeaker rig is a d&b audiotechnik line array, usually 16 per side depending on the venue size. At Jazz Fest, Orrison mixed to a Clair Cohesion 12 rig through a Lake processor with 12 boxes per side for the mains, another six each on the sides, plus six flown subs and three ground subs per side.

Over in monitorworld, the pro-

(continued on page 42)

### VITALstats

#### Jack White

##### FOH Engineer:

Brett Orrison

##### Monitor Engineer:

Marcel Cacdac

##### FOH Tech:

Taylor Nyquist

##### FOH Console:

Midas XL4

##### Monitor Console:

Midas Heritage H3000

##### Monitor Speakers:

d&b audiotechnik M2, Q Subs

##### Monitor Amplifiers:

d&b audiotechnik D80

##### FOH Equipment:

Focusrite RedNet A16R, MP8R; UA 1176; Rupert Neve Designs P2MB Portico II, 5035, 5043; Allen Smart C1; Genelec 8050A; Drawmer DL241; AMS Neve 33609; Demeter Rv1; Yamaha SPX2000; TC Electronic 2290; Avalon 737sp; GML 8200; Empirical Labs Fatso; Fulltone Tape Echo; Sound Devices USBPre2; Lectrosonics R400A

##### Monitor Equipment:

Neve DI; BSS DPR901II, DPR404; Yamaha SPX900; Lexicon PCM96, PCM70; Empirical Labs Distressor; dbx 160A; Drawmer DL251; BSS FCS960; Meyer CP-10; Avalon 737sp

##### Microphones:

Audix D6, OM7; Shure SM58, SM57; Coles 4038; AKG TL2 414





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# Consoles and Connection at Coachella

INDIO, CA—Coachella is no simple festival. The sprawling, multistage, two-weekend Coachella Valley Music and Arts Festival entertained more than 300,000 people at the Empire Polo Club in Indio, CA, in April. Helping simplify things a little, Camarillo-based Rat Sound Systems was once again the primary audio reinforcement provider for the event.

Rat Sound fielded more than 800 L-Acoustics loudspeaker systems across the festival's seven largest performance areas—the Coachella Stage, Outdoor Theatre, Gobi, Sahara, Mojave, Yuma and Sonora. For mixing the audio that flowed through all those systems, Rat enlisted Bay Area-based console sales and rental specialists Hi-Tech Audio to help supply DiGiCo mixing consoles for each of the stages' FOH and monitor positions.

Each of Coachella's three largest stages was equipped with dual SD10s with Waves at FOH and dual SD12s on monitors; these systems also had their own SD-Racks complete with DiGiCo's Ultimate Stadius 32-bit mic preamps. The other four stages that Rat serviced were configured with a single SD10 with Waves



Left: Bjarne Hemmingsen, crew chief for the main stages at Coachella and Stagecoach, with Rat Sound's arsenal of Focusrite RedNet devices. Right: FOH engineer Kyle Hamilton mixes SZA's Friday night set on one of the two DiGiCo SD10 desks at Coachella Stage's house mix position.



and SD12 paired with the same SD-Racks and Ultimate 32-bit pre's.

Additionally, Rat Sound had both an SD10 and SD12, plus SD-Rack loaded with new 32-bit pre's, set up in its production office, allowing engineers to create, tweak or test their show files before moving to the performance stages.

Ensuring mixes reached those hundreds of L-Acoustics loudspeakers throughout the Polo Grounds, Rat Sound used an expansive array of Focusrite RedNet audio converters and interfaces, all on a Dante network. Each of the 15 delay towers used RedNet D16R 16-channel AES3 I/Os to connect their loud-

speakers with the L-Acoustics LA8-amplified controllers, powering them through the sound system's main matrix and QSC Q-SYS fiber network.

On the main stage at Stagecoach—which took place the weekend after Coachella at the same site, attracting more than 75,000 people on its own—Rat Sound had 27 RedNet D16R units that performed the same task. In addition, the front-of-house position for the main stage at each festival had both a RedNet D16R and a RedNet A16R 16-channel analog I/O interface, allowing them to accommodate both digital and analog FOH consoles brought in by performers.

Elsewhere in the main stage system, RedNet MP8R eight-channel mic pre and A/D converters were used for each row of delay towers at both festivals, 10 in all. These allowed Rat Sound engineers to remotely change the positions of measurement microphones that were used to gauge the SPL at each row of towers, via RedNet Control software.

Rat Sound Systems  
www.ratsound.com

Focusrite Pro  
pro.focusrite.com

DiGiCo  
www.digico.biz

## Jack White

(continued from page 40)

duction gets even more interesting. White wanted a clean stage but also wedges, so the crew worked with Firehouse and Accurate Staging to develop a modular system of rolling platforms that creates a semicircle when fully assembled.

Having all the stage volume funneling toward White's three-headed mic stand and monitors created some acoustical anomalies for monitor engineer Marcel Cacdac to overcome, but figuring out how to run wedge monitors with no visible cables or speakers required even more ingenuity. To meet the spec, they devised a way to suspend the wedges underneath the grated stage modules.

"The d&b M2 wedges already have [mounting] points in them, so we developed a rigging system to use underneath, and then a hanger system," explained Cacdac. "When we're setting up, the rigging goes on four points on the speakers, the speakers slide underneath, and they clip into the eyebolts."



At stageside, monitor engineer Marcel Cacdac looks after a Midas Heritage H3000 console for Jack White.

That may sound easy enough for a headlining performance at an arena, but pulling it off during a rushed festival setup is another story. "For situations like today," he noted, "everything has to be suspended—all our cables, all our looms, all our inputs, all the outputs. Everything has to roll. We have a hanging system [with] carabineers, [and] we've got 22 Neve DIs suspended under this thing."

Back at FOH, Orrison is using the skills he's learned both in live and studio settings—he also owns Austin Recording Service, where he's worked with Alex Haas of the Black Angels and Kalu and The Electric Joint—to make his live mixes stronger every night.

