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ProAudio  
Review

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July 2015



**STRIKE A POSE**—Sweetwater founder and president Chuck Surack, producer/engineer Sylvia Masy and Mojave Audio's Dusty Wakeman enjoy a moment of levity at Sweetwater GearFest 2015's photo-op station. Masy, sponsored by Mojave, was interviewed onstage by Sweetwater's Mitch Gallagher, discussing gear and her upcoming book, *Recording Unhinged*. More on GearFest next month.

## Project Sharing in Audio Production

BY STROTHER BULLINS

As today's audio engineers increasingly work on projects remotely—serving clients from nearly anywhere around the world—project sharing and distribution tools have become more important than FedEx, UPS and the studio “runner” of days gone by. Our modern digital tools for

collaboration have made what was once impossible possible.

Nashville-based Russ Long—a prolific music producer/engineer—largely depends on Dropbox for sharing content with clients. “When I’m collaborating on a project, nothing works as well as Dropbox,” Long insists. “Everyone sharing a folder can add files, make up-

(continued on page 57)

## A Niche in West Nashville

Since 2006, Jonell Polansky has owned and operated DaCapo Music Studios in West Nashville, TN. There, the California transplant has specialized in working with songwriters and vocalists, going so far as to design her current facility without a glassed-in control room in order to better communicate with artists.



## RADAR Love

iZ Technology made waves at the Winter NAMM show when it debuted the RADAR Studio recording system, which runs DAW software natively. Our reviewer put it through the paces for two months and came away impressed—find out why inside.



## Worship Broadcasters Embrace Digital

BY STEVE HARVEY

From studios located within houses of worship to purpose-built

radio and television facilities, religious broadcasters are taking full advantage of the features and benefits of digital audio mixing consoles

and networking.

“The nice part was being able to start from scratch and build a digital studio from the ground up,” says Jeff Ozanne, general manager and “tech guy” of affiliate station WWJC 101.5 FM, part of the Prayz Network. The listener-supported radio ministry covers southwest Wisconsin plus portions of southeast Minnesota and northeast Iowa. Calvary Technical Management of Lynchburg, VA provided system integration and build-out.

A pair of studios at Prayz Network are outfitted with Wheatstone E6 consoles, while a standby studio is equipped with the Glass-E Virtual Mixer, and multiple Wheatstone AirAura X3 units process the on-air and internet feeds, while also offering redundancy.

“Through WheatNet-IP [Wheatstone’s proprietary network system], you can connect the Glass-E to any E6, so I can run either one remotely from the third stu-

(continued on page 56)

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# Bose Showcases F1 Series' Flexible Array Technology

BY STROTHER BULLINS

FRAMINGHAM, MA—Bose Professional recently hosted a group of guests for a tour of its Framingham, MA HQ and a demonstration of its new F1 portable PA (PPA). A live performance by Will Dailey and band followed, held at the Showcase Live,

Patriot Place in Foxborough—a venue normally covered by a large touring-grade line array and large-format digital touring console at FOH, but utilizing the Bose F1 for Dailey's concert. The audience agreed that the F1 covered the large venue amazingly well while sounding notably full and natural. Also demonstrated onsite by a live DJ, the guests were able to witness how well and simply the system's four vertical coverage patterns work; I was switching the push/pull patterns on the Model 812 cabinet myself as the DJ performed.

Designed to serve a broader set of applications than Bose's L1 portable PA (PPA) systems, the F1 Model 812 is reportedly the first powered portable loudspeaker that allows users up to four different vertical coverage patterns. The F1 system is targeted for live music, DJ, corporate AV, house-of-worship, AV rental and general PA applications.

With the F1 system, sound can be optimized for playing at floor level, on stage or facing raked seats or bleachers. To control the vertical coverage



PSN reviews editor Strother Bullins gives artist Will Dailey and band's demonstration of the F1 PPA at Showcase Live, Patriot Place in Foxborough, MA a definite thumbs up.

pattern, users simply push or pull the array into position to create "Straight" (tightest vertical control, for floor-level audience coverage), "J" (adjust vertical splay down, when PA is placed on stage), "C" (adjust vertical splay up and down, to cover extreme raked seating), or "Reverse J" (adjust vertical splay up, e.g. for bleacher seating coverage) dispersion patterns. Once set, the system automatically adjusts the EQ to maintain tonal balance for each coverage pattern.

The F1 Model 812 loudspeaker is built with an array of eight Bose proprietary 2.25-inch drivers, 100-de-

gree horizontal waveguides and a high-powered 12-inch woofer. Dimensions are 26.1 by 13.1 by 14.6 inches, while total weight is 44.5 lbs.

For extended bass response, the optional Bose F1 Subwoofer (27 by 16.14 by 17.6 inches; 55.3 lbs) creates a 2,000 W per side full-range system; F1 array components are rated at 1,000 W each. A proprietary Bose mounting stand for the loudspeaker is integrated right into the body of the subwoofer. The stand also includes cable channels to neatly hide the wires. Additionally, the loudspeaker and sub-

woofer feature strategically placed handles for stress-free transportation; the system easily fits in a car, according to Bose. In addition, the F1 Model 812 has been designed with features to facilitate fixed installations through threaded inserts and accessory pan-and-tilt and yoke brackets.

Stay tuned to *Pro Sound News* for a comprehensive review of the full F1 portable PA system; the F1 Model 812 and F1 Subwoofer will be available in late Summer 2015.

**Bose Professional**  
[www.bose.com/F1](http://www.bose.com/F1)

## briefs

### KMC Music On The Move

BLOOMFIELD, CT—KMC Music ([kmcmusic.com](http://kmcmusic.com)) has completed its transition from Fender Musical Instruments to JAM Industries ownership with the opening of a new corporate headquarters in Bloomfield, CT that includes all executive offices, telemarketing, training, sales, marketing and customer support functions. Also key is the relocation of its warehousing and distribution to the JAM Industries 300,000-square-foot automated operations and distribution center in Southaven, MI, and the implementation of new credit and order processing systems based in JAM Industries' Montreal, Canada headquarters.

## Lectrosonics' Larry Fisher Retires

### MOORE AND WINKLER MOVE UP

RIO RANCHO, NM—Wireless microphone system/audio processing product manufacturer, Lectrosonics, has announced the retirement of longtime company president Larry Fisher, as well as the promotions of Gordon Moore to president and Karl Winkler to vice president Sales/Service.

Fisher, who has been with the company for 43 years, will remain active with Lectrosonics as chairman of the Board of Directors, and will continue his active presence on industry-related social media sites. During Fisher's leadership at the company, Lectrosonics has garnered a number of industry awards, including winning the Cinema Audio Society award for excellence in technology on two occasions. The company's products are employed on major movie and TV productions as well as for theatrical and installed sound. Today, Lectrosonics products are sold in nearly every country in the world.

"After more than 40 years of design engineering and administration,



Lectrosonics' former president, Larry Fisher, newly appointed president, Gordon Moore and new VP sales/service, Karl Winkler

I'm going to take time for fast cars, slow comfortable hammocks and interesting travel," explains Fisher. "The very capable Lectrosonics management team has been in place for over a decade and I expect continued innovation and advancement in the coming years as they rise to the challenges of new regulations and spectrum allocations."

Taking the reigns as Lectrosonics president is Gordon Moore, a 26-year veteran of the company and longtime

vice president Sales/Service. Moore has been active in the audio and AV industry since joining Lectrosonics in 1988. In 1991, he became an instructor for the ICIA (International Communications Industries Association) Academy, teaching audio systems design, theory and troubleshooting. In 2000, Moore was voted Educator of the Year by the InfoCOMM Professional Education and Training Committee (PETC), and for 2015, he was named chairman.

"Speaking for the entire bunch of fanatics at Lectrosonics, we wish Larry a well-deserved and fun retirement. Besides, he really doesn't get off that easy—he is only a phone call away and just down the road..." says Moore.

Karl Winkler is being promoted to the position of vice president, Sales/Service. Winkler, who has been with Lectrosonics for a decade, was previously the company's director of business development. Winkler has worked in the professional audio industry since 1992, when he joined the U.S. Air Force Band in Washington, DC as an audio engineer. He has also given seminars on microphones, audio and wireless microphone systems at Audio Engineering Society conventions, Syn Aud Con seminars and many colleges and universities.

"I've thoroughly enjoyed working for the company thus far," says Winkler, "and look forward to many more years of success with this great team."

Other executives on the Lectrosonics management team include Bob Cummings, vice president, Engineering; Wes Herron, vice president, production; and Bruce Jones, vice president, Marketing.

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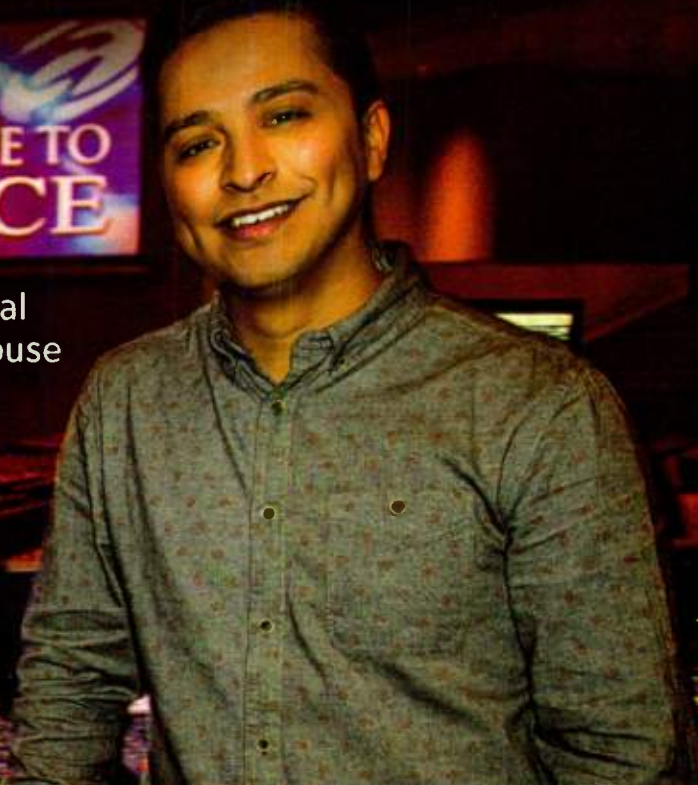
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## Not Your Daddy's Ceiling Speakers

As I write, I'm 30,000 feet in the air, winging towards Orlando and InfoComm. The first few times I attended a trade show developed for systems integrators, beginning near 20 years ago, it was hardly cause for grand enthusiasm on my part. With a studio and broadcast background, entering the world of ceiling speakers and industrial audio distribution seemed a step backwards.

