

# proSOUND

NEW

Volume 41 No. 5

www.prosoundnetwork.com

May 2019



JEFF KRAVITZ/ACMA2019/FILMMAGIC FOR ACM

**CAN'T HIDE A-T**—Sure, the NAB Show was opening across town the next day, but on Sunday, April 7, all eyes in Las Vegas were focused on the 54th Academy of Country Music Awards, broadcast from the MGM Grand Garden Arena. The evening kicked off with Jason Aldean (center) and Florida Georgia Line—Tyler Hubbard (left) and Brian Kelley—performing the opening number, “Can’t Hide Red,” with all three using Audio-Technica’s new 5000 Series UHF wireless systems with AEW-T6100a hypercardioid dynamic handheld transmitters. Both acts were nominated in multiple categories, and Aldean was presented with the ACM Dick Clark Artist of the Decade award.

## Esports Engage at 2019 NAB Show

BY STEVE HARVEY

LAS VEGAS, NV—If you recognize the names KuroKy, Faker and Xyp9x, then you are likely one of the 400 million-plus esports fans worldwide contributing to an industry that is beginning to rival its traditional counterpart in viewership and revenues. Recognizing the rapidly growing business sector, the NAB

Show this year launched its inaugural Esports Experience, showcasing the latest online gaming trends and content delivery technologies. The interactive exhibit area, sponsored by Akamai, Beasley Broadcast Group, eBlue, Grass Valley, IHSEusa and The Switch, offered educational programming and the opportunity for attend-

*(continued on page 49)*

## Busted: Counterfeit Gear Seized

A police raid on a factory in China resulted in police seizing hundreds of fake Shure, Sennheiser, Yamaha and Harman products, halting an aggressive attempt to rip off pro audio manufacturers and their customers.



## Studio Design Shifts with the Times

BY STEVE HARVEY

There is no denying that the halcyon days of the commercial music

recording studio are behind us. But as studio designers and acousticians report, their business has simply shifted—to the education market,

audio post-production houses and podcast studios, as well as home-based production rooms, and even the occasional commercial facility—and they remain as busy as ever.

Record sales peaked in the United States in 1999 and, while revenues have been on the rise since the nadir of 2014, it seems unlikely that the business will ever be the same again. Francis Manzella of Francis Manzella Design in upstate New York’s Hudson Valley reports, “Our work over the past few years has

moved away from music recording and more into post-production and education.”

Not that Manzella doesn’t still design music rooms, but they tend to be boutique facilities and are rarely commercial, for-hire studios—that business model is behind us, he says. “I’m honored I was part of this business in the ’80s and ’90s when it was swinging,” says Manzella, who once worked at Skyline, renamed Reservoir Studios in its latest incarnation, in Manhattan.

*(continued on page 48)*

## Real-World Review: KEF LSX Monitors

The new LSX Monitor from British manufacturer KEF aims squarely at the intersection between pro and consumer and satisfies both camps with app-driven operation, professional performance and an emphasis on convenience for all parties.



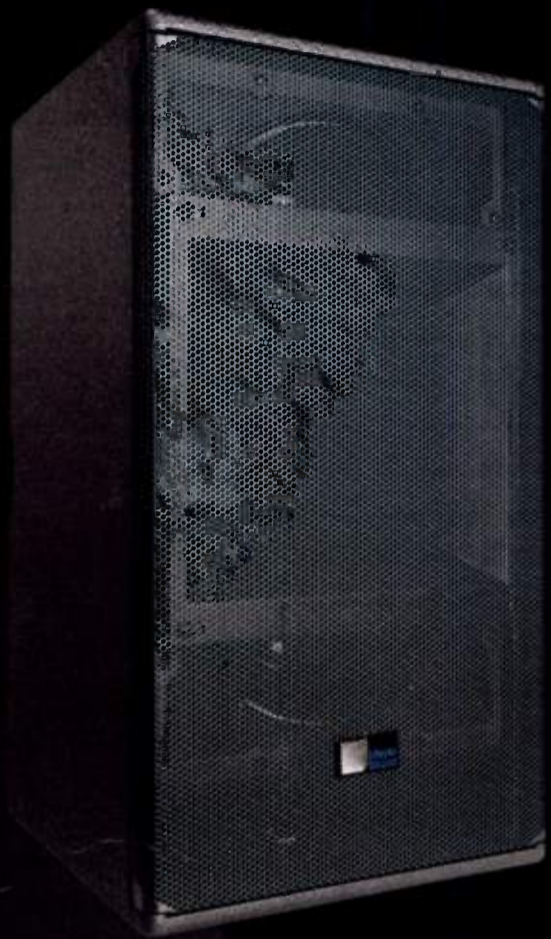
358-1SD1 000002932  
RODHOUSE IL 62082-3008  
1169 COURLEY RD  
NO MANS LAND STUDIO  
OWNER  
BRUCE BUCHANAN  
#BXNRSFS \*\*\*\*\*AUTO\*\*SCH 3-DIGIT  
#0393017 9# PSNA 0393017 B 1709



## ADAMSON S-SERIES EXPANSION

S7, S118, S7p, S10p

Your proven technology in an ultra-compact platform. Adamson has expanded the S-Series family with four new products, designed to meet the the highest standard of performance and quality.



Clear  
Precise  
Pristine  
Performance

## BUILT ON 4 DECADES OF LEGENDARY PERFORMANCE

The UPA is known for its ideal form factor, power output and versatile coverage. The ULTRA-X40 incorporates Meyer Sound's latest advancements in driver, distortion and phase response perfection into the do-it-all superhero form factor of the UPA.

Light-weight, highly portable with intelligent rigging and mounting options, the ULTRA-X40 has unprecedented versatility. This is the perfect multi-purpose loudspeaker for every rental inventory, portable application or permanent installation.

Join the nearly 3,000 pre-orders to set up your inventory of ULTRA-X40, the new do-it-all superhero that's a bold revolution of an industry standard.

# ULTRA-X40

A BOLD REVOLUTION OF AN INDUSTRY STANDARD



[MEYERSOUND.COM/PSN](http://MEYERSOUND.COM/PSN)

DIGITAL MIXING SYSTEM

# RIVAGE

PM SERIES

RIVAGE PM7

CS-R10-S Compact Control  
Surface for RIVAGE PM10

RIVAGE PM10

## Reliability, Intuitive Workflow, Natural Sound

The RIVAGE PM series offers sound engineers unprecedented reliability, easy-to-use workflow and natural sound characteristics for outstanding, natural sound reproduction. Available in three different control surface configurations for an even broader range of applications.



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

# MORE POWER

T H A N Y O U ' L L E V E R N E E D



*StudioLive 64S*  
76 mixing channels, 43 buses, 33 faders

## Introducing the STUDIOLIVE 64S.

The StudioLive 64S offers twice the DSP of any other Series III mixer thanks to our new Quad-Core PreSonus FLEX DSP. You get an unprecedented 526 simultaneous effects, 128-channel (64x64) USB recording—more than any other mixer, 76 mixing channels, 43 buses, 33 touch-sensitive motorized faders, and 32 FlexMixes.

We've managed to squeeze every drop of large-format console power into a family of mixers that fit in the back seat of your car. Heck, one of them is even rack-mountable. When you choose a StudioLive Series III S, you're guaranteed to get the best mixer for the task at hand. It might even be *too good*. Visit [www.presonus.com](http://www.presonus.com) for your introduction.

## Also introducing...



*StudioLive 32S*  
40 mixing channels, 26 buses, 33 faders



*StudioLive 32SX*  
40 mixing channels, 26 buses, 25 faders



*StudioLive 32SC*  
40 mixing channels, 26 buses, 17 faders

**PreSonus**  
STUDIOLIVE SERIES III S MIXERS

©2019 All Rights Reserved. PreSonus Audio Electronics. PreSonus is a registered trademark of PreSonus Audio Electronics, Inc. All other trademarks are property of their respective owners.

# Counterfeit Pro Audio Gear Seized in China

ENPING CITY, CHINA—A raid on a factory in Enping City, China, resulted in police seizing hundreds of counterfeit audio products, halting an aggressive attempt to rip off pro audio manufacturers and their customers. The raid, conducted last October, found Soundpu Electronics Equipment (aka Voxpu Electronics Equipment) producing fake Shure, Sennheiser, Yamaha and Harman gear—and it wasn't the first time Soundpu had been caught.

The raid was instigated by Shure, working with the Enping Public Security Bureau (PSB) and the Enping Administration of Industry and Commerce (AIC). Fake pro audio gear seized on the premises included a variety of fraudulent wireless microphones and receivers, consoles, amplifiers and processors.

A visit to the Soundpu website still reveals numerous products that could be visually mistaken for pro audio equipment by better-known manufacturers except that they bear the Voxpu name silkscreened on them.

Soundpu had already been busted in the past when counterfeit Shure wireless microphones were discovered at its factory during a routine market investigation in April 2018, leading to a hefty fine by the Enping AIC in August. With the repeat offense, now Shure intends to legally go after the company's owner and management, with Sennheiser, Yamaha and Harman assisting in the upcoming criminal prosecution.

"Counterfeiting is an ongoing problem for the audio industry, and we remain vigilant in our anti-counterfeiting efforts," said Chris Schyvinck, Shure president and CEO. "Our collective intellectual property has been compromised, and we greatly appreciate the cooperation of Sennheiser, Yamaha, and Harman in this matter."

Takuya Nakata, president and representative executive officer of Yamaha Corp., averred, "Yamaha has long taken various measures against counterfeit products such as civil actions, police raids, suspensions from customs, and placing enlightening ad-



Counterfeit microphones were piled high inside the Soundpu factory.

vertisements globally, particularly in China. We have done so because we firmly believe that these activities will not only protect our valued customers and end users from low-quality counterfeits, but also lead to an improvement of reliability and trust in our brands."

Fake audio gear damages more than a brand's reputation; Daniel Sennheiser, co-CEO of Sennheiser, explained, "These cheap counterfeits also fall short in terms of quality, and in some cases, dangerously so."

As a result, while all four brands are competitors in the pro audio marketplace, they have no problem teaming up to help prevent counterfeit gear from spreading. Mohit Parasher, EVP and president, HARMAN Professional Solutions, said, "We will continue to partner and cooperate with industry leading manufacturers such as Shure, Yamaha and Sennheiser, investigators and law enforcement agencies around the world to safeguard our names, designs and trademarks. It is critical that we ensure our customers are protected from counterfeit products."

And what can audio pros do to ensure they don't inadvertently buy fake, substandard audio equipment? Shure's Schyvinck shared, "We encourage customers to buy all of these professional audio products only from authorized dealers."

Shure  
www.shure.com

Yamaha  
www.yamahaca.com

Harman Professional  
www.harman.com

Sennheiser  
www.sennheiser.com

## briefs

### Adatasol Adds Studio Suite

CLEVELAND, OH—AlterMedia's studio management software, Studio Suite (www.studiosuite.com), and its related assets, have been acquired by Adatasol (www.adasol.com), an Ohio-based software development company. Studio Suite focuses on budgeting, scheduling, project management tasks, invoicing, resource management, CRM, equipment inventory, media asset management and more for studios, including those involved in post-production, media divisions of larger corporations, traditional recording facilities and more. Joel Stoner, founder of AlterMedia and creator of Studio Suite, will continue as a consultant during the transitional period; key members of the AlterMedia team will join Adatasol's team of developers.

### Spotify Acquires Parcast

NEW YORK, NY—Spotify Technology (www.spotify.com) has entered into a definitive agreement to acquire Parcast, a storytelling-driven podcast studio. Founded in 2016, Parcast has launched 18 premium podcast series including *Serial Killers*, *Unsolved Murders*, *Cults and Conspiracy Theories* and the studio's first fiction series, *Mind's Eye*. Parcast has more than 20 new shows slated to launch later this year. The transaction is expected to close in the second quarter of 2019 and subject to customary closing conditions. Terms of the transaction were not disclosed.

# Engineer Must Pay \$4M to Prince Estate

BY CLIVE YOUNG

MINNEAPOLIS, MN—Engineer George Ian Boxill and his business partners have been ordered by a Minnesota judge to pay nearly \$4 million to the estate of Prince, nearly two years after they attempted to release *Deliverance*, a six-song EP of previously unreleased songs that Boxill and the late artist collaborated on.

Boxill worked with Prince from 2004 to 2008, recording much of the artist's 2006 album, *3121*, and 2007's *Planet Earth*. Tracks on the *Deliverance* EP were initially recorded between 2006 and 2008, though Boxill later completed them on his own in 2016 and 2017. The result was five new songs, which included titles like "Sunrise Sunset" and "Touch Me," and an additional extended mix of one track, all of which listed Boxill as a co-writer and co-producer on the EP's credits.

Within days of Boxill's business partner, Rogue Music Alliance, announcing it would release the EP on streaming services like iTunes in

April 2017, Paisley Park and Prince's estate gained a restraining order preventing the release. Nonetheless, fans who pre-ordered the EP received the title track as an instant download. Also named in the case with Boxill and Rogue Music Alliance were David Staley and Gabriel Solomon Wilson.

At the time of recording, Boxill signed a confidentiality agreement that stated that all tracks they worked on together would remain Prince's sole and exclusive property. In the 2017 court proceedings, however, Boxill's lawyer argued that his client owned 10 percent of the songs and that the confidentiality agreement was invalid because it was never signed by Prince or Paisley Park.

The case eventually went into arbitration, and ultimately the arbitrator disagreed, declaring in August 2018 that the agreement was binding, ordering that Boxill and his partners pay \$3,960,000—\$3 million for the contract violation and \$960,000 for costs—to Prince's estate, and addi-



Prince, performing at Madison Square Garden in February 2011.

tionally for Boxill to return all his Prince-related materials to the estate as well. In turn, the engineer attempted to get the decision vacated, stating that the arbitrator had ignored copyright law, but the new court ruling has confirmed the arbitration judgment.

Prince's estate is still suing Boxill and his partners for copyright and trademark infringement.



18



25



38

### follow us ONLINE

**subscriptions:**  
www.mypsnmag.com

**facebook:**  
www.facebook.com/  
ProSoundNews/



**online:**  
www.prosoundnews.com

**twitter:**  
www.twitter.com/  
ProSoundNews

## SOUNDRECORDING

**Stevo's Studio Goes West . . . . . 18**  
Stephen "Stevo" George, founding member of Ministry, discusses his move to California in 2018 after his Woodstock studio burned down, following years working at Battery, Criteria, Hit Factory and elsewhere, all while racking up gold and platinum hits with Whitney, Britney, The Cars, Backstreet Boys, R. Kelly, Celine, Mary J. Blige, Q, Aaliyah, Sting and many more.

**Studio Showcase: Memphis Magnetic 20**  
Memphis Magnetic Recording, a new studio just blocks from Beale Street, was named by owners Scott and Claire McEwen as a reference to both the city's pull on them and the facility's many tape machines.

## SOUNDPOST/BROADCAST

**Stitcher's Flexible New Facility . . . . . 25**  
Podcast network Stitcher recently moved into its new headquarters in Midtown Manhattan, building out a 2,000-square-foot production complex comprising three studios, two edit rooms and two iso booths designed in concert with WSDG Walters-Storyk Design Group.

**Sonifex's 50th Anniversary . . . . . 25**  
Broadcast audio gear manufacturer Sonifex celebrated its 50th anniversary in March. The company designs and manufactures audio products for the radio and TV industry—a remit that has changed over the years.

## SOUNDTECHNOLOGY

**Sound Innovations: Waves eMotion LV1 Complete Live Mixing System . . . . . 27**  
Waves' Mick Olesh discusses the company's recently introduced eMotion LV1 system, intended to be an all-inclusive/cost-effective mixing solution for live engineers working with clubs, touring bands and houses of worship.

**The METAlliance Report: Walk the Room . . . . . 28**  
In this month's column, multiple Grammy-winner Frank Filipetti explains why engineers starting to work in a studio for the first time should instead take a walk—around the room.

**Pro Audio Review in PSN . . . . . 29, 30, 32**  
Revive Audio Vintage Audio MSL-Mk2 Compressor; Wilkinson Audio DeBleeder Plug-In; RME Babyface Pro Interface; KEF LSX Monitors

**Winners of Future's NAB Best of Show Awards from PSN . . . . . 33**  
The 2019 NAB Show, held April 8-11 in Las Vegas, was loaded with new product introductions. The editors of *Pro Sound News*, representing Future's Pro Audio Technology Group, roamed the aisles and came away with their picks for Best of Show.

## SOUNDPRODUCTS

**Studio Products . . . . . 34**  
**SR Products . . . . . 35**

## SOUNDREINFORCEMENT

**J Cole Preps for the Big Game . . . . . 36**  
The Playroom, one of Charlotte's oldest and most established rehearsal facilities, hosted rapper/singer J Cole and his team for five days as the artist prepared for his halftime performance at the 2019 NBA All-Star Game.

**Live Sound Showcase: Jacob Collier . 38**  
UK multi-instrumentalist Jacob Collier and his production director, Ben Bloomberg from MIT's Media Lab, reveal the custom technologies behind the staging of their solo and four-piece band performances on the current U.S. tour.

## DEPARTMENTS

Sound Business	5
Sound People	45
Advertiser Index	48
Classifieds	49

## CHARTS

Tracks	22
Centerstage	44



## SPECIAL REPORT

**2019 NAB Show . 1, 8, 33**  
The NAB Show is changing with the times, serving up its usual insightful offerings and exhibitors for the broadcast industry, while also exploring emerging content outlets and formats like podcasts and esports.

## COLUMNS

softwaretech . . . . . 21	Craig Anderton looks at remote possibilities.
viewfromthetop . . . . . 46	Bob Brennan, founder of Reflex Marketing, reflects on the long-running rep firm's history; why the dealer, manufacturer and rep have to be equals; and the value of training.
theahamoment . . . . . 47	Part two of Peter Janis' look at growing your pro audio business through acquisition.
music,etc. . . . . 50	Hey, hey, it's Mickey Dolenz, looking back on 50-plus years as a Monkee, recording with the legendary Wrecking Crew and more.



# THE NEXT STAGE IN SOUND.

Through sweat, noise, and heavy wear, the TwinPlex™ subminiature lavalier stands up to the toughest conditions to make every word a clear statement of quality.

[shure.com/twinplex](https://www.shure.com/twinplex)

**SHURE**

CLIVE YOUNG  
clive.young@futurenet.com



<http://www.prosoundnetwork.com>

FOLLOW US

- @prosoundnews
- facebook.com/prosoundnews

**CONTENT**

VP/Content Creation Anthony Savona

Content Director Clive Young,  
[clive.young@futurenet.com](mailto:clive.young@futurenet.com)

Content Manager Katie Makal,  
[katie.makal@futurenet.com](mailto:katie.makal@futurenet.com)

Senior Content Producer Steve Harvey,  
[sharvey.prosound@gmail.com](mailto:sharvey.prosound@gmail.com)

Contributors: Craig Anderton, Russ Long,  
Jacques Sonyieux, Rob Tavaglione, Rich Tozzoli

Managing Design Director Nicole Cobban

Production Manager Fred Vega

**ADVERTISING SALES**

VP/Market Expert, AV/Consumer  
Electronics, Education & Pro Audio

Adam Goldstein, [adam.goldstein@futurenet.com](mailto:adam.goldstein@futurenet.com),  
212-378-0465

**SUBSCRIBER CUSTOMER SERVICE**

To subscribe, change your address, or check  
on your current account status, go to  
[www.MyPSNmag.com](http://www.MyPSNmag.com) and click on About Us, email  
[futurepc@computerfulfillment.com](mailto:futurepc@computerfulfillment.com), call 888-266-  
5828, or write P.O. Box 234, Lowell, MA 01853.

**LICENSING/REPRINTS/PERMISSIONS**

Pro Sound News is available for licensing.  
Contact the Licensing team to discuss  
partnership opportunities.  
Head of Print Licensing Rachel Shaw,  
[licensing@futurenet.com](mailto:licensing@futurenet.com)

**MANAGEMENT**

Managing Director/Senior Vice President

Christine Shaw

Chief Revenue Officer Luke Edson

Chief Marketing Officer Wendy Lissau

Head of Production US & UK Mark Constance

**FUTURE US, INC.**

11 West 42nd Street, 15th floor, New York, NY 10036



All contents © 2019 Future US, Inc. All rights reserved. No part of this publication may be copied, reprinted or reproduced in any form without the prior written permission of the publisher, Future Publishing Limited (company number 2008885) registered in England and Wales. Registered office: Quay House, The Ambury, Bath BA1 1UA. All information contained in this publication is for information only and is not intended to constitute an offer of any financial product or service. Future does not accept any responsibility for errors or inaccuracies in such information. You are advised to contact manufacturers and retailers directly with regard to the price of products or services referred to in this publication. Apps and websites mentioned in this publication are for information only. We are not responsible for their contents or any other changes or updates to them. This magazine is fully independent and not affiliated in any way with the companies mentioned herein.

If you wish to contribute to us, you will need to own the copyright and have the necessary rights/permissions to supply the material and you automatically grant Future and its licensee a licence to publish your submission in whole or in part in any/all forms and/or editions of publications, in any format published worldwide and on associated websites, social media channels and associated products. Any material you submit is sent at your own risk and, although every care will be taken, neither Future nor its employees, agents, subcontractors or licensors shall be liable for loss or damage. We assume all unclassified material in this publication unless otherwise stated, and reserve the right to edit, amend, delete or substitute.



Future plc is a public company quoted on the London Stock Exchange (symbol: FUTR)  
www.futureplc.com  
Chief executive Zarah Byng-Thorne  
Non-executive chairman Richard Hillingford  
Chief financial officer Penny Ludlow-Brace  
Tel: +44(0)1228 442 244

# On Adopting Technology

Critics have long said we live in a consumer culture of disposable technologies, and that our ravenous, face-forward ingestion of new tech is a part of a larger cultural ethos that society is at its best when it's moving ahead, leaving the past behind as we use the technologies of today to create the world of tomorrow, yada yada yada.

Maybe so, but the adoption of new technologies doesn't have to be—and realistically never has been—a binary thing. You don't flip a switch and everybody's now on a new system or way of working. It's why we have so many formats and standards—because figuring out what comes next and how to get there is rarely as clean, tidy and obvious as we'd like it to be. Instead, the process of getting to tomorrow's technologies and standards is usually messy, littered with wrong turns and insightful leaps of faith. The adoption of technology is often a very human process.

I've been mulling that a lot this past month. Changing technologies and new applications for them were readily evident at the NAB Show in Las Vegas. Case in point: the new Esports Experience at the convention, which explored how broadcast technologies are being applied to the fast-growing entertainment format—a process you can read about in one of our cover stories.

And yet, in our other cover story, on the changing face of studio design,

Brad Graham, vice president of sales for ProCo Sound in Jackson, MO, muses that the rise of digital recording “created a submarket of analog gear that people can pick up for a song.” Inexpensive, fading technologies can help level the playing field for some in the audio world, and they further highlight the fact that technology adoption by content creators, regardless of their field, is never a uniform shift. Instead, it creates a broader variety of creator and consumer experiences.

Podcasting is a perfect example, as it's a content format that gets created everywhere, from WSDG-designed facilities like Stitcher (see page 25) where pros use top-shelf gear, to kitchen tables where amateurs use the Voice Memo app on their phone. Are pros and amateurs on a now-level playing field? Maybe, but one's podcast is probably easier to listen to than the other. Some might argue that podcasting is exemplifies how having money for technology unfairly creates two strata of content, where pros are listened to and amateurs aren't, but that's been the case since the dawn of media. Plenty of people watch the Travel Channel, but nobody wants to see their in-laws' vacation videos.

Plus, you can't count out amateurs. Not only are a few going to turn pro, but sometimes they reinvent things along the way. I was reminded

of that when I visited New York City's Metropolitan Museum of Art to see the new *Play It Loud: Instruments of Rock and Roll* exhibit. Taking pride of place there is the famous “Frankenstein” guitar that a 20-year-old, pre-fame Eddie Van Halen shoved together using chunks of other instruments. When you look at it up close, the wonky homemade effort looks like it will electrocute someone rather than make sound, but it was the tool that helped reinvent guitar playing. The point is, amateurs? You never know.

Ultimately, we can't lose sight of the fact that all content creation tools—old or new, analog or digital—are not ends unto themselves, but are meant to serve how we create and how those creations are experienced. I saw legendary producer/musician T-Bone Burnett play a set at a local record shop on Record Store Day in April, and while he pointed out on stage that he preferred “analog and vinyl, especially [since] it's a much more stable storage medium than digital,” more striking was that he essentially said that the medium—the technology that conveys the content—is still very much the message: “In an age of ubiquitous information, having something that's personal and real and solid is important.... The United States has spread its message of freedom and innovation all around the world with music. The musicians have been our best goodwill ambassadors [through] the soft power of music.”

The **Aeolian**®

**SOUND BETTER.**

**AcousticsFirst.com**®  
The first name in state-of-the-art sound control.™

Toll-Free Number:  
**888-765-2900**



Photo: BIG3 STUDIOS - St. Petersburg, Florida



# GENESYS BLACK



## Total Integration

The Neve Genesys Black is a digitally controlled analogue recording console with total integration with the studio environment and the DAW of your choice

- Legendary Neve 1073 mic preamps
- Choice of Neve 88R 4-band EQ or Neve 1084 Classic EQ
- Mastering grade A/D/D/A conversion
- Digital control with instant reset and Total Recall<sup>®</sup>
- Enormous scalability and monitoring power



 **Neve**

[www.ams-neve.com](http://www.ams-neve.com)

# We've Got Your Back—

Shop Online  
or Call Today!  
Sweetwater.com  
(800) 222-4700



**MIDAS**  
PRO2 – Tour Pack



**VENUE S6L**

We Carry Gear from These Respected Manufacturers and Many More!

- |                |                       |                  |                   |                    |                |                     |                 |
|----------------|-----------------------|------------------|-------------------|--------------------|----------------|---------------------|-----------------|
| A Designs      | Ashly                 | Aviom            | Cakewalk          | Daking             | Earthworks     | Galaxy              | IsoAcoustics    |
| AEA            | Aspen Pittman Designs | BBE              | Celestion         | Dangerous Musi.    | Electrodyne    | Gator Custom Shop   | iZotope         |
| Ableton        | Aston                 | Benchmark        | Chameleon Labs    | Dave Hill Designs  | Electro Voice  | Gator Frameworks    | JBL             |
| AKG            | ATC                   | Bettermaker      | Chandler Limited  | dbx                | elysia         | Genelec             | JDK Audio       |
| Allen & Heath  | Atlas Sound           | Beyerdynamic     | Chauvet Pro       | Decksaver          | Eminence       | GML                 | JHS             |
| Antelope Audio | Audient               | Blue Microphones | ClearSonic        | Denon              | Empirical Labs | Golden Age          | JK Audio        |
| Aphex          | Audio-Technica        | Blue Sky         | Cloud Microphones | DiGiGrid           | Eventide       | GoPro               | JoeCo           |
| API            | Audix                 | Bock Audio       | Coleman Audio     | Digital Audio Labs | FabFilter      | Grace Design        | Joemeek         |
| Apogee         | Auratone              | Bose             | Countryman        | Direct Sound       | Focal          | Granelli Audio Labs | K & M           |
| Apple          | Avalon                | BOSS             | Crane Song        | DPA                | Focusrite      | Great River         | KRK             |
| Argosy         | Avantone Audio        | Bricasti Design  | Crown             | Drawmer            | Fostex         | Heritage Audio      | Kush Audio      |
| ART            | Avid                  | Burl Audio       | Cymatic Audio     | Dynaudio           | Furman         | Hosa                | LaChapell Audio |

Pro Audio ■ Recording ■ Mixers ■ Monitors ■ Microphones ■ Guitars ■

## 2-YEAR WARRANTY

TOTAL CONFIDENCE  
COVERAGE™ WARRANTY

## FREE TECH SUPPORT

GET PROFESSIONAL  
SWEETCARE SUPPORT, 24/7

## LOWEST POSSIBLE PRICES

GET THE GEAR YOU WANT,  
AT THE RIGHT PRICE

## FLEXIBLE FINANCING AND LEASING

WE'LL HELP YOU FIND A WAY  
TO GET IT TODAY!

## FAST, FREE SHIPPING

ON MOST ORDERS, WITH  
NO MINIMUM PURCHASE!