"The mixing situation is so different between live and studio," he said. "At first, it can drive you absolute-

ly crazy, but you can get to a point where both disciplines lean into each other and help each other out."

One of the reasons he specified the old-school Midas XL4 is the line input that allows for virtual playback, which he feeds to a redundant setup of Focusrite RedNet interfaces and into a pair of Mac laptops.

"When I do playback in a live situation, like playing back the night before and being able to mix on [Genelec 8050A] studio monitors, I'm able to mix in a record form," he explains. "You can trust that mix and know that if something's wonky, it's in the P.A. and it needs to be dealt with from the root of the problem. You don't go chopping up your mix every night."

Orrison doesn't mind the constant learning curve and challenges of constantly seeking the perfect mix.

"That's something you'll strive for your whole life," he said. "If you care, you'll constantly search for the perfect situation."

Clair Global  
www.clairglobal.com

d&b audiotechnik  
www.dbaudio.com

# Salem's Got the Beat

SALEM, OR—Every year the Salem World Beat Festival brings the music and traditions of 70 countries to Oregon, fielding 10 stages throughout Riverfront Park for the two-day event. This year the main stage audio was tackled by local audio production company Alpha Sound.

Given that the festival serves up everything from Irish dancers to a Native American powwow, Alpha aimed for flexibility. Devin Sheets, head engineer, said, "Given the eclectic and creative nature of so many of the artists and their instruments from around the world, Alpha has experimented with new and unique amplification techniques that immerse listeners in a powerful sense of space and depth of sound."

Alpha Sound provided a Nexo STM line array system and Yamaha CL5 digital mixing console with two Rio stageboxes. The main stage system consisted of a dozen STM M46 line array boxes, set out six per side, along with 12 S118 subwoofers set up in cardioid pairs. Two PS15R2 speakers were used for extended L/R,

four PS10s were used as surround L/R speakers (two per channel), and five NX4x4 amplifiers powered it all. Yamaha Rio-3208 and Rio-1608 input/output boxes accompanied the Yamaha CL5 at front of house.

"The Yamaha CL5 console with Rio preamps further ensured the purity of sound while many processing



Salem World Beat Festival

effects were being used simultaneously, including a special low-frequency trick that is used for Taiko drum performances," said Sheets, who added that the client "especially enjoyed the positive reactions from the performers, who know that the sound is amazing each year, which has in large part contributed to the continuing growth of the event."

Yamaha/Nexo  
www.yamahaca.com

## BST

(continued from page 38)

Leading Capital's 24-strong crew were Martin Connolly, account manager, Great Oak Stage, with Capital operations and development director Paul Timmins taking responsibility for the other stages. Al Woods served as main stage crew chief. For Martin Audio, Jason Baird provided system alignment and propagation tests, while Chris Pyne lent additional MLA support.

Speaking after Waters' opening show was completed, Capital operations and development director Paul Timmins said, "This is up there in my top-five shows of all time. We've never built a surround sound system on that scale, and we were not only firing low-level effects but high-level sources around the site, which needed to be contained. But with everyone working to a common goal, we were able to meet all sound level challenges, and the reviews of the sound system in the serious media the following day were 100 percent positive."

Connolly agreed. "Roger Waters' production team—including sound engineer Jon Lemon, system tech Dean Mizzi and Josh Lloyd, who did the set-up with our system tech, Toby Donovan, achieved everything they wanted." Martin Audio  
www.martin-audio.com