In those days, there were two professional A/V shows: NSCA (big A and little v) and InfoComm (little a and big V). NSCA was, well, quaint, with small booths (you couldn't book a big one, only a number of adjacent smaller ones if you needed to stretch out). The booths were height restricted and signage was controlled—you could stand at one end of an NSCA exhibition hall and see if someone was at their booth on the other end of the hall. That actually fostered a sense of community and camaraderie amongst the participants. InfoComm was bigger and flashier, but audio was a secondary consideration.

I also came to realize, even in those early experiences, that even if I didn't get too excited about the audio technology level, I could embrace the professionalism, knowledge and experience of the program

presenters, the exhibitors and most of all, the attendees. There was plenty to learn about areas of the audio sciences where I had little experience, and plenty more to learn about the particular applications of technology practiced by systems contractors. And, I came to appreciate a greater sophistication in the products than I had superficially noted.

Several years ago, the trade show aspects of NSCA's endeavors were merged into InfoComm and now there's but one large format exposition. InfoComm is still A/V with a little A and a big V, but perhaps the A is capitalized now, just in a smaller font size. Audio exhibitors with big systems to show at InfoComm need to make noise, so they tend towards the demo rooms as opposed to taking the towering, large footprint exhibition hall stands of the folks showing gargantuan video walls.

What has changed over time is the now extremely high level of sophistication of the audio tools employed by systems contractors. Systems—and this should surprise no one—are increasingly incorporating digital technology. Distribution of signals is more often digital than not (save for the final run to loudspeakers in most cases). DSP, either central or distributed, con-

trols levels, dynamics, equalization and crossover filters. Further, DSP is employed to tailor loudspeaker performance for clarity and precise dispersion patterns. Digital routing controls what signals go where. Presets allow integrators to create broad palettes of scene changes that adapt spaces for multiple purposes without the intense low-level programming once required.

It's not all digital technology that is cutting edge for integrators. Transducers have gone from utilitarian to high performance and high fidelity. That's true for both loudspeakers and microphones. Wireless systems employed for installations and small venues share performance equity with those used for major broadcast and touring.

So, while I got on this plane thinking, "Here I go again, into the land of ceiling speakers," the more I thought about it, the more I realized that it was lazy thinking. The preshow announcements were filled with highly refined products built on cutting-edge research. I'm looking forward to seeing what these clever minds have developed, and stand ready to be impressed, be the product a touring-level line array or even a high-performance ceiling speaker. We'll talk again on the flip side, when we'll share what we learn.

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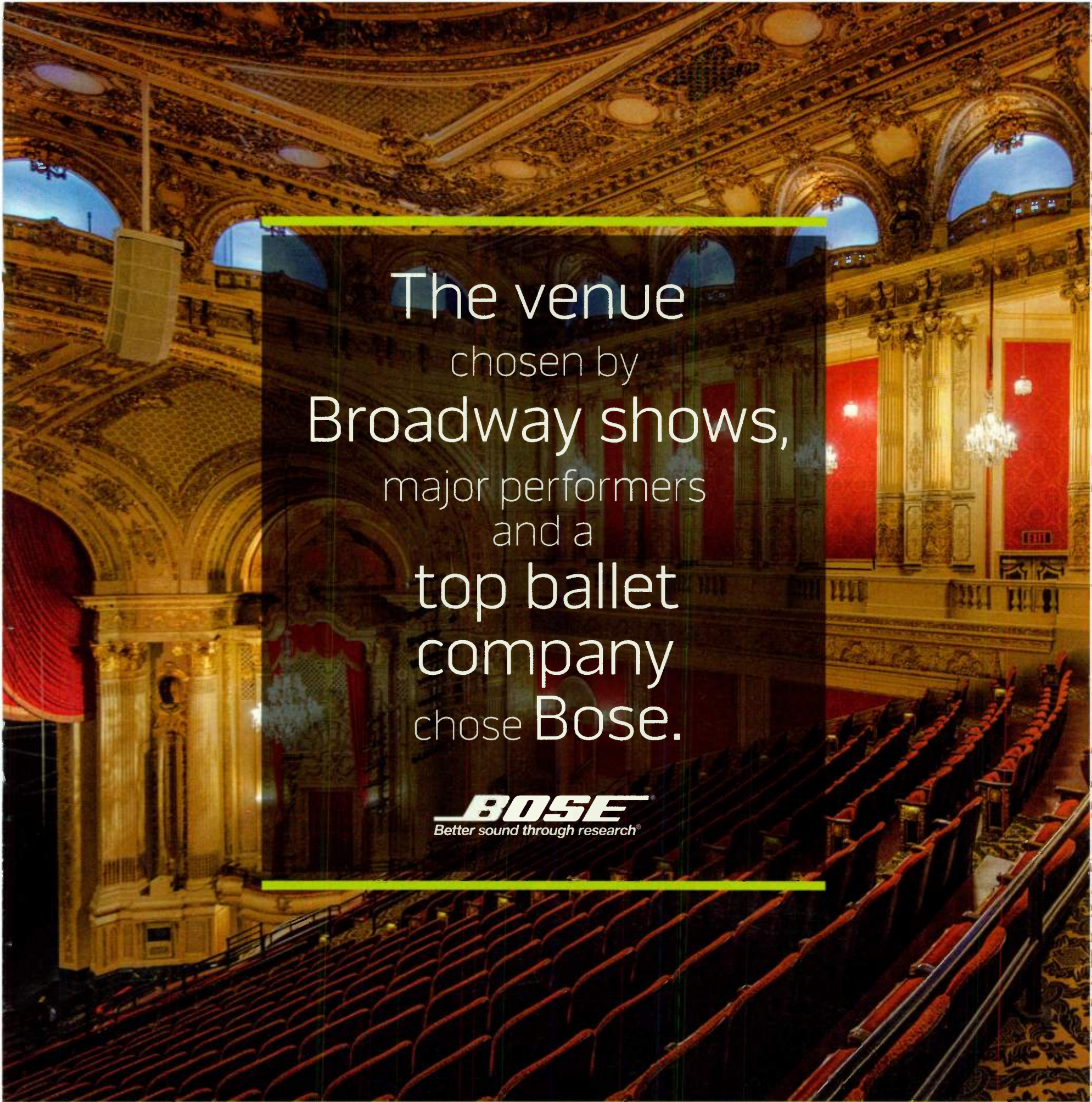
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## Adamson's E-Series Makes U.S. Inroads

PORT PERRY, ONTARIO, CANADA—Adamson Systems Engineering's E-Series line source enclosures have been increasingly adopted among a variety of sound companies, including Econdido, CA-based Sound Image and Highland Heights, OH-based Eighth Day Sound.

Having bulked up its E-Series inventory, Sound Image recently held a two-day training session with the manufacturer to bring its employees up to speed on the new boxes, Adamson's Blueprint AV 3D modeling software and their integration with Lab.gruppen's PLM product. Mick Whelan, Adamson's director of U.S. operations, and Brian Fraser, applications engineer, led the Adamson portion of the training while Colin Studybaker, touring/install sales for TC Group, was on site to walk the team through optimizing Lab.gruppen PLM amplifiers, with Lake processing, and the Adamson rig.

On the other side of the U.S., Eighth Day Sound—which acquired one of the first E15 line array systems in 2013—added more than 200 E-Series loudspeakers to its global inventory in the form of 108 E15 and 30 E12 line array enclosures, along with 80 units of a new subwoofer that will be launched later in 2015. The boxes will be shared between the company's U.S., U.K. and Australian offices. The company deployed its new boxes for the first time at the recent Hot 97 Summer Jam concert, held at Metlife Stadium in June. Adamson Systems Engineering [www.adamsonsystems.com](http://www.adamsonsystems.com)

## Townshend Tracks To Disk at 1979

NASHVILLE, TN—Welcome to 1979, a retro-oriented studio in Nashville, recently hosted musician and philanthropist Pete Townshend of The Who, for a three-day weekend before his band's current tour rolled into Music City. While there, he recorded directly to a laquer master to create a unique, one-off record to be auctioned for charity.

Pete's sessions were recorded two ways—one with a custom MCI 2 8 track (refurbished by 1979's sister company, Mara Machines), and then directly to the studio's cutting lathe. During a special benefit concert in Chicago on May 14th, Pete revealed a one-of-a-kind record that he recorded during his sessions at Welcome To 1979—an exclusive version of "I'm One" from *Quadrophenia*.



Pete Townshend signs the laquer master on the cutting lathe at Welcome To 1979 Studios.

In 2012, Townshend and bandmate Roger Daltrey founded Teen Cancer America—a charity aimed at youth-oriented treatment and rehabilitation centers for teenagers and young adults. The 12-inch single Pete recorded at Welcome to 1979 was one of two featured items being auctioned off to benefit the non-profit organization.

For a \$25 dollar donation, individuals were entered into a drawing for the chance to win the exclusive single. The week-long auction produced \$37,000—all of which

benefited Teen Cancer America.

Teen Cancer America  
[www.teencanceramerica.org](http://www.teencanceramerica.org)

Welcome to 1979  
[www.welcometo1979.com](http://www.welcometo1979.com)

## "Imagine" Engineer Dennis Ferrante Dies

BY CLIVE YOUNG

NEW YORK, NY—Dennis Ferrante, Grammy-winning recording engineer for the likes of John Lennon, Kiss, Hall & Oates, Lou Reed and others, died of heart failure on Saturday, June 6.

Ferrante had a history of heart trouble and had suffered numerous heart attacks in the past, to such extent that a charity concert was held for him at New York City's Highline Ballroom in 2010 to help raise money for a heart transplant.

Nonetheless, he remained active, sharing his experiences and recording knowledge, and was a regular presence on the Beatle convention circuit. Ferrante surely had a lot to talk about; while he started his career in the 1960s as a singer in bands like Chips and Company, and The Swampseeds, he became an engineer in the 1970s, eventually earning a Best Historical Album Grammy winner for his work on 1999's *The Duke Ellington Centennial Edition—The Complete RCA Victor Recordings (1927-1973)*.

Over his career, he worked with The Clash, Iggy Pop, Joe Jackson, The Raspberries, The Guess Who, Cher, Alice Cooper, Wynton Marsalis, Harry Nilsson, Waylon Jennings, Chet Atkins, the 1910 Fruitgum Company and Harry Connick, Jr., in addition to mixing a posthumous album by Elvis.