# and Your Front of House

Live or in the studio, your reputation as a sound pro depends on doing consistently great work. So you need products and support you can depend on — year in and year out — for any gig. For over 35 years, Sweetwater has been there for pros like you, with service and attention to detail unparalleled in the industry. Call us today.



**YAMAHA**  
CL5



**CABLE FINDER** – Find any cable in 3 easy steps! [Sweetwater.com/cables](http://Sweetwater.com/cables)



**CASE FINDER** – The easiest way to find exactly the right case for your gear! [Sweetwater.com/casefinder](http://Sweetwater.com/casefinder)

- |                     |                          |               |                     |                         |                     |                            |                    |
|---------------------|--------------------------|---------------|---------------------|-------------------------|---------------------|----------------------------|--------------------|
| Latch Lake          | Marantz                  | Neumann       | RAB Audio           | sE Electronics          | Sound Construction  | TC-Helicon                 | Universal Audio    |
| Lauter Audio        | McDSP                    | Nuage         | Radial              | Shadow Hills Industries | Soundcraft          | Teac                       | Valley People      |
| Lexicon             | MicW                     | pArtScience   | Rane                | Shure                   | Sound Devices       | Telefunken                 | Vienna Instruments |
| Lindell Audio       | Midas                    | Peavey        | RapcoHorizon        | SKB                     | Soundtoys           | TK Audio                   | Vintech            |
| Line 6              | Middle Atlantic Products | Pete's Place  | Raxxess             | Slate Digital           | SPL                 | Toft Audio                 | Warm Audio         |
| LitlLite            | Mighty Bright            | Primacoustic  | Retro Instruments   | Slate Media Technology  | Stedman Corporation | Tonelux                    | Waves              |
| LM Cases            | Miktek                   | Pro Co        | RME                 | Slate Pro Audio         | Steinberg           | Triad-Orbit                | Westone            |
| Lynx                | Millennia                | Propellerhead | Rob Papen           | Solid State Logic       | Studio Projects     | Trident Audio Developments | Whirlwind          |
| Maag Audio          | Mogami                   | Pultec        | Roland              | Sonnox                  | Summit Audio        | True Systems               | WindTech           |
| Mackie              | Mojave Audio             | Purple Audio  | Royer               | Sonodyne                | Switchcraft         | Tube-Tech                  | Zoom               |
| Maione Design Works | Moog                     | QSC           | Rupert Neve Designs | Sony                    | TASCAM              | Ultimate Acoustics         |                    |
| Manley              | MOTU                     | Que Audio     | Schoeps             | Soundelux               | TC Electronic       | Ultimate Support           |                    |

Keyboards ■ Drums ■ Live Sound ■ Sweetwater Has All the Gear You Need!

"Never has there been a better buying experience. Sweetwater is always my number one choice for all my needs."

*Jahlene from Richmond, KY*

**Sweetwater**<sup>®</sup>

Music Instruments & Pro Audio

**(800) 222-4700**  
**Sweetwater.com**

## AES Wraps Up Dublin Convention

DUBLIN, IRELAND—Late March saw the Audio Engineering Society bring its annual International Pro Audio Convention to Dublin, Ireland, for the first time, hosting attendees from 47 countries for four days of audio science and education.

“It was a pleasure to bring the AES convention to Dublin for the very first time, and an excellent way to kick off the formation of the new AES Ireland regional section in style,” commented convention co-chair and Dublin resident Enda Bates. “It was also great to see a more diverse range of presenters and topics—something that was specifically highlighted by many attendees as a welcome development.”

The convention content offered numerous options, noted co-chair Ben Kok, with 200 individual workshops, tutorials, paper and poster presentations and special events held in parallel in seven auditoriums in the Dublin Convention Centre. This year’s convention featured the AES Heyser Memorial lecture “Learning to Listen” by digital reverb pioneer David Griesinger, and the keynote address—arranged by AES Dublin’s third co-chair, Mariana Lopez—“Inclusive Sonic Interactions,” presented by Aalborg University Copenhagen professor Stefania Serafin.

“For topics like cathedral acoustics and spatial electroacoustic music



Stefania Serafin, professor in sonic interaction design at Aalborg University Copenhagen, delivers the keynote speech “Inclusive Sonic Interaction” during the AES Dublin opening ceremonies.

and education, there was a link between the technical program, off-site and special events,” Kok said, “Overall, immersive/3D sound and spatial audio had a strong presence at the convention, covering both sonic capture as well as reproduction through loudspeakers or headphones.”

Co-chair Lopez was actively involved in the program, including chairing the panel “The Present and Future of Audio for Film and Television,” which brought together industry notables Howard Bargroff, Anna Bertmark, Emma Butt and Fiona Cruickshank.

The immersive audio emphasis was continued into AES Dublin’s hands-on sessions, part of the convention’s dedicated student programming including the education and career fair and the student recording

and design competitions.

The theme of diversity and inclusion was brought to the forefront with co-chair Lopez’s AES Dublin Opening Ceremonies challenge for support and participation of the Society’s initiatives, and in the AES Diversity & Inclusion Committee’s Town Hall dialogue, which she moderated. Questions about how the Society moves forward toward equality, noted Lopez, “are ultimately about who we are and who we hope to be.”

As AES Dublin concluded, the site selection of Vienna, Austria, was announced for AES Europe in 2020 (May 25–28). Next on the AES Convention calendar is the upcoming AES New York International Pro Audio Convention (Oct. 16–19, 2019).

Audio Engineering Society  
[www.aes.org](http://www.aes.org)

## RTW Hits New York

NEW YORK, NY—As part of a larger expansion in the United States, German audio metering manufacturer RTW has opened its first office here, in New York City, led by Claudia Haase.

With much of the U.S. broadcast and production industry located in New York, RTW expects that its new office will make RTW accessible to new and longtime customers that use RTW products for broadcast, production, post-production and quality control. Other recent moves by the company have in-



Claudia Haase

cluded the creation of authorized RTW service centers in New York (dBm Pro Audio Services) and Los Angeles (Advanced Musical Electronics Inc.).

A former RTW employee, Haase is returning to the company to lead the New York office. “Reuniting with RTW and taking on this position and challenge is a great opportunity,” said Haase. “I am very much looking forward to getting started and supporting our U.S. dealers and service centers on a daily basis. The U.S. is a huge market, and having a local office is the only way forward. I am proud to be the one in charge of opening this next chapter.”

“Our new office in New York simply underpins our focus on the important U.S. market, and I’m excited that we have now taken a huge step in our effort to bring the company closer to our American customers,” said Andreas Tweitmann, CEO of RTW.

The new office is located at 175 Varick St. in New York City.

RTW  
[www.rtw.com](http://www.rtw.com)

## Noland Named ATSC President

WASHINGTON, DC—The Advanced Television Systems Committee has named Madeleine Noland to succeed Mark Richer, who in January announced his plan to retire after leading the standards development organization for 20 of its 35 years. Noland becomes the new ATSC president, effective May 15.

Noland, senior technology and standards advisor for LG Electronics, currently chairs the ATSC technology group that oversees the ATSC 3.0 next-generation broadcast standard. Noland has chaired various ATSC 3.0-related specialist groups, ad hoc groups and implementation teams since 2012.

“Madeleine is superbly qualified to lead ATSC into the future,” said Richer. “I couldn’t be happier, passing the baton to such a talented leader.”

She began her career in the television industry in 2004 with Backchannelmedia Inc., an interactive television technology developer. It was during her work there that she

first started working on ATSC projects.

In 2012, she moved on to product and project management roles at Telvue Corp. before joining the LG Electronics CTO’s office in 2013. Noland has represented LG in a variety of industry organizations for over six years. Among other activities, in addition to her ATSC roles, she chairs the Ultra HD Forum’s Guidelines Work Group.

“I am humbled and honored to follow in Mark Richer’s footsteps, and I look forward with great enthusiasm to working with the talented ATSC Board and the hundreds of ATSC volunteer leaders. This is a critical time for the organization as Next Gen TV powered by ATSC 3.0 is commercialized in the months and years ahead,” Noland said.



The Advanced Television Systems Committee has named Madeleine Noland as its new president.

Noland is the recipient of TV NewsCheck’s “2019 Futurist” Women in Technology Award and was named one of 2018’s “Powerful Women in Consumer Technology” by Dealerscope magazine. In 2016, she received the ATSC’s highest technical honor, the Bernard J. Lechner Outstanding Contributor Award recognizing her leadership roles related to the development of ATSC 3.0 Next Gen TV.

Credited on three U.S. patents for television technology, Noland is a member of the Society of Motion Picture and Television Engineers, the Society of Cable Telecommunications Engineers, and the Institute of Electrical and Electronics Engineers—Broadcast Technology Society.

ATSC  
[www.atsc.org](http://www.atsc.org)

# \$70,000 of Gear Stolen from Martine

BY CLIVE YOUNG

PORTLAND, OR—Starting a new studio is never easy, but for Grammy-nominated producer/engineer Tucker Martine, it's become immeasurably harder because his nearly completed facility in Portland, OR, was robbed on March 15. Thieves made off with an estimated \$70,000 in prized microphones, guitars and amplifiers. Now one of the acts he's worked with, The Decemberists, is stepping in to help, as member Nate Query has launched a GoFundMe page and the group will hold a benefit concert for the producer June 3 at Portland's Crystal Palace.

Martine was close to finishing the latest, fifth iteration of his long-running Flora Recording Studio with his wife, singer/songwriter Laura Veirs, when the facility was broken into and robbed. Thieves took off with multiple modified Neumann U67s, a

Wunder Audio CM7-GT and a Mojave MA-1000, along with vintage instruments and amps (a full list can be found at <https://bit.ly/2Z91Fad>).

Since then, some of the guitars have been recovered from a music store in Tacoma, WA, that purchased them, unaware that the instruments had been stolen. Nonetheless, most

of the gear remains missing.

A mainstay of the Pacific Northwest recording scene, Martine has worked with the likes of Death Cab for Cutie, the Avett Brothers, Neko Case, She & Him, R.E.M, Modest Mouse, Sufjan Stevens, My Morning Jacket, Spoon, The Jayhawks and countless others.



Tucker Martine's new studio was burgled during construction.

Martine GoFundMe Page  
<https://www.gofundme.com/tuckermartine>

## TSL Acquires DNF Controls

NORTHRIDGE, CA—Broadcast workflow solutions manufacturer TSL Products has acquired Northridge, CA-based DNF Controls, a U.S.-based company that has offered a range of human-to-machine and machine-to-machine solutions for more than 27 years.

According to a company statement, the acquisition "provides opportunity for TSL to expand its presence in the broadcast control systems market for customers worldwide, and to offer audio and power solutions locally to the Americas."

DNF customers in the U.S. region will have increased access to TSL's product range, offering audio and power solutions in addition to control systems, with the ability to place orders and take advantage of its support department out of Northridge, CA. Meanwhile, TSL customers will be able to use DNF's dedicated hardware control panel and integration capabilities, allowing them to add further functionality to their systems.

There will be a period of transition to bring the DNF and TSL product families together, with DNF's California base becoming the TSL Inc. head office for the Americas.

TSL Products  
[www.tslproducts.com](http://www.tslproducts.com)

DNF Controls  
[www.dnfcontrols.com](http://www.dnfcontrols.com)

Santa Fe Opera

Asolo Repertory Theater

Stratford Festival

Paramour

Frozen

Moulin Rouge

Waitress

Kinky Boots

St. Louis Municipal Opera Theater

Lion King

The Wild Party

Once On This Island

Beetlejuice

Benedum Center

Elgin Theater

King Kong

Pretty Woman

# Proven.

Visit us in June  
at Infocomm  
Orlando, FL  
Booth 6043



Since its introduction, the Lectrosonics SSM bodypack transmitter has endeared itself to sound designers, costumers and talent alike. From TV and Film production to opera and musical theater, the SSM delivers.

With patented, compandor-free Digital Hybrid Wireless® transmission, the SSM provides pure sound and rock solid RF reliability. Then there are the clever features like the app for changing settings, the ability to take updates in the field, and the selectable input configuration for a wide variety of lav and headset mics. Plus, at 2.3 Oz, it is feather light.

Demo the Lectrosonics SSM and join the ranks of fans worldwide.



<< Scan here to learn more about the SSM

[www.lectrosonics.com](http://www.lectrosonics.com) or 1-800-821-1121

In Canada, call 877-753-2876

In Europe, call +33 (0) 78558-3735



# Offering Insight into AMBEO

BY CLIVE YOUNG

ANAHEIM, CA—While immersive audio has become a buzzword at pro audio conventions in recent times, Sennheiser has been in that space for a number of years now, steadily developing, refining and implementing its AMBEO 3D sound technology for a variety of uses, most notably virtual reality (VR) and augmented reality (AR). But while professional and consumer interest in them seems to ebb and flow depending on the latest technology trend story, AMBEO has been steadily moving along and Sennheiser has created partnerships with related companies in the field, resulting in a growing ecosystem of products for creators and consumers alike over the last six years.

While AMBEO is often mentioned in the same breath as AR and VR, it wasn't initially created with those uses in mind. "At the beginning, AMBEO was a small initiative for us that aimed to reinvent the way we perceive music," said Andreas Sennheiser, co-CEO, Sennheiser. "It started out with giving the artist an opportunity to express himself when it's not live in the very same way as if it were live. That was the idea."

Approached by artists who were dissatisfied with production workflows and, likewise, with how listeners ultimately experienced their recorded music, Sennheiser began exploring the possibility of creating a new immersive audio format. "We found out that if we really want to make something that is indistinguishable from a live event, we need to cover the whole range, from recording—how it would be recorded, mixed and processed through the algorithm—to how it's played back. This is where the idea of AMBEO came from: Okay, let's reinvent this whole chain."

A chain has to start somewhere, and much like the typical signal chain, it began with a mic. The AMBEO VR microphone made a humble debut in 2015. "At the time, it was a very small market," recalled Sennheiser. "It was really only a couple of VR producers who were into this idea. We started small with a virtual reality microphone, and it was a co-creation between us and potential



Andreas Sennheiser, co-CEO of Sennheiser

users. We presented it at NAMM in a state where you could say it was an ugly prototype, but it was so well received that within eight months, we had something out in the market."

With the VR microphone established, the company continued to expand its presence in that burgeoning marketplace, said Sennheiser: "Step by step, we started to bring in other things. We did installations in 9.1, we did software that connects the two things—the recording and playback type—and now with AR coming in and volumetric-capturing production technology, we suddenly see ourselves in the core of something that is taking off very quickly."

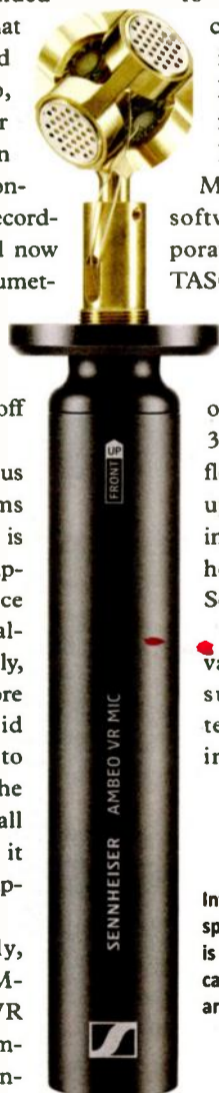
While interest in the various "reality" technologies seems to keep shifting, the upside is that regardless of the visual application, the user experience is always improved by quality sound. "For me personally, VR is something that is more a transition into AR," said Sennheiser. "We need VR to invent all the content, all the production workflow and all that, but ultimately where it can become a mass-market application is the space of AR."

Perhaps unsurprisingly, the company aims for AMBEO to be part of both VR and AR, with Sennheiser himself envisioning it as "a stan-

dard, but not in a form where we would have a closed standard you would pay royalties for—more like a de facto industry standard that we want to establish." With that in mind, while the technology remains closed to Sennheiser products, the company has been partnering with others, like Magic Leap, working together for four years to create an AMBEO headset that works with Magic Leap goggles. AMBEO software has also been incorporated into various Zoom and TASCAM recorders to allow use of Sennheiser's VR mic, and more collaborations are on the way. "To bring our vision of a perfectly new 3D audio production workflow to life, we need to team up with a lot of companies in different areas, and this is how it's building gradually," Sennheiser confirmed.

Aiding that effort are advances in VR and AR, consumer acclimation to the technologies, and the growing number of real-world

Intended for capturing immersive spatial sound, Sennheiser's VR Mic is based around four matched KE 14 cardioid capsules in a tetrahedral arrangement.



uses for them. "Currently the limitation of AR is the form factor—we are just not walking down the street wearing headsets," Sennheiser mused, "but that's going to be overcome in time. I see all sorts of applications where digital reality adds value to your everyday life—like walking down the street and getting directions or information about what's around you. Or perhaps you're deciding how to furnish your home by placing virtual objects there. You may also want to know how it sounds instead of an empty room, to have this experience as if it were real. [There's also] virtual meetings, where we can sit together physically and then have two or three other people sitting here as holographic projections—we want the sound to be perfect so we can hear the virtual people where they are."

"There are so many potential applications for this that I think we've just scratched the surface," Sennheiser noted. Much as there has been experimentation with allowing viewers to choose different camera perspectives in Formula 1 and other sports, "In the future, you will be able to choose different audio perspectives. You get more involved, as if you were there."

While they're intriguing ideas, they require the various VR and AR technologies to take root and become more widely adopted by consumers, which, in turn, requires something else: content. "It's the chicken and the egg," said Sennheiser. "The demand cannot develop unless there is content. It's like a great bottle of wine—you can't judge it by looking at it; you have to open it and drink it, and then you know. So that's why we [Sennheiser] have to work on both sides, to let people experience it and see how great it is, and from there, the demand is spurred. Then, coming back to the pro side, it's providing the microphones and workflows to create the content."

While that hasn't happened yet on the scale that he anticipates, Sennheiser is committed to staying in the space until it does: "Besides our core business—because we will never let go of microphones—probably AMBEO will be the biggest focus of exploration for us. We tend to grab trends very early and then decide which we want to follow and which we don't. AMBEO was something where we saw great opportunity ... but it's more because innovation is in the DNA of our company."

Sennheiser  
www.sennheiser.com

"Currently the limitation of AR is the form factor—we are just not walking down the street wearing headsets, but that's going to be overcome in time. I see all sorts of applications where digital reality adds value to your everyday life."

Andreas Sennheiser

## Sweetwater Studios Sets Masterclass

FORT WAYNE, IN—Sweetwater Studios senior producer/engineer Mark Hornsby will host a three-day intensive masterclass on Avid Pro Tools at Sweetwater Studios, the commercial recording arm of Sweetwater Sound, and Sweetwater University on May 9–11.

The event is aimed at users of all skill levels, from amateur musicians using Pro Tools for the first time to seasoned studio pros. Attendees will receive Pro Tools 101

Official Courseware by Frank D. Cook, a copy of the session files, a certificate of completion, daily lunch and dinner on Thursday with Mark Hornsby.

The course is an excellent opportunity for both beginners and advanced users and will be held in Sweetwater Studios and Sweetwater

University. Registration is \$795.

Day 1 will cover Session File Structure; Pro Tools Navigation; Edit Modes/Tools; Recording Audio; Capturing MIDI and Using Virtual Instruments; and Exploring Playlists and Comping Performance. Day 2 will explore Setting Up for a Mix; Signal Routing; Us-

ing Compression, EQ and FX; Utility Automation; and Printing Your Final Mix and File Management. Day 3 will include One-on-One Collaboration with Mark; Group Lab Exercises; and Keeping Your Session Files.

Sweetwater Studios  
www.sweetwaterstudios.com

## iZotope Acquires Exponential Audio

CAMBRIDGE, MA—iZotope has acquired Exponential Audio's product line of digital reverbs, and the latter company's founder, Michael Carnes, has joined iZotope as a Research Fellow.

Exponential Audio's product line, which includes the R4, PhoenixVerb Surround and Symphony, is intended for music and audio post production.

Carnes is a longtime software developer and musician. Prior to starting Exponential Audio, he was the creator of Lexicon's 960L, the PCM96, and the Lexicon plug-ins. Beyond hardware and software development, Carnes holds an advanced degree in classical composition.

"By combining forces with iZotope, I know the potential for future innovation is vast," said Carnes. "I am eager to bring Exponential Audio's expertise, technology and values to iZotope, and I'm excited to imagine what we can deliver together for our customers."

Exponential Audio's products will now be sold through iZotope.com. Current and future users of Exponential Audio products will become part of the iZotope community and will be supported by iZotope's Customer Care team.

iZotope  
www.izotope.com



**S-SERIES EXPANSION**  
Introducing the S7, S118, S7p and S10p

Your proven technology in an ultra-compact platform, Adamson has expanded the S Series family with four new products, designed to meet the the highest standard of performance and quality.

**ADAMSON**

It's all online at [www.adamsonsystems.com](http://www.adamsonsystems.com)



Multiple Clair systems were employed variously throughout Privilege Ibiza.

## Rocking the World's Largest Club

IBIZA, SPAIN—There's big clubs, and then there's Privilege Ibiza, which can handle up to 10,000 guests at a time. It's the kind of place that needs a staff of 200 people to cover the entire venue. And Privilege itself? It sports a ceiling height of 25 meters, a huge dance floor, live stage, large windows and a glass dome for an observatory view of the stars at night, three floors, several terraces and a huge swimming pool with a DJ booth above it for good measure. For one of Privilege's most recent blowouts, the venue loaded up

on Clair Brothers loudspeaker systems provided by four audio vendors in order to cover the entire facility.

Clair Brothers' Spanish distribution and rental partner, VTècnics, had Josep Maria Serra, production manager, involved with the project: "On this occasion, four companies in southern Europe shared their equipment and knowledge, which allowed us to achieve the best sound possible. My company, VTècnics, worked with other Clair Brothers partners Grupo Friends, also from Spain, Audio Con-

cept from France, and Prase Media Technologies from Italy."

A downside of being such a massive venue is that many of its design features are glass and metallic surfaces. Serra noted, "The venue does not have good acoustics because it has so many reflective surface elements, and the floor has a giant swimming pool with a cover on it, which unfortunately works as a big resonance box. What we needed to do was create a sound system that was strong on clarity, with powerful subs, that would be easy to

control. The Clair Brothers C12s and iS218s more than delivered."

An additional challenge for setting up the sound system was the presence of a monstrous lighting system. "We had fixed anchor points to hang the C12s," said Serra. "It was impossible to scroll the anchors in any direction because within the structure was a 20-ton pro-lighting rig. It was essential that we respect those loading points."

The final, exclusively Clair Brothers, sound system designed for the big event consisted of two-dozen C12s, 24 iS218s and eight FF2s for the main stage; eight i212s and two iS218s in an additional hall; 12 i212s and four iS218s in VIP Zones 1 & 2; four kiTCurve12s, two kiTSubs and four C12s in VIP Zone 3; and two C12s and four iS218s for the DJ set monitor. All amplifiers were CB-PLM12K44s and CB-PLM20K44s.

The VTècnics production team that pulled off the evening were sound designer Francesc Güell; system engineer Narcis Solé; sound assistant Juan Carlos Álvarez; and monitor engineer Konstantinos Ftoulis. "It was a super fun night for all of us and the sound was great," said Serra. "One promoter in attendance went so far as to say that this is the best sound he's heard on the island of Ibiza in 30 years."

Clair Brothers  
www.clairbrothers.com

## L-Acoustics Acquires DeltaLive UK

LONDON, UK—Loudspeaker and live sound technologies manufacturer L-Acoustics Group announced that it will acquire a majority stake in audiovisual services and rental specialist DeltaLive UK.

Christian Heil, president and founder of L-Acoustics, noted, "Technologies are currently becoming more complex and often challenging for service companies. L-Acoustics is a pioneer in multiple audio-related fields and connected activities. We therefore need partners who are consistently in touch with end users and can assist us in refining and validating our offer to better align with the escalating standards of high-level show production. DeltaLive UK brings a wide range of opportunities, and its geographical proximity to our UK offices in London will allow us to fulfill this mission."

Perhaps unsurprisingly, DeltaLive UK has been a longtime customer of L-Acoustics, using the manufacturer's products for projects ranging from the opening and closing ceremonies of major cultural and sporting events to royal and public events. No-



Paul Keating (left), co-founder of DeltaLive, and Christian Heil, president and founder of L-Acoustics.

tably, DeltaLive UK deployed L-ISA technology for the sound production of BBC Proms 2018 at London's Royal Albert Hall.

According to Hervé Guillaume, CEO of L-Acoustics Group, "DeltaLive UK will continue to operate independently under the joint management of Mark Bonner and Paul Keating, with no change to the services or conditions of sale, rental and production that the company has

been providing over the last 30 years. The medium-term strategy is for DeltaLive UK to venture into markets that have hitherto remained unexplored by L-Acoustics, with the commissioning of private and professional multichannel auditoria such as Island or Ocean, featuring best-in-class L-ISA technology under the banner of L-Acoustics Creations."

DeltaLive UK founders Paul Keating and Mark Bonner sold their

Dubai-based operations, Delta Sound LLC, to PRG almost simultaneously, handing over that arm of the company on April 9. Founded in 2006, that entity will retain its existing operational format and be officially titled PRG deltasound during the transition process of moving under PRG's wing.

Discussing his company's acquisition by L-Acoustics, however, Keating noted, "This year is our thirtieth year and we felt it was time to move the business forward for the future. As Hervé mentioned, nothing will change in terms of the day-to-day management of the company, and the excellent team at DeltaLive UK will continue to exceed customer and audience expectations.... At a personal level, I am really looking forward to the challenge ahead and working closely with L-Acoustics, growing their private, lifestyle and sound art sector. Exciting times ahead!"

L-Acoustics  
www.l-acoustics.com

DeltaLive UK  
www.deltalive.com



# Lawo, Evertz Enter Patent Infringement Battle

RASTATT, GERMANY—Audio and video technology specialist Lawo is pushing back following the announcement in mid-March that Evertz has filed a lawsuit for patent infringement against the company.

Canada-based Evertz, which provides video infrastructure solutions for the broadcast and media industries, announced that it had filed a lawsuit against Lawo for infringing “seven patents relating to Evertz’ internet protocol (IP) based video routing and switching technology and multi-image multi-display video processing technology.”

“Evertz prides itself on leading the industry with cutting-edge products. We spent many years and tens of millions to develop our industry-leading

IP-based broadcast solutions,” CEO Romolo Magarelli commented in a statement. “We are taking this legal action to protect our investment and our intellectual property.”

In response, a Lawo statement averred that the company will “vigorously defend itself against the unfounded claims that Evertz alleges, and it strongly asserts that it has committed no wrongdoing.” Lawo’s comment noted that the Evertz statement was “part of a global public relations campaign which obviously goes beyond the mere protection of Evertz’s alleged rights in court.”

Evertz announced that it had filed for patent infringement against Lawo’s businesses in Germany,

the United States and Canada in the United States Federal District Court for the District of Delaware. The statement added, “The Delaware lawsuit will proceed in parallel with a prior litigation filed by Evertz in the Superior Court of Ontario against Lawo and several former Evertz employees for breach of contract, breach of confidence and other torts.”

In turn, Lawo points out that Evertz “failed to state that the Canadian action was struck by the court on Feb, 28, 2019, because Evertz failed to articulate a material basis for its claim.” Further, according to Lawo’s press release, Evertz failed to state in the amended complaint it filed in the United States that its Ca-

nadian action was stricken.

Claudia Nowak, CFO of Lawo, comments, “As we approach our 50th year of business, our customers understand that honesty and integrity have formed the pillar of our success over these years. We believe our success has made us the target of Evertz. We will vigorously defend the lawsuits and will pursue all appropriate legal actions against Evertz. Business will continue as usual and there should not be any impact on our customers while these matters are pending.”

Lawo  
www.lawo.com

Evertz  
www.evertz.com

# Multi-Use UK Venue Invests in Epic Upgrade

NORWICH, UK—TV production company and music venue Epic Studios has embarked on a major audio upgrade of its Norwich, UK facility with Allen & Heath dLive and SQ mixing systems and a permanent installation of Martin Audio’s MLA P.A. system.

“After getting my hands on a dLive S7000 at InfoComm, I knew this was the perfect desk for us,” said Matt Rabong, technical manager at Epic Studios. “dLive has integrated seamlessly with our workflow and my engineers love it.” The facility further invested in an SQ-7 desk, which is used primarily as the main monitor desk.