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ACT / STATISTICS	CREW	EQUIPMENT
<b>1 TAYLOR SWIFT   EIGHTH DAY SOUND</b>	David Payne (be); Jordan Kolenc (Swift me/cc); Scott Wasilk (Band me); Dan Bluhm (se); Eoin Collins (mtech); Chase Usry (ae); Ike Zimbel (rf coordinator); Turner Pollari (rf tech); Andy Dudash (rf comms); Liam Von Elbe (lead pa tech); Sam Balk, Mike Vultaggio, JP Kearney (pa tech)	<b>HC:</b> DiGiCo SD7; <b>MC:</b> (2) DiGiCo SD7; <b>HS:</b> d&b audiotechnik J Series Array Processed, J-Sub, B22, V8 front fills; <b>IEM:</b> Shure PSM 1000, Wisycom MTK952; <b>HA:</b> d&b audiotechnik D80; <b>HARDWIRED MICS:</b> Telefunken; Shure; Sennhieser; <b>WIRELESS MICS:</b> Sennheiser Digital 9000, 6000; Shure Axient Digital; <b>FOH EQUIPMENT:</b> Neve Portico, Masterbuss; Lexicon PCM 92; Bricasti M7; Waves; Soundcraft Realtime Rack; <b>MONITOR EQUIPMENT:</b> Eventide Eclipse; TC Electronic System 6000; SPL TD4; Waves; Soundcraft Realtime Rack; <b>OTHER:</b> Radial JS2, JS3, J Rak 4, Tonebone Mix Blender
<b>2 PINK   BRITANNIA ROW</b>	Dave Bracey (he); Jon Lewis (me-Pink); Horst Hartmann (me-Band); Guillaume Burguez (cc); Johnny Keirle (se); Juan Beilin, Shaun Ayles (ae); Jack Murphy (tech)	<b>HC:</b> DiGiCo SD7; <b>MC:</b> DiGiCo SD7; Yamaha PM10; <b>HS:</b> L-Acoustics K1, K2, K15B, KARA, KS28; <b>MS:</b> L-Acoustics X15, Clair CM-2; <b>IEM:</b> Sennheiser 2050; <b>HA:</b> L-Acoustics LA12X; <b>MA:</b> Lab.gruppen; <b>WIRELESS MICS:</b> Sennheiser 6000 series; <b>OTHER:</b> Radial SW8
<b>3 DEAD &amp; COMPANY   ULTRASOUND</b>	Derek Featherstone (be/se); Matt Haasch, Ryan Cornelious (me); Lonnie Quinn (mse); Michal Kacunel (cc/se); Sean McAdam (se); Michael Bollella, Cody Scott (techs)	<b>HC:</b> Gamble EX56; Avid S6L (96 Ch. drums) with Pro Tools 12.7; <b>MC:</b> Avid Venue D-Show (96 Ch.), Venue Profile (96 Ch.); <b>HS:</b> (36) Meyer Sound Leo, (22) 1100-LFC, (16) 700-HP, (32) Milo, (16) Mica, (6) Leopard; <b>MS:</b> Meyer Sound MJF-212, MJF-210, 1100-LFC; <b>IEM:</b> Sensaphonics; JH Audio; Future Sonics; <b>HARDWIRED MICS:</b> 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; <b>FOH EQUIPMENT:</b> 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; <b>MONITOR EQUIPMENT:</b> Sennheiser EW300G3
<b>4 KENNY CHESNEY   MORRIS</b>	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)	<b>HC:</b> SSL L500 Plus; <b>MC:</b> (2) Midas ProX; <b>HS:</b> d&b audiotechnik GSL; <b>MS:</b> d&b audiotechnik M4; <b>IEM:</b> Shure PSM1000; <b>HARDWIRED MICS:</b> 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; Audio-Technica; <b>WIRELESS MICS:</b> Shure AXT400 Axient, AXT200 J5 Handheld, AXT610 Axient; sE Electronics V7 MC1 capsule; <b>FOH EQUIPMENT:</b> Empirical Labs EL8-X Distressor, EL7 Fats0 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
<b>5 JUSTIN TIMBERLAKE   CLAIR GLOBAL</b>	Andy Meyer (he); Paul Klimson (me); Phil Kriz, Justin Lenards (se); Hugo Gudino Jr., Elliott Wiley (mse); Paul Manuel (ae); Dustin Chrysler, Carlos Lopez-Olavarria, Rachel Rozzi, Nathan Sonnenberg (techs); Kevin Leas (RF tech)	<b>HC:</b> DiGiCo SD7; <b>MC:</b> DiGiCo SD7; <b>HS:</b> Clair Cohesion CO-12, CO-10, CP-6, CP-118, CP-218; <b>HA:</b> Lab.gruppen PLM 20000Q; <b>MA:</b> Lab.gruppen PLM 20000Q; <b>OTHER:</b> Radial JX44, SGI44
<b>6 U2   CLAIR GLOBAL</b>	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 (techs)	<b>HC:</b> DiGiCo SD7; <b>MC:</b> (3) DiGiCo SD7; <b>HS:</b> Clair Cohesion CO-12, CO-10, CO-8, CP-218; <b>MS:</b> Clair Cohesion CP-118; <b>IEM:</b> Sennheiser 2000 Series; <b>HA:</b> Lab.gruppen StakRak; <b>HARDWIRED MICS:</b> 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; <b>WIRELESS MICS:</b> Shure Axient; <b>FOH EQUIPMENT:</b> Lexicon 480L, PCM70; Summit DCL-200; Manley VoxBox; Avalon VT-737SP; Eventide H3500; Klark-Teknik DN6000; Yamaha SPX1000; <b>MONITOR EQUIPMENT:</b> Lexicon PCM80; AMS RMX16; Yamaha SPX-1000, SPX-990; Amek 9098; Antelope Isochrone Trinity
<b>7 LUIS MIGUEL   CLAIR GLOBAL</b>	Markus Meyer (he); Brian Evans, Steve Walsh (me); Frank Principato (cc); Frank Principato (se); Maurice Young, Luke Murphy (tech)	<b>HC:</b> DiGiCo SD5; <b>MC:</b> DiGiCo SD7, SD5; <b>HS:</b> Clair Cohesion CO-12, CP-218, CO-6; <b>MS:</b> Clair CM-22; L-Acoustics Kudo, -dvSub; <b>IEM:</b> Sennheiser 2050XP; Shure PSM 1000; <b>HA:</b> Lab.gruppen PLM20000; <b>MA:</b> Lab.gruppen PLM20000; <b>HARDWIRED MICS:</b> Shure Beta91, Beta52, Shure SM57, SM58S; Beyerdynamic Opus 88, Opus 87; Earthworks SR30; AKG 451, 414/XLS; Audio-Technica ATM350; Sennheiser MD-421; DPA 4099; Royer R-121; Milab DC-96c; Nuemann KMS-104; Radial J48, JDI; Countryman DT85-FET; <b>WIRELESS MICS:</b> Sennheiser SKM5200; <b>FOH EQUIPMENT:</b> Waves Mercury bundle; <b>MONITOR EQUIPMENT:</b> Waves Mercury bundle, Pro Show
<b>8 BON JOVI   CLAIR GLOBAL</b>	Dave Kob (be); Dave Skaff (me); Adam Stuart (cc/se); Dave Ferretti (ae); Ken McDowell (rf tech); Katie Hughes (tech)	<b>HC:</b> Yamaha PM5000, QL1; <b>MC:</b> DiGiCo SD7 with SD Rack; <b>HS:</b> Clair Cohesion CO-12, CP-218, CO-10; <b>MS:</b> Clair CP-118; <b>IEM:</b> Shure PSM 1000; <b>HA:</b> Lab.gruppen; <b>MA:</b> Lab.gruppen; <b>HARDWIRED MICS:</b> 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; <b>WIRELESS MICS:</b> Shure Axient AD4D; <b>FOH EQUIPMENT:</b> Bricasti M7; Summit TLA 100; Empirical Labs Distressor; Yamaha SPX2000; Aphex 612 gates; TC Electronic D-Two; dbx 160A; <b>MONITOR EQUIPMENT:</b> Waves Mercury Bundle; API.3124
<b>9 ROD STEWART   MAJOR TOM</b>	Lars Brogaard (he); Sven Jorgensen, Charlie Bryson (me); David Vinnicombe (cc/se); Olly Twiby (ae); Juan Villa, Parker Vandenberg (tech)	<b>HC:</b> DiGiCo SD7; <b>MC:</b> (2) DiGiCo SD7; <b>HS:</b> Meyer Sound Leo; <b>IEM:</b> Sennheiser; <b>HARDWIRED MICS:</b> AKG, Neumann; <b>WIRELESS MICS:</b> AKG 5900; <b>FOH EQUIPMENT:</b> Rupert Neve 5045; <b>MONITOR EQUIPMENT:</b> Rupert Neve 5045 <b>OTHER:</b> Radial JX62, Headbone VT, PZDI, J48, BigShot, DM1
<b>10 BILLY JOEL   CLAIR GLOBAL</b>	Brian Ruggles (he); Josh Weibel (me); Rich Schoenadel (cc/se); Jay Yochem (m tech); Tom Ford, Bryan Darling (tech)	<b>HC:</b> DiGiCo SD5; <b>MC:</b> DiGiCo SD10; <b>HS:</b> Clair Cohesion CO-12, i-3, P-2, R4, CP-218; <b>MS:</b> Clair CM-22, SRM, ML-18; <b>IEM:</b> Sennheiser 2050; <b>HA:</b> Clair StakRak (Lab.gruppen); <b>MA:</b> Lab.gruppen; <b>HARDWIRED MICS:</b> Shure; AKG; Sennheiser; Audio-Technica; Radial J48, JDI, SW8, Firefly; <b>WIRELESS MICS:</b> Shure UR Series; <b>FOH EQUIPMENT:</b> Waves