His stretch working with Lennon extended to multiple albums, working on *Imagine*, *Mind Games* and *Walls & Bridges*. Ferrante was supposed to meet with Lennon on December 8, 1980, the night the Beatle was killed, but was running late due to a session recording The Four Tops.





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# U2 TM Sheehan Passes

BY CLIVE YOUNG

NEW YORK, NY—U2's longtime tour manager, Dennis Sheehan, 68, died on May 27 in Los Angeles, just hours after the band completed the first concert of a five-show stand at The Forum. A permanent part of

U2's team, Sheehan had worked with the band for more than 30 years.

According to reports, paramedics came to the Sunset Marquis Hotel around 5:30 AM after Sheehan suffered a cardiac arrest; he was pronounced dead at the scene. "We've lost a family member, we're still taking it in," said Bono in a statement on the

band's website. "He wasn't just a legend in the music business, he was a legend in our band. He is irreplaceable."

Clair Global, the band's audio provider for decades, took to Facebook to honor the tour manager, posting, "We are heartbroken over the loss of an extraordinary human being. Thank you, Dennis, for gracing us with your knowledge, friendship, laughter & humility. Please continue to watch over the U2 family as only

you can."

Sheehan first began working with U2 in early 1982 after being introduced to the band's manager, Paul McGuinness, by a mutual friend. He quickly landed the job overseeing the band's next tour, supporting the album *War*, and had worked with them ever since.

Beyond managing that initial journey, he played an unexpectedly pivotal role in creating the definitive document of the tour, the classic live EP, *Under A Blood Red Sky*. Recorded at a cold, rainy show at Red Rocks Amphitheater outside Denver, CO, the concert closed with the ballad "40," after which the band came off stage, disappointed by the frozen audience's muted response at the end of an otherwise career-defining concert. Sheehan impetuously grabbed a mic, hid behind the stage barrier and began singing the song's refrain, "How long to sing this song?" quietly through the PA until the audience slowly joined in for a massive sing-along. The result, after an edit, became the EP's haunting fade out.

U2 was hardly the first act Sheehan worked with, however; in addition to handling tours for the likes of Patti Smith, Lou Reed and Iggy Pop around the turn of the 1980s, between 1967 and 1979, he worked with numerous groups managed by Peter Grant, most notably Led Zeppelin, as the assistant to another famed tour manager, Richard Cole.

Honoring the memory of their friend, U2 soldiered on the next night with a performance of the now-rarely played "40." The 70-date tour continues through November.



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## briefs

### TEC Awards' Open Call For Entries

ANAHEIM, CA—The open call for the 31st Annual Technical Excellence & Creativity Awards ([tecawards.org](http://tecawards.org)) has begun. Categories include Outstanding Technical Achievement; Outstanding Creative Achievement; and Studio Design Product. Held during The Winter NAMM Show in Anaheim, CA each year, The NAMM TEC Awards are often considered the "Oscars" of the pro audio and sound recording industry. Having honored top products in the worlds of music making, live performances, video games, television and films, the awards have also celebrated creative luminaries like Les Paul, Quincy Jones, Pete Townshend and Stevie Wonder for their musical contributions.





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## d&b Gets *Reckless*

CANADA—Touring to mark the thirtieth anniversary of his album *Reckless*, rocker Bryan Adams is working once again with Canadian production company Gearforce, headed by his long-time monitor engineer Rob Nevalainen. Also in tow is the company's d&b audiotechnik V-Series line array system, marking its second time out on the road with Adams, albeit the

first time with a full band.

According to Nevalainen, after Gearforce took delivery in May 2014, "We used it almost immediately on a Bryan Adams solo tour. The V system brought many benefits, in particular better coverage with the use of V8 and V12 combinations, and the weight issue was also a key factor: we could fly it virtually anywhere."

This year, the Gearforce V-Series system is out with a full-size arena production for Adams, traveling across Canada and Europe. "Our first full band tour, we have d&b J-Series for left/right mains which I've subhired from EDS, and our own



Bryan Adams is currently on a global tour, carrying a sizable d&b audiotechnik V-Series line array system.

V-Series for the side hangs, with Y-Series for the rears in the bigger venues where we play 270 or 360-degrees. All driven by D80s; it sounds great."

The use of d&b extends to Nevalainen's monitor rig, too: "Although

all the band are on IEMs, I have sidefills composed rather unconventionally of J-INFRA with Y10 on top. The lower octave reach of the INFRA is ideal for building the kick drum sound on the stage apron; it's big, loud and rich, and all the band feel it. The Y-TOPs enable me to feed guitars to stage left, and vocals to both sides with remarkable clarity and power for such a small cabinet. The vocals in particular are very useful for

the guest artists we have turn up on Bryan's shows; the tightness of the dispersion putting sound right where I want it."

d&b audiotechnik  
dbaudio.com



## SSL Live Flies With Noel Gallagher

MANCHESTER, UK—Monitor mixer Nahuel Gutierrez has been using an SSL Live L500 console supplied by Britannia Row on the current world tour by Noel Gallagher's High Flying Birds, the band led by namesake former Oasis songwriter/guitarist.

While he worked for Oasis in the past as well, Gutierrez has also mixed for The Cure, Jamiroquai, Jake Bugg, The Prodigy and The Vaccines.

"My favourite feature is the stems," comments Gutierrez. "I send the individual keyboards to Mike [Rowe], so he gets all his keyboards without going through the keys stem, but, for everyone else, I just use the stem, so it's just one fader. The same goes for the horn section; the horn players get individual channels, but

everyone else just gets the horn stem, just one fader. It has made my life so easy."

Gutierrez uses three reverbs: one for vocals, one for horns and a third for the acoustic guitars, plus a delay for Gallagher's vocal. "Live's effects are beautiful, definitely one of the biggest improvements from the desk that I was using before," adds Gutierrez.

"The overall sound from the SSL is beautiful, the top-end particularly is amazing. It is crisp, round and especially natural. I can personally hear



An SSL Live L500 console has been used nightly by monitor mixer Nahuel Gutierrez on the road with Noel Gallagher's High Flying Birds.

that SSL Live sounds different in my in-ears, which are always my reference."

Solid State Logic  
solidstatellogic.com

## Midas Takes On Eurovision Song Contest



Both a Midas PRO6 (shown) and a Pro9 were used at the FOH position of this year's Eurovision Song Contest.

VIENNA, AUSTRIA—A slew of Midas PRO X, PRO6 and PRO9 consoles were used in May for the Eurovision Song Contest. Watched by nearly 200 million viewers around the globe, the annual event was produced by Österreichischer Rundfunk/Austrian Public Broadcasting (ORF), with Vienna-based Sound Art Service (SAS) providing the audio system inside Vienna's Wiener Stadthalle arena.

ORF's Head of Sound commented, "We use Midas PRO9 and PRO6 together as FOH consoles. The PRO9 handles the artists and music, while the PRO6 distributes the outputs and handles additional inputs,

announcers and some sources from other playbacks. PRO X consoles are used for monitors on stage. Every console has an active spare console for redundancy purposes."

In total, seven consoles were on hand: two PRO9, two PRO6 and three PRO X, all of which distributed inputs via DN9650 Network bridges from a MADI distribution system. A single DL451 Modular I/O Unit (and its redundant partner) were driven via four pairs of DN9620 AES50 Extenders to provide a secure fiber optic linkage.

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## A Gun at Front of House

House engineers hate it when touring engineers revamp their audio systems. Touring engineers hate using poorly assembled house systems that barely function. Nobody's happy—but recently we heard about one instance escalating a little too quickly.

So I'm drinking a cup of coffee this morning and reading Facebook when I come across a post from a guy I've known since the early Nineties. Back then, he was the drummer of a major-label rock band. These days, a generation later, he's the dad of the drummer of an indie-label rock band.

The post was about his son's current tour, and how it had played his town a few days ago. Naturally my friend had looked forward to seeing his kid's act blow away the headliners that night, but midway through the afternoon, he got a call: "Dad, just so you know, the show might not happen—the venue just pulled a gun on our sound guy."

I just about did a spit take with my coffee. Apparently everyone else reading the post did, too, because there was a string of people all asking the same question: What the heck happened?

The response was "Band audio engineer touched sound board before house guy arrived (who was very late and pushing sound checks back), which started the whole chain of events...."

For the rest of the story, visit [prosoundnetwork.com/july2015](http://prosoundnetwork.com/july2015).



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Pro Sound News brings you audio news every weekday on [prosoundnetwork.com](http://prosoundnetwork.com), Twitter (@prosoundnews) and Facebook ([facebook.com/ProSoundNews](https://facebook.com/ProSoundNews))—but we also use social media to share links to interesting mainstream audio stories. Here's a few we recently shared; get their links at [prosoundnetwork.com/july2015](http://prosoundnetwork.com/july2015).

- ▶ Weird Al Yankovic's FOH engineer/TM Jeffery Osborne (really) profiled by local town paper.
- ▶ Surrounded by construction, Evanston, IL recording studio is forced to move, put building on the market.
- ▶ Blauvelt, NY residents campaign for historical plaque at site of studio where Springsteen recorded *Born To Run*.
- ▶ Can you hear subtleties between a 128 kbps mp3, a 320 kbps mp3 and a WAV file? Try NPR's test; how'd you do?
- ▶ Rap star Big Sean promised his Detroit high school a surprise if its ACT scores went up. He gave it a studio.

## BLOGGINGS

### REVIEW: THE INSIDER'S GUIDE TO HOME RECORDING

With an authoritative title like that, an engineering book had better be able to walk the walk—and the latest tome by Emmy-winning recording engineer and author Brian Tarquin does just that, bringing the thoroughness of a textbook together with the casualness of a veteran engineer sharing his thoughts over a burger and fries.



### MUSICIANS INSTITUTES HITS THE EBOOKS

There's more to Musicians Institute in Hollywood, CA than musical training. With that in mind, the venerable college has released an ebook, *Want A Career In The Music Industry?*



*Six Things You Should Consider*, that shows what potential students should be doing to prepare for or maintain a music-industry career—a move that instantly makes readers mentally check-off “I do that, I don’t do that,” thus determining whether they’re serious about being in the field or should just be content to love music and explore other professions instead.

Find these blog posts at [prosoundnetwork.com/july2015](http://prosoundnetwork.com/july2015).