The venue upgraded from its older Martin Audio system after testing a variety of brands. “We ultimately chose MLA for its sound quality, particularly the punchy subs and its Hard Avoid feature, which allows us to steer the sound away from our roof where the most leakage is, as well as our back wall, which houses our production gallery,” said Rabong.

The new system comprises a dozen MLA Compact (six elements per L/R hang), eight DSX subs, five CDD-LIVE 15s and a CSX-LIVE 118 sub, eight LE200 wedge monitors, and all necessary amps and distro.

Rabong noted, “The dLive gives us incredible fidelity through our new MLA compact rig. We invested in a full suite of gigaACE, MADI and Dante cards for the DM48 MixRack to enable us to have digital splits to broadcast in our full HD production gallery, as well as 48-way multitrack recording directly to a laptop at FOH

and audio distribution to other parts of the building using Dante. The quality of the onboard FX is amazing and having up to 64 multiband compressors across any channel type is very useful.”

Allen & Heath  
www.allen-heath.com

Martin Audio  
www.martin-audio.com



Epic Studios was recently outfitted with a sizable Martin Audio P.A. rig and a new Allen & Heath dLive console.



## DEFINING PROFESSIONAL

1-800-253-7360  
www.procosound.com

Now with AES67



**Dante**  
SPOKEN HERE

**AOD-FAN3-2XM**

- DANTE® AUDIO INPUT
- POWER FROM POE SWITCH OR POE INJECTOR CIRCUIT
- TWO CHANNELS OF ANALOG OUTPUT
- RUGGED ALUMINUM EXTRUSION HOUSING
- RESILIENT CABLE STRAIN RELIEF
- NEUTRIK® BLACK XLR CONNECTORS
- 3FT. PROCO MIC3 BALANCED CABLE WITH BRAIDED SHIELD
- RJ45 METAL CONNECTOR WITH INTEGRATED LED'S
- 1 YEAR LIMITED WARRANTY



**AOD-4XF • AOD-4XM • AOD-2XF2XM**

- RUGGED ALUMINUM EXTRUSION STAGE BOXES
- 4 CHANNELS OF ANALOG LINE LEVEL AUDIO
- CONFIGURE WITH COMBINATIONS OF (2) LINE IN (2) LINE OUT ANALOG CARDS
  - 4 INPUTS / 4 OUTPUTS / 2-IN + 2-OUT
- NEUTRIK® LOCKING ETHERCON PROVIDES DANTE® AUDIO INTERFACE
- POWER FROM POE SWITCH OR POE INJECTOR CIRCUIT
- LED INDICATORS DISPLAY DANTE SYSTEM STATUS AND "IDENTIFY DEVICE" FUNCTION
- NEUTRIK® BLACK XLR AUDIO CONNECTORS
- 1 YEAR LIMITED WARRANTY



**AODDP-2XF2XM**

- 2 GANG WALL BOX DESIGN
- 4 CHANNELS OF ANALOG LINE LEVEL AUDIO
- CONFIGURE WITH COMBINATIONS OF (2) LINE IN (2) LINE OUT ANALOG CARDS
  - 4 INPUTS / 4 OUTPUTS / 2-IN + 2-OUT
- DANTE® AUDIO INTERFACE ON THE BACK
- POWER FROM POE SWITCH OR POE INJECTOR CIRCUIT
- FITS INSIDE A STANDARD 2 GANG DEEP WELL J-BOX
- LED INDICATORS DISPLAY DANTE SYSTEM STATUS AND "IDENTIFY DEVICE" FUNCTION
- NEUTRIK® BLACK XLR AUDIO CONNECTORS
- 1 YEAR LIMITED WARRANTY



## Stevo's Studio Goes West

BY STEVE HARVEY

BURBANK, CA—Stephen George knows a thing or two, because—to quote the TV commercial—he's seen a thing or two. Indeed, with a 40-year career that began with him co-founding one of the first industrial bands, working as chief engineer at a major label-owned recording studio and an exclusive stint with a multi-platinum record-selling artist, then running his own production facility and record label, it's hardly surprising that George has a story or two to tell.

George, known to many simply as Stevo, is a founding member of Ministry, which started in Chicago as a synth-pop band before evolving into one of the pioneers of industrial music. After being “underhandedly expelled” from the group after four years, he formed the band Colortone, producing, engineering, co-writing and playing on the band's Pasha Records debut. He also found time to add drums to major label projects by Ric Ocasek and Elliot Easton of The Cars, Jane Wiedlin of the Go-Go's, Iggy Pop and others.

From 1989 through 1998, he was chief engineer at the Zomba Group's Battery Studios Chicago, working on one hit after another by a succession of artists signed to the company's various labels, including Jive Records.



Stephen “Stevo” George’s name appears on 100 million albums—and on the door of Gimme That Sound Productions in Burbank, CA.

He engineered and mixed songs on the Backstreet Boys' debut and *Millennium* albums, which together sold 27-times platinum; mixed songs on Britney Spears' *Oops! ... I Did It Again* and *Britney* albums, which sold 14-times platinum combined; worked on the motion picture-inspired *Space Jam* album, which racked up six-times platinum sales; and on and on. His name appears on over 100 million records sold.

During that time, R. Kelly set up shop at Battery for five years and persuaded George to exclusively join his team as mixer, recording engineer

and programmer, also recording at facilities worldwide. “I was the R&B dude,” he says. “He liked me, and we hit it off.”

These days, R. Kelly has become notorious in the wake of sexual misconduct allegations, but at that time, says George, the work was rewarding. Indeed, he was awarded a Grammy certificate in 1997 in the Best Male R&B Vocal Performance category for mixing and recording “I Believe I Can Fly,” which won three Grammys. “He’s the most prolific songwriter I’ve ever worked with. One night at Record One in L.A., he wrote six

songs, finished vocals on three—and three became platinum-selling records.”

Back then, the sessions could be epic. For “I’m Your Angel,” he recalls, “It was a 36-hour roll, from kick drum to final vocals.” A few weeks later, Kelly decided to make it a duet with Celine Dion, and made plans to take his tour bus to Canada to cut her vocals. But he wasn’t sure what key it should be in, says George. “Because I did all the MIDI programming, I had to program and record the song in six different keys—all in one night, to 48 tracks of analog tape.” The song ended up at Number One on the *Billboard* Hot 100 for seven weeks.

Eventually George left Battery Chicago and moved to New York City. There, he worked with a diverse array of artists: Lil Jon, Max Martin, Michael Jackson, Usher, Ric Ocasek (on solo projects plus the final Cars album, 2011’s *Move Like This*), Maroon 5 and others. But in 2004, file-sharing took its toll, he recalls, and the bottom dropped out of the market. Manhattan studios started closing and the labels began major layoffs.

“I remember doing this record,” says George, “a band that Ric Ocasek produced. He got a gig, VP of A&R at Elektra, and his first signing was the Stratford 4. We were the only people in Electric Lady Studios; it was like a graveyard. I was so lucky to

(continued on page 24)

## A Joy-ful Reunion

BY CLIVE YOUNG

PETALUMA, CA—Life can take you in interesting directions. In 1988, it took Too Much Joy, an indie pop-punk band from Scarsdale, NY, to Venice, CA, to record its first proper album at the now-defunct Radio Tokyo Studios with producer Michael James. Realizing they had something special on their hands, but that they needed to go over budget to do it justice, each band member—and James—threw in \$800 apiece to buy an extra week of studio time. It was a good investment; the record, *Son of Sam I Am*, vaulted both the group and its producer to the big leagues as the band signed to a Warner Brothers label and re-released the album, scoring an MTV hit with their rocked-out cover of LL Cool J’s “That’s a Lie.”

After a string of albums, the



Michael James’ mix facility in Petaluma, CA, centers around a unique analog console that contains a Dangerous Music summing, monitoring and conversion platform.

group wound down in the late '90s as band members scattered across the country to pursue new careers. This past January, however, found

three-quarters of the group—singer Tim Quirk, bassist Sandy Smallens and drummer Tommy Vinton—coincidentally all in New York at the

same time. Sensing an opportunity, a last-minute session was booked with engineer Matt Noble at WS-

(continued on page 24)

H O W

D E E P

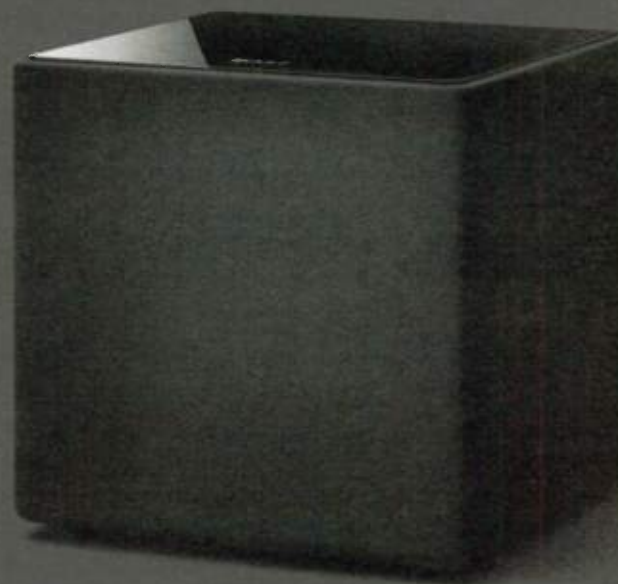


I S



Y O U R

L O V E ?



Explore new dimensions in sound with Kube, KEF's powerful range of subwoofers that open up sound's hidden depths. Each elegantly designed, fully sealed unit unleashes explosive power effortlessly, intuitively, intelligently. iBX technology extends the bass depth dynamically, unlocking the full potential of the driver's power. Delivering immersive music and home theatre sounds that drive you deeper into the heart of the performance.

KEF.COM



OBSESSED WITH HIGH RESOLUTION

## A Vintage Vibe in Modern-Day Memphis

BY STEVE HARVEY

MEMPHIS, TN—Memphis has a unique place in American musical history, birthing a string of blues, soul, R&B, rockabilly, rock 'n' roll and pop hits in the 1950s, '60s and onward out of legendary studios such as Sun, Royal, Stax, Ardent and American. Memphis Magnetic Recording, a new studio that opened in February, just a few blocks from Beale Street, aims to build on that heritage with a design aesthetic and an equipment list straight out of an earlier era.

Memphis Magnetic Recording was named by owners Scott and Claire McEwen as a reference both to the city's pull on them as well as the studio's many tape machines. Scott previously owned and operated Frys Pharmacy Recording, a classic analog facility in Nashville. In 2017, they found a 1927 building with foot-and-a-half-thick brick walls in Memphis' South City neighborhood, gutted it and, in partnership with Bob Suffolk of Suffolk Studio Design, have created a facility with a look and a vibe straight out of the '60s and '70s, with equipment to match.

Engineer and producer Scott is originally from Detroit, but he has long felt the attraction of Memphis. "Every time I went to Memphis as a musician to play, I always felt at home," he says. With costs rising in Nashville, "I had a soul-searching moment where I thought, where do I really want to be?" Other than at the beach, he laughs, the answer was Memphis. The energy of the city reminds him of New York, where he also once lived, he says, and has a grittiness not found in Nashville. "And I feel like with independent music, you need some of that."

The building had been a grocery store, a taxicab office and, until recently, a document storage facility. Support from the Economic Development Growth Engine for Memphis and Shelby County allowed the footprint to be expanded to about 2,800 sq. ft. with the addition of a new ADA-compliant entryway and lobby area, and also enabled other upgrades and exterior improvements. Self+Tucker Architects designed the new floor plan.

McEwen's previous studio in Nashville was a one-room layout, a concept he picked up from working with Eric Roscoe Ambel at the producer's 33 1/3 Recording in Brooklyn. "It was the first time I experienced a control room that wasn't



The control room at Memphis Magnetic centers around a 28-input, 16-bus Sphere Eclipse A originally built for the Grand Ol' Opry's broadcast facility in the 1970s.

behind glass. The communication was amazing." But during 13 years of operation at Frys, the downside became apparent. "As the engineer, you can't get away from the sound, so at the new place, I went back to a traditional control room," he says.

Suffolk, who is also a musician and producer, designed Memphis Magnetic using elements from some of his favorite facilities. He started as a tea boy (runner) at London's Pye Recording Studios, where the first band he worked with was The Kinks, before breaking into the design business when he was asked to renovate Trident Studios in the 1980s. A resident of Texas since the '90s, he has since designed more than 200 rooms. Along the way, he also founded English new wave precursors the Fabulous Poodles and worked with musicians such as Kate Bush and her band.

When Suffolk saw the Memphis Magnetic building, "I said, let's have a big tracking room. I did the acoustics in such a way that we have probably a 9.5 millisecond delay; it's a nice, bright room. We're getting some great results," he reports. "I like to build what I call purpose-built vintage," he adds, noting that the wall finishings include classic drilled acoustic tiles.

McEwen adds that the room, materials and colors are also a mix of classic studios that he really likes. For example, the tracking room is similar in dimensions to the RCA B tracking room in Nashville where he has worked, most notably on JD McPherson's *Undivided Heart and Soul* album. "Lots of the other elements are lifted in style and spirit from some classic vintage studios in America and England," says McEwen.

Memphis Magnetic is well provisioned with tape recorders. McEwen's collection includes a couple of Ampex MM1200 machines from the 1970s with 2-inch 16-track or 24-track headstacks; an all-tube 3-track Ampex 300-3 1/2-inch from 1958; 1950s vintage mono and stereo Ampex 351 1/4-inch mastering decks, and several Ampex AG440 1/4-inch 2-track mastering machines from the 1960s.

"I'm a fan of 2-inch 16-track tape; I feel like it's the Holy Grail, as far as tape formats," says McEwen. The studio also has a Pro Tools rig, rarely used, but whereas a DAW can offer almost unlimited tracks and encourages leaving decisions until the mix, with tape, he says, "You have to commit. It forces your hand. There are a whole bunch of engineering things that you have to do, because there aren't endless tracks." And that's the way McEwen likes it: "I love being on consoles and on tape."

Indeed, pride of place at Memphis Magnetic goes to a very special console—a 28-input, 16-bus Sphere Eclipse A that was custom-built for the broadcast facility at Nashville's Grand Ole Opry. "At the time, it was made—which was the '70s—they could have bought anything, and they bought a Sphere. That's saying something," says McEwen. "It's a stellar console." The company only built about 50 consoles, many of them for Nashville clients but also for the White House and the president of Peru; less than 25 are believed to still exist.

As for outboard gear, "We have all kinds of stuff; I've been buying gear forever," says McEwen. A few choice items include a couple of Universal 1176 and a pair of Urei



Owners Scott and Claire McEwen and Bob Suffolk of Suffolk Studio Design aimed to imbue a "purpose-built vintage" vibe in the newly built studio.

LA-4 compressors, a Spectrasonics 610 compressor and a few dbx units. Spring reverbs from Fairchild, Fender and MicMix are available and there is a venerable Roland Space Echo. Microphone choices range from vintage AKG, Neumann and RCA tubes and ribbons, to newer Audio-Technica, Sennheiser and Shure models.

The booking schedule started to fill up as soon as the doors opened. Local freelance engineer Adam Hill, known for his work with the likes of Big Star, Tav Falco and Jack White, has already brought in a few projects. JD McPherson has also been in, says McEwen.

But he is especially excited about a project that put a young singer from the Netherlands together with some Memphis Music Hall of Famers. "We're bringing new blood in, somebody from Europe, using a songwriter from down the street and guys like Rev. Charles Hodges on keyboards and Leroy Hodges on bass," he says, referring to the Hi Rhythm Section, Royal Studios' house musicians who played on Hi Records classics such as Al Green's "Love and Happiness."

Memphis Magnetic has opened at an opportune time, with the city currently undergoing a massive revitalization. "It's the underdog, coming out of a dark period," says McEwen. But now that he's established roots in the city, he's feeling protective: "I've stopped telling people how cool Memphis is, because I don't want people coming here and ruining it!"

Memphis Magnetic  
www.memphismagneticrecording.com

## Remote Possibilities



BY CRAIG ANDERTON

Decades ago, multitrack tape recorders had bulky remote/autolocator boxes, trailing multiple umbilical cables in their wake. Remotes were essential: An engineer couldn't sit next to a giant tape recorder while at the mix position. As tape recorders became smaller, so did the remotes. And with more people piloting their own sessions, remotes became even more crucial. For example, as a guitarist, I needed a hands-free recording solution, so I built a punch-in switch for the TEAC 3340 4-track (fortunately, TASCAM liked the idea enough to include footswitch jacks in subsequent machines). Other remote alternatives appeared, from wireless QWERTY keyboards to music keyboards that doubled as control surfaces.

Now smartphones and tablets have fostered a veritable explosion in remote control options. A visit to the Apple App Store or Google Play reveals a growing number of apps, like the ultra-customizable, universal TouchOSC control surface by Hexler. It sends and receives OSC (Open Sound Control) and MIDI messages via Wi-Fi or Apple's CoreMIDI IAC (Inter-Application Communication). Liine's Lemur is another popular OSC/MIDI controller that's excellent for DAWs, and it's deep (for example, you can create a customized interface).

Other general-purpose remotes include DAW Remote, which supports the Logic Control, HUI and Mackie control protocols, and which connects to Mac/Windows computers via Wi-Fi or USB/MIDI cable. A similar app, DAW Control, supports Logic Control and Mackie Control-friendly applications (its interface even looks like a Mackie Control), although it's optimized for Apple Logic and Ableton Live. And for MIDI only, there's Sonic Logic's Knob Lab. It works with USB, Wi-Fi, Bluetooth and IAC, but with a device-to-MIDI adapter, can also use CoreMIDI to send MIDI signals to hardware devices.

Although some of these appear to be Mac exclusives, there's a PC solution: Tobias Erichsen's rtpMIDI-driver for Windows 7 and higher, which is compatible with the network MIDI (AppleMIDI, aka RTP-MIDI) included in Apple iOS and

OS X. rtpMIDI-driver exposes virtual MIDI ports to applications running under Windows, which allows DAWs to communicate with other computers over Ethernet or Wi-Fi networks. And when you really need something universal for Mac or Windows programs, there's TeamViewer. It's designed for secure remote desk-

top access, but even the free version makes a usable remote control for pretty much anything that runs on a computer.

In addition to general-purpose apps, there are also manufacturer- or product-specific ones, which typically give a better setup and user experience than general-purpose software. For example, Steinberg's Cubase iC Pro does everything from providing a project overview, to mixing, to al-

lowing the use of custom keyboard shortcuts. It even provides four dedicated cue mixes, so musicians doing overdubs can adjust a mix with an iPhone or iPad. PreSonus' Universal Control application provides remote control, as well as drivers, for multiple products across its lines of mixers, interfaces, control surfaces and software (i.e., Studio One and Capture). You'll also find apps for QSC's TouchMix,

(continued on page 48)



TRUE  
OUTDOOR  
PROTECTION

# SETTING STANDARDS

UL 50E  
APPROVED

RUGGED  
& RELIABLE

ENCLOSURE TYPE 3  
& IP65 RATED

CORROSIVE GAS  
& UV RESISTANT



## XLR TOP

Neutrik's new range of TRUE OUTDOOR PROTECTION products for demanding outdoor applications is setting standards. UL50E approved for outdoor use, UV resistant and IP65 rated. For more information visit [www.neutrik.com](http://www.neutrik.com)

NEUTRIK



**ARTIST:** TAAALI  
**ALBUM:** I AM HERE  
**LABEL:** RAINBOW BLONDE RECORDS  
**PERSONNEL:**  
**Produced by:** Josiah Kosier, Talia Billig, Brian Bender, Jacob Bergson  
**Engineered by:** Josiah Kosier, Brian Bender  
**Mix Engineer:** Brian Bender  
**Studios:** Studio Awesome and Motherbrain West (both Los Angeles, CA)  
**Mastered by:** Chris Gehringer at Sterling Sound (Edgewater, NJ)  
**EQUIPMENT NOTES:** ProAC Studio 100 monitors, Avid Pro Tools, Ableton Live



**ARTIST:** RYAN POLLIE  
**ALBUM:** RYAN POLLIE  
**LABEL:** ANTI-RECORDS  
**PERSONNEL:**  
**Produced by:** Ryan Pollie  
**Mix Engineer:** Brian Rosemyer  
**Studio:** Lake Rescue Recording (home studio)  
**Mastered by:** Gavin Lurszen  
**EQUIPMENT NOTES:** 26-channel custom MCI 400 series console, 16-channel Electrodyne console, ProAC Studio 100 monitors, Tascam 388, Logic Pro X



**ARTIST:** HUNDRED WATT HEART  
**ALBUM:** TURBULENT TIMES  
**LABEL:** WHOLE LEAP RECORDS  
**PERSONNEL:**  
**Produced by:** Kirk Douglas, Paul Klimson  
**Engineered by:** Paul Klimson

**Mix Engineer:** Paul Klimson, Kirk Douglas  
**Studios:** Electric Lady Studio (New York, NY), Gibson Showroom (New York, NY), GB's Juke Joint (Long Island City, NY)  
**Mastered by:** Vlado Meller at Vlado Meller Mastering (Charleston, SC)

**EQUIPMENT NOTES:** Neve 8078, Trident 88, Euphonix Artist Control, Yamaha NS10 monitors, ProAC monitors, Dynaudio BM5 monitors, Avid Pro Tools



**ARTIST:** SON OF CLOUD  
**ALBUM:** SON OF CLOUD  
**LABEL:** MASON JAR MUSIC  
**PERSONNEL:**  
**Produced by:** Jeremy McDonald, Russell Durham  
**Engineered by:** Jonathan Seale  
**Mix Engineer:** Jacob Blumberg  
**Studio:** Mason Jar Music  
**Mastered by:** Mason Jar Music  
**EQUIPMENT NOTES:** Neve 542, Focal Solo 6 monitors, Avid Pro Tools



**ARTIST:** HEATHER WOODS BRODERICK  
**ALBUM:** INVITATION  
**LABEL:** WESTERN VINYL  
**PERSONNEL:**  
**Produced by:** Daniel James Goodwin, Heather Woods Broderick  
**Engineered by:** Daniel James Goodwin  
**Studio:** Isokon (Woodstock, NY)  
**Mastered by:** Daniel James Goodwin at Isokon  
**EQUIPMENT NOTES:** MCI 416a console, Barefoot MicroMain27 and Harbeth P3ESR monitors, Avid Pro Tools



**ARTIST:** LOCATE YOUR LIPS  
**ALBUM:** FOR KENNY  
**LABEL:** HAPPY GROWL RECORDS  
**PERSONNEL:**  
**Produced by:** Jim Eannelli  
**Engineered by:** John Walsh, Jim Autz  
**Studios:** Trax 32 (Mequon, WI), Traum Studios mobile van (Milwaukee, WI)  
**Mastered by:** Gary Tanin at Daystorm Music (Milwaukee, WI)  
**EQUIPMENT NOTES:** 24-track MCI console; Yamaha NS-10M, Klipsch Heresy, Auratones monitors; Avid Pro Tools



**ARTIST:** JOSEPH PATRICK MOORE  
**ALBUM:** NEVADA SUN  
**LABEL:** BLUE CANOE RECORDS  
**PERSONNEL:**  
**Produced by:** Joseph Patrick Moore  
**Engineered by:** Joseph Patrick Moore  
**Studios:** Abstract Truth Recording Studios (Henderson, NV)  
**Mastered by:** Rich Breen at Dogmatic Sound Studio (Burbank, CA)  
**EQUIPMENT NOTES:** ADAM Audio A7X, Cerwin Vega and Bose radio monitors



**ARTIST:** MASKED INTRUDER  
**ALBUM:** III  
**LABEL:** PURE NOISE RECORDS  
**PERSONNEL:**

**Produced by:** Roger Lima, Mike Kennerty, Masked Intruder  
**Engineered by:** Roger Lima, Mike Kennerty  
**Mix Engineer:** Jason Livermore  
**Studio:** The Moat House (Gainesville, FL)  
**Mastered by:** Jason Livermore at The Blasting Room (Fort Collins, CO)  
**EQUIPMENT NOTES:** Trident 65 console, Avid Pro Tools HD; Apogee A/D converters; Neve, API pre's



**ARTIST:** TOEBOW  
**ALBUM:** THEMES  
**LABEL:** IMAGINATOR RECORDS  
**PERSONNEL:**  
**Produced by:** D. James Goodwin, Toebow  
**Engineered by:** D. James Goodwin  
**Studio:** Isokon (Woodstock, NY)  
**Mastered by:** Dave Gardner at Infrasonic Sound (Los Angeles, CA)  
**EQUIPMENT NOTES:** MCI 416a console, Barefoot MicroMain27 and Harbeth P3ESR monitors, Avid Pro Tools



**ARTIST:** TAYLOR ALEXANDER  
**ALBUM:** GOOD OLD FASHIONED PAIN  
**LABEL:** HAIL MARY RECORDS  
**PERSONNEL:**  
**Produced by:** Brendan St. Gelais  
**Engineered by:** Brendan St. Gelais  
**Mix Engineer:** Mark Petaccia  
**Studio:** The Smoakstack (Nashville, TN)  
**Mastered by:** Sam Moses  
**EQUIPMENT NOTES:** SSL 4056G+ console; Avid Pro Tools 12 HDX with Apogee Symphony 56x56 I/O; Yamaha NS-10, KRK Rocket6 studio monitors

## ATCs Deliver for Cherney

HOLLYWOOD, CA—Earlier this year, veteran engineer Ed Cherney garnered his fourth Grammy, for Willie Nelson's tribute album to Frank Sinatra, *My Way*, which he tracked over five days at Studio 2 at EastWest Studios in Hollywood and mixed in his room, Studio Ed, at the Village in West L.A., entirely on ATC SCM45A ([www.trans-audiogroup.com](http://www.trans-audiogroup.com)) monitors.

## Timbaland Studio Sold

VIRGINIA BEACH, VA—Recording/mixing engineer and event coordinator Josh Haddad has purchased Timothy "Timbaland" Mosley's Thomas Crown Studio complex, a two-story, 6,756-square-foot destination facility designed by WSDG Walters-Storyk Design Group ([www.wsdg.com](http://www.wsdg.com)) and outfitted with a Neve VR 72 console, renaming it Virginia Beach Recording Arts.

## Fenix Reborn with PMC

BIGGLESWADE, UK—Fenix recording studio in Varnhem, Sweden, owned by musician Lars Hallbäck, has rebuilt its main control room, calling on Chris Walls of Level Acoustic Design to resolve the studio's acoustic issues in preparation for the installation of a new PMC ([www.pmc-speakers.com](http://www.pmc-speakers.com)) QB1 XBD-A monitoring system.

## Animalistic Recording

GUILDFORD, UK—Sound designer and field recordist Mattia Cellotto has been building his *Animal Hyperrealism* sounds collection using a JoeCo ([www.joeco.co.uk](http://www.joeco.co.uk)) Cello interface, connected to a Fusion 5 tablet to record everything at 384 kHz with Reaper in order to record lemurs, leopards, parakeets and owls, among others, capturing frequencies typically undetectable by the human ear.

# CATDUSA

## RJ45 breakout solutions.



### The Whirlwind Catdusa CT-F & CT-M

Catdusa **CT-F** and **CT-M** are the latest addition to the Catdusa family. Like other Catdusa products, they use Cat cable to transmit four channels of analog audio. Both have a Neutrik Ethercon connector broken out to four XLRs on 18 inch tails. They are wired with 110 ohm cable to maintain AES and DMX performance when using shielded Cat cable. The CT-F has four female XLRs, while the CT-M terminates to four male XLRs. They can be used together to create a simple 4 channel fan to fan snake, or combined with other Catdusa pieces to create a flexible and comprehensive stage sub snake system. Log on to [whirlwindusa.com](http://whirlwindusa.com) to see the entire Catdusa family, and find out what RJ45 solution works best for you!



**whirlwind**

1-800-733-9473  [whirlwindusa.com](http://whirlwindusa.com)

Made in USA



## Stevo

(continued from page 18)

be working. We do the record, master it with George Marino at Sterling Sound, hold the record listening party at Electric Lady, and the following week, Elektra is no more." In 2015, the album finally saw the light of day on Spotify.