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

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

# Proudly “The Dumbest Guy in the Room”

MIKE BELITZ, CEO, ULTIMATE SUPPORT SYSTEMS AND RADIAL ENGINEERING

BY CLIVE YOUNG

For most people, accessories are what you buy after your main purchase. For Mike Belitz, accessories are the main purchase. In 2006, he acquired Ultimate Support Systems, a high-end accessories company that offers every kind of music gear-related stand you can think of, as well as studio furniture, cases and more. Then this past January, the big buzz of the NAMM Show was that he'd netted Radial Engineering, the longtime producer of DIs, effects pedals, 500 Series boxes and more, as well as its other brands: Primacoustic, Jensen Transformers, Hafler and Dynaco.

“Despite being separate entities, both Radial and Ultimate share the same core values and appealed to me for similar reasons,” he says. “I am a strong believer in the value of the ‘accessories’ category as a high-turn, high-margin and low-obsolescence area of the market that encourages innovation for the sake of quality-of-task improvements. Both companies exist in the accessories category as premium brands, both enjoy the advantages of the product segments they operate in, and both focus on delivering dependable, innovative products to multiple segments of the market.”

Belitz knows his markets well, having been immersed in them since a young age. Starting out taking lessons from his dad, a world-class player, he became a professional keyboardist, but eventually he moved into the pro audio world. As it happened, he became a product specialist at Alesis around 1990, just before it skyrocketed with the release of the ADAT digital recorder. From there, he moved with Alesis' exiting management to assist in a startup, Event Electronics, where he worked for three years before going out on his own. “I recognized an opportunity in the western states markets, developing a rep firm called Sonic Sales, which I owned and operated until 2009,” he recalls. “During my time there, we represented several lines—including Ultimate Support Systems.” Sonic became Ultimate Support's top rep firm, and when the opportunity came to buy the company in 2006, Belitz jumped at the chance.

Now, in the wake of teaming with Vancouver-based private equity firm

Regimen Capital Partners to purchase Radial Engineering earlier this year, Belitz sees a number of similarities between the two manufacturers. “Both companies have followed a similar lifetime trajectory with an eye on diversification to help succeed regardless of changing economies and marketplaces,” he says. “In this way, we are not reliant on one particular market segment. The shared core values of each company are the pursuit of innovation matched with quality. We pride ourselves by offering ‘best in class’ products and solutions for several applications. These values, like many of the core products at each company, are not affected by fashion or driven solely by economic trends.”

That said, while the companies have much in common, they are distinct in that they continue to operate as separate entities, and Belitz now divides his time between their two headquarters. Ultimate Support is based in Loveland, CO, while Radial Engineering resides in Port Coquitlam, BC, Canada. Together, the companies have roughly 150 employees and contractors.

“As a relatively small company, I am directly involved in most facets of the business,” he admits. “While I am still in the early phase of my leadership role at Radial, I am approaching it very similarly to Ultimate Support—with growth in mind. If our intention is to improve and grow, it is paramount that we are actively empowering our people while also seeking new talent to optimize the teams. I often joke that I want to surround myself with talent, with the goal of being ‘the dumbest guy in the room.’ If I've learned anything in my roughly



CEO Mike Belitz, center, with the teams of Radial Engineering and Ultimate Support Systems at the 2018 NAMM Show

25 years of running businesses in this industry, it's exactly this: Empower, recruit well, hold accountable, grow, repeat.”

Much of the brain trust at his companies can be found in the R&D departments, he says. “We invest heavily in innovation because we are well aware that the strength and backbone of the business comes from solid R&D activity. Having musicians working in each department, too, not only brings a passion to day-to-day operations, but it expands the availability of input at each stage of the development process. Our R&D isn't limited to the engineering team, but relies on input from sales, marketing, logistics personnel, service team members and just about everyone in the building.”

The engineering and development teams have the tools and resources to act on those insights. The companies' internal capabilities include full-time machining/prototyping via CNC machining and 3D printing, allowing them to conceptualize, create mechanical designs, test, produce and implement quality control processes entirely in-house.