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## video vault

### Building A Shipping Container Studio



Matt Dever is an Australian sound engineer who specializes in recording entire tours for instant 2-CD sets released at the end of each show; clients have ranged from Blondie and Simple Minds to Devo and The Church. When he's not on the road, he also has his own facility, D4 Studio, and while it's small, there's something that really makes it stand out: It was custom-built inside a shipping container. Catch the clip at [prosoundnetwork.com/july2015](http://prosoundnetwork.com/july2015).



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## It's Out With The Big Iron For Veneto West

BY STEVE HARVEY

SANTA MONICA, CA—Ronan Chris Murphy, a producer, mixer, engineer and recording artist whose multi-room Veneto West facility in Santa Monica, CA also provides a home base for his educational endeavors, recently made a major change to his control room. Out went the vintage analog mixing console, for many years the centerpiece of the studio, to be replaced by a new set-up that enables the room to quickly be reconfigured to best handle the demands of the work in progress.

"The big thing that changed was realizing that holding onto the console was ultimately doing a disservice to my clients," says Murphy, who notes that clients almost universally now expect instant recall. And while he enjoyed certain workflow and audio quality benefits with the console, "I was prioritizing things for my clients when really those weren't their personal priorities."

Murphy, who has experience mixing in-the-box dating back to 1993, says, "Because I shuffle between production, mixing and mastering, I set up a hybrid and modular workflow." In place of the console is a small roll-around table for a computer screen for his Pro Tools rig and a new Crane



Ronan Chris Murphy with his Veneto West's amply stuffed outboard racks.

Song Avocet II controller, which replaces the console's monitor section.

"It also replaced some of my conversion," he says. "Crane Song's conversion is awesome, and the Avocet II even steps it up another level. This is just a remote that passes no audio. With my modular set-up, it comes with me so I have input switching and speaker selection anywhere in the room."

He continues, "My 2-bus and vocal EQ rack also rolls with me. When I switch to being the mastering engi-

neer, I roll back to a different place in the room. The rack rolls with me, and we switch from the NS-10s to the big speakers."

The mains are a one-of-a-kind pair of three-way active speakers with dual 15-inch subs from Belgian manufacturer FAR (Fundamental Acoustic Research). Murphy, a champion of IsoAcoustics decoupling stands since first installing them in 2013, was worried that none of the company's products were up to the challenge of the very weighty prototype metal speaker

cabinets. "They're about 300 pounds each, with 1,000-watt power amps just for the low frequency drivers," he explains.

Happily, IsoAcoustics' new custom-configured Modular Series aluminum isolation stands were equal to the task. "The difference with and without the IsoAcoustic stands was night and day. With them, the accuracy of the low end is just exponentially better," he reports.

Murphy created Veneto West's main workspace, a control room and tracking area with no separation between them, from two adjacent apartments. "When we're doing production work, we can roll around to move the tracking position anywhere in the room," he says of the new reconfigurable working arrangement.

A third apartment has been configured into an editing, overdubbing and songwriting studio. It features a Mac Mini running Pro Tools with an Apogee Duet 2 interface. The complex also includes outdoor patio space and a barbecue area.

The rolling monitor station and outboard rack are complemented by twin towers housing gear from the likes of A-Designs, Altec, Drip Electronics, Electrodyne, Empirical Labs, (continued on page 24)

## Facing Wireless Challenges As Video Comes Under The Umbrella

BY STEVE HARVEY

CHATSWORTH, CA—Over the past decade or more, as the music recording business has evolved and the primacy of the recording studio has been challenged by home and even mobile production, facility owners have had to look elsewhere to maintain revenues. For some, video production and post production has offered a solution, but as Andy Waterman, CEO and creative director of Umbrella Media, observes, the two businesses require some of the same skills, yet can also be very different.

"This is becoming a secondary market for a lot of us former studio guys," says Waterman, who was a studio owner in his native Chicago

in the 1970s before relocating to Los Angeles in the 1980s and setting up shop. "It's another other revenue source that is very complementary to the audio side that we're doing."

"It's not like putting a Neumann into a great mic pre. You have to be super-prepared or you're not going to get the shot."

Andy Waterman, Umbrella Media

Yet even now, six or seven years after first moving into video work, much of it for Umbrella's number-one client, Hal Leonard, the world's largest music publisher, Waterman is still learning, he says. "I'm coming from being a studio guy. But it's not

like putting a Neumann into a great mic pre. You have to be super-prepared or you're not going to get the shot. That's a lesson that Hollywood teaches people who come from the

more pristine, casual background [of record production]."

With the changeover to DTV in the U.S., RF mic users lost access to the 700 MHz band. Currently, plans are underway to auction off the 600 MHz band to the telcos,

further reducing the usable radio frequency spectrum available—to current pro audio wireless products, anyway. Combine the competition for the shrinking spectrum with the time-pressure of a video shoot and there's the potential for disaster—and Waterman's moment came several months ago.

"We worked on a project called *Music Express*, which is a kids-oriented music magazine, but it has a lot of edutainment aspects. That day, we were on the Disney lot to go behind the scenes to see how their musicals, especially the animated features, including *Frozen*, are made. The assignment was to interview these people and get a tour of the infrastructure."

But, he says, "The big surprise was that we got on the Disney lot and we had all kinds of interference problems. We had three wireless mics all fighting one another. One thing I had never experienced

(continued on page 24)



# "I specify Radial exclusively for every tour I mix."

~ Dave Natale

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~ Paul 'Pab' Boothroyd  
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"Radial DI's provide the flexibility I need to perfectly match any situation I come across. I specify Radial exclusively for every tour I mix."

~ Dave Natale  
(Rolling Stones, Joe Cocker, Lionel Richie, Fleetwood Mac)

"Once you hear the difference between a Radial DI and the others, you'll never go back... and after hundreds of U2 shows around the world, they have worked flawlessly."

~ Terry Lawless  
(Keyboards & programmer - U2)

"On the Santana tour, we have Radial J48's on guitars and Radial JDI's on keyboards. We have traveled all over and the Radial DI's have worked great!"

~ Rob Mailman  
(FOH engineer - Santana)

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# DaCapo Music Studios: Artist-Friendly

BY STROTHER BULLINS

WEST NASHVILLE, TN—Since 2006, Jonell Polansky has owned and operated DaCapo Music Studios. The California transplant's bustling, west-Nashville music production facility is balanced on her experience as a musician and her background as both an EE and an audio engineer.

After years of working as a recording engineer and honing her craft in California, Polansky was lured to Nashville, where she bought property on Music Row, later selling out to move to the west side of the city before a real estate correction around 2006. "There is this mysteriously rich musical community here in Nashville," she offers. "Between the writer's nights and live music everywhere, the access to talent is so straightforward. It was much easier for me to find talent here, particularly in singer/songwriters."

Understanding artists and songwriters, explains Polansky, informed her approach to building-out studios in town. Polansky has always been an adamant champion of open studio designs with no proper "glassed-in" control rooms. Specializing in recording vocalists, Polansky's DaCapo Studios was conceptualized to make it a comfortable, soothing place to work as an artist.

"I don't like control rooms because I don't like the idea of talk-back," she explains. "Especially when I'm working with a singer, they stand two-to-10 feet away from



Jonell Polansky at the vintage Trident 808 analog console in DaCapo's "open" control room.

me when we record vocals. Because of that, our communication is so much better and the singers love it."

Polansky's 1,100 square-foot DaCapo Studios is "a true hybrid studio," she notes, as her goal was to provide the best balance of analog and digital technology for recording in the most artist-centric way possible. She explains, "For ex-

ample, I use [more than an average amount of] analog outboard gear, always having been a huge fan of the Eventide UltraHarmonizer series; I always have that reverb on a headphone mix. It's a subtle difference that often has us leaning toward Eventide reverbs."

When artists are truly part of the decision-making process in the stu-

dio, results are better and sessions run more smoothly and faster, Polansky notes. "It's a huge deal to me to make vocal recording natural, working in a flow where we don't comp vocals—we just cut them on the fly. It's all due to the client knowing how the studio works, because I explain it to them. So many producers and engineers don't talk to their artists about how it all works. I totally involve them in the process and they love it. They get involved and the amount of time saved is staggering because of it."

Gear-wise, Polansky name-checks her favorite preamp and vocal microphone—Avalon and the Manley Cardioid LDC, respectively—as examples of her approach to audio production. "I've tried out all the great mics, but I really prefer a flat frequency response; that way I can EQ the voice, not the frequency response of the microphone. The Manley has a very transparent response and just a little sizzle on the top end. Some of the 'great mics' will favor certain frequency bands, and the artists will love it. But for me, I don't feel like I have the same amount of freedom to hear what the artist sounds like when using something more colored."

When building-out DaCapo Studios, Polansky worked alongside designer Scott Munsell, who encouraged her to investigate vintage analog consoles as the centerpiece. "Oddly enough, I'd never used a Trident," she recalls with a laugh. "He loved Neve, Soundcraft, MCI, etcetera, but the Trident was actually the most reasonable price point, and a lot easier and less expensive to maintain. The 80B is one of the most sought-after pieces in Nashville, too. Scott set me up with Warren Rhoades, who found the console for me. It hit the number of channels I wanted, the size, and its maintenance has been surprisingly trouble-free."

DaCapo Studios  
dacapomusic.com

STUDIO: DACAPO STUDIOS  
OWNER: JONELL POLANSKY  
LOCATION: WEST NASHVILLE, TN

There's more ▶ Catch AES Nashville's interview with Jonell Polansky at [soundnetwork.com/july2015](http://soundnetwork.com/july2015).



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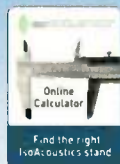
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—Elliot Scheiner, Grammy Award-Winning Recording & Mixing Engineer

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## Veneto West

(continued from page 20)

Eventide, Great River, Maag Audio, Manley Labs, Pete's Place, RCM and TC Electronic. "The D&R console has very nice mic preamps but my outboard was better suited to my aesthetic. I almost never tracked through the console," says Murphy.

"I'm really into Quad Eight-sounding stuff, so you see tons of A-Designs. The A-Designs Pacifica is used for 90 percent of the things that I record; I like the sound a lot," he says. "The Quad Eight modules are Neil Young's from Broken Arrow Studios."

An API lunchbox sits atop one rack. "I stayed out of the 500 world until A-Designs put out the EMP EQ," he admits. "But I was so blown away by it. Now there are other

"The big thing that changed was realizing that holding onto the console was ultimately doing a disservice to my clients. I was prioritizing things for my clients when really those weren't their personal priorities."

Ronan Chris Murphy

things, like the Maag EQ, that are only 500 and have become critical for a lot of the work that I do."