George had no work coming in, he says, when Zomba Gospel called and asked if he could mix a gospel track at home on his Pro Tools rig because they didn't have the budget for a studio. "I did it in my bedroom in Manhattan and it turned out really good—the first mix I ever did in-the-box. They asked me to do the album, but my neighbors were beating on the walls." Happily, he and his wife had a weekend getaway 30 minutes south of Woodstock, so he packed up his gear and set up Gimme That Sound Productions, his recording, mixing and production company and record label, in a refurbished barn. The album, the McClurkin Project's *We Praise You*, won a Stellar Award for Best Con-

temporary Group of the Year.

The upstate New York studio gave George an opportunity to return to his first love, rock 'n' roll, he says. He signed a few artists and released a handful of records, including for My Pet Dragon, with whom he enjoyed modest success, producing three re-

essential mixing and tracking signal chains. In addition to plug-ins by Nu-Gen, Waves, Valhalla DSP, Sound-Toys and Avid, he has a Neyrinck-assisted Digidesign Control 24 work surface and Heritage Audio RAM 5000 monitor system. Outboard, there are several Focusrite ISA 110

ers because it sounds bigger."

George has his favorite mix processing gear, too, including a Publison Inferno and a Lexicon PCM80. "I use one patch, by Scott Martin Gershin, called String Chamber, a 3D reverb. I've been using it for 20 years." On his Eventide Orville, he says, one engine is always set to the H910 pitch-shifter. "On the other side, I'll dial in a plate or a Black Hole reverb."

George previously picked up work as score engineer and score mixer on a teen feature, *The Outcasts*, and several episodes of streaming series *Project Mc²*, so after decades of record-making, he is focusing on getting more post-production work. Last year, he signed on as a freelance re-recording mixer for a foreign language dub of animated series *Splash and Bubbles* at SPG Studios. In the meantime, at his new room, he's ready to give his NS10 surround speaker system a workout with some 5.1—soon to be 7.1—mixes. But more than anything, he says, "I'm climbing out of my skin to do an Atmos mix."

Gimme That Sound  
www.gimmethatsound.com

"I did it in my bedroom in Manhattan and it turned out really good—the first mix I ever did in-the-box. They asked me to do the album, but my neighbors were beating on the walls."

Stephen "Stevo" George

ords and negotiating various licensing deals before the band imploded. In late November 2015, a fire destroyed the couple's house. They rebuilt, but weary of the Hudson Valley winters, they relocated to Los Angeles in 2018, where George subsequently set up Gimme That Sound West, moving a choice selection of his equipment into a multiroom complex in Burbank, CA.

The gear in George's new hybrid analog/digital room represents his

mic pre/EQs; Harrison, API and Creation mic pre's, Focusrite Red 3 compressor/limiters, Manley Vari-Mu and a Tube-Tech CL 1B opto-compressor.

His lead vocal chain includes a compressor/limiter and gate with optionally patchable transformers built by his mentor, Bob Lucas of Professional Audio Works. It's one of only two in existence. "It sounds awesome, with no artifacts," he reports. "It really clamps down. I always go with the transform-

## Too Much Joy

(continued from page 18)

DG-designed Riverworks Recording (Dobbs Ferry, NY) to capture "Death Ray Machine," a stray song from 1991 that the band had never gotten around to recording.

While Too Much Joy had to head cross-country 30 years earlier to record in California, this time their tracks made the trek; the song was sent to Los Angeles so guitarist Jay Blumenfeld could overdub his guitar parts with engineer Johannes Luley. Continuing the remote reunion, the group corralled Michael James into mixing the song, only their second collaboration since *Son of Sam I Am*. It was a good fit, too, as James spent the intervening decades producing and engineering the likes of Hole, Jane's Addiction, Reverend Horton Heat, L7, New Radicals and others before becoming a mix specialist in Los Angeles and the Bay Area.

While James produced Too Much Joy at Radio Tokyo back in the day



Mix specialist Michael James (pictured) reunited with Too Much Joy, one of the first bands he produced, to mix the group's reunion single.

using a prosumer desk and a 3M M79 24-track tape machine, 30 years' worth of audio advancements meant this time the band's sound came together on a unique analog console built around a Dangerous Music summing, monitoring and conversion platform, with 64 channels of 2-Bus+, Convert-8 DA, Con-

vert-2 DA and Convert AD+.

"Because my signal path has a low noise floor and my Dangerous Music converters are so fast and accurate, I was able to stay out of the way and let the band's performances do the talking," said James. "Dangerous Bax and Manley Enhanced Pultec EQs were applied tastefully. Compression was less subtle, courtesy of Avalon AD2044, Manley ELOP and Variable Mu on buses, Purple Audio MC76s on individual vocals and Empirical Labs Distressors on a parallel drum bus. A Dangerous Compressor, always my last line of defense in the signal path, glued everything together before hitting the Convert-AD+ on the way back into Pro Tools Ultimate

HDX, where I printed the final mix."

With the mix completed, revisions went quickly thanks to a real-time live stream of James' console via Nicecast and iTunes. Band members 3,000 miles away were able to listen and comment as if they were sitting at the console; by the next day, the song was released to the world.

"I often get asked about the difference between mixing independent versus major-label albums, and a track like 'Death Ray Machine' is a great example," said James. "TMJ was a major-label band, but they released this single independently. Nonetheless, they are accustomed to—and expect—a radio-ready, major-label sound. So what did I do differently? Absolutely nothing.

"From my perspective, the biggest differences are the budget, terms of payment, number of revisions, layers of creative thumbprints from upper management and fresh flowers. Indies have less money to spend, therefore I have less time to get it right and they have less time to make decisions—but the quality always needs to remain top shelf. You never know who's listening; that's what we learned back then with *Son of Sam I Am*, so I make sure every mix I send out the door reflects that today."

Too Much Joy  
www.toomuchjoy.com

Michael James  
www.michaeljamesproducer.com

"I often get asked about the difference between mixing independent versus major-label albums, and a track like 'Death Ray Machine' is a great example."

Michael James



# Stitcher's Flexible New Facility

BY STEVE HARVEY

NEW YORK, NY—Podcast network Stitcher recently moved into its new headquarters in Midtown Manhat-

tan, building out a 2,000-square-foot production complex comprising three studios, two edit rooms and two iso booths designed in concert with WSDG Walters-Storyk Design Group. The new facilities have been outfitted to accommodate Stitcher's typical workflow, which can often involve collaboration between talent, producers and engineers at the company's offices in Los Angeles and San Francisco.

Romina Larregina, partner, director of production at WSDG, reports that her biggest challenge was ensuring consistency between the new studio spaces. "One of the things that Stitcher looked for was identical sound in every room. That was challenging, to make sure that the reverb time was the same in all the studios, even though the shapes, sizes and volumes were different," she says.

The floating floor, room-within-a-room design provides critical isolation for speech recording, both from the potentially noisy neighborhood,

where the company occupies an entire floor in a building overlooking Bryant Park, as well as between studios. To achieve consistent responses within each space, WSDG implemented custom low frequency absorption, soffits, ceiling treatment and corner treatments to target specific frequencies, says Larregina. WSDG installed RPG's hybrid BAD diffusion/absorption panels at the listening position in each control room, she adds.

According to John DeLore, senior production manager at Stitcher's New York office, the choices of audio technology at the new facility were a combination of recommendations from Larregina and the WSDG staff and from Stitcher's Los Angeles and New York teams. Key to the com-

pany's content creation workflow is a Dropbox scheme implemented by Dave Seidel, Stitcher lead systems engineer, he says.

Every studio is hooked up to an SNS (Studio Network Solutions) EVO shared storage server hosting Dropbox, DeLore explains. Those Dropbox folders are synchronized everywhere within Stitcher's network, enabling engineers, producers, hosts and other contributors to collaborate from multi-

(continued on page 26)



All the recording facilities in Stitcher's new headquarters, including Studio A's control room seen here, were designed by Walters-Storyk Design Group.

## briefs

### Thompson Digs in for Dialogue

ATLANTA, GA—Sound mixer Chykeria Thompson, founder of Sound Speeds, has been using an arsenal of Lectrosonics ([www.lectrosonics.com](http://www.lectrosonics.com)) gear when working on projects such as the TV series *The Walking Dead*, the Emmy Award-winning television show *Atlanta Eat* and the documentary *This World Is Not My Own*, bringing to bear SRC and SMV transmitters and the SPDR recorder.

### One Union Rises from the Ashes

SAN FRANCISCO, CA—Following a devastating fire and a complete rebuild, Bay Area post-production sound company One Union Recording ([www.oneunionrecording.com](http://www.oneunionrecording.com)) has reopened with five new studios designed for mixing, sound design, ADR, voice recording and other sound work, all outfitted with Avid/Euphonix System 5 digital audio consoles.

### TODD-AO Unveils PhADR iOS App

LOS ANGELES, CA—Todd-AO has released PhADR (<https://toddao.com/#phadr>), an iOS app for iPhone or iPad that is designed to help actors record and replace their dialogue, commonly known as ADR, in the location of their choice, in sync with a QuickTime video, then generate a WAV file to send to the post-production team.

### NextRadioTV Deploys Riedel Network

WUPPERTAL, GERMANY—NextRadioTV has deployed a 204-node Riedel Communications ([www.riedel.net](http://www.riedel.net)) MediorNet real-time signal network encompassing 18 MetroN core fiber routers and 186 MicroN high-density media distribution network devices as the backbone for its new audiovisual infrastructure at the broadcaster's new facilities on the Altice Group campus in Paris, France.

## IIIIII

# Sonifex Marks 50th Anniversary

IRTHLINGBOROUGH, UK—Broadcast audio gear manufacturer Sonifex celebrated its 50th anniversary in March. Sonifex designs and manufactures audio products for the radio and TV industry and currently exports more than 70 percent of its products out of the UK.

The company was founded by Paul Brooke in April 1969 in the front room of his house in Wellingborough, UK. While Brooke had trained as an electronic engineer at Marconi, he had been recently laid off from an electronics job and used the time to start designing and making a mixer that he could sell to film and recording studios in London. Producing custom electronic designs became his trade, and in 1973, he moved to a factory in Irthlingborough.

In the late '70s and early '80s, Sonifex become known for designing and building successively better cart machines used for playing radio jingles, and higher sales led to the company moving in 1985 to where it is today: a purpose-built factory in Irthlingborough. Cart machine sales increased rapidly during the late '80s, resulting in, at one point, a 35-week lead time for cart machines from Sonifex.

Always a family-run business with various relatives working as part of the staff, son Marcus Brooke took over the company as managing director in 1994. Since then, the company has had to reinvent itself a number of



The Sonifex team outside company headquarters.

times as technologies change product demands and categories. Cart machines were redesigned to floppy disk machines to PC-based playout

systems; tape-based loggers changed to hard disk-based loggers to software loggers; analog audio made way for

(continued on page 26)

**WE'VE GOT THE PROS COVERED.**

**PRO** Look.  
**PRO** Build.  
**PRO** Results.

"Since installing GIK treatments, the sonic difference has been really astounding."

RUPERT NEVE DESIGNS

"The GIK Acoustics Monster Bass Trap was the perfect trap to reduce a resonance that I detected in studio B."

BOB KATZ, MASTERING ENGINEER

"The wide selection of colours, sizes and modularity of their panels were a major factor in our decision to use GIK products."

LUCA BARASSI, ABBEY ROAD INSTITUTE

GET HELP WITH ROOM SETUP

FREE ACOUSTIC ADVICE  
[GIKACOUSTICS.COM](http://GIKACOUSTICS.COM)  
(404) 492-8364

## Carolla Podcast Updates Audio Equipment

LOS ANGELES, CA—Adam Carolla's name may be in the title, but making his podcast *The Adam Carolla Show* happen is a team effort, as the affable host is backed by executive producer Chris Laxamana, who oversees production from creation to distribution.

"We try to keep the shows true to Adam's radio roots, so we record everything straight to tape and we release the show in mono 64 kbps, which is just crazy," said Laxamana. "We want it to be a fast download and easy to stream for people using their cellular data. And we want to make sure that every word is clearly

understood, and it sounds good, even on a phone, anywhere you go."

The podcast has been on the air for 10 years, and the studio's analog mixer was starting to get a little long in the tooth; with that mind, Laxamana began researching a replacement desk, looking for clarity but also benefits that a modern digital desk brings to the table, such as snapshots, since the desk would be used by visiting engineers to record other podcasts. "With the Allen & Heath SQ-6, we could record scenes for our guest engineers and call them up with the push of a button,"



Adam Carolla's Studio with Allen & Heath SQ-6 Digital Mixer

he said, "and, with all its compressors, gates and EQ, the SQ-6 was a no-brainer."

An SQ-6, purchased from FP Logistics in Anaheim, CA, now records every show. Laxamana noted, "We do a lot of music cues and we can group all the mics in a mix, all the sound ef-

fects in a mix, and give everyone their own headphone feed. We are in the business of being heard, and the SQ-6's sound is phenomenal. That helps make us the best sounding podcast in the business."

Allen & Heath  
[www.allen-heath.com](http://www.allen-heath.com)

## Stitcher

(continued from page 25)

ple locations, handing off and updating audio files as work progresses.

While the Stitcher app is one of the preeminent podcast listening platforms—it has been described as the most popular alternative to the default Apple podcast app—Stitcher is also a content network with a large catalogue of original programming. Much more than simply spoken word, Stitcher Premium shows such as *Wolverine: The Long Night*, Marvel's first scripted podcast, and *Stranglers*, a documentary series on the Boston Strangler that DeLore produced, feature layers of sound design and custom music, produced in-house.

"Our belief here is that the future of the medium will mirror TV and film," says DeLore. "As the marketplace becomes more and more crowded with content, attention to technical and artistic details will be a big part of creating content that stands apart from the rest."

Voice recording may take place in one room, editing in another and mixing in yet another, so certain pieces of gear are standardized at the new facility and between Stitcher locations. Each of the new control rooms features an Allen & Heath Qu-16 console, the desk of choice at the L.A. facility, DeLore reports. "It has a good reputation, good sound, it's solidly built and doesn't crash. We love that it's got the Qu-Drive function; we can hook up a drive and do a multitrack backup in parallel with Pro Tools," he says.

Microphones throughout are Shure SM7B dynamics, paired with Cloud Cloudlifter CL-4 mic activators to enhance and boost the signal

level going into Pro Tools, without noise or artifacts, says DeLore. "It's a flat mic, really clear, with no coloration. We have other mics in our closet in case somebody wants to come in and use a U 87 or an RE20."

Each of the three studio control rooms and the two edit bays also include a pair of arm-mounted SM7s, he says, for added flexibility. Mimicking the company's west coast Earwolf studio setup, "The engineer can be on-mic from the control room" if desired, he says. "And if the interviewer wants to engineer, we have mics in the room."

Conversely, computer screens enable remote operation of Pro Tools from the recording spaces. "The Allen & Heath boards have Bluetooth

Qu-32, for its extra inputs, and additional outboard, including a Grace Design m103 channel strip. "Whether you're recording a voice for a spoken word podcast or a musical lead vocalist, we wanted Studio A to have some boutique options in the mic pre department."

Additional processing for music production includes a Warm Audio Tone Beast, a Foote Control Systems P3S stereo compressor and a Lexicon MX400 reverb. "Lexicon is great and we're all familiar with it," says DeLore, whose background includes time working at Right Track Recording in Manhattan, as well as Gimlet Media and WNYC Radio. Since launching the facility, Stitcher has added a Boston upright piano, drum kit and Am-

phones. "Sennheiser are the official headphones of Stitcher. As part of that partnership, we also stocked our mic closet with a nice selection of Sennheiser and Neumann microphones."

In addition to the studios and edit rooms are a pair of iso booths where producers can escape for a mix or playback session. Summing up the entire facility, DeLore notes, "Everything is set up with as much flexibility as we could build into it."

Walters-Storyk Design Group  
[www.wsdg.com](http://www.wsdg.com)

Neumann  
[www.neumann.com](http://www.neumann.com)

"One of the things that Stitcher looked for was identical sound in every room."

Romina Larregina

remote capabilities from a tablet, so we've also experimented with that," says DeLore.

About 75 percent of sessions involve just a host and a guest, he says, in person or on the phone (the studios are equipped with Telos Hx series telephone hybrid units). For that reason, the control rooms offer two channels of AEA RPQ2 mic preamps. "It's giving us a little extra juice and a little extra color and warmth," he says.

Studio A, a larger space that incorporates an iso booth and a sound lock, is multi-use. "It's designed for large ensemble recordings, for original podcast score recording and for doing a live music podcast, hopefully; nobody has cracked that code yet, but it's going to happen and I'm sure we'll be in that space."

Control room A houses an A&H

peg bass amp, he also reports.

Monitoring in the studios and edit rooms, on Larregina's recommendation, includes Neumann KH 120 two-way speakers, while the A room additionally features a pair of three-way Neumann KH 310 monitors. "At the point of ingest, we're just listening to voice," says DeLore, "so we need to be able to hear everything at a good listening volume, and the Neumann is a clean speaker. The 310s are designed to provide a wider sweet spot, which is ideal for podcasts which can have production teams of four to five people who need to all sit in the studio and be able to hear the same mix." A PreSonus Monitor Station V2 manages source selection and speaker level control in every room.

All of the studios and control rooms feature Sennheiser head-

## Sonifex

(continued from page 25)

digital audio to now IP audio. The company's current-day Redbox range of analog and digital audio interfaces grew out of this need to keep pace with the times.

Nonetheless, some things haven't changed. All Sonifex products are designed and manufactured in-house in Irthlingborough. The R&D team still does its own analog and digital circuit, hardware and software design. A surface mount manufacturing line was introduced in 1996 and was replaced with a newer line in 2011, able to place dense BGA FPGAs and small components. An engineering workshop has CNC machines to manufacture the product chassis, front and rear panels for more than 150 different Sonifex product lines.

Sonifex  
[www.sonifex.co.uk](http://www.sonifex.co.uk)

innovations: the manufacturer's view

# Translating the Studio to the Stage

## WAVES EMOTION LV1 COMPLETE LIVE MIXING SYSTEM

BY MICK OLESH

Waves recently introduced the eMotion LV1 Complete Live Mixing System, which incorporates everything you need to create truly captivating live sound experiences. It is an all-inclusive and extremely cost-effective mixing solution ideal for live engineers working in clubs, touring bands and houses of worship.

Waves' objective in offering this unique configuration is to offer live mixing engineers the ultimate live mixing "kit" that essentially covers any possible need they may have, without compromising on quality and at an affordable price. The Waves Live division focused its efforts on determining that imperative features in a mixing engineer's workflow will all be addressed. When the LV1 was in its designing stage, we were mainly looking at catering to the needs of touring engineers mixing for bands with an eye on small- to medium-sized venues. Another focus was to enable them to mix in live environments such as clubs or houses of worship, while still having access to affordable high-quality processing.

As a result of years of making processors, and especially with the development of Waves SoundGrid (which, among other functions, provides a low-latency environment for audio processing), it felt only natural that we utilize this experience and knowledge and take it to the next step: developing a full-fledged mixer together with added hardware units such as controllers and IOs.

We were also determined to bridge the gap between studio and live by supplying the live engineer with studio quality sound. The ability to mix live, with an array of Waves and third-party plug-ins, offers the engineer the flexibility to mix creatively and have



Waves eMotion LV1 Complete Live Mixing System

total control, while possessing a vast palette of superior sonic possibilities (all the more necessary when "translating" the studio to the stage has become a commonplace requirement).

Another crucial aspect is the system's scalability. With the LV1 Complete System, you can easily upgrade the system according to your needs; before the LV1, the only way to move forward was either to purchase new components for your setup or to acquire a costly new console.

With the LV1 Complete system, the user receives an easy-to-use, state-of-the-art system. The complete live mixing system comes with the Waves eMotion LV1 16-stereo-channel live software mixer; a SoundStudio STG-1608 stagebox, which is a 1U rack-mountable stagebox with 16 mic/line ins, high-end digitally controlled preamps, 8 line outs, and SoundGrid

connectivity for real-time plug-in processing and monitoring; a SoundGrid Impact Server-C, which is a compact, durable and rugged rack-mountable DSP server that takes the load off your computer and gives you more plug-in processing power when mixing in the studio or live; an Axis One Waves-optimized computer custom-designed and optimized to run Waves audio applications, packed in a road-hardy half-rack 2U case; a 24-inch Dell touchscreen; an eight-port network switch; and network cables.

The LV1 delivers class-A sound quality and an unparalleled workflow. Featuring 16 mono/stereo channels, LV1's channel strips feature a plug-in rack that can host up to eight SoundGrid-compatible plug-ins for real-time processing. It also comes pre-loaded with three plug-ins specifically designed for live sound: eMo

F2 Filter, eMo D5 Dynamics and eMo Q4 Equalizer. The included SoundStudio STG-1608 is a sturdy SoundGrid stagebox that features 16 mic/line inputs with high-end preamps, the latter of which can be remote-controlled directly from LV1's mixer channels.

All audio coming from the stage and through the plug-ins is processed on the included SoundGrid Impact Server-C. You can send the processed audio out to the PA system and back to the stage via the eight line outputs. All of this takes place at a lightning speed of only 0.8 ms at 44.1–96 kHz.

To supercharge your LV1 mixing system, run eMotion LV1 on Axis One, a Waves-optimized computer made from the ground up to perform consistently and reliably even in the most challenging scenarios. It features an Intel i5 8500 processor, 16 GB of DDR4 RAM, two HDMI ports, one display port, eight USB 2/3 ports and a USB-C port, all cased in a rugged 2U

half-rack chassis. With maximum stability and rock-solid performance, Axis One is optimized to run eMotion LV1 and other Waves software with power to spare.

The LV1 Complete System enables the user to benefit from easy portability with a fast and easy setup; a quick and simple virtual soundcheck; smooth and speedy transition from a musical production to a succeeding audio visual conference using dedicated Waves Dugan Automixer and Dugan Speech plug-ins; and much more. It is also compatible with the TRACT System Calibration plug-in for hall analysis just minutes before a show. And to reiterate its exceptional unique scalability: With the eMotion LV1 Complete Live Mixing System, you have the freedom to expand your I/O count from 16 to 32, to 64 and beyond) and an unprecedented price performance of \$5,499.

Mick Olesh is the executive vice president of sales and marketing for Waves.

Waves  
www.waves.com

When the LV1 was in its designing stage, we were mainly looking at catering to the needs of touring engineers mixing for bands with an eye on small-to-medium venues.

Mick Olesh

## THE METALLIANCE REPORT: Rule #1: Walk the Room

BY FRANK FILIPETTI

I'll admit it, I'm no Al Schmitt! But who is? Al's heard and seen it all since before the tumultuous '60s, and he's still at the top of his game. I started engineering in 1981, and I'm still learning ... like most of you out there. Over the years I've amassed what I call F2's Top Ten Recording Tips, and it always fascinates me how many young engineers ignore my Rule #1: Start with the room!

"Well of course I do," you may reply. Not so fast, Grasshopper!

Many of you, when you walk into a room for the first time, will ask the assistant (assuming there's an assistant), "Where do folks usually place the drums?" Those more conscientious might actually scope out the room by looking or clapping, but seldom is that decision based on a methodical testing of the room's characteristics. Often the choice on where to place the drum room mics involves more thought than where to place the actual drums.

Now, Al can put the mics wherever he wants, but when it comes to the rest of us mortals, a few minutes of experimentation can do wonders. When I walk into a room for the first time, the first thing I do is walk the room with a kick drum, snare drum and cymbal in hand.

I move to the various areas in the room, methodically place the bass drum, snare and cymbal at each spot, and hit them, listening to the sounds of each. I then start taking notes:

1. Position 1
  - a. Bass drum – great low end, nice punch, a bit hollow and muted
  - b. Snare – good bottom, but no crack
  - c. Cymbal – thin and splashy
2. Position 2
  - a. Bass drum – no bottom, nice top
  - b. Snare – ok bottom, punchy
  - c. Cymbal – natural
3. Position 3 – Well, you get the picture.

If the room has been well designed, you will find at least one place where the bottom on the kick is deep, the top on the snare is ballsy, and the cymbal doesn't overpower everything. You will be amazed at how much better the kit can sound simply by moving a foot or two.

I've had the privilege to design four great-sounding (IMHO) rooms: Studios A, B, C at Right Track, and



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

Studio A509 at Legacy, all in Midtown Manhattan. Yet as well as I knew those rooms (and I knew every nook and cranny), I would still go through this procedure whenever time allowed. Rooms are affected not only by their size and shape, but by the barometric pressure, the temperature and the humidity, to name just a few factors, and you will be amazed at how in one particular area in that room, the whole sonic texture suddenly coalesces into a bold and focused sound.

But I hear you ask, "Surely when close-miking a kit, the room contribution is minimal?" Again, not so fast, Grasshopper. I offer the following exhibits:

**EXHIBIT A:** As a drummer, I know that a great sound in the room inspires me. Inspiration leads to a more emotional performance.

**EXHIBIT B:** As an engineer, I know that a great sound to begin with has a better chance of sounding great through the microphone.

**EXHIBIT C:** Although you are close-miking individual drums, the room has more influence on the sound getting into those mics than you might imagine. Even dismissing the contribution of the overheads, that room contributes 10 to 30 percent of the sound. If you're like me, where my drum sound consists of mostly kick and overheads that can go as high as 50 or 60 percent—and we're not even talking about "room" mics here.

The sound of the drum at any spot in the room influences the sound of the drum into the microphone. I have recorded close mics for the bass drum, snare and cymbal at two different areas in the room and you'd be astonished at how different the sound in the control room can be. And that

doesn't even factor into the equation how much better the drummer feels.

When we went up to Martha's Vineyard to record James Taylor's *Hourglass* in a rented cottage, the first thing I did was go into each room of the cottage with Carlos Vegas' kick, snare and cymbal to spot the optimum drum sound. It turned out the drums sounded best in the living room next to a stone fireplace. The rest of the band was referenced to this.

But what if we're only recording a vocal?

The same rules apply. Oftentimes the vocal is placed in the smallest iso booth during a session. The problem with a small iso booth is that the first reflections often occur within the 30 ms Haas window, and impart a nasal, scooped or hollow quality to the voice, especially on power notes. For instance, we had that problem while recording Jonathan Davis of Korn; our solution was to surround him with foam by building a booth within the iso booth. This allowed Jonathan to project with full intensity without experiencing the inevitable comb filtering that would otherwise occur.

Likewise, when recording Munky and Head's guitars on that album, we placed each guitar cabinet in a foam

**METAlliance**  
MUSIC ENGINEERING & TECHNOLOGY  
Advancing Excellence and Integrity in Music Technology

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

enclosure to keep the cabinets from interacting with each other. The idea there was to allow each cabinet its own unique sound without the room or the other cabs homogenizing that sound.

In a previous METAlliance Report (December 2018), Al talked about mixing with emotion. A lot of what he said applies to recording as well. Working the room enhances the sound, which motivates the musicians, which inspires the artist, which jumpstarts the emotion—and that means a better recording.

So do yourself a favor: Get a room! Walk the room. Listen to how remarkably different that kit, or vocal or guitar sounds depending on where they are in the room. You will be very glad you did.

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

METAlliance  
www.metalliance.com

### PAYING ATTENTION

Why do we engineers focus so much attention on the drums? Well, to begin with, they form the foundation (or the center) of most popular music forms, but more importantly, they are the instrument with the broadest frequency response and widest dynamic range. A bass drum can go as low as the lowest contrabass, while the snare and cymbals go higher than a piccolo. Their dynamic range is well over the capabilities of the finest recorder.

In addition, they normally involve the use of several microphones with conflicting phase response. So, to get a good drum sound, all your ducks have to be in a row—which is why they are so difficult to record.

## REVIVE AUDIO VINTAGE AUDIO MSL-MK2 COMPRESSOR ■ WILKINSON AUDIO DEBLEEDER PLUG-IN ■ RME BABYFACE PRO INTERFACE ■ KEF LSX MONITORS



Revive Audio Vintage Audio MSL-Mk2 Compressor

### REVIVE AUDIO VINTAGE AUDIO MSL-MK2 COMPRESSOR

Have I ever mentioned what a wonderful time it is to be an audio engineer? Maybe a thousand times. But it is a great time, filled with amazing new plug-ins, digital conveniences, active monitors, great new gear designs, smart modifications readily available, boutique creations, falling prices and more. Take those last three items—mods, hand-made gear and affordability—and you’ve got the *raison d’être* of Revive Audio in Caldwell, Idaho. There, Jason Lambson modifies gear, smartly improving upon the power supplies, transformers and components of both new and old gear, as well as designing new versions of old classics which are put together with carefully selected parts and modern insights.