While Belitz runs the companies with growth in mind, he doesn't want to necessarily barge into new marketplaces; rather, the two companies are achieving growth by naturally broadening what they do best. “Presently at Ultimate Support our studio furniture lines, pedal boards and our new series of modular device stands account for new market segments, but in all cases, these new offerings are more of an organic or logical progression of product development in market segments we were already serving. We aren't new to synthesizer, guitar or studio-based products—we simply have developed new products to offer those spaces.”

One line that would seem primed for expansion is the Primacoustic acoustic treatment brand. “The commercial and studio acoustics mar-

kets are seeing positive performance and significant growth,” Belitz notes. “The installation market in particular represents a virtually unlimited opportunity, as the awareness of the benefits of treating the acoustics in almost any environment—for health and safety reasons, for example—is gaining traction throughout the world.”

For manufacturers to gain and maintain traction, however, connecting with the customer long-term is key. “We constantly strive to keep our valued dealers and end-users at the forefront of our policies and practices,” says Belitz. “We spend a lot of time internally contemplating whether a new policy, for example, is ‘company-centric’ or ‘customer-centric.’ If the latter, it's usually a good idea. Nonetheless, I've been lucky enough to work with and develop meaningful relationships throughout our industry, with artists, engineers and customers, that have stood the tests of time.”

Looking forward, Belitz expects “an endless stream of updates from both brands in the months and years ahead about new products, categories, logistical improvements and more.” As might be expected, potential synergies between Radial and Ultimate Support are being explored, and the opportunity for them to not merely collaborate but also learn from and inform each other seems likely. As Belitz puts it, “We are all hard at work exploring the many ways in which we can create new tools and pathways to success at every level of both businesses. Whether speaking of our retail and distribution partners, new products, or even the most basic aspects of customer experience, I can assure you that the best is yet to come.”

Radial Engineering  
www.radialeng.com

Ultimate Support Systems  
www.ultimatesupport.com



Matt Searfus

**Matt Searfus** has joined Yamaha Corp. of America in the newly created position of vice president of marketing, reporting directly to YCA president Tom Sumner. Previously he led Nike's marketing efforts to elevate the consumer experience at Dick's Sporting Goods. Prior to that, he was the senior director of product and integrated marketing at Getty Images, where he developed a new brand strategy and creative direction, launched subscription and a la carte products, and improved customer acquisition and retention. From 2012 to 2014 he held the position of senior director of global brand, advertising and media for Hotels.com, where he relaunched the brand via the popular "Captain Obvious" campaign.



Anita Masson

Zoom North America has promoted **Anita Masson** to chief financial officer. For the past four years, Masson has served as ZNA's controller, leading the company's banking and external U.S. accounting relationships. She has also directed all HR and AR activities, overseeing ZNA's health benefits, corporate insurance and corporate governance. Masson has more than 20 years of financial expertise at tech companies including MicroVision and KiloBytes, as well as trade publisher Earnshaw Publications.



Liana Rosenberg

Sound Lounge has promoted **Liana Rosenberg** to head of production, overseeing all production activity at the studio and supervising its team of staff producers. She will serve as a key liaison between Sound Lounge and its advertising agency and post-production house clients, and play a lead role in forecasting, budgeting and marketing. She will also manage production activities for Sound Lounge Everywhere, the company's remote sound production service, which currently has outposts in Boston and Boulder, CO, and is expected to expand to other cities this year.



Jeff Smith

Lawo has named **Jeff Smith** vice president of sales, Americas. Smith's broadcasting career began in 2006 and is highlighted by his work in technical sales roles; he joins Lawo after eight years with Evertz. Lawo employs more than two dozen sales and support personnel in North America and recently added a logistics hub in Elmsford, NY, to support its U.S. headquarters in New York City, West Coast sales and support offices in Los Angeles, and Canadian headquarters in Toronto.



Paul Andrews

DPA Microphones has named **Paul Andrews** global sales support & business development manager and **Chris Brunhaver** regional sales manager, Pacific Northwest. Andrews, who will be responsible for brand development and support through technical and application-driven informational presentations, has a background in recording and currently acts as the owner/engineer of Bridge Recording Studios. He has recorded artists such as Sheryl Crow, Aerosmith, Boyz II Men, Dennis Chambers, Bill Evans and the CSU Symphony Orchestra and Big Band.



Chris Brunhaver

Brunhaver brings 15 years of experience in the A/V industry including design, project management, systems integration and sales, with stints at Sony and Digital Projection. Brunhaver's nine-state territory in the Pacific Northwest comprises Washington, Oregon, Idaho, Utah, Montana, Wyoming, North Dakota, South Dakota and Alaska.



Cassandra McNulty

Synthax, distributor of RME, Ferrofish and myMix, has appointed **Cassandra McNulty** to the role of marketing manager. McNulty brings 14 years of experience in marketing to the new position and

## 60SECONDS



**Jeff Rocha**  
L-Acoustics

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

**A:** My new title is director of product management. Product management accompanies the product development lifecycle end to end. My role encompasses market intelligence and identification of key opportunities; crafting product portfolio and technology roadmaps cross-functionally in collaboration with R&D, applications, sales and marketing teams; development of marketing and sales collateral and training; and coordination of communication around products and services.

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

**A:** This role requires lots of interaction and close coordination between and across a wide variety of functional groups within L-Acoustics. I have been fortunate over my career to have held roles that offered broad and direct cross-functional leadership experience within different sized organizations as well as experience in multiple vertical markets. All of that is very helpful for this initiative, but my roots remain planted in engineering and technology, a background that is well aligned to the continuous vision of technical leadership that drives L-Acoustics.

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

**A:** L-Acoustics has always been driven to provide system-level solutions to the market. The system definition has expanded beyond acoustics and mechanics to include core expertise in amplification, processing and software, as well as the training and support to ensure consistency and quality of deployment worldwide. This evolution continues as L-ISA technology also considers the sound system configuration and mix methodology in providing a toolchain and more holistic solution that better enables artist-to-audience engagement. You will continue to see us focus attention in this direction as we look for new opportunities to develop technologies that elevate shared experiences.