Over the years, that work has encompassed progressive rock projects with King Crimson founder and guitarist Robert Fripp, Crimson alum Tony Levin, Steve Morse and Terry Bozzio; jazz recordings with *Chucho Valdés*, Kenny Wheeler and Norma Winstone; and work with Norwegian experimentalist Ulver. Over half his client base is international, says Murphy, whose recent projects have in-

cluded Italian artist Mike 3rd, Malaysian Top 10 artist Pete Tio and Alexia Vassilou, a multi-platinum Greek-Cypriot vocalist.

While working with Mike 3rd in Italy during April and May this year, Murphy took the opportunity to host a couple of his Recording Boot Camps. "I try and do at least one overseas per year. I did a six-day camp, then the next week, I did a three-day advanced level program for alumni of my Level One program."

The newly reconfigured Veneto

THERE'S MORE ▶ A longer version of this story and Murphy's review of the IsoAcoustics ISO-L8R155 & Modular Aluminum System is available at [prosoundnetwork.com/july2015](http://prosoundnetwork.com/july2015)

West will be the venue for several upcoming Recording Boot Camps. "We have one in July; it was sold out five days after we announced it," he says. In September, Murphy will hold a six-day beginner/intermediate level class and a two-day intermediate level mixing camp.

Veneto West  
[studio.venetowest.com](http://studio.venetowest.com)

Crane Song  
[www.cranesong.com](http://www.cranesong.com)

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## Umbrella

(continued from page 20)

was the competitive nature of the frequencies available for wireless technology. I'm sure people working on Broadway or in Hollywood have to deal with it every day, but I had never been in a situation where we couldn't solve it by finding another frequency. What we had never experienced was being on a lot where there is probably tons of other wireless transmissions

and Wi-Fi all over the place.

"On top of that, we found out later that one of the guys we were interviewing had his iPhone in a pocket right next to where we put his wireless. As the director, I take responsibility for that—when you're on a wireless set, you've got to have all the other wireless devices turned off."

That particular day was a run-and-gun shoot, recording audio into the camera. "We also have a small Pro Tools system in a laptop with a Focusrite Scarlett, which is an amazingly great box," he says. "We can do

eight or more mics with that, and for some of the interviews, we've used eight lavs. Then it's the same old frequency problem."

On that day at Disney, he continues, "One by one, all of these things compounded to become a little bit of a nightmare. We muddled through it, but a day later, I called Brad Lieberman at RSPE and said, 'We've got to upgrade our wireless capabilities.'"

Lieberman, design consultant at the L.A.-based pro AV solutions provider, steered Waterman in the direction of Sennheiser. "Whenever we

had a big job, we would rent from Location Sound," reports Waterman. "Some days, we'd have a Lectrosonics; another day, we'd have Sennheiser. I've also rented Shure and Audio-Technica. They're all great products, but the price point for the Sennheiser G3 was right in our wheelhouse—and it sounds fantastic."

The features were also right, he continues. "You can pair the transmitter to the receiver automatically just by holding them up to each other and hitting the Pair button. They also have channel scanning—it finds you the best channel that's available in your location that isn't being taken by other devices."

He adds, "I'm also really thankful that Sennheiser gave us a morning of training at our studio. Aron Berg [who has since left the company] came over and took us through the product line and showed us how to get the best performance and the best frequency selection, and how not to mix and match frequency banks. In Los Angeles, there are really only two frequency bands that are usable, he told us. Sennheiser calls them the A and the G band." Sennheiser's A band covers 516-558 MHz, the G band 556-608 MHz.

Ultimately, the Disney shoot was a valuable learning experience, Waterman concedes. "It was a great eye-opening experience. I'm really glad we had the opportunity to buy the right gear. Buying the right gear really made a difference for us in solving this problem."

Sennheiser  
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**ARTIST:** THE ZAC BROWN BAND  
**ALBUM:** JEKYLL + HYDE  
**LABEL:** VARVATOS/REPUBLIC/BIG MACHINE/SOUTHERN GROUND  
**PERSONNEL:**  
**Produced by:** In the Arena Productions (Zac Brown, Darrell Scott, Jay Joyce, Jim Hoke, CeeLo Green)  
**Engineered by:** Brandon Bell, Ben Simonetti, Jason Hall, Kyle Lehning, Sean Phelan, Anthony Ruotolo, Tom Syrowski  
**Studios:** Southern Ground (Nashville, TN); Avatar (New York, NY); Henson Recording (Los Angeles, CA)  
**Mastered by:** Chris Bellman at Bernie Grundman Mastering  
**EQUIPMENT NOTES:** Neve V3 console; Avid Pro Tools 10; TAD custom, ATC 300, Yamaha NS-10 studio monitors



**ARTIST:** CJ RAMONE  
**ALBUM:** LAST CHANCE TO DANCE  
**LABEL:** FAT WRECK CHORDS  
**PERSONNEL:**  
**Produced by:** Jim Monroe, Steve Soto, CJ Ramone  
**Engineered by:** Jim Monroe  
**Studios:** The Racket Room (Santa Ana, CA)  
**Mastered by:** Paul Minder at Buzzbomb (Orange, CA)  
**EQUIPMENT NOTES:** API, Chandler pres; Avid Pro Tools HD; Universal Audio, Genelec, Yamaha NS-10 studio monitors



**ARTIST:** JACK LADDER & THE DREAMLANDERS  
**ALBUM:** PLAYMATES  
**LABEL:** FAT POSSUM

**PERSONNEL:**

**Produced by:** Kim Moyes  
**Engineered by:** Kim Moyes, Oliver Marlan (assistant), Richard Belkner (Drum Kit)  
**Mix Engineer:** David Wrench  
**Studios:** Piper Lane, Free Energy Device (Sydney, Australia)  
**Mastered by:** Mandy Parnell at Black Saloon  
**EQUIPMENT NOTES:** Neve 1073, 8098, Quad 8 MM-310 Classic, Aurora Audio GTQ2 Mark3, Millennia pres; Avid Pro Tools HD 8; MCI JH24 recorder; Barefoot Micromain27, Pure Evoke 2 studio monitors



**ARTIST:** FRANKIE  
**ALBUM:** DREAMSTATE EP  
**LABEL:** SOUTH X SEA  
**PERSONNEL:**  
**Produced by:** Petros  
**Engineered by:** Petros  
**Studios:** Top Bunk (Silver Lake, CA)  
**Mastered by:** Chris Geringer  
**EQUIPMENT NOTES:** Avid Pro Tools; Adam Audio A7X studio monitors



**ARTIST:** THE MAINE  
**ALBUM:** AMERICAN CANDY  
**LABEL:** BIG PICNIC  
**PERSONNEL:**  
**Produced by:** Colby Wedgeworth  
**Engineered by:** Colby Wedgeworth  
**Studios:** "Dome Home" (Joshua Tree, CA)  
**Mastered by:** Tom Coyne  
**EQUIPMENT NOTES:** MCI JH-600 console; Avid Pro Tools; Adam Audio A7X studio monitors



**ARTIST:** ANTI-FLAG  
**ALBUM:** AMERICAN SPRING  
**LABEL:** SPINEFARM  
**PERSONNEL:**  
**Produced by:** Kenny Carkeet, Jim Kaufman, Anti-Flag  
**Engineered by:** Jim Kaufman  
**Studios:** Jim Kaufman Studios (Los Angeles, CA)  
**Mastered by:** Mass Giorgini  
**EQUIPMENT NOTES:** Neve 8038 console; Avid Pro Tools; Barefoot studio monitors



**ARTIST:** DELTA RAE  
**ALBUM:** AFTER IT ALL  
**LABEL:** SIRE/ WARNER BROS.  
**PERSONNEL:**  
**Produced by:** Peter Katis, Rob Cavallo, Julian Raymond, Delta Rae  
**Engineered by:** Peter Katis, Rob Cavallo, Julian Raymond, Delta Rae, Howard Willing, Doug McKean; Lars Fox, Bryan Cook  
**Assistant Engineer:** Pieter Vonk, Marlowe Stern; Tom Rasulo; Andrew Law; Mark McKee  
**Studios:** Tarquin (Bridgeport, CT); Ocean Way, East West, Lightning Sound (Los Angeles, CA)  
**Mastered by:** Greg Calbi with Steve Fallone at Sterling Sound (New York, NY)  
**EQUIPMENT NOTES:** NEOTEK Elite 56 console; Avid Pro Tools



**ARTIST:** GOOD OLD WAR  
**ALBUM:** BROKEN INTO BETTER SHAPE  
**LABEL:** NETTWERK

**PERSONNEL:**

**Produced by:** Jason Lehning, T Collar  
**Engineered by:** Jason Lehning, Vance Powell  
**Studios:** Echo Mountain (Asheville, NC); The Compound, Sputnik Sound (Nashville, TN); home studios  
**Mastered by:** Andrew Mendelson at Georgetown Masters (Nashville, TN)  
**EQUIPMENT NOTES:** Neve 8068, Soundcraft consoles; Avid Pro Tools; Yamaha NS-10, Focal, ATC SCM20, ProAc Studio 100 studio monitors



**ARTIST:** DWIGHT YOAKAM  
**ALBUM:** SECOND HAND HEART  
**LABEL:** WARNER BROS./REPRISE  
**PERSONNEL:**  
**Produced by:** Dwight Yoakam; Chris Lord-Alge  
**Engineered by:** Marc DeSisto, Chris Lord-Alge  
**Studios:** Capitol Studios B & A, Henson Recording Studio D (Los Angeles, CA)  
**Mastered by:** Steven Marcussen  
**EQUIPMENT NOTES:** Vintage Neve 8068, Telefunken-Mercury mic pre amps; Avid ProTools HD; Yamaha NS-10M studio monitors with JBL subwoofer



**ARTIST:** JOSEPH EID  
**ALBUM:** HUMAN  
**LABEL:** JOSEPH EID MUSIC  
**PERSONNEL:**  
**Produced by:** Joseph Eid, Brian Soucy  
**Engineered by:** Brian Soucy  
**Studios:** Sunnyland  
**Mastered by:** Ron Boustead  
**EQUIPMENT NOTES:** Allen & Heath WZ16 mixer; PreSonus Eureka, Demeter mic pres; Avid Pro Tools 10, M&K MPS1611P studio monitors

notes

**AKG Partners with GC for Video**

NORTHRIDGE, CA—AKG by Harman (harman.com) has partnered with Guitar Center for the *At: Guitar Center* video series, an up-close-and-personal look at the company's favorite artists, recorded with the C414 XLS multi-pattern condenser, C214 large-diaphragm condenser, D112 dynamic bass drum, C518 instrument condenser and other AKG microphones.