I got wind of Revive Audio’s line of mic preamps and processors a while ago, but was especially drawn to their \$1,049 MSL-Mk2, a two-channel VCA-based compressor designed especially for stereo-bus use, designed with the cleanliness, glue and punch of a certain classic SSL two-bus comp, but without being a knockoff. The components chosen attest to the overall build quality: four “A-rated” That VCAs (two per channel, but switchable), Burr-Brown op-amps, Canare cabling, Neutrik connectors, Vishay/Dale resistors and Panasonic/Wima/Vishay capacitors. The units are hand-wired and assembled on a custom PCB, carrying a confidence-boosting three-year war-

ranty.

In a space-saving, one RU design, Revive uses one set of controls for both channels, including a threshold control, a ratio selector (2, 4 or 10 to 1 only), a seven-position attack control (as quick as .1 mS), a five-position release control (with an auto mode), a sidechain filter selector (HPF of 60, 90, 150, 240, 440 Hz, external or none), a relay-switched true bypass and up to +20 dB of make-up gain. A single VU meter shows gain reduction, or level at any one input/output.

The transformer-less unit as tested here uses dual detectors and dual VCAs (per channel), for an inherently clean and transparent sound, although via the Detector-out switch, you can use only a single detector per channel, forcing the tone into saturation, aggressive attack and numerous creative possibilities.

I popped the MSL-Mk2 into my rack no problem (no external power supplies, no cooling vents...nice) and got to work. First off, I had to hit it with some basic-track rough mixes, and I immediately felt that familiar and desirable glue, cohesion and punch brought to the mixes. This was nothing fancy, everyday stuff—2:1, slightly slowed attack, auto release, sidechain HPF at 240 and just a little make-up gain. I did find the threshold to be a lot grabbier than I expected and it required careful setting, especially for only 2:1 and slow-ish

attack. I also found the 440 Hz sidechain setting to be less useful than expected and kind of lunge-y in response. The auto release setting was also a little slower than I hoped for and not as responsive as I needed on fast and medium tempos.

However, once I dialed in my perfect setting, it seemed to be this one-size-fits-all, nearly universal mix bus setting that would work well on almost anything. Quite transparent, quite subtle, yet quite profound; this neutral setting seemed to enhance punch while containing dynamics and otherwise remaining invisible. All I had to do was fine-tune threshold and output level from song to song as I mixed the week’s work (rock, pop, country, rap and Americana). With repeated mix use, I also did find myself sometimes choosing that auto release setting, to prevent pumping.

A stereo comp like the MSL-Mk2 is a natural choice for nice, big, stereo pictures like drum overheads, acoustic guitar and piano, and it performed as expected. Drum overheads were a great fit with genteel, clean containment and settings not unlike my mix settings. I ran through some creative options like higher ratios (4:1 is excellent, not unlike a UA 1176, while 10:1 was pretty grabby, better suited to room mics), various sidechain settings (low settings can really grab the whole kit and that 440 setting was cool in a pump-y kind of way) and release options, too. I tried the De-



BY ROB TAVAGLIONE

Rob Tavaglione owns and operates Charlotte’s Catalyst Recording and has been a longtime studio contributor. [twitter.com/robtavaglione](https://twitter.com/robtavaglione)

detector-out option, too, and while it wasn’t right for many recordings, it was going to be right for something, with a nicely saturated, not quite distorted, sort off growly thing going on—a thing perhaps better suited to a track or subgroup if not the whole mix (kind of like all-buttons-in on an 1176).

Even though the MSL is meant for mix work, that doesn’t mean you can’t use it on a mono source. You could use it on two different mono sources at once, but they’d be sharing settings. The MSL did a nice job on snare and kick, with some pretty usable tones at 4:1 and 10:1 if you put some effort into tweaking attack time, release and the sidechain filter. Bass guitar and mono synths take a nice MSL squeeze as well, either clean and quick or with Detector-out and nastied up for some parallel processing. For that matter, you can do anything with the MSL that you can do with a nice, clean, fast VCA compressor, like vocals, percussion, string instruments, subgroups.

About the only things I missed with the MSL-Mk2 are space related (one RU doesn’t offer a whole lot of real estate to work with), as I wished for an additional VU meter and an output balance control or fine-trim pots in order to get left and right channel output perfectly matched. I managed to get by without either and otherwise have no complaints, which is pretty rare for this picky reviewer.

The MSL really is very good at mix compression where it does punchy, clean and powerful work without any muss or fuss. If you are looking for a little more character and less neutrality, Revive also makes its MSL-TX; at \$1,349, that offers switchable Cinemag transformers (laminates at input and steel-core at output for numerous tonal options) and more headroom. Either way, you’re looking at top-shelf compression performance at about half the price that is typical for such quality.

Revive Audio  
[www.reviveaudio.com](http://www.reviveaudio.com)

## WILKINSON AUDIO DEBLEEDER PLUG-IN



Wilkinson Audio DeBleeder Plug-In

Getting tom toms and snares up to “in your face” levels without getting too much cymbal bleed also in your face always presents a number of difficult methodological choices. You can gate them, downward expand them, edit the hell out of them, automate LPFs, precisely automate attenuation.... All these methods work and they all have certain drawbacks. Now you can enter Wilkinson Audio DeBleeder into the fray, with its own brand of intelligent analysis and a unique set of user-controlled parameters to “plug-in” your way to in your face, clean, drum hits.

DeBleeder (VST, VST3, AU, AAX, Mac, PC) utilizes only four largely familiar controls, but does so intelligently, allowing a fine tuning

that aims to not only smoothly remove the cymbal bleed from closely placed drum mics, but also retain the natural decay of the drum, too. I tested DeBleeder as channel-insert on a number of snare and tom tom tracks, and although I’m sure there are a number of other creative uses, I figured that core-function efficacy is what we’re all curious about here. It requires a bit of tuning and some effort, but yes, DeBleeder really works.

It starts out with tuning the sidechain to see the right signal via Fundamental. Hit Aud to audition the sidechain and tune in the first harmonic above that fundamental for the most accurate tracking. Don’t worry; it’s easier to sweep the con-

trol intuitively to find the sweet spot than it might sound. You can adjust the bandwidth of your sensor and select its shape (cone or bell) if that helps zero in on the right frequency. You can select Ext to use an external key, if you used drum-mounted contact triggers for example, and turn the control fully clockwise for full bandwidth—flat—sidechain sensing.

The Range and Reduction controls sort of work in concert to achieve just the right response. Range limits the frequency range that DeBleeder will work upon, and it is useful to fine tune this control to not act upon your fundamental and allow resonance/decay to pass thru. Reduction rather obviously controls the

amount of reduction possible, but the fine-tuning controls are where the expertise lies. Threshold, also obviously, sets the level required to enact processing and it has two sensor properties—a soft or hard control. Soft considers events for processing that are under threshold, while Hard looks only at events above.

What’s that? Why didn’t I call that “knee?” Because, if you hit the “I” button for more info, you will not only find numerical values to each parameter you’ve set, but also a hidden Advanced Parameter—Knee—that controls how ghost notes are processed (although Wilkinson says this control is seldom needed).

Release allows control as you’d expect and is highly tempo dependent; once you’ve got all the controls balanced out, you’ll enjoy the clarity of nice, tight drum hits and the more responsive reverbs that result from such clean hits. Left to its own devices, DeBleeder (with your help fine tuning parameters) will get rid of most of your bleed problems with a nicely solid and consistent drummer. For troublesome drummers and really tricky spots, you’ll have to automate parameters, especially Reduction’s Threshold control.

Even with DeBleeder’s help, snares and tom toms still remain time-consuming culprits in our quest for organic drums and minimal time spent mixing them. For only \$80, we’ve now got a useful tool that slightly outperforms the aforementioned bleed-removal solutions and does it with a little less effort in a little less time—and that’s definite progress towards solving this ages old problem.

Wilkinson Audio  
www.wilkinsonaudio.com

## RME BABYFACE PRO INTERFACE

I hate it when my students and clients tell me of their sub-par, disposable interfaces and their struggles with intermittent connections, bad converters, driver issues and a lack of headroom. Don’t they know that pro-level performance and durability doesn’t cost a fortune and is worth the extra initial outlay? Case in point, the RME Babyface Pro.

For \$749, you get no-compromise, bus-powered operation, a solid-aluminum chassis, up to 192 kHz capable, two excellent mic preamps (digitally controlled, individual 48V phantom, relay-driven pad, 76 dB of gain) on XLRs, two more line inputs on 1/4-inch XLR outputs, eight channels of ADAT optical in and out, SPDIF optical I/O, direct latency-free monitoring, MIDI I/O, headphone outputs

on both 1/4-inch and 1/8-inch, professional audio quality and some of the best control software I’ve ever seen.

The Babyface Pro (BFP) uses USB2 (USB3 compatible and Class Compliant) to connect with your computer, and even though that may limit overall throughput and latency performance compared to a Thunderbolt/USB-C device, in my testing, I found the BFP to be more than adequate. Rather than connect with my full-blown studio, I utilized the BFP like many users would—with my MacBook Pro laptop, some headphones and a need to cut some overdubs. The first thing I noticed about the BFP as I set up my system was that it feels right—its heft and firm connections gave me confidence that the rig would not only stay put on my

desktop, but also could survive in a backpack (a nice little carrying case is provided) and keep working for a long while.

Even though the BFP works in a standalone mode, TotalMix FX software is included with purchase and you’ll find it both essential and unexpectedly good. This FGPA-based DSP mixer has a powerful set of features that allows more than just routing convenience. The big luxury is being able to apply EQ (3-band plus a low-cut HPF) to an input or an output, allowing “EQ to record,” but reverb (15 algorithms), echo (with variable high-cut and 16 storable settings), stereo width, M-S processing and even polarity reversal features are all available. I particularly liked the control room section (with talkback and cue mix

routing), the metering and the ability to make channels “slim” or expand them. Total Mix is even iOS compatible and works with an iPad, although a power adaptor is required.

The best way to review gear is to actually get some work done, so I put together a demo idea for a client. Starting with cajon, I used the two mic inputs/preamps to amplify a large diaphragm condenser and a passive ribbon. My condenser mounted up top had nice transient attack and headroom; my ribbon mounted behind and down low needed more gain, which it got cleanly. I went ahead and EQ’d both signals, adding just a touch of slap to the top and a little backside to the bottom. I’ve never been able to “EQ to record” on a portable interface, and let me tell you, it was nice. The mic preamps

(continued on page 31)

## Reviews

(continued from page 30)

weren't particularly thick sounding, like transformer-coupled ones are, but they were nice and open, unrestrained and low in noise.

I ran bass guitar and stereo keys through the 1/4-inch inputs and they were much like the mic preamps—clean, crisp and clear, if not particularly colorful or rich. I ran my synths and drum machine in nice and hot with no issues, but my super-hot bass required almost no gain to avoid clipping and preserve just a little headroom.

I found myself needing the headphones really loud for some overdubs (my cajon "snare" slaps were so darn loud) and the headphone amp kept up, but just barely. It was easy to change headphone level with the data wheel, which has a good feel and tracks better than some I've used. Getting a good headphone mix was



RME Babyface Pro Interface

easy with Totalmix, which has an abundance of useful features. Those features include talkback, L/R balance control of stereo inputs, mix groups and snapshots(!), all needed by professionals, but yet above and well beyond the norm for portable

interface control software. The only thing I found myself missing was a little compression to lightly contain input levels (for what it's worth, Totalmix does offer dynamics on larger, non-bus-powered models from RME which have a larger, power-hungry

FPGA chip).

Perhaps most importantly, RME is known for stable drivers, and as tested here on a MacBook Pro, I never had even a hiccup, much less a crash or freeze. In my research, I found that Windows users also find the RME drivers to be dependable, even more dependable than those of the bestselling interfaces in this class, or so they report.

All things considered, the Babyface Pro is a strong contender in a crowded interface market. There are many other interfaces that are as portable and a few that sound equally good, as well as many models that cost less for similar four-analog-input designs. However, the Babyface Pro stands out from that pack with a fantastic chassis, pro-level audio, excellent software and advanced features via that software that are seldom seen on portable devices or budget units.

RME  
[www.rme-audio.com](http://www.rme-audio.com)



## Your Performance. Focused.

Only Renkus-Heinz has the tools necessary to place sound precisely where it's needed most, delivering the intelligibility, clarity and power your audience demands without the wash and reflections of traditional loudspeaker systems. The ICL-X Series by Renkus-Heinz helps you overcome the most challenging production hurdles with minimal setup time.

From community theater to national touring companies, Renkus-Heinz brings sonic control center stage. We focus the sound, so you can focus on the performance.



## KEF LSX MONITORS

The new LSX Monitor from British manufacturer KEF, then, appears to aim squarely at the intersection between pro and consumer (prosumer, if you will) and satisfies both camps with app-driven operation, professional performance and an emphasis on convenience for all parties.

The two-way, active, biamped, time-aligned LSXs incorporate Wi-Fi interconnectivity and networking, wireless Bluetooth connection, wireless remote control, analog and digital inputs, high sample rate operation and subwoofer capability, and the typically cumbersome interconnection cable between monitors is optional (more on that).

The wireless and networked LSXs have an 1/8-inch stereo mini-plug analog input and a TOSLINK optical connection that allows high sample rate input and playback. There is an Ethernet connection on each speaker and an Ethernet cable is provided with the kit, but the cable is only used for interconnection during firmware updates and high sample rate operation in Cable Mode. In a welcome nod to home theater enthusiasts and gamers, the LSXs have a subwoofer out (switchable, variable crossover and level) on an RCA jack.

The LSXs have 19 mm (0.75") aluminum dome tweeters and 115 mm (4.5") aluminum/magnesium alloy low-mid drivers, with 100 watts driving them (70 low and 30 high) and an overall timbre that's more flat and neutral than a typical curvy consumer-ish balance.

Bluetooth class 2 is supported with a 10-meter range, up to eight devices stored in memory and 2.5 mW of power. Wi-Fi is of the dual-band 2.4/5 GHz variety, so you'll need an appropriate router for the speakers to not only talk to each other (at 24-bit, 48 kHz), but also to optionally draw input signal from your home/studio network as well. The LSXs can accept up to a 192 k signal input (via TOSLINK) and can operate at 24-bit, 96 k in Cable Mode while using the aforementioned Ethernet cable.

As if this weren't enough convenience, the LSXs also come bundled with apps for ease of listening. Apple's AirPlay2 allows integration into a home's multi-room audio setup, with Tidal and Spotify Connect to complete a triumvirate of major streaming options.

Set-up is a very specific (and frankly cumbersome) process that requires peripherals and your attention. It starts with getting the KEF Control app for your phone, getting on your dual-band Wi-Fi network (yes, modern monitors now require

cellphones and digital infrastructure) and initializing the system. From the app or the provided remote control, you can select your input source (Wi-Fi, Bluetooth, optical or the analog jack), control volume, mute and have minimal streaming transport control (play/pause, next/back). The app contains a Basic mode, but you'll want the Expert mode to control Desk mode (low mids), Wall mode (bottom end), Treble trim, Phase Correction (which digitally helps clean up phase error at the crossover point) and Bass Extension (less, standard, extra). Your settings are savable, nameable and recallable for numerous useful options.

The Kvadrat fabric on the cabinet sides and top is worth a mention, as its novelty kind of threw me off at first, but it looks very nice in the studio and with home decor. It may be reflection-minimizing, but I think it may also prove to be a long-wearing and a little-cleaning solution as well. It did not attract cat/dog hair or gather excessive dust, and was cleanable with a vacuum attachment.

OK, so they look cool, feel cool and have every modern convenience—but do they sound good? Yes, surprisingly good.

First of all, the point-source concentric woofer/tweeter arrangement makes for some accurate imaging and a very wide sweet spot. KEF boasts of its uniformity frequency-response wise as you move laterally, and it's not kidding. That might not be so useful if only one person is listening, but it's quite important if there's two or more people squeezed into the sound field, trying to make decisions (or, alternately, if everyone in the living room wants to hear a movie's dialogue).

The sonic balance is surprisingly flat for a monitor that seeks to please consumers as well as pros, without any particular frequency ranges accented or hyped. There's no upper-mid forwardness, no mid-range bumps (ok, maybe a couple of dips), none of the scratchy 10 k-ness that aluminum tweets sometimes make. It's just a little thuddy in low-end definition and there's some extra low-mid girth, but I'm being quite critical. These are trustworthy, accurate monitors that you can mix on.

Once I realized this, I cynically thought, "Yeah, but I'll bet you can't fill the room with 4-inch woofers" as I cranked up the LSXs, slowly waiting for either warning lights, woofer splat or ugly, strained resonances. I found none of the above as I turned them back down to preserve their health and my hearing. Their "sound pressure-to-size" ratio is quite high, on par with the loudest I've heard.



KEF LSX Monitors

I moved the LSXs up into the living room and they were even more comfortable there. They looked good on small stands by the big-screen TV, and the lack of visible cabling delighted the wife. When she was out of town on business for a few days, I hooked up my old Sony subwoofer to the LSXs and enjoyed some sci-fi, horror and action flicks with an abundance of bottom end that was way over the top, as the LSXs already provided enough for me sans sub. I found the overall flatness to allow non-fatiguing, long-term (binge) listening, and the even dispersion nicely filled the room with even coverage. However, using the TOSLINK inputs to get audio from my TV yielded a slight signal delay that threw off sync. Further testing with a pro-level TOSLINK device revealed the issue was with my TV (and that's not an uncommon issue, according to KEF). Bluetooth connectivity sure made it convenient for the whole family to send audio to the LSXs from most any device we were using at the moment—iPhones, laptops, tablets—or straight off the home network with Wi-Fi. Even the pre-school grandkid noticed and said, "These speakers sound really good" during family fun time.

Latency—of which there must be some no matter what due to networking and DSP—is minimal and not a problem when mixing or home-theatering. I could see how many potential users could pair the LSXs with a laptop or iPad for a very mobile personal studio, but you wouldn't want to do so using Bluetooth. Laying tracks/overdubs via the LSXs via Bluetooth created way too much latency for me, but after a quick switch to the analog input and Cable Mode, processing latency was no longer noticeable or a problem, though, of course, the wireless convenience was lost.

I couldn't help but wonder how much wireless operation affects performance, so I compared Cable Mode to Bluetooth with only fidelity in mind. The answer is that it's only a small difference and not one of concern for music listening, home theatre and even routine mix checking/client playback work in the studio. Nonetheless, the LSXs do sound their very best cabled up and at high sample rates; the frequency response was just a little wider, the dynamics just a touch livelier and the soundstage showed more detail, placement and depth. Hearing the LSXs this way proved to me they are pro-capable.

My biggest complaint is in adjusting volume on the LSXs. The remote does so in single-unit increments so that lots of tapping is required to change the volume quickly, but via the app, you can adjust responsiveness to provide as many as 10 increments per tap, which was quite helpful. Also via the app, you can set a max volume limitation, which is also quite useful if your finger should accidentally slip.

I got far more performance out of these LSXs than I reasonably expected as I learned to merge them into my workflow, personal and professional.

At \$1,099 per pair, the LSXs are expensive, so this much utility comes at a price. They may be just a little too large for a portable backpack recording studio, but for laptop producers, for control rooms needing a second reference and wireless convenience for their clients, for those who need the versatility of home theater usage, too, and especially those who don't want an unsightly cable between monitors, these LSXs are an ideal choice.

KEF  
www.kef.com



# Pro Sound News NAB Best of Show Award Winners

The 2019 NAB Show, held April 8-11 in Las Vegas, NV, was loaded with new product introductions. The editors of *Pro Sound News*, representing Future's Pro Audio Technology Group, roamed the aisles and came away with our picks for Best of Show. Products were selected from submissions made by the manufacturers, then judged by editors in person at the convention; judges considered design, features, cost-efficiency and performance in serving professional users. *Winners are presented here in alphabetical order by manufacturer, with manufacturer-supplied product summaries.*

## ALTEROS GTX-FX8 DIRECT-TO-FIBER SYSTEM

Expanding upon the innovative GTX Series L.A.W.N (local area wireless mic network) 6.5 GHz UWB wireless microphone system, a fully digital wireless microphone system immune to UHF spectrum crunch, Alteros introduces the industry's first "Direct-to-Fiber" venue solution.

In order to compliment the performance, sound quality and ease-of-use of our direct and fully digital wireless mic system, the new fiber implementation was designed to provide the utmost in signal quality, stability and reliability. The innovative solution seamlessly connects to venue IP and networked based infrastructure, allowing remote operation of systems over fiber of up to 10,000 feet.

Like traditional RF mics, RF over fiber is complicated to set up and maintain. The Alteros Direct-to-Digital system eliminates the problems of RF over fiber. Rather than compromise the fully-digital, frequency intermodulation-free superior performance of the GTX wireless microphone system, the Direct-to-Fiber technology allows utilization in the largest and most complex settings with minimum effort and easy full integration into the latest workflow efficiencies.



The Alteros team at NAB Show with a raft of awards, including Pro Sound News' Best of Show award (left) for the GTX-FX8 Direct-To-Fiber System.

Via true plug-and-play connection to venue/facility infrastructure, remote operation of systems over fiber lengths of up to 10,000 feet are possible. RF is complicated, and traditional methods require experts to constantly monitor and adjust. This is not efficient. Our Direct-to-Fiber system provides high-quality reliable audio and allows complete scalability and flexibility across any venue, meeting any production demand in a simple, "connect and forget" system.

## AVID PRO TOOLS 2019 DIGITAL AUDIO WORKSTATION

In direct response to customer feedback from the Avid Customer Association Vote and building on

music creation features from previous Pro Tools releases, Pro Tools 2019 gives every user—from professional music creators and aspiring artists to top-echelon audio post professionals and engineers—powerful and performance-enhancing features, enabling them to work faster and more creatively on the most complex projects.

Pro Tools 2019 gives users numerous opportunities to achieve their full creative potential. With advanced features and workflows for more demanding commercial music and audio post production, Pro Tools enables users to work more efficiently with intuitive features that reduce mundane and repetitive tasks that interrupt creativity.

Pro Tools First users can now work with unlimited projects (new to Pro Tools First) and create and save as many projects, save them, and selectively sync three of them to the cloud.



Avid's award was on display at NAB Show.

For users working in high track-count environments, such as audio post production, Pro Tools Ultimate software and HD Native systems now deliver 50 percent more voices/audio tracks. With an improved base voice limit of 384 and Voice Pack options to further augment total voices up to 768 per system—on par with a three-card HDX system—users now have the performance and flexibility they need to scale the number of voices for their most demanding work.

## BITTREE PATCH32A DANTE PATCHBAY

The Bittree Patch32A represents the world's first Dante audio patchbay, and streamlines the integration of analog audio and Dante network patching while providing professional, transparent A/D>D/A cross-conversions.

Bittree's Dante patchbay eliminates the complexity of analog and Dante audio patching in the broadcast infrastructure. It provides a ramp to instantly move 16 channels of analog audio on and off of Dante networks, and serves as a natural bridge to unite legacy audio equipment with IP systems. Beyond broadcast, the Dante patchbay provides connectivity solutions to recording studios, post-production facilities and commercial AV environments (houses of worship, live event and performance venues, and large corporate and higher education campuses).

The Bittree Dante patchbay will interface with Dante Virtual Soundcard, countless Dante devices, and almost any analog component in the same system, including audio distribution equipment, digital audio workstations (DAWs), digital signal processors (DSPs), mixing consoles, multi-track recorders and video routers. The compact standalone or rack-mounted 1.5 RU powder-coat enclosure carefully incorporates TT patching for audio I/O (16x16), redundant DC power in, external word



Bittree's Patch32A Dante Patch Bay

clock I/O, network status, and audio VU multi-level LED metering.

Bittree's Dante patchbay supports a wide variety of audio sample rates ranging from 24-bit 44.1 to 192 kHz. The design integrates balanced TT connections to Dante analog and digital conversions, maintaining signal integrity and audio quality without requiring specialized patchbay circuit programming. Settings will be configurable using Dante Controller, including sample rates and channel assignments to and from Dante networks.

## SHURE TWINPLEX LAVALIER & HEADSET MICROPHONES

TwinPlex—Shure's new line of premium subminiature omnidirectional lavalier and headset microphones—stands up to the toughest conditions. The new dual-diaphragm, patent-pending capsule technology offers best-in-class sound in a compact and easy-to-conceal package for when professional vocal performance is a must.

TwinPlex's cutting-edge dual-diaphragm design captures the speaker's whole voice. The dual-diaphragm design results in best in class specifications, while the improved off-axis consistency enables sound to read accurately even when users aren't speaking directly into the microphone. The easy-to-conceal package is perfect for quick costume changes or discrete placements under wardrobes without the sound quality being affected.

TwinPlex was pushed to the limit to simulate years of intense use. The ultra-thin, medical-grade cable was flexed, stretched, and pulled to its limits. Utilizing an exclusive, innovative spiral construction with redundant shielding, TwinPlex cables are immune to kinks and memory effects—ensuring they lay flat under any costume design or clothing. The superhydrophobic coating and interchangeable sweat-resistant frequency caps prevent perspiration and moisture from upstaging the audio even in the most intense theater or field recording environments.

Consisting of four lavalier microphones (TL45, TL46, TL47, TL48) and an ultra-light, fully-adjustable headset microphone (TH53), TwinPlex is available in multiple colors with extensive accessories and options. TwinPlex lavaliers and headsets also connect to a variety of wireless bodypacks and can be seamlessly integrated into existing wireless audio systems.



Shure had its award out with its TwinPlex microphones at NAB Show.

## SSL SYSTEM T S500M CONSOLE

Solid State Logic has launched its System T S500m console. The desk can be specified as 32- and 48-fader versions with turnkey flight case solutions, or as a larger custom specification surface with up to 96 faders. The S500m provides all the flagship features of the System T S500 console in a form factor said to be 25 percent lighter and specifically designed for OB and fly-pack applications where weight and portability are key concerns. The S500m's modular functionality also lets a console be deployed with or without an extended meter bridge. This allows a complete production system to be transported in a purpose-built rack case, providing a console stand, meter bridge shipping storage and two 8RU racks for Tempest Engines and Network I/O.



## STEINBERG NUENDO 10

Steinberg has announced Nuendo 10, due in the second quarter of 2019. The software now includes Video Cut Detection for analyzing videos for edits and setting markers automatically. Field Recorder Audio Import allows users to search field recorder audio files and match these with a project's events using available attributes or metadata. Also brand-new is a Doppler effect that simulates the changing perception of a sound as its source passes. Among many other new and redesigned plug-ins, the VoiceDesigner is intended for modifying voices, with parameters such as Detune, Formant, Preserve (for pitch shifting while preserving formants), Robot, Morph and FX. ADM files can now be directly imported into a new or existing project.



## RØDE WIRELESS GO DIGITAL MIC SYSTEM

Røde Microphones has launched its new Wireless Go digital wireless microphone system, which it claims is the world's smallest digital wireless mic/receiver combination intended for use by filmmakers, on-camera presenters, newsgatherers, vloggers and others. Measuring 44 mm x 45.3 mm x 18.5 mm and weighing 31g, the Wireless GO transmitter (TX) can be used as a clip-on wireless microphone, making use of its built-in omnidirectional condenser capsule, or as a belt-pack transmitter for a lavalier microphone via the 3.5 mm TRS input. The RX, meanwhile, measures 44 mm x 46.4 mm x 18.5 mm and weighs 31g, allowing it to mount on a range of camera gimbals and stabilizers.



## MAKEPROAUDIO MPA PLATFORM

Cologne, Germany-based MakeProAudio has introduced its MPA Platform of pre-constructed electrical and mechanical components. Aimed at DIY fans and maker enthusiasts, the platform allows users to choose from a variety of modules ("Tiles") that each perform specific functions. Using only a screwdriver, the Tiles can be combined to create customized Blocks—forms that can be combined to create whatever the user wants to build, be it a console, control gear, a synth, EuroRack module or something else. Everything users need to build a Block comes in a "Makekit," which includes instructions on installing a Raspberry Pi that runs GLUE, the company's network control software. MakeProAudio expects to ship its first individual Maker boards and MakeKits in June.