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

**A:** Short-term goal: learn to speak French.

Product management is all about identifying strategic opportunities that are consistent with the company vision and foster the application of innovation to address them. It truly is the synthesis of opportunity and innovation. So my long-term goals are conditioned by the logic of the role: Leverage data, research and market intelligence to clearly identify strategic opportunities; help to focus the strength of our teams to develop and deliver targeted system solutions that elevate the industry state of the art; and ensure that we tell our story to the market.

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

**A:** My greatest challenge is the rate of change in our industry. Consolidation is evolving the competitive landscape, lines between vertical markets are blurring, and the pace of technological advancement is accelerating. My goal is to keep us focused on the things that align with our values and matter most to our customers amid these market dynamics.

will report directly to Mathias Von Heydekampf, managing director of Synthax. Prior to her appointment at Synthax, she served as marketing, communications and business development manager at Cannery Casino and Hotel in Las Vegas, where she helped develop and monitor digital marketing strategies and social media campaigns.



Ladd Temple

kus-Heinz, where he provided technical and sales support to that com-

Innovox Audio has appointed **Ladd Temple** to the position of North American sales director. Temple comes to Innovox after serving as North American sales manager for Ren-



Jeff Lowe

pany's network of representatives and dealers throughout the United States. Previously he spent more than a decade with Peavey Electronics, where he served as product development manager for the company's Crest Audio and Architectural Acoustics divisions, as well as other positions, including plant manager and artist relations manager.

Neutrik USA has named **Jeff Lowe** to the position of national sales manager for the newly defined Broadcast & Professional Video vertical market. Lowe's goal will be to further expand the company's presence in the sales channel.

## European P.A.s

(continued from page 1)

In recent years, many overseas P.A. brands have raised their profile within the United States, whether they've been distributed here for some time but have gained an increased presence, or are simply new to the U.S. marketplace. Entering the North American market may be a daunting challenge, but it's proving to be an increasingly irresistible one for loudspeaker brands from across the Atlantic.

The benefit for manufacturers to break into North America is obvious. "The U.S. is the biggest market in the world, and with our strong basis in West End theater [in London], it was a natural progression to look toward Broadway initially," said Mike Wheeler, operations director

for UK-based EM Acoustics. "Having said that, there is, of course, the much larger live music rental market that is clearly appealing."

EM Acoustics has taken a methodical approach, having first landed on our shores in 2005. "It has been quite a slow process," Wheeler said, explaining, "We approached gradually to make sure we would find the right people to work with."

There's a benefit in this for the customer, too, in that brands placing a greater emphasis on North America ultimately means there will be more options to choose from here. "There is an influx of European pro audio manufacturers introducing product to the North American landscape," agreed Steve Hendee, director of sales for Yorkville Sound, which just became the North American distributor for German loudspeaker brand HK Audio (see page 13 for more). "As a result, U.S. in-

stallers have a variety of choice. It is our job to make sure they are aware of our product and we are solving their sound reinforcement needs with durable, affordable and great-sounding product."

Unusually, a few of HK Audio's products compete with some of Yorkville's own offerings, as Hendee noted. "There are definitely similarities," he said. "The winning opportunity is to highlight the differences. Both Yorkville Sound and HK Audio manufacture product with their own distinctive features and benefits, so it all comes down to the personal taste of the end user. By offering both brands, we can serve our customer base thoroughly."

If manufacturers are investing in making inroads here, it's ultimately because they see a demand. "The U.S. pro audio market is primed for top-quality, top-performing lines of loudspeakers; we're a consumer

nation and we all want the best we can afford," said John Krupa, who distributes Italian brand FBT as the president and owner of Italian Speaker Imports, which he founded in 2014. "I believe all credit is due to the U.S. marketplace's highly intelligent, highly educated consumer. My job has just been to inform these people of the merits of FBT."

While different brands may have different levels of acceptance in the U.S. market, their rising presence here may help all of them as a whole. Krupa noted, "I grew up in this industry, which was once dominated by brands from within the USA. I vividly recall the preferred USA 'boom and sizzle' sound, then so prevalent—but tastes have changed. Pure, articulate mid-range has become more acceptable, so what was once frowned on as a 'European sound' has now become more the norm."

## 2018 DAW Update

(continued from page 1)

for 360 videos that includes a spatializer, 360 VR video player, encoder and rendering SDK—delivered an end-to-end pipeline.

Avid's traditional software update numbering paradigm went out the window at the beginning of this year with Pro Tools 2018. Updates are now indicated with a numbered suffix denoting the month of release. The most recent, Pro Tools 2018.4, for instance, was introduced in April. The flagship product is now Pro Tools Ultimate, formerly known as Pro Tools HD, which provides the maximum track count, performance and surround sound features.

The new Track Presets feature enables users to store track data such as automation, sends and plug-ins and their associated settings, including clips, if desired, then recall selected parameters on a case-by-case basis. A typical application—as noted by Bay Area music company Temp Love on page 25 of this issue—is to store favorite settings and recall them for, say, an orchestra tracking session or a vocal recording.

A new Playlists feature organizes multiple takes nested within a track and, in Pro Tools 2018, enables the user to send selected clips to a Target Playlist for comping. New shortcuts further speed the workflow and, being EUCON-mapped, may be controlled via softkeys on Avid S6, S3 and Dock control surfaces or the free Pro Tools Control iPad app.

One final highlight: Leave a MIDI

or instrument track record-enabled during playback and Pro Tools will listen in, capturing any performance on those tracks. After stopping playback, the performance may be added to the timeline, then edited, if necessary. The latest update also includes enhanced MIDI editing shortcuts.