**Flying Lotus Lands On SSL**

LOS ANGELES, CA—Flying Lotus, the musician, producer and rapper otherwise known as Steven Ellison, has installed an SSL (solidstate-logic.com) XL-Desk in his personal studio that is equipped with SSL's classic E-Series console channel EQs and the Stereo Bus Compressor in its 18-slot 500 format rack.

**25th St. Gets Real with API**

OAKLAND, CA—An eclectic selection of artists has been using the 64-channel API (apiaudio.com) Vision console at 25th Street Recording in Oakland, CA, which opened its doors six years ago, including Norteño mega-band Los Tigres del Norte, recording new album *Realidades* with Grammy-winning engineer Alfonso Rodenas; Joe Satriani, working with longtime engineer John Cuniberti; and Sheila E.

**GC Pro Sources for Japanski**

WESTLAKE VILLAGE, CA—Guitar Center Professional (gcpro.com) and Brian Overton, GC Pro account manager, recently helped Matt Tamisin and his brother Abraham source the console for their Japanski Studio in Athens, GA, a 24-fader Neve Genesys console that previously resided in Studio E at Capitol Studios in L.A.



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**-Fritz Lewak**, Drummer  
(Jackson Browne, Melissa Etheridge)

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**-Stephen Marsh**, Mastering Engineer  
(Keb' Mo', Boyz II Men, Los Lobos)



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## Can You Be Replaced by a Software Algorithm?

BY CRAIG ANDERTON

For decades, mastering was considered an arcane, difficult art capable of being mastered (sorry about the pun) only by those with Jedi-level skill sets. Much



of this was due to vinyl, which involved a complex set of tradeoffs: level, length, distortion, bass and the infamous RIAA curve. And, of course, there was the value of a professional, trained set of ears that could evaluate

music and oversee the process of translating audio so it could play over multiple systems.

Enter digital audio. After vinyl's constraints disappeared, all you needed to master was quality plugins and computer-based editors—and great ears. Then came the inter-

net, and people could send files off via email to be mastered.

Now we have LANDR.com, where for \$39/a month, you can submit mixes and have them mastered by an algorithm. According to the site, "LANDR incubated and refined algorithms developed over eight years of university research, testing and tweaking based on feedback from trained audio experts. Our team is composed of music industry veterans...who know exactly what the mastering process needs to deliver...Our system is built around an adaptive engine that 'listens' and reacts to music, using micro-genre detection to make subtle frame-by-frame adjustments selectively using tools like multi-band compression, EQ, stereo enhancement, limiting and aural excitation based on the unique properties of the song."

Then there's AAMS, a software program that "provides suggestions for Equalizer, Multi-Band Compres-

We create music,  
not audio.

sion and Loudness settings with internal DSP Processing to make all such audio corrections within the AAMS Program and creates a final mastered audio file...Essentially, the program takes a specific audio file and then compares the mixing settings to over 100 different styles within its very own database."

Now before you get outraged, consider that many mixes can indeed sound better with a little bit of limiting and a balanced frequency response. Those processes can be done easily; add a few user controls to optimize those options, and the result is cheap, fast and produces results better than the original.

But an algorithm can't decide to give a 2 dB boost to the snare hit that comes just before the chorus, bring up the intro by a dB before the vocals enter, take out two bars of an overindulgent solo, add a hint of reverb or customize the fadeout. The algorithm can't ask for you to leave a few seconds at the beginning so you can take a "noiseprint" for noise reduction, or ask the artist to provide a different mix with vocals

(continued on page 56)

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## AVnu Alliance Champions AVB/TSN's New Nomenclature And Momentum

BY STEVE HARVEY

BEAVERTON, OR—AVnu Alliance headed to InfoComm 2015 with momentum building behind its open standards-based deterministic networking technologies, new leadership and an evolution of the ecosystem's title. Proponents of AVB/TSN, combining the IEEE's Audio Video Bridging standards with newer, backward-compatible Time Sensitive Networking enhancements, were slated for representation at InfoComm's dedicated AVnu Alliance Pavilion and at individual member booths.

The alliance, an industry consortium promoting AVB/TSN through product and design certification, recently announced a new president and chairman at the inaugural conference on Time Sensitive Networking and Applications (TSNA) in Santa Clara, CA at the end of April. Gary Stuebing, manager of engineering, IoT standards/architecture at Cisco, was elected as the new AVnu Alliance president, and Kevin Stanton, senior principal engineer at Intel, was named AVnu Alliance chairman.

According to Patrick Prothe of Biamp Systems, the new AVnu Alliance pro AV segment chair, the re-

alignment of the platform's name just makes sense. "It's the next evolution of AVB—AVB being focused on the pro audio industry. But TSN, Time Sensitive Networking, refers more to what it does and is more applicable to all four segments: pro AV, automotive, consumer electronics and industrial controls," he explains.

"The key point is that this tech-

Supporters within the broadcast industry have been promoting AVB/TSN as the inevitable ultimate networking solution. The highest profile broadcast installation to date is at ESPN's new Digital Center 2 in Connecticut, which opened in June, 2014, where AVB replaced the plant's previous MADI-based transport infrastructure. "It's incredibly impres-

"It's the next evolution of AVB—AVB being focused on the pro audio industry. But TSN, Time Sensitive Networking, refers more to what it does and is more applicable to all four segments: pro AV, automotive, consumer electronics and industrial controls."

Patrick Prothe, AVnu Alliance pro AV segment chair

nology is becoming ubiquitous and useful across all of those [segments]," adds Intel's Greg Schlechter, *pro tem* AVnu marketing workgroup chair. "By doing it in a foundational way, anything that needs to be real-time and deterministic can utilize this foundation."

sive what they've been able to do with AVB and the gains they got out of it, and how it affected their whole architecture," says Schlechter, who has visited the facility.

"What I heard at [the] NAB [Show] was people beginning to real-

(continued on page 31)

## Sound Advice For Sound Design Goes On Tour

BY STEVE HARVEY

LOS ANGELES, CA—The Sound Advice Tour with Frank Serafine rolled into Los Angeles at the end of May, halfway through a 32-date nationwide schedule. The day-long interactive educational workshop is designed to reveal some of the secrets behind the sound designer's award-winning audio production and post production techniques for filmmaking, broadcast and the web.

Unfortunately, Serafine, whose extensive resume includes work on television shows, video games and major motion pictures such as *Poltergeist*, *The Hunt for Red October*, which won the Oscar for sound editing, and a couple of *Star Trek* films, had to bow out of the tour in its first week due to health issues. But Mark Edward Lewis, the tour's techni-

cal director and co-presenter, more than ably filled in, also bringing his own considerable experience to bear on the day's presentations.

"Frank and I created a curriculum that basically takes his 40 years of experience and dumps it on you," said Lewis in his introduction. "You get the benefit of everything we de-



Mark Edward Lewis, host of the Sound Advice Tour, demonstrates sound effects capture during the daylong event's stop in Los Angeles.

signed for Frank, and my 25 years as an award-winning filmmaker, an editor, a post production supervisor and a composer. So you're getting 65 years for the price of 40."

Using a clip from *Iron Man*, Lewis demonstrated the ability of sound effects to immerse an audience in a film, in partnership with dialog, which tells the story, and music, which telegraphs and emphasizes the emotion of a scene. Content creators can use dialog, effects and music, as well as other elements, to manipulate the audience, he explained.

"Scientists tell us that our brain can process 7,000 things a second, and can focus on any three, or four. None of you are aware of the pressure of the chair on the back of your legs—but you are now, because I directed your focus.

"What we do as filmmakers and mediamakers is direct our audience's focus to one of those three or four things. If we can give them enough input for the brain to tune out up to 7,000 things, the subconscious of our

(continued on page 32)

### briefs

#### Talamas Celebrates with Lectro

NEWTON, MA—This year marks the 25th anniversary of the partnership between Lectrosonics (lectrosonics.com) and sales and rental house Talamas Broadcast, which recently ordered 20 of the new Lectrosonics L Series kits with patented Digital Hybrid Wireless technology, including 10 LMB/LR and 10 LT/LR kits. This year also marks the 35th year in business for husband and wife team Dave and Diane Talamas.

#### Mix 2 Go Picks Allen & Heath

PENRYN, UK—For the 20th anniversary concert for singer Ivete Sangalo, Brazilian production company Mix 2 Go selected its modular Allen & Heath (allen-heath.com) iLive system—an iLive-144 surface in the OB truck with iDR-64 and iDR10 racks located in the hall—to integrate and control the audio, network and communications and handle 128 recording channels plus 16 channels from the video recording.

#### DPA Goes Dancing

LOS ANGELES, CA—Production sound mixer/supervisor Daniel McCoy, CAS, used 28 DPA (dpamicrophones.com) d:screet 4060 omni miniature mics, supplied direct from DPA through Location Sound Corporation, plus d:diccate 4017B shotgun mics to record behind-the-scenes action and interviews during the 20th anniversary season of *Dancing With the Stars* (DWTS).

#### O'Connell Returns to Sony

CULVER CITY, CA—Twenty-time Academy Award-nominated recording mixer Kevin O'Connell has returned to Sony Pictures Post Production Services (sonypictures.com), where he recently completed *The Boy Next Door*, *Self/less*, *No Good Deed* and *Pitch Perfect 2*. He was previously on staff at the studio from 1993 to 2008, mixing *Pearl Harbor*, *Spider-Man*, *Spider-Man 2*, *Memoirs of a Geisha*, *Transformers* and other titles.



## AVnu Alliance

(continued from page 30)

ize the value" of a networking platform that combines both audio and video, he continues. "People are used to those being separate systems; once they realize they can combine them, it makes perfect sense."

Adds Prothe, "The big promise is that it's so scalable and essentially futureproof, wherever the technology goes." The list of certified AVB switch and audio end points has been growing, including the recent addition of Meyer Sound CAL, the first ever AVnu-certified loudspeaker. Video product certification is expected to be in place later this year, according to Schlechter.

Certified AVB products being highlighted at InfoComm 2015 include Meyer Sound's CAL, the Extreme Networks X440 switch and AudioScience's Hono AVB Mini I/O interface. Products from Biamp Systems, Covelloz, Cisco, Intel, Pivitec, Riedel and Revolabs will also be present.