## MAGIX SOUND FORGE PRO 13

Magix's Sound Forge Pro version 13 sports a new user interface, a new VST engine, new effects and more. Sound Forge Pro 13 has a fully customizable interface that can be personalized to fit individual preferences and work-



There's more information on all the products featured at [prosoundnetwork.com/may2019](http://prosoundnetwork.com/may2019).

## firstlook

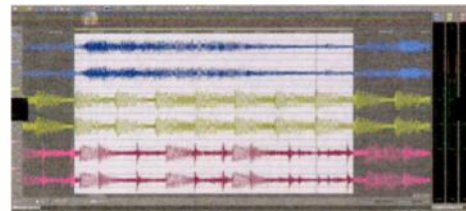
### GENELEC AURAL ID

Genelec's Aural ID software technology calculates a user's personal Head Related Transfer Function (HRTF), which describes the acoustical properties of the head, upper torso and external ear—elements that interact in complex ways to affect sounds reaching the



eardrums. This file enables an audio engine to precisely render stereo or immersive content via headphones. Genelec Aural ID software requires the user to provide a 360-degree video of their head and shoulder region, for which a high-quality smartphone camera is sufficient. Once the video is uploaded to the Genelec web-based calculation service, the calculation process first builds a detailed 3D model scaled to the dimensions of the head and upper torso, with special attention paid to modeling of the external ears.

flows. The UI can be adjusted in four color levels, depending on environmental and lighting conditions. Based around an icon design, the interface shows all important audio editing features at once. Meanwhile, the enhanced VST2/3 engine and ARA2 interface extension reportedly offer greater stability and speed when using plug-ins, and allow users to work faster and more precisely. The new Peak Meter V2 allows peak level measurement of digital audio signals according to international industry standards.



## FLOCK AUDIO PATCH PATCHBAY

Canadian manufacturer Flock Audio has introduced PATCH, a digitally controlled analog audio patch bay routing system. PATCH is a 64-point, expandable system combining hardware and software. Users operate the system using PATCH App software to control analog audio routings with a drag and drop GUI that allows all settings to be created, stored and recalled as needed. The macOS and Windows-compatible software was designed to be easy to use, regardless of experience level, and is intended to provide flexibility to handle a variety of professional audio setups. The unit offers 32 channels of 48V phantom power on-board. PATCH has accessible front input/output section balanced combo inputs for quick integration of external hardware sources for use on the fly.



## WHEATSTONE STRATA 32 CONSOLE

Wheatstone has launched Strata 32, a new compact IP audio mixing console intended for newsrooms, remote vans and sports venues. The desk offers dedicated faders for eight sub-groups and two masters along with 32 physical faders that can be layered for 64 channels. The 40-inch-frame console provides access to all resources in Wheatstone's WheatNet-IP AES67-compatible IP audio ecosystem through a touchscreen interface with a menu for adjusting EQ, dynamics, setting talkback, configuring mix-minus feeds and bus matrices, muting mic groups and managing sources and destinations. Per-channel OLEDs display all relevant editing and operating functions.



## YAMAHA TF SERIES FIRMWARE UPDATE

Yamaha's v4.0 firmware update for its TF Series digital mixers adds a Selected Channel View that provides access to the main parameters for the currently selected input channel in a single display. Combined with the mixer's Touch & Turn Knob, this new view is intended to provide more intuitive operation. V4.0 also adds a scene fade time function that offers new flexibility for scene management. Support for DZR-D and DXS-XLF-D Series speakers has been expanded with speaker amp mute control directly from the mixer display. QuickPro Presets now include in-ear monitors from Westone Laboratories. The TF StageMix iPad app also got an upgrade, allowing control of playback from and recording to a USB storage device connected to the mixer.



## CELESTION OEM OFFERINGS

Celestion has announced the OEM availability of both its 12-inch low-frequency CF1230F, and 15-inch CF1540HD, designed for use in subwoofers. The 500 Wrms, 12-inch CF1230F has a reported nominal sensitivity of 98 dB (1W, 1m). With a 3-inch copper-clad aluminum voice coil, it is intended for bass applications in two and three-way systems. The 1,200 Wrms CF1540HD has a 97 dB sensitivity (1W, 1m), and a 4-inch inside/outside voice coil, wound on both sides of the former with the aim of better heat dissipation to prevent sensitivity loss through thermal compression. Purpose-built for subwoofer applications, the CF1540HD features a phase-matched double suspension system for a more balanced and symmetric performance.



## AUDIO-TECHNICA INSTRUMENT MIC MOUNTS

Audio-Technica has created a pair of new mounts for the ATM350a cardioid condenser instrument microphone: the AT8491S surface mount and AT8491G guitar mount. Each mount is offered three ways: as a full system (ATM350a mic, mount and gooseneck), mount only, and a bundle (mount and gooseneck only). The new AT8491S surface mount is designed for the ATM350a to capture accordions and similar instruments. The notched mount can be attached permanently using the accordion's grille screw and the included adhesive silicon pad, or it can be attached temporarily using in-



cluded 3M Dual Lock pads. The included transparent protective film prevents damage to the instrument's finish.

## CLEAR-COM V-SERIES IRIS INTERCOM PANEL

The V-Series Iris intercom Panel provides a low-latency AES67 AoIP connection for Eclipse HX users.



The panel can monitor and send communications over three concurrent full-duplex uncompressed audio IP streams, enabling systems to deliver uncompressed AES67 audio from user to user with low latency. When connected to Clear-Com's AES67-compliant E-IPA audio-and-intercom-over-IP card, users can deploy up to 64 Iris panels per card. V-Series Iris panels feature full-color user-configurable OLED displays to help users organize and locate keys with similar functions. The V-Series Iris panel is optimized for use with Eclipse HX (EHX) version 11 software to implement its AES67 connectivity; it also has compressed IV.Core IP and analog four-wire connections for backward compatibility with Eclipse frames running EHX 10.0 or earlier.

## NEUTRIK opticalCON DRAGONFLY SERIES

Neutrik USA has announced the opticalCON Dragonfly Fiber Optic Camera Connector Series for the broadcast and AV markets. With technology based on fiber lenses and fusion splicing, Neutrik's Dragonfly aims to provide a robust signal with minimal loss. opticalCON Dragonfly makes use of lens technology and is based on Neutrik's patented XB2 Technology. Its fusion splice high-performance lens transmits UHD 4K and 8K signals with reportedly low loss, as the signal surface of the XB2 lens is 322 times larger than physical contact surfaces. Neutrik's Dragonfly's hybrid connection transmits both power and data over a single connection, with low maintenance intervals, and Dragonfly fits into standardized broadcast cutouts. Cleaning can be handled with compressed air and water.



## ALLEN & HEATH DLIVE FIRMWARE V1.8

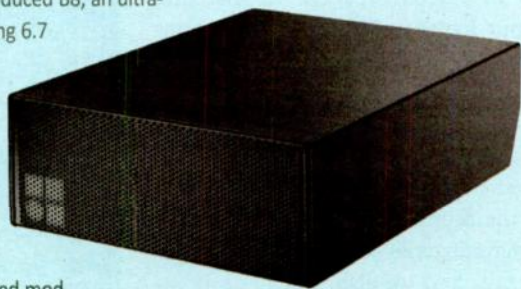
Allen & Heath has updated its dLive mixing system with the release of firmware v1.8, which adds Mix Control Association (MCA), bringing the concept of DCA groups and spills to monitor engineers, enabling control over multiple AUX/MTX sends via a single fader. Also new are A/B/C/D inputs, enabling up to four input sockets to be assigned to every input channel. There's also a selection of sockets via SoftKeys, which allows users to rapidly switch to a backup microphone, or to prerecorded files on a playback system. The addition of 12 assignable Talkback Groups, which can be populated with any combination of the available mix buses, simplifies talkback routing with SoftKey controls.



## firstlook

### D&B AUDIOTECHNIK B8-SUB

d&b audiotechnik has introduced B8, an ultra-compact subwoofer standing 6.7 inches tall. Despite its diminutive size, the B8-SUB offers a low frequency extension down to 43 Hz. The B8 pairs with the established d&b xC, xS and E-Series loudspeakers, with dedicated models for mobile (B8-SUB) and install (Bi8-SUB). The B8 is an actively driven subwoofer that features two 6.5-inch drivers with ferrite magnets housed within a bass-reflex cabinet design. The drivers reportedly achieve a low frequency extension from 170 Hz down to 43 Hz. The B8 can be driven by all current d&b amplifiers, achieving a maximum SPL of 122 dB.



## FUNKTION-ONE VERO VX LINE ARRAY

Funktion-One's Vero VX compact line array comprises VX90 full-range vertical array elements, V124 or V221 bass enclosures, amp racks, fly bars, transport dollies, ground stack hardware, cabling and Projection predictive software. The VX90 is a three-way vertical array element with four new company-designed neodymium drivers in a horizontally symmetric configuration: two reflex loaded 12-inch mid bass drivers; one Axhead loaded wide bandwidth 8-inch cone midrange driver; and a single 1-inch compression driver on a proprietary isophase diffraction waveguide. The VX90 measures 1120 mm wide and 340 mm high; its usable bandwidth is 50 Hz to 20 kHz and horizontal dispersion is 90°.



## Founder Buys Back Pro Media

BY CLIVE YOUNG

MARTINEZ, CA—Prior owner Andrew Serb and a group of private partners made up of senior staff members has acquired Pro Media Audio & Video from Panasonic North America. Serb founded the company, which specializes in audiovisual solutions for the sports, live entertainment, performing arts, corporate and transportation markets, 43 years ago.

Pro Media Audio & Video will maintain its name, Pro Media. Headquarters are located in Denver, CO, with operations and sales offices in Dallas, TX, and Martinez, CA.

Ted Leamy, Pro Media general manager, told *Pro Sound News*, “We now have the freedom to really grow



the Pro Media business more than ever before. Building off of our rich history with high-end pro audio and our live production chops, we can now focus more on merging those technologies with today’s demands for video. Our future at Pro Media

is focused on managing campuses and establishing enterprise standards to drive a broader audience experience—whether that’s at the office, a stadium, an airport or a performing arts center.”

Pro Media clients include the Dallas Cowboys AT&T Stadium, Green Bay Packers Lambeau Field, San Francisco Giants, Stanford University, Oakland International Airport, Dodger Stadium, the Warfield Theatre, Atlanta Braves SunTrust Park, San Francisco International Airport, Santa Clara Convention Center and Colorado Rockies Coors Field.

In the spring of 1998, Pro Media merged with Bay Area-based sound company UltraSound, which provides audio systems for high-profile concert tours. In the decades that followed, the jointly run Pro Media UltraSound continued to address both markets until in late 2016, when Serb sold Pro Media to Panasonic, retaining UltraSound, which he later sold to company management in June 2018.

Pro Media  
www.promediaultrasound.com

“Our future at Pro Media is focused on managing campuses and establishing enterprise standards to drive a broader audience experience.”

Ted Leamy

## J Cole Preps for the Big Game

BY CLIVE YOUNG

CHARLOTTE, NC—The Playroom, one of Charlotte’s oldest and most established rehearsal facilities, hosted rapper/singer J Cole and his team for five days as the artist prepared for his halftime performance at the 2019 NBA All-Star Game, held at the Spectrum Center in Charlotte on Feb. 17.

First taking over the facility’s National Room on Feb. 10, the production rehearsed using a monitor package provided by Mike Hartis and his team at Specialized Sound and Light (Concord, NC); gear included an Avid Venue Profile desk, JBL SRX 835 sidefills and subs, and QSC HPR122 floor wedges. Backline was supplied by Bryan Akers at Carolina Backline (Charlotte, NC).

After two days’ rehearsal, it was time to record. As The Playroom’s owner, Eddie Z, recounted to *Pro Sound News*, “On Feb. 12, the J Cole team moved into the production



J Cole’s team hard at work, recording in the production room at The Playroom/The Vault in Charlotte, NC.

room and The Vault recording studio, where we spent two days tracking, editing and mixing all of the music for the NBA halftime show. Because of the production demands of the night, the entire musical and vocal bed was pre-recorded—only J Cole’s vocal was live.”

The recording process itself found different parts of the ensemble work-

ing in different spaces. “As the band input list was 40 inputs, the songs were tracked in two passes each, as The Vault is 24 in and 32 out, all Apogee converters, controlled by a Big Ben master clock,” said Z. “We used the Avid Venue Profile console in the production room to supply 10 different stereo ears mixes to the musicians, and we also split the mic inputs at the console to send 24 inputs at a time to The Vault to be handled by the Neotek Elite 2 console. Next pass was the remaining tracks. The background vocalists were recorded

(continued on page 42)

“It was awesome hearing our work broadcast all over the world.”

Eddie Z

### briefs

#### Hotel Vegas Feels Synergy

AUSTIN, TX—SXSW brought everyone to Austin in March but its official events were hardly the only game in town. Take Hotel Vegas’ annual Spring Break celebration—this year’s edition fielded dozens of high-octane Austin bands, and bringing them to the masses was a new Yorkville Sound ([www.yorkville.com](http://www.yorkville.com)) Synergy Array Series active point source P.A. provided by local audio company Rock N Roll Rentals.

#### Behind the Mic

NEW YORK, NY—Folk legend Joan Baez is on her last extended tour and along for the journey are a passel of Heil Sound ([www.heilsound.com](http://www.heilsound.com)) PR35 mics for vocals. According to founder Bob Heil, back in 2008, “Joan happened to sing into our PR30—which isn’t a handheld mic—at a rehearsal, loved the sound and asked if a handheld version was available. Weeks later, I came up with a design for the PR35. I credit Joan with giving me that spark of an idea that turned into one of the most successful microphones that Heil Sound makes.”

#### Old Dominion Tours with Edwina

NASHVILLE, TN—On country act Old Dominion’s current arena tour, the group has been performing a new ballad, “One Man Band,” with lead vocalist Matthew Ramsey and lead guitarist Brad Tursi sharing a unique-looking Ear Trumpet Labs ([www.eartrumpetlabs.com](http://www.eartrumpetlabs.com)) large-diaphragm condenser Edwina microphone for vocal harmonies.

#### Taylor Gets A HALO-A

HOLTSVILLE, NY—Taylor Productions, based outside New York City, has taken delivery of the first EM Acoustics ([www.emacoustics.co.uk](http://www.emacoustics.co.uk)) HALO-A line array system delivered to the United States. The new system is made up of 16 HALO-A line array modules, six MSE-218 ground and six MSE-218F flyable subwoofers.

[dbaudio.com](http://dbaudio.com)

# More than a venue.

Royal Albert Hall, London, UK

"To enlighten the people", proposed Prince Albert. And so they came. For art and science, music and meetings, sport and politics. To this national treasure. A world of cultural exploration. An artist's dream. Today, the capabilities of a new loudspeaker system are helping shape this vision. In which sound is not technology, but transformation.

**d&b**  
audiotechnik 

## Reinventing a One-Man Show for Four

BY STEVE HARVEY

LOS ANGELES, CA—For some, the first realization of Jacob Collier's innate talent and musical prowess came with a split-screen video of him singing and performing every part on a radically rearranged cover of Stevie Wonder's "Don't You Worry 'Bout a Thing," posted on YouTube in late 2013. He was 19 at the time. "Recorded entirely with one SM58 microphone," says the video's notes—and there's no prize for guessing that he also created the video.

In the years since, Collier's life has been a whirlwind: opening for Herbie Hancock and Chick Corea with his one-man show at the 2015 Montreux Jazz Festival at the behest of Quincy Jones; a debut album, *In My Room*, recorded and mixed in just three months in the music room at the family home in London (he won two Grammys); and numerous performances, collaborations and masterclasses worldwide. Late last year, Collier released *Djesse (Vol. 1)*, the first of a four-volume, 45-song project, which he produced, arranged and orchestrated, and which features over two-dozen collaborators from around the world.



Jacob Collier spends much of his performance time running from instrument to instrument, alternating between Shure Axient Digital wireless microphones and a DPA d:fine 4088 headset mic.

*Volume 2* will be released in June, 2019, with him returning to the road for dates in the Northwest. (Collier

talks about *Djesse* in the June issue of *PSN*.)

To tour the new release, Collier has assembled a band that includes Maro, a Portuguese multi-instrumentalist, bass player Robin Mullarkey and drummer Christian Euman. Ben Bloomberg, who has been collaborating with Collier since helping him develop his one-man show, has further evolved the on-stage technology to suit the expanded lineup.

"On Jacob's first tour, it was just the two of us," says Bloomberg on the phone shortly after the US leg of the tour ended in mid-March. "Then Jose [Ortega, FOH engineer] came on to do the shows that I couldn't do. Now, the show and the tech has gotten big enough that I fill the role of production director and help them design the gear, choose the gear and program everything." Claudio Somigli, another long-time collaborator, mixes monitors.

The first thing that Bloomberg and Collier worked on was the Har-

monizer, which enables Collier to achieve his vocal layering live. "It's sort of a cross between a vocoder and a live sampler, running a lot of custom software but also hardware. It's got some dismantled parts from some other products that we liked," Bloomberg reveals. "We thought 12 voices would be good; you can play two keys with your thumb, and Jacob's favorite chord has all 12 notes in it."

Bloomberg spends less time on the road now, he says, not least since he's still a student in the Ph.D. program at MIT's Media Lab. On previous shows, he's used all kinds of desks, but on this leg, a bus-and-trailer tour, he suggested a pair of DiGiCo SD10s for the engineers. Previously, in Europe, they had SD12s.

"I'm a huge fan of DiGiCo, mainly because of the flexibility," says Bloomberg. "Having the dual displays on the SD12 is really amazing for moving quickly during rehearsals, and adding and changing things. The SD10 was nice for the US tour, because we had a few opening acts and we were able to use some of the additional DSP to accommodate those extra inputs very flexibly."

Indeed, flexibility is key across the board. "The goal is that the band can do whatever it wants. The crew has to be ready to react, and the DiGiCo certainly helps with that," he says. "We focus on making the show feel organic and fluid."

Collier uses a Shure Axient Digital wireless mic with a KSM9 capsule, with a second positioned at the piano. "The KSM9 is a great match for his voice, but he's running around so much that we also have a DPA 4088 headset that he wears. We try to use the KSM as much as possible, but he comes down front or moves to another instrument, and we need to be ready to catch it as it happens." Ortega programmed a macro on the desk that selects the active mic and mutes the other two, adds Bloomberg.

Because Collier's performances are so freewheeling, Bloomberg designed a tech setup with no show automation, timecode or click tracks. It also had to be robust, transportable and easy to set up, especially with fly dates coming up later this year.

"We have a pair of identical laptops, running redundantly, that contain all the electronics for the entire performance; the entire show runs off a single laptop. That was for cost,

ADAM HART

ADAM HART

but it means everything can be connected—all the keyboard sounds, drum samples, some of the stuff coming out of Jacob's world, like the talkbox, and MIDI out of his piano. We did have to do some OS-level tweaks. Some of the newer Apple stuff is intended to go crazy with the power-saving, so we had to disable a lot of that stuff."

The system features Apple MainStage and Ableton linked and running simultaneously. Collier has been working in Logic Pro since age 11. "We can take his Logic channel strips directly from the album, re-create those in MainStage, but automate it using some of the control and looping capabilities of Ableton," says Bloomberg.

Maro, at her keyboard, controls the master patching. "She's switching her own sounds, but she's also enabling different signal paths, like sidechains and that kind of thing. Rob, Christian and Jacob all have their own sets of patches as well, but those are all being switched on the same laptop." The musicians use a variety of Novation networked controllers. "We run MIDI around the stage, just like the mic lines;

Ben Bloomberg, a student in the Ph.D program at MIT's Media Lab, co-developed Collier's tech-heavy stage show.



that's built into the snakes," says Bloomberg.

The laptop outputs pass through a Focusrite Red 16Line interface and over a Dante network—the redundant secondary path travels via Dante Virtual Soundcard—into a RedNet D64R MADI-Dante Bridge and the DiGiCo desks. The mixers wrangle about 56 inputs, says Bloomberg. "We try to mix things down, partially because it makes the primary/backup switch easier, but we've got about 14 channels coming from the computer. And because we're doing looping, we're also sending to the computer. I haven't seen a lot of people who are doing a completely redundant looping system as well as playback and keyboards."

The benefit of towing a trailer is that the tour can carry some key items of gear, says Bloomberg, such as a totally Yamaha backline, including a MIDI-capable grand piano. "We were layering textures with the acoustic piano sound. It was nice to have the same instrument every day."

Jacob Collier  
www.jacobcollier.com

## DiNET DAN-TX2

2-Channel Dante transmitter



**Dante**  
SPOKEN HERE

## DiNET DAN-RX2

2-Channel Dante receiver with headphone amplifier



Simplify your Dante network with Radial-tough endpoints

The DiNET DAN-RX2 and DAN-TX2 are designed for pro touring and installation applications, featuring 24bit/96kHz digital converters and compatibility with any Dante or AES67-compliant network. A rugged 14-gauge steel chassis is complemented by locking EtherCON compatible network connectors, along with the ability to mount either device in standard equipment racks.



Do more with Dante at  
[www.radialeng.com](http://www.radialeng.com)

Appearance and specifications subject to change without notice

## George Strait Rides into NRG Stadium Show

HOUSTON, TX—When George Strait called his 2013-14 tour *The Cowboy Rides Away*, he meant it, bringing to an end his days of hard touring, but that didn't mean he was done playing live. Having knocked out the occasional arena-filling show at the T-Mobile Arena in Las Vegas, he recently upped the ante, playing for more than 80,100 fans at the Rodeo-Houston NRG Stadium and setting the venue's attendance record in the process.

The NRG Stadium stage package and control system was provided by GP Productions, with stack and racks coming from LD Systems. A complement of roughly 400 L-Acoustics K1, Kara and ARCS speakers combined to provide coverage across the full 360-degree seating area in the large venue.

Monitors for Strait's 11-piece band were handled by veteran monitor engineer and Allen & Heath USA live sound/touring manager Mike Bangs, who mixed on an Allen & Heath dLive Digital Mixing System, just as he did for the T-Mobile Arena shows. Configured to address the challenges of a 50-foot square stage with limited sightlines, additional dedicated on-stage mix control was provided via networked Allen & Heath IP8 Remote Controllers.

Bangs notes, "The tactile control and on-the-fly programmability of



Michael Bangs tackled monitors for George Strait on his Allen & Heath dLive S5000 console during a recent show at Houston's NRG Stadium.

the IP8s has a big impact on making the musicians feel comfortable in a complex sonic environment. I still maintain full control, but shows are much smoother with the IP8s placed around the stage. They allow me to really focus on George's in-ear mix.

"George's camp has been running with dLive for a couple of years now," adds Bangs. "The monitor system was designed by Josh Kaylor and it

has since become an essential part of the show audio system." Composed of an Allen & Heath S5000 control Surface, a DM64 MixRack, and five IP8 remotes, close to 60 channels of audio are mixed and fed as needed to a dozen Shure PSM 1000 wireless and six d&b audiotechnik M2 stage monitors. A Waves Audio networking card provides 128 x 128 96 kHz audio interface for multitrack recording

and virtual soundcheck.

"While I have the option of interfacing to external tools for plug-in processing, I've found everything I need so far 'in the box' with dLive," Bangs says. "With just a taste of EQ and the 16T, Opto compressor and a few Dyn8 here and there, I have a highly intelligible and musical mix."

Allen & Heath  
www.allen-heath.com

## Masque Sound Equips *Falsettos* National Tour

EAST RUTHERFORD, NJ—The recent Broadway revival of *Falsettos* led to five Tony Award nominations and now a national tour of the production, with sound design by Dan Moses Schreier using audio gear provided by East Rutherford, NJ-based Masque Sound.

While playing different rooms every few days or weeks can be a challenge for a sound engineer, it's just as much a test for Ashley Diaz, the tour's A2, located backstage during performances, who is responsible for maintaining RF for the show.

"Unlike a Broadway production, a touring production is particularly susceptible to changes in frequencies from city to city, so flexibility was key," said associate sound designer Joshua Reid, noting that the production is carrying Shure Axient Digital wireless microphone systems. "The ability of the receivers and transmitters to switch in various bands relatively easily, especially under show conditions, is a huge advantage."



The seven characters in *Falsettos* wear Shure Axient ADX1M transmitters equipped with DPA d:screet 4061 mini omnidirectional lavalier microphones provided by Masque Sound.

The show tours with four Axient receivers, which can handle up to 16 ADX1M, micro-bodypack transmitters. Each of the seven main characters are double-miked with DPA d:screet 4061 mini omnidirectional microphones; the remaining two

transmitters and mics serve as back-up.

"Equipping each performer with a backup ensures that the show appears flawless," said Reid. "It's comforting to the performers to know that we can easily switch to mic number two

remotely if needed without interfering with the production."

Diaz works with a Shure AXT600 Spectrum Manager and AD610 Diversity ShowLink Access Point rack-mounted with the four Axient receivers to help her deliver a smooth production. The ATX600 delivers UHF spectrum scanning and analysis along with compatible frequency coordination, while the AD610 enables real-time wireless remote control of the transmitters.

"We worked with Scott Kalata at Masque for the Broadway production and it was logical to continue the relationship for the touring production; they are extremely knowledgeable and offer state-of-the-art technology," said Reid. "When they suggested the Axient system, it made perfect sense and has proven to simplify using wireless from venue to venue. We are extremely pleased with the end result."

Masque Sound  
www.masquesound.com



# Reinventing the Agora's Audio

CLEVELAND, OH—Cleveland's legendary Agora Theatre and Ballroom has been a centerpiece of the region's music scene for more than half a century, and rightfully so.

The Agora opened in 1966 and moved the following year to a venue on East 24th St., where it hosted shows by emerging artists including Kiss, ZZ Top, Boston and Bruce Springsteen, until the site was heavily damaged by a 1984 fire.

Two years later, the Agora reopened at 5000 Euclid Ave.—a 2,100-capacity venue constructed in 1913 and massively renovated for the Agora's relocation.

Even updates can get old, however, and when concert giant AEG Presents acquired the operating rights to the Agora in 2017, it turned around and poured \$3 million into the venue, looking at everything from restoring its interior architecture to installing a brand-new P.A. to bring it up to date.

Designed by Michigan's Allen Audio Systems and sold and installed by Cleveland's own Eighth Day Sound Systems, the Agora's new audio solution is built around Adamson System Engineering's sub-compact S-Series and was one of the first to incorporate the S10n narrow-dispersion array enclosure.

Allen Audio CEO Mark Allen designed the system. "One of our engineers, Jake Wargo, had been championing Adamson for some time and connected us with Eighth Day Sound based on that," shares Allen. "We thought the S-Series would fit the bill perfectly, being a sub-compact box voiced the same as the large-format E-Series. After a visit with director of installations Tom George at Eighth Day and then a trip to the Adamson factory in Canada for a demo of the new S10n narrow-dispersion cabinet, we knew we had the right system for this venue."

The system in the Agora Theatre is composed of main left-right arrays of eight S10n compact two-way full-range cabinets over two standard S10s per side, supported by left, center and right stacks of two E219 subwoofers in front of the stage and four iS7p point source cabinets for front fills.



Cleveland's legendary Agora Theatre now sports an Adamson Systems Engineering system based around S10n/S10 arrays.

Part of Allen's remit was to make sure the new P.A. actually fit the venue; noting that many mid-size array enclosures have too wide a dispersion for historic theaters like the Agora, he pointed out that the previous system suffered from inconsistent coverage and SPL levels, particularly in the rear corners and under-balcony areas,

so the team used Adamson's Blueprint AV 3D predictive simulation software. "Using Blueprint, it was easy to work out the number of boxes and their configuration to effectively handle this," said Bill Gleespen, Allen Audio's chief of operations, who handled the Blueprint modeling work.

"The system definitely sounds far

bigger than it looks," said John T. Blasko, lead audio engineer at the Agora. "The pairing of the Adamson line arrays, subs and fills with Dolby Lake processing definitely helps us overcome some of the challenges of coverage in the older-style theater. In the 20 years that I have been attending shows at the Cleveland Agora, this is far and away the best the room has sounded."

Adamson Systems Engineering  
www.adamsonsystems.com

ic19

## EXPERIENCE THE POWER OF INTEGRATED AV TECHNOLOGY

Have you redeemed your FREE Exhibit Hall Pass yet?

Visit [infocommshow.org/register](http://infocommshow.org/register) and use VIP Code PSN during registration to save \$299 on an Exhibits-Only Pass.