### APPLE LOGIC PRO X

Another pro favorite, Apple's Logic Pro X, introduced several updates in release 10.4 earlier this year. What the developer describes as new advanced tempo detection technology, for example, now automatically manages tempo across all the content in a project. Dubbed Smart Tempo, the feature allows users to record without a metronome or click track, then have their performance play back in sync with any other tempo-based content or features in a project.

Apple also launched several new plug-ins for Logic Pro X, including ChromaVerb. The algorithmic reverb plug-in features a colorful interactive interface and simulates a wide range of acoustic spaces.

No self-respecting DAW software is complete without some vintage emulations. The latest update's Vintage EQ suite features three plug-ins—Vintage Graphic EQ, Vintage Tube EQ and Vintage Console EQ—that will no doubt be popular with fans of API, Neve and Pultec hardware.

Step FX uses three step sequencers and an X/Y pad to add rhythmic movement to tracks by arranging filters, effects and independent step sequencers to control treatments over time. Phat FX adds warmth, punch and presence to synths, guitar, bass and drums.

### ABLETON LIVE

Ableton Live initially caught fire with DJs following its 2001 launch, though now it is as likely to be employed by musicians and composers for in-studio work as for live performances. Ableton Live 10 was a long time coming, so the list of new features is long and deep, but several stand out.

Ableton acquired developer Cycling '74 at the beginning of the year, so it's no surprise that there is full Max for Live integration in the latest update. Max for Live isn't in the standard version but is included in the extra-cost Live Suite.

Live 10 brings welcome news for those working in surround sound: Max for Live offers new multichannel audio routing capabilities. MIDI hardware integration has also been enhanced with Max for Live, with devices now able to send and receive SysEx data. Ableton Live ships with dozens of Max for Live devices—plug-ins that can be defined by the user—and there is now quite an ecosystem of third-party devices. Live 10 also sees the addition of Meet Wavetable, Echo, Drum Buss and Pedal devices. Additional tools include the capacity to develop custom control surfaces for outboard equipment.

Some pretty basic audio functionality has also been improved. For example, users can now bounce to MP3 and FLAC file formats. And there is now true stereo panning, where previously stereo tracks were panned via a balance control.

### STEINBERG NUENDO

Nuendo from Steinberg—a wholly owned subsidiary of Yamaha Corp. since 2005—made quite a splash in

its early days, especially when the developer promoted the DAW through its Nuendo Producer Group, which included the likes of Frank Filipetti, Chuck Ainlay and the late Greg Ladanyi. These days, it also serves as the core of the Nuage editing and mixing system, which has developed a following, especially in the audio post community.

Nuendo 8.2.10, released in June, was essentially a maintenance update, but its predecessor, Nuendo 8.2, released in May, introduced the double-precision 64-bit engine, new automation tools, double the quantity of insert slots and revamped effects of Cubase Pro 9.5. It also included a new Ambisonics bus system for authoring audio for 360 VR videos, and additionally supports most current VST 3 VR authoring tools for DAWs.

That's just the first step in Nuendo's plan to become a complete solution for VR audio production out of the box. More tools, including an Ambisonics panner, a head-tracking system and a binauralizer, among others, will appear in another maintenance update later this year.

Also new in v8.2, VST MultiPanner provides full support for multichannel and immersive formats such as 5.1, 7.1 and Dolby Atmos, and can pan mono, stereo and surround channels to Auro-3D. Graphically, it provides a 2D-Top View and a 3D-Rear View that may be linked together or controlled individually to perform several movements in three-dimensional space. Dolby Atmos support includes a channel-based 9.1 bed mix and an object-based Dolby Atmos mix when using a Dolby RMU.



## Anderton

(continued from page 21)

long, for example—or deal with the comping on a more granular level.

In this case, the intelligent machine doesn't replace us, but it makes our tasks easier. Ultimately we still have to judge whether the machine's comp worked or not, but as it assimilates more data about our preferences, it will do its job more efficiently. (If you don't believe me, aren't you finding that the endless ads peppering your online existence are ever-closer to your particular interests?)

Another simple, practical example involves mastering. Although many of my clients want a master with maxi-

mum levels, I prefer more dynamics. To split the difference, I analyze a mixed file and look for half-cycle peaks that exceed, for example, -3 dB below a reference. There can easily be 30 or 40 such peaks. I can then normalize each half cycle down to -3 dB, which allows raising the overall level by 3 dB without introducing artifacts like pumping, while maintaining the dynamics. But doing this over and over is tiresome. A machine learning process could analyze the audio, reduce the peaks automatically, run a LUFS analysis, and finally add enough limiting or maximizing (if needed) to hit -14 to -12 LUFS. Over time, as the process generated more files and found out which ones I preferred, it would learn to strike the right balance of half-cycle nor-

malization, dynamics processing and overall level to achieve the desired result. This would help automate a pretty tedious process.

The primary use of machine learning will probably be in marketing, because the process can go through amounts of data that would be incredibly daunting to humans, recognize patterns, and target people with very specific messages.

There are also going to be audio applications of this technology, and it's not going to make engineers obsolete. Likely, it will just make our jobs that much easier, at least in the near future.

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

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## Bose S1

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nels also has a ToneMatch selector button that lets you pick optimized presets for vocal mics and acoustic guitars; the mic preset brought out my vocal nicely, providing a balance that I'd long sought.

Channel 3 is an auxiliary 3.5mm input; connecting my cell phone to the unit, I could feed my Spotify playlists directly into the S1 during breaks. That said, perhaps my favorite feature is the ability to wirelessly and remotely use Bluetooth technology to accomplish the same functionality as the auxiliary input.

Additionally, once I synched my smartphone to the S1 Pro using Bluetooth, I was able to use advanced settings to control the bass, treble and other effects. This was particularly useful to counteract changes in the volume or quality of the sound on songs playing through the Bluetooth connection.