L-Acoustics will be making its first U.S. trade show appearance since announcing in April that it has joined the AVnu Alliance. Total membership of AVnu Alliance is now "85 to 90" manufacturers, says Schlechter. "It's definitely gaining momentum," says Prothe.

According to Genio Kronauer, head of the electronics department at L-Acoustics, "We believe in standards and interoperability, so IEEE's AVB/TSN standard, certified by the AVnu Alliance, is a natural choice for us. We believe that L-Acoustics' high-end user-base will bring significant contributions to growing the AVB/TSN market in the professional domain."

AVnu Alliance also planned to move forward with its AVB/TSN educational agenda at InfoComm 2015, including, for example, a presentation by Meyer Sound's Jeff Kofinoff, "Deploying Large-Scale AVB Networks," on Friday, June 19. "There's going to be a series of educational presentations on the AVnu Alliance booth on a variety of AVB/TSN topics," said Prothe in advance of InfoComm. "There will be one covering the application of live sound, an installed audio application and Extreme Networks will be doing one on troubleshooting. Then, there will be a product showcase of a suite of products showcasing the AVB ecosystem."

On the manufacturing and development side, says Schlechter, "A lot of people have been clamoring for AVB and a lot of them have been able to architect or use the reference designs." Indeed, the catalog of ref-

erence designs has been expanding. Earlier this year, XMOS announced that its hardware and software audio endpoint reference platform had been AVnu certified. The platform is intended as an affordable, scalable and production-ready solution enabling XMOS customers to build a wide range of AVB-enabled audio products, from single speakers and microphones to complex multichannel mixing desks and multi-port confer-

encing systems.

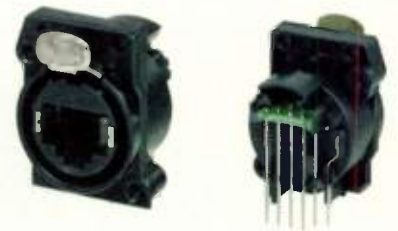
"AVB standards have huge benefits for our customers; by selecting XMOS our customers can add the enhanced functionality that AVB provides and through software development quickly create a portfolio of AVB enabled products," says Paul Neil, vice president product management, XMOS. "We chose to pursue AVnu certification to provide our customers fast time-to-market with a

proven, flexible, scalable networked audio connectivity solution."

Covelloz, Pivitec and UMAN are also among the developers that have introduced AVB reference designs, says Schlechter. "That promise of having many different types and price points for reference designs, if you want to incorporate AVB—that's really starting to fill out."

AVnu Alliance  
www.avnu.org

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## Sound Advice Tour

(continued from page 30)

audience will go to sleep, and that is the opportunity we've been waiting for. When that happens, we can easily and facily move their attention to anything we want, through suggestion, visuals, audio, dialog, music."

Mounting a traveling roadshow

such as this, which features a 5.1 playback system, greenscreen set, camera and lights, multiple projectors and screens, a forest of microphones and other gear, necessitates accommodations from equipment manufacturers to be economically viable. And while the presentations obviously emphasized that equipment—from software and hardware companies such as Adobe, Apple, Arturia, Avid, Holophone, iZotope, Mytek, Røde,

Roland, Samson, sE Electronics, Sony, Triad-Orbit, Zynaptiq and others—Lewis discovered a regional anomaly in Los Angeles when he asked "Who are my Pro Tools people?" and 75 percent of the attendees raised their hands.

"Everywhere we go in the nation,



Attendees of the Sound Advice Tour record a scripted scene to be used for other demonstrations during the day. Mark Edward Lewis, event host, looks on (back right).

I ask, who are my Pro Tools people? One hand. Who are my Audition people? Eighty hands. It's pretty interesting," he observed.

Throughout the day, Lewis called on audience members to participate in practical exercises, including a two-man scripted scene that generated sound and visuals that he later incorporated into discussion of post-production workflows and techniques. Six attendees walked slowly around an omnidirectional mic while talking about their morning to demonstrate an effective loop group, also known as walla. Lewis also showed how a lavalier mic could be effective in any number of positions on a person's body. In summary, he suggested, "Put it where the noise is."

These days, a lot of content is finding a home on the web, sometimes exclusively. "Listeners like louder content better," argued Lewis, proving his point by playing an identical clip twice and asking which clip attendees preferred. The preferred clip was just 1 dB louder. "Does that matter? It's everything," he commented.

Hammering home his point, Lewis played a web promo for a film on which he worked that had been mixed by a hip-hop producer and mastered to just 3 dB of dynamic range. "We have to make our internet mixes so loud that it's louder than our competition. This is the tool that we use, a limiter or a maximizer, to crush the volume and make it incredibly loud. If you don't do it, you can't compete."

Another way to gain a competitive edge on the web is by mixing in an immersive format. "You're all going to be delivering in 11.1 within the next five years. Why? It's not the future, because right now, for \$300, you can deliver completely discrete 22.2 on headphones, on YouTube, if you want," Lewis explained, as he remixed the stereo dialog, effects and music stems from *Iron Man* through the Spatial Audio Designer plug-in while attendees listened on headphones. "It's going to be a standard deliverable if you want to compete," he said.

The Sound Advice Tour finishes in Boston, MA on July 2 after stops in Nashville, TN (June 22), Washington, DC (June 24), Toronto, Canada (June 26) and New York City (June 28 and 30).

Sound Advice Tour with Frank Serafine  
www.soundadvice.mzed.com

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# innovations: the manufacturer's view

## Testing Audio ADCs and DACs

EXPERT ADVICE FROM AUDIO PRECISION



Audio Precision's APx555 is the new flagship audio analyzer, with the capabilities to test digital converter performance in both the digital and analog domains, and much more.

BY DAVID MATTHEW

In 2015, there's not much question about audio storage, transmission or streaming: It's digital. Apart from rare sightings of vinyl or open-reel tape in boutique sales or creative enclaves, audio is digital. Done right, digital audio is flexible, robust and of very high quality. PCM recording, lossless surround formats and even lossy compression (at least at high data rates) provide the soundtrack for our lives.

But, of course, sound in air is not digital. The pressure waves created by a human voice or a musical instrument are recorded after exciting a transducer of some sort, and the transducer responds with an electrical voltage that is an analog of the pressure wave. Likewise, at the end of the chain, the digitized audio signal must eventually move air, using a voltage that is the analog of the original sound wave to drive a transducer that creates a pressure wave.

Near the beginning of a digital chain, then, we must use an ADC (analog-to-digital converter) to transform the analog electrical signal to a digital representation of that signal. Near the end of the chain, we must use a DAC (digital-to-analog converter) to transform the digital audio signal back into an analog electrical signal. Along with the transducers, these two links in the chain—the ADC and the DAC—are key in determining the overall quality of the sound presented to the listener.

### TESTING AUDIO CONVERTERS

The conventional measurements used in audio test can also be used to evaluate ADCs and DACs. These measurements include frequency response, signal-to-noise ratio, inter-channel phase, crosstalk, distortion,

group delay, polarity and others. But conversion between the continuous and sampled domains brings a number of new mechanisms for non-linearity, particularly for low-level signals. This article looks at problems seen in audio A-to-D and D-to-A conversion, and some methods that have evolved to address these issues.

### TEST SETUPS

The typical test setups are straightforward.

For ADC testing, the analyzer must provide extremely pure stimulus signals at the drive levels appropriate for the converter input. For converter ICs, the analyzer must have a digital input in a format and protocol to match the IC output, such as I2S, DSP, or a custom format. For a commercial converter device, the digital format is typically an AES3-S/PDIF-compatible stream. For devices that can sync to an external clock, the analyzer should provide a clock sync output.

As mentioned previously, ADCs and DACs exhibit behaviors unique to converters. The Audio Engineering Society has recommended methods to measure many converter behaviors in the AES17 standard. The following examples examine and compare a number of characteristic converter issues.

### IDLE TONES

Common audio converter architectures, such as delta-sigma devices, are prone to have an idling behavior that produces low-level tones. These "idle tones" can be modulated in frequency by the applied signal and by DC offset, which means they are difficult to identify if a signal is present. An FFT of the idle channel test output can be used to identify these tones.

### SIGNAL-TO-NOISE RATIO (DYNAMIC RANGE)

For analog audio devices, a signal-to-noise ratio measurement involves finding the device maximum output and the bandwidth-limited rms noise floor, and reporting the difference between the two in decibels.

With audio converters, the maximum level is usually defined as that level where the peaks of a sine wave just touch the maximum and minimum sample values. This is called "full scale" (1 FS), which can be expressed logarithmically as 0 dBFS. The rms noise floor is a little tricky to measure because of low-level idle tones and, in some converters, muting that is applied when the signal input is zero. AES17 recommends that a -60 dB tone be applied to defeat any muting and to allow the converter to operate linearly. The distortion products of this tone are so low they fall below the noise floor, and the tone itself is notched out during the noise measurement. IEC61606 recommends a similar method, but calls the measurement *dynamic range*.

### JITTER

For ADCs, clock jitter can occur within the converter, and synchronization jitter can be contributed through an external clock sync input. For DACs receiving a signal with an embedded clock (such as AES3 or S/PDIF), interface jitter on the incoming signal must be attenuated.

Sinusoidal jitter primarily affects the audio signal by creating modulation sidebands—frequencies above and below the original audio signal. More complex or broadband jitter will raise the converter noise floor. A common measurement that reveals jitter susceptibility is to use a high-frequency sinusoidal stimulus and examine an FFT of the converter output for jitter sidebands, which are symmetrical around the stimulus tone.

quency sinusoidal stimulus and examine an FFT of the converter output for jitter sidebands, which are symmetrical around the stimulus tone.

### JITTER TOLERANCE TEMPLATE

AES3 describes a jitter tolerance test, where the capability of a receiver to tolerate defined levels of interface jitter on its input is examined. A digital audio signal is applied to the input. The signal is jittered with sinusoidal jitter, swept from 100 Hz to 100 kHz. As the jitter is swept, its level is varied according to the AES3 jitter tolerance template. Jitter is set at a high level up to 200 Hz, then reduced to a lower level by 8 kHz, where it is maintained until the end of the sweep.

An interface data receiver should correctly decode an incoming data stream with any sinusoidal jitter defined by the jitter tolerance template. As jitter level rises, poor tolerance will cause a receiver to decode the signal incorrectly, and then fail to decode the signal, occasionally muting or sometimes losing lock altogether.