CONFERENCE: JUNE 8-14  
EXHIBITS: JUNE 12-14  
ORANGE COUNTY CONVENTION CENTER  
ORLANDO

**infocomm**  
infocommshow.org

## CTS Nashville Jingles with JBL

NASHVILLE, TN—Full-service production company CTS put its new JBL VTX A8 line array speaker systems to the test a few months ago when it held its annual CTS Jingle & Mingle event for clients and friends. The event, which featured jazz artist Karlton Taylor and his band, also served as the grand opening of CTS' newly expanded operations center and warehouse.

"We work with JBL V20 and V25 speakers a lot, and we were blown away by the new JBL VTX A8 speakers," said Carl Taylor, CEO, CTS AVL. "The A8's package is beautiful, and together with its size, output, sound quality and price, it was kind of a no-brainer for us. Also, the A8's voicing is consistent with larger JBL speakers. You can use A12s for your mains and A8s as outfills or delay towers and the blend between them will be spot-on. You won't notice a difference between the speakers' tonal balance. When we showcased the A8 speakers



CTS Nashville threw a shindig to show off its new JBL VTX A8 system, with jazz artist Karlton Taylor and his band entertaining the crowd.

at our annual Jingle & Mingle event, the guests all loved them and talked about them. A lot of clients said they

want to use them on their next project, so that was a big success."

CTS plans to use the A8 speakers on tours, and recently deployed A8 line arrays for Country Radio Seminar showcase performances by Blake Shelton, Zac Brown Band, Ashley McBryde, Cole Swindell, Dan & Shay and more.

"We look forward to using the A8 speakers in smaller theaters, corporate presentations and ballrooms to provide great sound quality in a smaller footprint," said Taylor. "Also we work in some venues with restrictions on how much weight we can hang from the ceiling. With the A8s, we can hang eight speakers where we could previously hang only five, and because they're smaller boxes, we can still get the output and sound quality we need in an area that has weight restric-

tions on rigging." Harman [www.harman.com](http://www.harman.com)

## J Cole

(continued from page 36)

in The Vault's vocal booth using dynamic mics through Neve pre's, using the Stereo 2 mix off the Neotek as their guide."

Recording the tracks in Avid Pro Tools were recording engineers Mark Williams, Eddie Z and Gabriel Jules, assisted by Logan Foland. In charge of production for J Cole's team was Grammy Award-winner Raymond Rogers. Throughout the sessions, members of the NBA's audio team came by to monitor progress. And as if The Playroom didn't have enough going on, elsewhere in the facility, dancers for Meek Mill—who opened the game with his own performance—were on-site rehearsing, too.

"It was awesome hearing our work broadcast all over the world!" said Z. "Very gratifying. Also, longtime Playroom clients Anthony Hamilton, Shago Elizondo and Lamont McCain did an amazing job on the National Anthem. It was a truly wonderful showing for The Playroom and its clients."

The Playroom  
[www.theplayroomonline.com](http://www.theplayroomonline.com)

## Revitalizing a Reverberant Chapel's Sound

GENEVA, SWITZERLAND—The stone chapel at Cimetière de Saint-Georges (St. Georges Cemetery) was designed by 19th century architect John Camoletti and features all the aural hindrances that come with such an edifice: the large amount of reverberation (an RT60 of more than 2 seconds) and the restrictions imposed on historic buildings. Now the chapel has undergone an audio overhaul completed by Vaud, Switzerland's Studio Equipment.

The chapel, now named for Camoletti, seats 150 to 200 people for funeral services. It is relatively small—only 43 feet long and half that wide—but has a vaulted ceiling that rises to a bit more than 26 feet. Services in the chapel are mostly spoken word but also make use of recorded music.

"The chapel is a listed historic building," said Studio Equipment CEO Terry Nelson, "so we were limited to a maximum thickness of about 3 mm [0.12 inches] for acoustic panels. That approach would have been labor-intensive, inefficient, and generally just a waste of time and money. However, we needed to find

a solution. Then the light went on in my head, and I thought, 'We won't change the acoustics; we'll change the sound system.' Our experience with Renkus-Heinz in previous installations such as the former Grand Hotel in Caux for Initiatives for Change made Renkus-Heinz's Iconyx the obvious choice." Having successfully worked with Studio Equipment on other projects, the city staff was open to Nelson's suggestion.

Nelson installed Renkus-Heinz Iconyx Gen5 loudspeakers, going with one IC8-RN digitally steerable line array loudspeaker system on either side of the arch leading to the space beyond the main chapel area. "There was not enough space above the middle of the arch for an IC16-RN, and that position would have been too high for proper beam steering," Nelson explains.

The IC8-RN houses eight 4-inch, purpose-designed coaxial transducers, each with its own array of three 1-inch tweeters. Eight audio amplifiers and DSP channels control the transducers, enabling a single IC8-RN column to form up to four individually shaped and aimed beams, controlled down to



A 19th century Swiss chapel recently got a new Renkus-Heinz Iconyx system to help tame its aggressive reverberation.

800 Hz. All of this is fit into a compact package only a little more than 3 feet high and 6 inches wide.

The IC8-RN's low profile was key to minimizing intrusion on the chapel's aesthetics, but putting the system in was tricky nonetheless. "The

installation needed to be as discreet as possible," states Nelson. "We had to use existing cable routes, which was difficult, and no cables were allowed to be visible."

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



Christ Church of the Valley's sound got a full system overhaul that included a new Martin Audio CDD-Live system.

## CCI Solutions Revamps CCV Audio Systems

RANCHO CUCAMONGA, CA—AV provider CCI Solutions recently updated audio at the Etiwanda Gardens campus of Christ Church of the Valley in Rancho Cucamonga, CA, as part of a larger audio, video and lighting installation.

CCI project lead Mike Sessler noted, "The room originally had a banquet hall feel, but they did a complete renovation of the auditorium to make more space and modernize the room. The space measures about 96 feet wide by 67 feet long, with a fairly low ceiling height of 15 feet. The project scope changed dramatically the week prior to the install, which led to tight timelines for getting everything up and running."

The audio system now includes a Yamaha CL5 console with Waves SoundGrid Server and various plug-ins, Shure Axient-D wireless mic systems, a Symetrix Prism 8x8 digital signal processor and a Bose 4-channel 600 W amplifier to drive the lobby and outdoor speakers.

The P.A. system includes three Martin Audio CDD-Live 12 flown left, center and right over the front edge of the stage, with three more CDD-Live 12 halfway back over the congregation for delays. A pair of CSX-Live 218 subs are flown over the stage in the ceiling behind and above the CCD-Live 12.

According to Sessler, "The church features a contemporary Christian worship service that definitely rocks, and their biggest concerns were volume and consistent coverage so that every member of the audience could have the same experience. The low ceiling height meant point source boxes, and for us, that means CDD-Live.

The built-in amplification and DSP make for a quick and clean install, and they sound fantastic.

"The entire CDD line provides more than enough SPL and sounds very musical. Low end is a big deal for these guys, so tucking the CSX-Live 218 subs up high was the logical choice. The low-end coverage is extremely even while providing the designed thump in the chest. The lobby features 11 Martin Audio C4.8T ceiling speakers and the outdoor patio has four CDD6TX-WR weatherized speakers. It's a total Martin Audio experience inside and out."

Martin Audio  
www.martin-audio.com

## You Event Center Nets New Church PA System

OFTRINGEN, SWITZERLAND—ICF Mittelland, a contemporary, non-denominational church in Oftringen, is housed in the 350-seat Celebration Hall at the You Event Center. Aiming to cover the congregation better, the church recently upgraded its audio to a full KV2 system supplied by Swiss Pro AV and lighting specialists Plusmusic AG.

The main challenge for the new audio system was to provide optimal sound for a wide, yet not very deep hall. Part of that goal was accomplished by placing acoustic panels on the ceiling and walls, but a demo of KV2 equipment in the hall convinced ICF Mittelland technical manager Patric Neeser and his team to go with a KV2 point source system.

Plusmusic ultimately provided a pair of wide-dispersion SL412s driven by an SL3000 amplifier for the main P.A. system, supplemented by a pair of VHD2.18J subwoofers powered by a VHD3200. Depending on the event, two EX6 full-range speakers and an ESD5 center speaker provide stage monitoring/fill.

"The sound quality is truly remarkable," said Neeser. "The wide dispersion of the SL412 system is perfect for the shape of our venue. It's a difficult area to cover from an acoustic point of view, being very wide and shallow, but we have managed to achieve smooth and even coverage across the whole area."

KV2 Audio  
www.kv2audio.com



Swiss church ICF Mittelland is covered by a KV2 system.



### Switchcraft Pro Audio





**NEW!!**  
**STEREO BLUETOOTH® AUDIO RECEIVER**  
**318BTS**

- Phantom Powered
- Up to 100' range
- Bluetooth 4.0 technology
- Stereo Output is achieved by using included cable
- Mono-merge output option on both channels

Consistently Excellent since 1946

Learn more at [Switchcraft.com](http://Switchcraft.com)

## ACT / STATISTICS

## CREW

## EQUIPMENT

**1 MICHAEL BUBLE | SOLOTECH**

Craig Doubet (he); Marc L. Depratto, Louis-Phillipe Maziade (me); Jonathan Trudeau (cc/se); Charles Deziel (rf); Francis Lussier, Sebastien Richard, Martin Albert (tech)

**HC:** SSL Live 500; **MC:** (2) DiGiCo SD7; **HS:** Meyer Sound Leo, Lyon, 1100-LFC, Mina, JM1P, 900-LFC, Mica, 700-HP; **MS:** Meyer Sound MJF-210, JM-1P; **IEM:** Shure PSM 1000, P9-HW; Albatros PH9B; **HARDWIRED MICS:** DPA 4060; Shure Beta 52; Sennheiser e901, e904, MKH-416 P48; AMT ERTS; Radial PZ-DI, J48, JDI; Schertler DYN-G-P48; Neumann LM 184; Audix i5; AKG C419; **WIRELESS MICS:** Shure Axient Digital with DPA 4018 S capsule; Sennheiser SKM 6000 with KK 204 capsule; **FOH EQUIPMENT:** Meyer Sound Galaxy, Gigacore; Focusrite RedNet A8R, RedNet MP8R; Rational Acoustics SMAART 8; Apple Mac Minis; RME HDSPe; Universal Audio UAD Live Rack with Ultimate Bundle; **MONITOR EQUIPMENT:** Apple Mac Pro; Avid Pro Tools (recording); Lexicon PCM 92

**2 KISS | CLAIR GLOBAL**

Adam Stuart (be); Scott Diamond (me); Don Baker (cc/se); Scott Megrath (ae); Robert Taylor III, Casey Harriman (tech)

**HC:** DiGiCo SD7 Quantum with SD Racks; **MC:** DiGiCo SD7 Quantum with SD Racks, Yamaha QL-1 (drummer); **HS:** Clair CO-12, CO-10, CP-6, CP-218; **MS:** Clair CM-22, 12AM, CP-118; **IEM:** Shure PSM 1000, Shure P9HW; **HA:** Lab.gruppen PLM 20K44; **MA:** Lab.gruppen PLM 20K44; **HARDWIRED MICS:** Shure 52a, Beta 91a, SM 57, SM 58, VP-88, KSM 137; Neumann TLM 102; Sennheiser MD-421, MKH-416, e935, e904; Audio-Technica AT 4050, AT 3031; Radial J48, JDI; **WIRELESS MICS:** Shure Axient AD4Q; **FOH EQUIPMENT:** Waves Mercury Bundle, SSL Collection 4000, Tascam SS-CDR250N; Bricasti Design M7; Empirical Labs EL-8; API 2500

**3 CHER | SOLOTECH**

Steve Guest (he); Martin Pare (me); Hilario Gonzalez (cc); Marc-Olivier Germain (se); Nick Stover (ae); Evan Rainwater (tech)

**HC:** DiGiCo SD7; **MC:** DiGiCo SD7; **HS:** L-Acoustics K1, K2, Kara, KS28, ARCSII; **MS:** L-Acoustics X12; **IEM:** Shure PSM 1000; **HA:** L-Acoustics LA12; **MA:** L-Acoustics LA12; **HARDWIRED MICS:** Shure; Sennheiser; **WIRELESS MICS:** Shure Axient Digital; Sennheiser; **FOH EQUIPMENT:** Waves

**4 BOB SEGER AND THE SILVER BULLET BAND | CLAIR GLOBAL**

Bruce Knight (be); Mark Harvey (me); Paul Jump (cc/se); Calvin Welshans (ae); Jacob Caples (tech)

**HC:** DiGiCo SD-5 with SD Racks; **MC:** Yamaha Rivage PM10 with Rio Racks; **HS:** Clair CO-12, CO-10, CP-218, FF-II, P-2; **MS:** Clair SRM; **IEM:** Sennheiser 2000; Shure PSM-6HW; **HA:** Lab.gruppen PLM 20K44; **MA:** Lab.gruppen PLM 20K44; **HARDWIRED MICS:** Audio-Technica AT 4047; Shure Beta 91a, SM 57, KSM8, KSM 313, KSM9HS; AKG C314; Radial J48, JDI; Sennheiser MKH-416, e935, e904; Royer SF-24L, PSM-SS24; **WIRELESS MICS:** Shure UR4D with KSM 8, KSM9HS; **FOH EQUIPMENT:** Waves Mercury bundle and SSL 4000 collection; Neve Portico II Master Buss; API 2500 stereo compressor; Alan Smart C2 stereo compressor; Urei 1176In; TC Electronic Finalizer; Tascam SS-CDR200, CD-01U

**5 PANIC! AT THE DISCO | EIGHTH DAY SOUND**

Spencer Jones (be); Jeremy Groshong (me); Tim Usry (se); Liam Von Elby (ae); Sam Balk, Mike Vultaggio (tech)

**HC:** DiGiCo SD5; **MC:** DiGiCo SD5; **HS:** d&b audiotechnik GSL, SL-SUB, J8, J12, V8; **IEM:** Shure; **HA:** d&b audiotechnik; **HARDWIRED MICS:** Shure; **WIRELESS MICS:** Shure; **FOH EQUIPMENT:** Empirical Labs; Bricasti; Eventide

**6 TRAVIS SCOTT | CLAIR GLOBAL**

Ken "Pooch" Van Druen (be); Justin Hoffmann (me); Tim Shaner (cc); Kory Lutes (m tech); Jordan Turner (rf); Tim Joyce, Jesse Cole (tech); Ian Kinersley (pm)

**HC:** DiGiCo SD12; **MC:** DiGiCo SD12; **HS:** Clair Cohesion CO-12, CO-10, CP-218; **MS:** Clair CM-22, CP-218; **IEM:** Shure PSM 1000; **HA:** Lab.gruppen PLM 20000Q; **MA:** Lab.gruppen PLM 20000Q; **WIRELESS MICS:** Sennheiser Digital 6000; **FOH EQUIPMENT:** Waves SSL 4000, C6; **MONITOR EQUIPMENT:** Waves SSL 4000, C6

**7 FLEETWOOD MAC | CLAIR GLOBAL**

David Morgan (be); Myles Hale, Blake Suib (me); Thomas Morris (cc/se); Ken Hottenstein, Chris King (stage e); Chris Fulton, Amy Bammarito (techs)

**HC:** DiGiCo SD5; **MC:** Avid S6L; DiGiCo SD5; **HS:** Clair Cohesion CO-12, CO-10, CO-8, CP-218 subs; **MS:** Clair 12AM, ML-18, R-4III; **IEM:** Shure PSM 1000, PSM600; **HA:** Lab.gruppen PLM 20000Q; **MA:** Lab.gruppen PLM 20000Q; **HARDWIRED MICS:** Earthworks SR40, DP30, SR25; Shure KSM8, Beta 181C, PGA81, Beta 91a, Beta 56, KSM8, KSM 32, KSM 313, KSM 27, KSM141, SM 57, SM 58, Beta 98; Sennheiser e935, e602, e902, MD421, MKH-50; Audio-Technica AE 4100, AT 4047; AKG C414B; Audix D4; Beyer M201TG; Neumann KM 184; Royer R1211; DPA 4099; Radial DI; **WIRELESS MICS:** Shure Axient; **FOH EQUIPMENT:** Bricasti M7; TC Electronic M6000; Eventide Eclipse; Lake LM44; Waves Mercury Bundle, SoundGrid; AAX McDSP Live Pack; **MONITOR EQUIPMENT:** Yamaha SPX990

**8 ANDREA BOCELLI | PRG**

Andrea Taglia (he/me/se); Francesco La Camera (orch e); Alan Henig (cc); Gabriele Turra (ae); Andre Roy, Tomasz Gajewski, Armando Montalvo, Justin Willmon, Tyler Austin, Alex Rotelli (tech)

**HC:** Midas Heritage 4000, XL-4; **HS:** L-Acoustics (88) K2, (4) K1-SB, (14) KS28, (36) Kara, (8) 12XT, (12) MTD108A; **MS:** (10) Meyer Sound UM-1P; **IEM:** Shure PSM 1000; **HA:** L-Acoustics LA12X; **HARDWIRED MICS:** 3 Schoeps CMC 6/MK 21, CMC 6/MK 4; Shure KSM32, SM57, VP88; AKG C414; DPA 4061; Schertler DYN-B; Electro-Voice RE20; various DIs; **WIRELESS MICS:** Shure UR2/KSM9, UR1 with DPA 4061; **FOH EQUIPMENT:** Meyer Sound Galileo; L-Acoustics LA Network; Lexicon 960L; TC Electronic 6000; dbx 162SL, 160A; Drawmer DL241; Tascam SS-CDR200 (SD recorder); Tascam SS-CDR200 (SD player); **MONITOR EQUIPMENT:** XTA DP448

**9 BLAKE SHELTON | CLAIR GLOBAL**

Jeff "Pig" Parsons (be); Brad Baisley (me); Dave Moncrieff (cc/se); Nathan Falknor (mse); Brandon Allison, Brady Maness (techs)

**HC:** Avid Venue S6L; **MC:** Avid Venue S6L; **HS:** Clair Cohesion CO-12, CO-8, CP-218; **MS:** Clair CM-22; **IEM:** Wisycom MTK952, MPR50; **HA:** Lab.gruppen PLM 20000Q; **MA:** Lab.gruppen PLM 20000Q; **HARDWIRED MICS:** Sennheiser e-901, e602, e905, e604, e914, e902, e935, e906, MD-421. Neumann KM-185 Radial J48, JDI; **WIRELESS MICS:** Sennheiser SKM6000; **FOH EQUIPMENT:** Waves C6, API collection, Live Bundle, SSL 4000 collection; Rane Seratto EQ

**10 KENNY CHESNEY | MORRIS**

Chris Rabold (be); Bryan "Opie" Baxley (me); Phill "Sidephill" Robinson (me-Chesney); Chris "Sully" Sullivan (se); Tom Nisun (stage m); Rich Rossey (patch); Phil Spina, Tanner Freese, Jeremy Bayne (techs); Ed Wannebo (pm); Jill Trunnell (apm)

**HC:** SSL L500 Plus; **MC:** (2) Midas ProX; **HS:** d&b audiotechnik GSL; **MS:** d&b audiotechnik J8, J12, JSub, SL-Sub, Y10P; **IEM:** Shure PSM 1000; **HARDWIRED MICS:** Shure, Earthworks, Telefunken, Sennheiser, Beyer; **WIRELESS MICS:** Shure Axient Digital with sE Electronics V7MC1 capsules; **FOH EQUIPMENT:** Rupert Neve 5045; API 2500; Empirical Labs EL8-X Distressor, DerrEsser, EL500, EL7 Fatso Jr; Sonic Farms Creamliner; Eventide H3000, Overstayer 8776A Imperial Channel Strip, Stereo Voltage Control, Stereo Field Effect, M-A-S; Waves SoundGrid

**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.



**Christophe Anet**  
QSC Live Sound

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

**A:** As product marketing manager for QSC Live Sound, I will be responsible for the creation, presentation, curation and refinement of product marketing content for our diverse portfolio of live sound products and solutions. I am very excited to work in the

QSC marketing team, as it is composed of very passionate and talented individuals with a broad range of art, music and marketing skills. Over the last 25 years spent in the pro audio industry, I have had the chance to endorse a wide range of responsibilities, from product engineering to customer support and technical writing, and from education and training to product specialist, which now all merge to provide the extended skill set needed for this new position.

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

**A:** Dedication to customers being at the heart of my motivation, my professional work has always revolved around finding the best possible way to serve clients, wherever they are in the world.

As an electroacoustics engineer, I spent years in designing products, teaching, lecturing, writing or assisting customers across five continents. This experience has immensely broadened my knowledge, not only technically but also culturally. In working with more than 70 countries, I had the chance to face a large number of highly interesting challenges in this industry.

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

**A:** #playoutloud. Our new branding campaign "Play Out Loud" is an expression of the company's dedication to instilling artists and performers with the confidence to enthusiastically and passionately connect with their audiences. The entire organization is highly engaged in this global effort and my role will play a key part in driving that message.

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

**A:** My goal is that QSC Live Sound products' features and benefits are well articulated and understood, as well as broadly and uniformly utilized by end users, channel and marketing partners, QSC representatives and internal stakeholders.

Dedication to customers being at the heart of my motivation, the vision in my professional work has always revolved around finding the best possible way to serve clients, wherever they are in the world. QSC is becoming a truly international company and I am very excited to contribute to this adventure.

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

**A:** I do not know it yet; I will find out

Renkus-Heinz has announced the appointment of **Matt Czyzewski** to the position of president. He joins the loudspeaker company following a 22-year



**Matt Czyzewski**

tenure at Biamp, where he started as a product manager and worked his way up to vice president, executive vice president, chief operating officer, and finally chief executive officer. During those years, he was a major contributor to the growth of the company, leading up to 350 employees company-wide in three locations in the United States and Australia. Czyzewski was a primary driver of five major Biamp product lines that received more than 30 industry awards.

Listen Technologies has named **Maile Keone** president of the company. She will be responsible for executing Listen

Technologies' business plan. Keone, a technology industry sales and marketing expert, previously served as the company's chief revenue officer. She replaces founder **Russ Gentner** as president; Gentner remains chief executive officer. Prior to joining Listen in 2013, Keone held leadership positions in sales and marketing, operations and employee experience at various technology companies. Also at Listen, **Tracy Bathurst** has been promoted to senior vice president and remains as chief technology officer. Bathurst has 25 years of experience in the audiovisual and telecommunications industries and has held a variety of leadership positions; in his new role, he will support Keone in running day-to-day business operations while continuing to oversee Listen Technologies' product development.



**Maile Keone**

Technologies' business plan. Keone, a technology industry sales and marketing expert, previously served as the company's chief revenue officer. She replaces founder **Russ Gentner** as president; Gentner remains chief executive officer. Prior to joining Listen in 2013, Keone held leadership positions in sales and marketing, operations and employee experience at various technology companies. Also at Listen, **Tracy Bathurst** has been promoted to senior vice president and remains as chief technology officer. Bathurst has 25 years of experience in the audiovisual and telecommunications industries and has held a variety of leadership positions; in his new role, he will support Keone in running day-to-day business operations while continuing to oversee Listen Technologies' product development.

Alteros, an Audio-Technica company, announces the appointment of **Jonathan Novick** to the position of director of sales and marketing. In his new role, Novick will be responsible for managing and directing sales and marketing activities on behalf of Alteros, reporting directly to Jackie Green. Novick previously held positions with Avermetrics (vice president, sales and marketing), Audio Precision (director of sales, sales manager, sales engineer) and Hewlett-Packard/Agilent Technologies (senior product manager, technical support manager, applications engineer).



**Jonathan Novick**

Christian Orcin has joined d&b audiotechnik as the managing director of d&b audiotechnik Spain. Headquartered in Barcelona, d&b Spain is one of nine d&b subsidiaries around the world. Orcin's responsibilities include sales and marketing, and overseeing service and support for regional customers and sales partners.



**Christian Orcin**

PK Sound has named industry veteran **Paul Freudenberg** as its vice president of global business development. He will be responsible for managing global sales and marketing as a key part of PK's executive management team, providing insight and experience to guide future growth, products and expansion.



**Paul Freudenberg**

Synthax, distributor of RME, Ferrofish and myMix, has appointed industry veteran **Dennis Stafford** to the role of marketing manager. Stafford started his career in the music industry in the early 1990s, serving in marketing roles at both MTV and BET. He later helped head up marketing efforts at the House of Blues in Chicago, which consistently ranked among the top revenue-generating venues during



**Dennis Stafford**

his tenure. Stafford then switched to the MI side of the business in 2014, working as marketing director for Armadillo Enterprises, which included Luna Guitars, Dean Guitars and ddrum.

Solotech has named **Paul Owen** as general manager of the company's Nashville office. Owen is now responsible for ensuring the efficiency of local operations and sales, encouraging synergies between the divisions and further developing the company's opportunities in the Nashville area. Drawing on over 40 years of experience in the audiovisual and entertainment industry, he is recognized for this work in the world's biggest stages and stadiums. Owen opened and expanded the Nashville office, created in 2016, which he was administrating prior to taking this new position.



**Paul Owen**

Apart Audio announced **Aaron Chisena** has been named director of business development for North America. Chisena brings more than 20 years of experience in product, sales and marketing management to his new role, as well as a knowledge of consumer electronics, commercial electronics, technology and the music industry. Based in Stamford, CT, Chisena will further develop and grow the Apart business together with its exclusive U.S. distributor, TMP-Pro.



**Aaron Chisena**

Biamp has appointed **David Woolf** as the company's senior director, global marketing, where he will oversee all elements of the company's corporate communications, product marketing, demand generation, web properties, public relations and social media to ensure a unified voice and strategy as the company grows through internal product development, geographic expansion and company acquisition. Woolf has more than 20 years' experience creating, developing, managing and marketing technology products, software, websites, mobile apps, and services.



**David Woolf**

## Reflecting on Reflex

BOB BRENNAN, FOUNDER/SALES  
MANAGER, REFLEX MARKETING

BY CLIVE YOUNG

Independent rep firms tend to come and go. Some stick around for a while longer and develop good reputations, and then there's the relative handful that become cornerstones of the industry in their territories. Reflex Marketing, founded more than 35 years ago by Bob Brennan, is one of the latter companies. Reflex reps a variety of musical instrument and professional audio brands throughout the greater New York metro, New Jersey and Pennsylvania territories.

"I had a background working in management positions with different companies in our industry and I decided to start my own company," said Brennan. "Reflex has survived for 35 years as a rep company where many others haven't, and we believe one of the main reasons for this is that we are good at conflict resolution—we don't take sides with either the dealer or the manufacturer. Instead, we work on logical solutions for a win-win scenario for all. We partner with our customers instead of being people who just try to get orders."

Knowing what is needed by all the entities involved—the dealer, the manufacturer and his own company—may have served Brennan well over the years, but that insight is informed by his own early years as an MI retailer: "I started my career in the early 1970s, owning a retail music store, which gave me a good understanding as an independent rep of all aspects of the relationships in the industry—from the independent rep, to the person on the retail floor, to sales management—over the course of my career. I know all the parts of the puzzle, and a guiding principle at Reflex Marketing is that everyone involved is just as important as everyone else. We don't just meet with the buyers; we go into the stores and into the territories and reach out to everyone."

That extra effort in building relationships hasn't just resulted in sales—it has demonstrably extended the life of Reflex Marketing because it led to Doug Nestler becoming the rep firm's new owner. "Doug says that he remembers in the early days that I was the only rep he knew who always talked to everyone in the store, everyone involved in the organization," Brennan recalled. "Now Doug has become the owner of Reflex Marketing. He has an extensive background in our industry and has held

positions including vice president at Korg and vice president of marketing at American Musical Supply. He has a deep knowledge of the changing technologies in our industry, as well as deep relationships. We have known each other for many years, and I will continue to work with him as sales manager for Reflex."

Other members of the Reflex Marketing team include Angelo Arimborgo, who joined the company about four years ago to handle the MI side of the business; Jon Coccaro, recently brought on to head up the company's contract marketing division; Alena Nestler, who is joining Reflex as full-time office manager; and various personnel who do on-site training at dealers.

If the addition of new personnel sounds like Reflex is expanding, that's because it is. "Our business has grown over the last 35 years and we have really seen a large increase, especially in the last five years, in both the MI and pro audio sides of the business," said Brennan. "Today our biggest markets are commercial sound, installations, pro audio-type stores, DJs and internet-based businesses."