Due to its compact size and shape, the S1 Pro can be set up almost anywhere. When using it at a private party on a client's front lawn, I was able to situate the unit on a narrow windowsill. In other settings, such as a piano bar and restaurant, I angled the S1 Pro in the Tilt-Back position, using it as both a monitor and a P.A.

The S1 Pro can also be mounted on standard speaker stands, which allows the sound to travel farther, as it did when I played at a large banquet hall with over 2,000 people roaming back and forth between the interior and exterior of the venue. The S1 Pro provided high output, ensuring the keys and vocals travelled well while maintaining clarity. More than once, passers-by commented, "Where is



A three-channel mixer offers ToneMatch and Bluetooth connectivity, as well as Auto EQ that varies depending on the physical positioning of the enclosure.

your sound system? I don't see anything!"

The unit has an AC power cable but also comes with a removable, rechargeable lithium-ion battery, able to hold up to 11 hours' worth of charge. The S1 Pro will automatically charge the battery when plugged into a wall, but a special Quick Charge setting, only available when the speaker is not in use, can be used to speed up the process. Worth mentioning, a pair of S1 Pros can be daisy-chained together in mono using a

TRS 1/4" cable; I didn't try this out as I had only the one unit to review.

While lightweight and small in size, the S1 Pro offers considerable volume, detailed audio and smart features for an MSRP of \$599, making it the company's first portable P.A. under \$1,000. My vocals have never sounded better live than through the S1 Pro—so much so that it's hard to imagine using a traditional amplifier or speaker again.

**Bose**  
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# Hanging Around with Blues Traveler

BY JACQUES SONYIEUX

Many bands relish the opportunity to re-invent themselves in the studio, while others are happy to keep refining the essence of what they recognize as their own sound. As Blues Traveler celebrates its 30th anniversary, its members not only know their sound, but they are also aware of how to function as a cohesive unit and churn out a great record. For their 13th album, entitled *Hurry Up and Hang Around*, Blues Traveler took that smoldering, bluesy psychedelia to new places, working at Nashville's Sound Emporium alongside producer Matt Rollings. *Pro Sound News* spoke to keyboard player Ben Wilson about hanging around and recording with Blues Traveler.

## ON RECORDING INTERVALS

It's one of those things. Ever since the beginning, we've been sort of a "once every couple of years" band when we do a record. We knew we needed to get going on one with new material, since the last two records had a lot of co-writing on them. *Suzie Cracks the Whip* was maybe 70 percent co-written by others and *Blow Up the Moon* was about 50 percent co-written. Those records entailed a different process, but after having done them, we just felt like we were in a position to do something else with all this backlog of music we had and some new ideas that John [Popper, Blues Traveler frontman] had. We rented a house in Nashville, got together for about two and a half weeks to write songs, then we met with our producer, Matt Rollings, and went into the studio. It was awesome, and having all that fresh material made

the process so much quicker and easier. It was especially great knowing that Rollings was going to come in and put the finishing touches on all our arrangements and ideas.

## ON STUDIO SELECTION

We had a little bit more of a struggle finding good rooms to record in for the last couple of albums, mainly because we were doing so much traveling around. This time, it was great having Matt at the helm—he had a line on a couple of studios, and Sound Emporium was where we ended up recording. It was perfect because both John and I have huge rigs, and they really came through in accommodating everything. Once we got in there, it was kind of like falling off a log. There was, of course, a little trepidation in getting to know the producer, what they are going to like, what they are going to dislike,



PHOTO BY MICHAEL WEINTROB

Blues Traveler has returned with its 13th album, *Hurry Up and Hang Around*.

and how they want to process stuff. It is also a challenge for the producer to understand and respect that we've been a band for 30 years. There is a process that we go through, and it is pretty obvious when we are stuck—when no ideas are flowing and nothing is coming out. A lot of times, a producer just has to point us in the right direction and let us know if a certain transition isn't working. This gives us something to work toward.

## ON STAYING OPEN MINDED

The great thing about this band is that everyone is comfortable giving their opinion. It is pretty open, and we have a mutual respect that if somebody has a strong idea about something, we try it. It is so much quicker to try everyone's idea than to argue about it before you've even had a chance to give it a go. So often it is so obvious what the right chord is once you actually play it. That said, it is tricky to know which path is the freshest and most interesting to pursue. Aside from having a good respect for each other, very often we all have different opinions. Something that I think is really cool, Chan [Kinchla, guitar] and Brendan [Hill, drums] might not, so there is an understanding of what Blues Traveler is, and we don't cut corners. You also have to rely on your producer so you don't start fetching far afield. Even if I don't love a song we are working on too much, I still try to give it my best ideas. It is a dynamic process and you have to keep trying to really fill out the songs and make them better.

## ON RECORDING GUITARS

For every song, once we had the drums together, there was a long decision-making process about which amps to use, which mics we should use on which amps and how far away the mic should be. In the guitar room, we had about six amps, and a lot of the time the coolest sounding amps would be these little tiny old ones. They break up just right; they can give you plenty of volume, but you don't need as much because you aren't trying to play over anything. One of the things we were excited about was the variety of amps that were available because of [engineer] David Leonard securing them and knowing how to mic and EQ them before they ever hit the board.

## ON STAYING FOCUSED

When we are in the middle of it all, I tend to focus in hard on the songs. I listen to the mixes, and then when the final mixes come in, I listen to them a few times, then put it away until we start working on the songs for the live shows. You get bored if you do it any other way. You inevitably end up changing the arrangements a little bit and come up with different parts to let the songs breathe and turn into whatever they are going to be. But on this record, I feel like we did some good stuff and I'm super proud of it. It feels good. Jacques Sonyieux is a devout explorer of recording studios and the artists who occasionally inhabit them. Please send any tips or feedback to Jacques at [jacquesso-nyieux@gmail.com](mailto:jacquesso-nyieux@gmail.com).

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