Brennan notes that "the MI brick-and-mortar stores are a big part of who we are," but also readily admits that working with internet retailers comes part and parcel with the modern economy: "In our business today, it is very important to be able to adapt to the world we live in based on the volume of business generated by the internet."

Anyone can start a business relationship, but for Brennan, the key to maintaining and building that connection over sometimes decades has been to ensure that "the manufacturer, dealer and rep are treated equally in all situations. We are deeply committed to the relationships we have with our vendors and dealers, and we believe in mutual respect for every-



Pounding the pavement and making it happen at Reflex Marketing are, from left, owner Doug Nestler and founder/sales manager Bob Brennan.

one. I believe in the triangle concept in business, which is that all parts have to be equal." It's such a tenet of Reflex Marketing, in fact, that the company's logo is based on a triangle for that reason.

Another aspect of maintaining a business relationship is being there—not merely being reliable, but being an active part of the other's business. "At Reflex, we believe in A to Z marketing," said Brennan. "When you win business from a client, it is very important to be involved in every aspect of the business—and I am. While I'm involved, I don't micromanage; instead, I employ people for various positions who are smarter than me in their given specialties. We get the right commitment for everyone to make sure that the business runs smoothly."

Much of that commitment comes from proving you have others' best interests at heart. "Today, many feel the strength of a rep firm is its ability to sell," said Brennan. "We also spend time educating our clients so they are comfortable [with what we are proposing]. We engage our accounts as partners and we are committed to supporting our customers. We always think of them as strategic partners and we never want to favor only the dealer; we want to favor everyone."

"For instance, there have been many times in my career when I've

told a client not to buy something because I believe in honesty, and that is how we have become partners with our customers. You must be involved. Manufacturers also have to see that their rep firms are involved deeply."

That ideology will continue to be a part of Reflex as it heads forward under Doug Nestler's leadership. Ever-changing with the time, Brennan sees new approaches he'll explore as sales manager: "As we move into the future, we will continue to concentrate much more on social media, as well as internal and external organization, resource management techniques, and on-site training and support for dealers. We've spent a great deal of time educating dealers about the products that we represent, and we strive to keep everyone informed. We put a lot of emphasis on that part of the relationship."

Just as Reflex aims for clients and partners to believe in it, Reflex likewise believes in the manufacturers it reps, said Brennan, and given his company's longevity, that's been an interesting ride all its own. "We have big lines and small lines, and some of our biggest lines are companies that started as small businesses and we believed they would grow. Reflex has been very successful at doing that."

Reflex Marketing

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

# Growing Through Acquisition, Part Two

Another reason to acquire a company may be to solidify a supply chain. This was how, during my time leading Radial, we acquired Jensen Transformers. We began our relationship with Jensen in the early '90s as its Canadian distributor. With the development and eventual success of the Radial JDI, our purchasing soon outpaced Jensen's ability to deliver. We had two choices: We could either find new sources, or help Jensen to deliver more by funding them.

As a manufacturer, part delivery is the blood of the organization, the point being that no matter how good the product, if you cannot deliver, you cannot grow. To fulfill our needs, we approached companies that had

done assembly work for Jensen before it brought production in-house. We quickly discovered that maintaining Jensen's incredible legacy of delivering spectacular product was much easier said than done. Using another transformer winding house, we had built and shipped products with hundreds of transformers to Europe for the Olympic Games in Russia, only to discover that all of the transformers had problems. This, of course, pushed me over the edge and was the impetus I needed to work out a deal to buy Jensen.

With investment funds in hand, Jensen was able to purchase more raw goods. We then set about working with its team to improve planning and cleaning up systems. These changes took about a year to implement, but once they were done, production increased and deliveries improved dramatically.

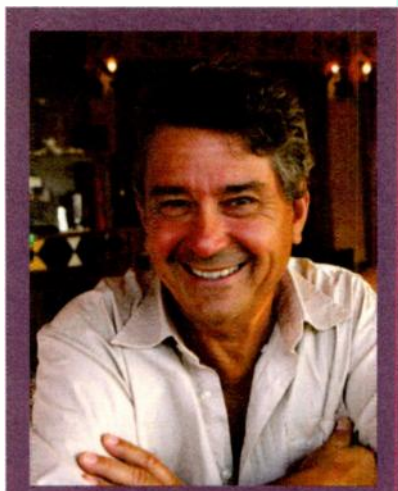
It is important to note that if and when you do decide to acquire a company, everyone will be nervous about keeping their jobs. You cannot instantly bring in new people or implement new processes, as they will cause disruption. A better approach is to take your time and gain the confidence of their employees; stability is crucially important in these situations.

After Jensen, we acquired Hafler. In the '90s, we were also the Hafler distributor in Canada. Back then, we would sell pallet-loads of studio amps

before the advent of self-powered monitors. We already knew the folks who owned the brand and knew that they had mothballed it. Although the market for studio amps was limited, I felt the brand had value. Walking into a shop with a Radial power amp seemed to me a lot less intriguing than taking advantage of David Hafler's tremendous 50-plus-year legacy. David Hafler began his career with the Dynaco brand, producing what would become the most successful tube amplifier of all time. I thought that maybe, just maybe, I could bring Hafler and Dynaco together to bring both of these brands back to life and then produce power amplifiers for studio, home Hi-Fi and the AV contractor market. That is exactly what I did. We managed to buy the Dynaco brand a few years later, and began our quest to produce three families of amplifiers along with other accessories.

Because each of these acquisitions happened over time, I was able to fund each one myself without having to get outside investors. When I sold, I decided to exit the same day that the deal was signed, because I knew that after running my own show for over 25 years, I simply did not have the DNA makeup to play second fiddle.

This brings me to another Aha Moment: It is sometimes argued that if retirement is in the horizon, growth may not be the end goal. I totally



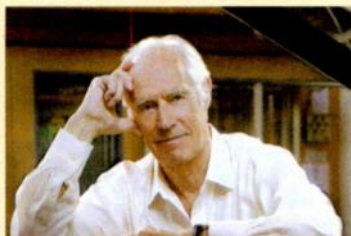
BY PETER JANIS

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

disagree. Preparing for exit is in fact a very important part of a growth strategy. The value in a company comes from a number of pointers such as brand strength, profitability, distribution channels, future growth potential and the stability of your management team. The last thing you want to do is show a potential buyer that sales are on the decline. Preparing a company for sale can take upwards to three years, but it is well worth the effort! Peter Janis, former CEO of Radial Engineering, is a 40-year veteran of the music industry. Exit Plan ([www.exit-plan.ca](http://www.exit-plan.ca)), his consulting firm, assists business owners to build their companies and prepare them for eventual sale.

## Music Biz HOF Inductees Named

NASHVILLE, TN—The Music Business Association has announced this year's inductees to its Music Business Hall of Fame. The late producer George Martin will be inducted by his son, Giles Martin, and this year's ceremony will also recognize major re-



The late George Martin.

cord labels Atlantic Records and Capitol Records; independent record label Sub Pop; Atlantic Records executives Ahmet Ertegun, Herb Abramson and Miriam Abramson; music industry landmarks the Apollo Theater, CBGBs, Hitsville U.S.A., Sun Studio and the Troubadour; and *Rolling Stone*.

The honorees will be recognized during the Music Biz 2019 Awards & Hall of Fame Dinner as part of Music Biz's annual conference, held May 5-8 at the JW Marriott Nashville. Inductees are selected annually by the Music Biz Board of Directors. Music Business Association [www.musicbiz.org](http://www.musicbiz.org)

## Sound Choices for Pro Audio Professionals

### David Clark Pro Audio Headsets

offer outstanding comfort, durability and performance for sound engineering/mixing, front-of-house personnel and broadcast production crews. Single and dual ear models are available in rest-on-ear and surround-the-ear styles. Visit our website or call 800-298-6235 for more information.



© 2019 David Clark Company, Inc. All rights reserved. David Clark Company is an Equal Opportunity Employer.



## DC PRO AUDIO

Model DC 8632  
Ultra Lightweight  
Rest-on-Ear Style

Model H8530  
Lightweight  
Surround-the-Ear Style



View our entire line of Pro Audio Headsets and order online, direct from David Clark at [www.davidclark.com](http://www.davidclark.com)

## Studio Design

(continued from page 1)

Gavin Haverstick of Haverstick Designs in Carmel, IN, still works on music facilities—his design for Hi-Five in Milwaukee was nominated for a TEC Award—but they are evolving, he says. Hi-Five has a huge live room, which goes against the current trend: “It’s a differentiator.” More typically, Haverstick says, he works on spaces that leverage variable acoustics to attract a variety of projects.

Indeed, Haverstick co-founded a separate company, Acoustical Fulfillment, to produce the patented Flex-48 adaptive system, which offers passive absorption, barrel-type diffusion and low-frequency control in one product. “It’s pretty dramatic; it’s not a subtle change,” he says.

While new studios vary greatly, they all still need acoustic treatment. “We deal with so many different situations and types of spaces that people want to do things in, and it’s constantly changing,” says Robb Wenner, Nashville-based marketing manager and artist relations for Auralex. However, he says, “We have definitely seen an uptick in podcasting and people being able to use a space that they have inside their offices or retail environment or pretty much anywhere. We have several different products that we’ve brought to market in the past couple of years to address that, too,” most notably the manufacturer’s MAX Kits.

“They’re freestanding and portable acoustic treatment. We sell these to people who don’t want to, or can’t, install treatment on the walls of their apartments. It can be configured quickly and inexpensively and can be moved around or put away easily. And it creates an environment where you don’t get the room sound that people complain about in podcasts,” says Wenner.

Primacoustic points podcasters in the direction of the company’s Broadway panels, which are intended to “eliminate primary reflections and flut-

ter echo, and subdue the reverberant field.” Broadcasters have been treating their studios for decades, but podcasters are now proliferating, enabled by a growing catalog of inexpensive audio tools. For podcasters who want to take their rooms to the next level, Primacoustic recommends also adding its Cumulus tri-corner traps high on the walls to tame the lower midrange typically accentuated in smaller rooms.

Where podcasters’ budgets and intentions have fewer constraints, a professional custom solution is the way to go, such as WSDG Walters-Storyk Design Group’s work for Stitcher detailed elsewhere in this issue. (See “Stitcher’s Flexible New Facility” on p. 25.) Manzella is also seeing business in that market. “We’re getting calls from people who would never call an acoustic design firm,” he reports, including an advertising agency. He asked one client, an insurance company, why they were doing podcasts, and was told that “the owner likes to talk with high-end clients and sit in a studio environment that is quiet, sounds good and looks good if they want to shoot video. ‘It’s a great way to promote our services,’ they said,” Manzella reports.

A certain segment of the music recording market is building larger rooms incorporating classic design elements of the ’50s, ’60s and ’70s, often in tandem with vintage analog equipment. Brad Graham, vice president of sales for ProCo Sound in Jackson, MO, has seen the effect of the analog-to-digital transition. “The whole shift to digital created a submarket of analog gear that people can pick up for a song. Our 48-channel splitter snakes declined, and our 300-foot shielded Cat cables increased because of Dante networking,” he says.

But analog certainly didn’t go away, says Graham. “We deal with everything from music stores to vintage guitar shops, and some of those old [instrument] pedals are \$500!”

Despite the bump in analog studios, Wenner says audio professionals are more typically bringing facilities into their homes. For companies like Auralex and Primacoustic, room

conversions are their bread-and-butter business. Wenner had his own audio post room on Nashville’s Music Row, and in Los Angeles for over a decade before that, but he now has a home studio and knows of several others just in his subdivision near Nashville. “Everyone, from A-list musicians to songwriters, producers and mixing engineers, has a home-based studio. Some have simple studios; others have extreme rebuilds or complete ground-up builds.”

A home-based facility makes sense for musicians who may not want to spend time at a commercial studio after having just spent months and months on tour, says Haverstick. He adds, “Record labels and artists are looking at the costs of renting out studios versus building one in someone’s home.” There’s no difference in the final product; for one client for whom he built a room, he says, “Their most recent album went straight to Number One and was recorded completely in their basement.”

Larger design firms attract work from a variety of markets, not just music production, of course. Haverstick has a significant roster of house of worship and commercial clients, for instance, and includes Butler and Ball State universities on his client list. Manzella is currently in the middle of projects for various education institutions. “I’m working with Berklee on the Power Station renovations, and we’re building the NYU Clive Davis facilities on Jay Street in Brooklyn, which is over 20,000 square feet. A year or two ago we designed a 20,000-square-foot multi-studio facility for the African Music Institute in Gabon,” he says.

As for audio post, says Manzella, “Dolby Atmos is driving everything. We’re moving clients from 7.1 to Atmos rooms. And I’d say 100 percent of the post-production suites that we build are Atmos-ready if they’re not Atmos-installed. That keeps us busy with television networks and privately-owned post-production houses. That’s always been a steady workstream, but it’s even more reliable these days.”

aware applications, like Logic Pro X, Steinberg Cubase and Steinberg Nuendo.

The downside of software remotes involves the usual suspects: the shifting goal posts of software trying to remain compatible with hardware, and days when Wi-Fi or Bluetooth are in a bad mood. While most still need your hands, there’s an answer for that, too. X-Tempo’s pok BLE is a wireless foot controller with eight editable footswitches that can transmit anything from keyboard shortcuts to command strings of six keys

per switch—so I’m back to that record punch-in footswitch ... but times eight, programmable and wireless.

In any event, the art of remote control has improved dramatically since its early days; now’s an excellent time to do a deep dive into what’s available for controlling your hardware or software, because you have more options than ever.

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

## advertiserINDEX

### ADVERTISER PAGE

Acoustics First	8
Adamson Systems	1,15
Allen & Heath	52
AMS-NEVE	9
B & H	51
d&b Audiotechnik	37
GIK Acoustics	25
KEF America	19
Lectrosonics	13
Meyer Sound	2
Neutrik USA	21
Presonus	4
Radial Engineering	39
RapcoHorizon	17
Renkus-Heinz	31
Shure	7
Sweetwater Music	
Instruments & Pro Audio	10-11
Switchcraft	43
Whirlwind	23
Yamaha Commercial Audio	3

## Anderton

(continued from page 21)

Allen & Heath’s SQ, Behringer’s x32 and others.

Apple offers the free Logic Remote app, which connects via Bluetooth and controls almost all program elements; it even edits parameters for third-party plug-ins. And, of course, Avid offers Control for Pro Tools, based around EUCON technology so it’s compatible with other EUCON-

Pro Sound News (ISSN# 0164-6338) is published monthly by Future US, Inc., 11 West 42nd Street - 15th Fl, New York, NY 10036. Pro Sound News is available without charge in the USA to qualified professionals engaged in sound recording, broadcast, video recording, audio-visual, sound reinforcement and associated business. The publisher reserves the right to refuse applications and restrict free copies sent to a company or organization. For subscription information or to email customer service, please visit our online Subscribe Center at [www.MyPSNmag.com](http://www.MyPSNmag.com). Reprints available upon request, call our Reprint Coordinator at Wright’s Reprints: 877-652-5295. Periodical postage paid at New York, NY and additional mailing offices. POSTMASTER: Send address changes to: Pro Sound News, P.O. Box 234, Lowell, MA 01853. Please allow 6-8 weeks for address changes to take effect. © Copyright 2019 by Future US, Inc. PRINTED IN U.S.A.



# Esports

(continued from page 1)

ees to not only watch professional teams competing, but also to play themselves.

Followers of traditional sports via traditional broadcast outlets may dismiss the idea of watching a bunch of twentysomethings sitting in the dark playing video games, but according to at least one analysis, esports viewership in the U.S. will outpace all traditional sports leagues other than the NFL by 2021. And some of those twentysomethings are as well paid as traditional sports stars: KuroKy, Faker and Xyp9x are the handles of last year's top-three esports earners, who raked in more than \$7 million in prize money between them from championship competitions, according to tracking website Esports Earnings.

Indeed, there is a lot of money flowing into esports. Globally, esports revenues are expected to break the \$1 billion barrier this year, with North America contributing over \$400 million of that. Gaming industry analytics firm Newzoo projects that, given the present trajectory, esports revenues could total \$1.8 billion worldwide by 2022.

Until relatively recently, esports broadcast distribution tended to be via internet platforms such as Twitch (which Amazon acquired for nearly \$1 billion in 2014), YouTube, Facebook and others. Lately, conventional networks such as Turner, Disney and NBC have increasingly been moving into esports broadcasting.

Although audiences are typically watching on smartphones, tablets and computers, esports broadcast production facilities are not dissimilar to traditional studios. The HyperX Esports Arena at Luxor in Las Vegas, for example, is equipped with a pair of Lawo mc<sup>2</sup>36 consoles. L.A.-based Riot Games, publisher of *League of Legends*, has installed a Calrec Artemis and a Calrec Brio at its Berlin esports complex in Germany, and Electronic Arts' EA Broadcast Center in Redwood City, CA, includes a Brio in its audio control room.

Some technology companies are developing products specifically for esports. At this year's NAB Show, for example, Studio Technologies launched its Model 207 eSports Console, addressing the microphone, audio monitoring and interfacing needs of esports players and personnel. The compact, tabletop enclosure offers both analog and Dante AoIP paths and enables direct integration with personal computers and Ethernet-based audio networks.

"As the popularity of esports has



Professional gamers showed the crowds how it's done at NAB Show's inaugural Esports Experience.

continued to grow, so has the expectations for the technology used by the competitors and event personnel," says Gordon Kapes, president of Studio Technologies. "We designed the Model 207 expressly to support the needs of these emerging applications."

Kapes adds, "Esports arenas are technically sophisticated, ever-shifting environments that require flexible and high-performance technology. We equipped the Model 207 with unique, configurable audio resources, along with careful circuit design for reliable operation and excellent audio performance."

This year's NAB Show offered a program of more than two dozen sessions on esports-related topics, from business issues and technology advice to the potential impact of 5G wireless systems on esports' evolution. At the Esports Experience on opening day, Charles Conroy, newly hired as vice president of gaming for The Switch, offered a personal perspective of esports from his 15-year involvement with the business. The international appeal of esports was apparent from the start, said Conroy, as he checked off some of the milestones, such as the establishment of Dallas as the esports hub of the world, the increasing involvement of traditional sports leagues in esports and the influx of money, bringing with it workflows and production values comparable to traditional sports.

At the NAB Show, the company that Conroy recently joined, The Switch, launched The Switch eSports, which integrates production, transmission and distribution from anywhere in the world using the company's managed, private cloud services for linear and streaming. The company's booth included an example of its at-home remote broadcast solution: a flypack enabling isolated camera feeds, audio channels and file-based workflows, incorporating a Clear-Com system for those all-important comms.

Some traditional broadcasters entered the esports arena a few years back but wanted everything to oper-

ate on a traditional linear model, said Conroy, relating an attempt by DirecTV to launch an eight-city league championship. Esports, for its part, was a little resistant to traditional media, he also noted. "There's a happy common ground. At The Switch, we're bringing the same technology we bring to the Super Bowl to an esports event."

Inspired by the demands of esports, Riedel Communications announced at the NAB Show its support of TechSound, a Shanghai-based company that designs and operates advanced systems for China esports clients supporting communications not only between players, but also between the remote production staff and on-site referees. The company's esports comms solutions are based on Riedel's Artist digital matrix intercom system, Performer partyline system and MAX headsets.

"TechSound is one of the few companies in China using VoIP systems for remote production of esports competitions," according to Gao Jian, general manager at Riedel China. "The evolving technical requirements of esports have become a

key driver of China's comms industry, and we're pleased to be supporting TechSound in addressing these requirements and achieving an agile and efficient production workflow for esports competitions across multiple geographic sites."

For one recent international esports event in China, TechSound leveraged Riedel technology to integrate intercom, wireless and walkie-talkie systems from different rental vendors and manufacturers into one communications system. TechSound also manages semi-permanently installed season systems, connecting stage referees and players across six Chinese cities back to a centralized production studio.

Ultimately, much of esports' appeal has to do with communications. As Conroy noted, fan engagement in esports is unmatched thanks to interaction with the players. "You can watch your favorite players playing, talk to them and they'll answer you back. That's unique." And it's not just fans chatting with players. Players constantly talk to each other during games—often, because of the international makeup of teams, in multiple languages.

"One of the big things in esports compared to traditional sports is the amount of interaction the fans have. That's why you're going to see it exceed all major sports relatively soon," he said. "The eyeballs are there. Now it's all about how you capitalize on that."

Studio Technologies  
www.studio-tech.com

The Switch  
www.theswitch.tv

Riedel  
www.riedel.net

## soundCLASSIFIEDS

### equipment for sale

JOSEPHSON CS50H Omni Condenser Microphone  
for calibrated system measurements  
Josephson Engineering  
www.josephson.com

ARX  
www.arxamerica.com®  
USB DI BOXES - SPLITTERS - SIGNAL PROCESSING

To advertise in the classified section of  
**PRO SOUND NEWS**  
Contact Zahra Majma at  
zahra.majma@futurenet.com

### acoustical products

AcousticsFirst.com  
Materials to Control Sound & Eliminate Noise  
MADE IN USA  
888-765-2900  
Toll-Free Number

# Monkee Generation

BY JACQUES SONYIEUX

In the mid-'60s, it was impossible to escape the pop culture presence of *The Monkees*. The weekly sitcom about a band struggling to make it was a massive hit on NBC, spawning chart-topping albums, sold-out tours and even a psychedelic cinematic effort, *Head*, written by a young Jack Nicholson.

During their heyday, the Monkees had an almost unfathomable influence on the younger generation and the charts, thanks to hits like "Pleasant Valley Sunday," "I'm A Believer" and "(I'm Not Your) Steppin' Stone." The series may have been a comedy about wisecracking cut-ups, but it also inadvertently provided an empathetic role model for thousands of aspiring bands that dreamed of success. Perhaps unsurprisingly, each of the Monkees was a talented actor, singer and musician in his own right, and that's still evident as Monkees Mike Nesmith and Mickey Dolenz continue to tour today, both solo and together. *Pro Sound News* recently caught up with Dolenz, who talked about the early days.

## ON EVOLVING THE CONCEPT

Originally, The Monkees wasn't a group or a band; it was a TV show about this imaginary band that lived in this beach house in Malibu and were trying to be The Beatles. So if you approach it from that point of view, everything else makes a lot of sense and it set the course. It was about the struggle for success—and I

think that is the thing that helped endear it to all those generations of kids out there, rehearsing in their garages, basements and living rooms. That said, the producers of the show must have known that if the pilot episode sold, we would have to go out and perform; otherwise, they wouldn't have hired musicians and singers. The Monkees was much more like a Marx Brothers musical than The Beatles. The Marx Brothers could sing, play, dance, act and do comedy. It was John Lennon, actually, who compared us to the Marx Brothers. That was by far the most accurate description of us if you understand the genetics behind that.

## ON THE AUDITION

You had to be a musician, a singer and an actor to get through the auditions. My audition piece, which I still do in my solo show, was "Johnny B. Goode" by Chuck Berry. Originally, I was a guitar player singing in cover bands, playing songs like "Wooly Bully," "Money" by Barrett Strong, "House of the Rising Sun" by Eric Burden. That's when the producers came along for the audition. I passed



it, but they did say to me, 'You are going to be the drummer, because we have enough guitar players.' Then eventually the four of us went on to perform hundreds of concerts in front of tens of thousands of people.

## ON STUDIO CATS

During those times and the early records in the studio, the Wrecking Crew was everywhere. They were playing the Beach Boys stuff, working with The Byrds, everybody. It is about time those people finally got the credit due them. I remember quite clearly sitting at the feet of Hal Blaine at RCA Victor studio; also with Earl Palmer and Carol Kaye and Glen Campbell. Hal would give me a pointer here or a pointer there, and I was studying feverishly, trying to keep up with him. Recording sessions were a very different situation back then; they were much more difficult, much more expensive and much more involved. It was not like today, where you can record something with your laptop in your living room.

## ON HENDRIX OPENING FOR THE MONKEES

I was in New York, and we were doing publicity, getting ready for the first tour. Somebody said, "You've got to come down to the Village and see this guy; he plays guitar with his teeth!" I remember that show very clearly, sitting at front row center. Then sure enough, there's this young kid playing guitar with his teeth. Months later, I am at Monterey Pop Festival, and out comes this trio all dressed up in these psychedelic, fancy clothes. That, of course, was Mitch, Noel and

Jimi, who were all very theatrical. We were looking for an opening act and we regarded The Monkees as a very theatrical act, so we asked them to open, and they thought it was a good idea. Jimi was the opening act for half a dozen dates or so, and we were blown away by his music. The fans, of course, were there to see The Monkees and they didn't get it. He would be singing "Purple Haze" and the fans would be going, 'We want Davy and Micky!' Embarrassing but true.

## ON RECENT RECORDINGS

In terms of recording, the last thing we did was a Christmas album last year with Mike and Peter [Tork], when he was still with us. We've also done a live album with Mike for our tour, which will be coming out on Rhino Records soon. We had a big album out in 2016 called *Good Times*, which went Top 20—for a 50-year-old band, that's not bad goin'! We had some great writers on that album; in addition to original writers Neil Diamond and Carol King, we also had Ben Gibbard from Death Cab for Cutie, Rivers Cuomo from Weezer and many others. During all these years, I've never really been a prolific writer. Every once and a while I'll get a crazy idea and write a tune, but I am not the kind of person who gets up in the morning at 10 a.m. and says, 'I'm going to sit in the studio and write.' That said, I wish I could, but I'm just not that kind of person. 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 jacquesonyieux@gmail.com.

BandH.com

800-875-8508

### Allen & Heath SQ-7 48-Channel / 36-Bus Digital Mixer with 32+1 Motorized Faders

The Allen & Heath SQ-7 is a 48-channel, 36-bus digital mixing console well suited for live sound, corporate A/V, recording studios, and houses of worship. The SQ-7 features 32+1 motorized faders and 32 professional-quality microphone preamps. There are also eight stereo FX engines with dedicated return channels and access to the RackExtra FX library. The mixer's 12 stereo outputs (configurable as groups or auxes) are well suited for in-ear-monitor setups, while the Automatic Mic Mixing function offers quick and easy operation over multiple microphones for conferences, panel talks, and more.

ALAHSQ7 | \$4,999.00

The Professional's Source



Visit **BandH.com** for the most current pricing



JBL 7-Series 705P 5" Bi-Amplified Master Reference Monitor

JB705P | \$999.00



iZotope RX 7 Standard Audio Restoration and Enhancement Software

IZ10RX7STD | \$399.00



Apple 15.4" MacBook Pro with Touch Bar

APMR942LLA | \$2,799.00



Owl Labs Meeting Owl All-In-One Audio Video 360 Conference Device

OWMEETINGOWL | \$799.00



Logitech MeetUp All-In-One 4K ConferenceCam

LOMUCC120 | \$897.18



Marantz Pro Audio-Video Streamer All-In-One

MAAVS | \$199.00



BenQ MH530FHD 3300-Lumen Full HD DLP Projector

BEMH530FHD | \$549.00



Roland V-60HD Multi-Format HD Video Switcher

ROV60HD | \$2,995.00



Tascam MZ 223 Industrial Grade Zone Mixer

TAMZ223 | \$399.99



Blackmagic Design ATEM Television Studio Pro HD Live Production Switcher

BLATWEMTSPHD | \$2,295.00

Learn, Explore and Buy at the Largest Photo Retailer

Free Expedited Shipping on orders over \$49\*



Call an Expert Today 800-875-8508



www.BandH.com where you will find information on over 400,000 items



Visit Our SuperStore 420 Ninth Avenue New York, NY 10001



Cash in or Trade up Used Equipment We Buy, Sell, and Trade

\*Apple is In-Stock Items. Some restrictions may apply. See website for details. NYC DCA Electronics Store Lic. #0906712; NYC DCA Electronics & Home Appliance Service Dealer Lic. #0907905; NYC DCA Secondhand Dealer - General Lic. #0907906; © 2019 B & H Foto & Electronics Corp.



# COMPACT TOURING TAKES OFF



**A phenomenally powerful XCVI Core puts dLive at the heart of tomorrow's sophisticated live audio systems, while its class-leading user interface keeps the engineer focused on mixing in the moment.**

**For fly-dates, bus tours and support slots – wherever the scale of the audio requirements conflicts with space and weight constraints, dLive lets you take the system you trust wherever you may roam, so you'll never need to gamble on house consoles again.**

**ALLEN & HEATH**  
WWW.ALLEN-HEATH.COM