### FILTER EFFECTS

Anti-aliasing filters are used in ADCs to eliminate signal content above the Nyquist frequency—half the sampling frequency; signal content higher in frequency than the Nyquist frequency reflect unwanted audio band artifacts into the audio band. Anti-aliasing filter effectiveness is tested by introducing swept out-of-band (above Nyquist) input stimulus. The resultant converter output is then analyzed for out-of-band induced content.

### SUMMARY

Tests for the high-level non-linear behavior of an ADC are similar to those for non-linearities in analog electronics, using standardized tests for harmonic distortion and intermodulation distortion. But audio converters bring new mechanisms for non-linearity, particularly for low-level signals. The AES17 Standard and Audio Precision's *Technote 124* describe effective testing methods for audio converter measurements. David Matthew is Technical Publications Manager at Audio Precision

Audio Precision  
ap.com

THERE'S MORE ▶ Find a longer, illustrated version of this article online at [prosoundnetwork.com/july2015](http://prosoundnetwork.com/july2015)



# Universal Audio/Softube Marshall Plug-in and AEA R88 mk 2 Microphone

This month, let's take a look at a few different products that have found their way into my real-world workflow.

## AEA R88 MK 2 STEREO RIBBON MICROPHONE

Working at Clubhouse Studios in Rhinebeck, New York with engineer/producer Neil Dorfsman, he and owner/engineer Paul Antonell put up an AEA R88 mk2 stereo ribbon microphone on drummer Ray Levier's kit. We were going for a big, wide, powerful drum sound, and they placed the mic about six feet from the kit and about five feet high, running it through two channels of 31102s, from a Neve 8068. As the R88 is a passive stereo ribbon mic with both elements fixed at 90 degrees in one housing, it can be used for both XY and MS recording. It features two 2.35-inch x 0.185-inch, 2-micron pure aluminum ribbon elements—the same as the ones in AEA's classic R44 ribbon mic. The frequency response has the HF roll-off characteristic of all ribbon mic elements, in this case down some -10 dB at 18 kHz. According to AEA, the R88 can handle up to 165 dB of SPL—a lot for any



AEA R88  
mk2

mic. [As with all ribbon mics, max SPL handling is reduced at lower frequencies. AEA confirms that this spec is for signal above 1 kHz; the max levels drop 6 dB per octave below 1 kHz—ed.] With its black, textured paint (reminiscent of the Coles 4038), it's a big, classic-looking mic, clocking in at over 15 inches tall, but wow—it does sound fantastic in a room!

Panning the mic hard left and right in the mix, it delivers a well-balanced

smooth sound, the soft sponginess of a ribbon and a beautiful stereo image. It can take compression well, too; when I hit it with some 1176 compression, it made the drums explode. Tucked into the mix, I found no need for reverb, letting the R88 do the job naturally. A superb mic all around, I highly recommend it.

[*PAR* Tech Editor Lynn Fuston adds: I've used the R88 in XY and MS, and its siblings, a pair of R84s, as string overheads when doing large string sections (10 to 24 pieces) and it's amazing how well it captures a well-balanced image and a big film score sound, even in less than ideal spaces. Very smooth and rich."]



BY RICH TOZZOLI

Rich Tozzoli is an award-winning, Grammy-nominated producer, engineer and composer for programming such as *FOX NFL*, *Pawn Stars*, *Duck Dynasty* and *Oprah & Deepak Chopra*. [richtozzoli.com](http://richtozzoli.com)

### Small Amp, Big Sound

While I'm on the topic of the Dorfsman session, one of the amps I used for the guitars was my 1947 Gibson BR6. This little amp runs around 11 W and features five tubes including a 6V6 pair. It uses a small 10-inch field coil Electro Magnetic Dynamic moving coil speaker and no controls but a volume knob.

There's one thing for sure when it comes to recording guitars: You don't always need big amps for big sound. By using a touch of Tube Screamer and a Creation Audio Labs' Holy Fire for clean input gain, this thing is a tone monster. Found for \$250 and restocked with fresh tubes by my friend Vincent Miragila of Analog

Design Group, it looks like a small radio from the 40s—but it's much more.

Neil Dorfsman used a Heil PR-30 and a Shure SM7B mic on the amp through the aforementioned Neve modules. I played a Fender Broadcaster through it in open D tuning, as well as a four-string Cigar Box tuned to AAGG. Both the Heil PR-30—a large diaphragm dynamic mic with a 40 Hz to 18 kHz frequency response—and the SM7B—a classic dynamic mic with switchable bass rolloff and presence boost—sound really great on guitar tracks. You can put them right on the cabinet and they will deliver a thick and creamy but present sound, especially when mixed together.

## MARSHALL PLEXI SUPER LEAD 1959 PLUG-IN

Developed by Softube for the UAD-2 and Apollo audio interfaces, this is a serious emulation of the classic EL34-tubed 100 W British monster, heard on countless hit records. Based on a 1967 Super Lead from Marshall's own museum, AC/DC's own engineer Tony Platt (*Back In Black*; *Highway to Hell*) recorded the cabinet and mic simulations on a 1960BHW 4X12 cabinet.

Like the original amp, one can "jump" the inputs to get a variety of tones, with Channel 1 being the brighter of the two channels. Of course, there are the standard On/Off switch, Presence knob, Bass, Middle,



Marshall Plexi Super Lead

and Treble knobs.

What makes this plug-in extra flexible is the ability to open up a Channel Strip panel on the right side

of the GUI, revealing a handful of extras, including EQ Main Out Low and High, a Main Out volume (up to +12 dB) and a Cabinet Microphone

Select between Off, Valve, FET or Dynamic. Valve features two Neumann U67s and an AKG C12 room (continued on page 39)



# NewerTech USB 3.0 Universal Drive Adapter

BY FRANK WELLS

If you are like me, you have a stack of old hard drives laying about—system and slave drives from older computers, small capacity drives (by today's standards) once used for projects and maybe an old laptop drive or two. For IDE drives, I have an older Ultra external drive housing with FireWire and USB support, but for other drives, like a laptop drive that had to be replaced, I didn't have the ability to utilize them for anything useful, nor could I even access the old data without temporarily installing such drives in a computer.

Enter NewerTech with a simple and elegant solution: the NewerTech USB 3.0 Universal Drive Adapter (USB3-UDA). This \$39.95 (list) device handles 40-pin 3.5-inch and 5.25-inch IDE/ATA/ATAPI hard drives and optical drives, 44-pin 2.5-inch IDE/ATA hard drives and any drive with a standard SATA connector, converting them to an external USB3 drive. The core device is just 1.4 oz with accessories attached. It measures 3.35-inches by 1.9-inches by .53-inches.

The USB3-UDA kit includes an IDE/ATA extension cable for 40-pin drives that plugs into one side of the device, and a USB 3.0 cable to go from the device to a computer. The external power supply terminates with a standard ATA style power connector that plugs directly into the larger IDE/ATA drives. Helpfully, the "line-lump" style power supply has an inline power switch and power-on indicator. Your 2.5-inch IDE/ATA drives plug directly into the core device, and get their power from the connector mounted on the opposite side from the 40-pin connector (these drives are powered from the USB port on the host computer). For SATA drives, an umbilical connects from the port on the drive, split to a standard power connector to connect to the power supply and an eSATA style 7-pin connector that plugs into the USB3-UDA (you can also also hook to external eSATA devices should your computer not have eSATA ports).

In use, you pick the appropriate cables for your drive type, plug it all together and to a computer and wait a few seconds for the computer to recognize that a drive has been added. A blue LED lights on the device when it's connected to a powered computer; the LED flashes when data is being transferred.

I used the adapter to connect drives of each format to a Windows 7 computer with complete success, and I connected a FAT32 formatted drive to a MacBook Pro. With USB 3, "re-

al-world" data rates can reach up to 200 MB/s according to NewerTech, and terabyte-plus drives are supported within operating system limitations. With the obvious reductions in transfer speeds, the USB3-UDA works fine with USB 2.0 and even USB 1.1 ports.

While best suited for short-term use, you could use the USB3-UDA

for longer term if careful about not shorting exposed drive electronics—NewerTech does offer silicone drive sleeves to help prevent such issues.

I love problem-solving devices, especially when they are simple, well thought-out and affordable. All of the above apply to the NewerTech USB 3.0 Universal Drive Adapter.

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# Ultimate Ears Sound Guard and iZ RADAR Studio System



## IZ RADAR STUDIO RECORDING SYSTEM/ MULTIPLATFORM DAW

The new iZ RADAR Studio offers an entirely new approach to the acclaimed RADAR recording system. The device, which looks like a regular RADAR with touch screen and transport controls on the front, can be booted into RADAR mode offering the classic RADAR operation that so many people know and love. Alternatively, it can be booted into Workstation mode, allowing it to natively run the user's DAW of choice (Sorry Logic users—RADAR studio runs Windows OS.) Harrison's Mixbus DAW comes pre-installed and, for an additional \$10, iZ will install Avid's Pro Tools 11 (with more DAW installation options available in the future, offers iZ). While Mixbus is actually a license, Pro Tools is only an installation; it requires an iLok. RADAR Studio runs Pro Tools at near HD specs, but it is not running HD so it doesn't require an HD license.

RADAR Studio is entirely customizable, too; I/O is available with either the Ultra-Nyquist or Classic 96 converter options and is available in banks of eight, allowing for eight, 16 or 24 channels of analog I/O. The Ultra-Nyquist cards support sample resolution up to 192 kHz while the

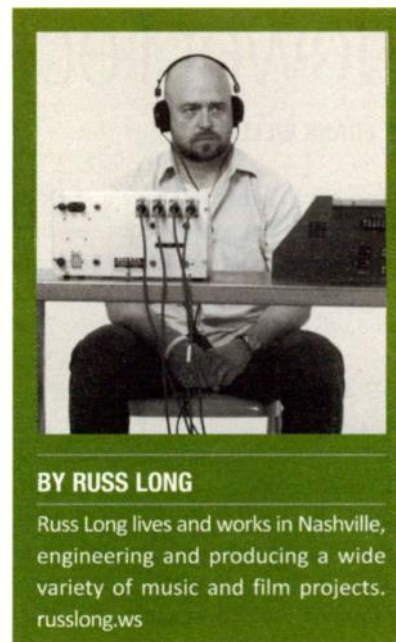
Classic 96 cards support up to 96 kHz. Digital I/O options include AES, MADI, ADAT and TDIF. In addition to converter and I/O options, iZ offers configurable drive

bays, external media, DSP cards and peripherals. The built-in touch screen makes many functions extremely easy.

The heart of the RADAR Studio and the key to its unmatched sonic

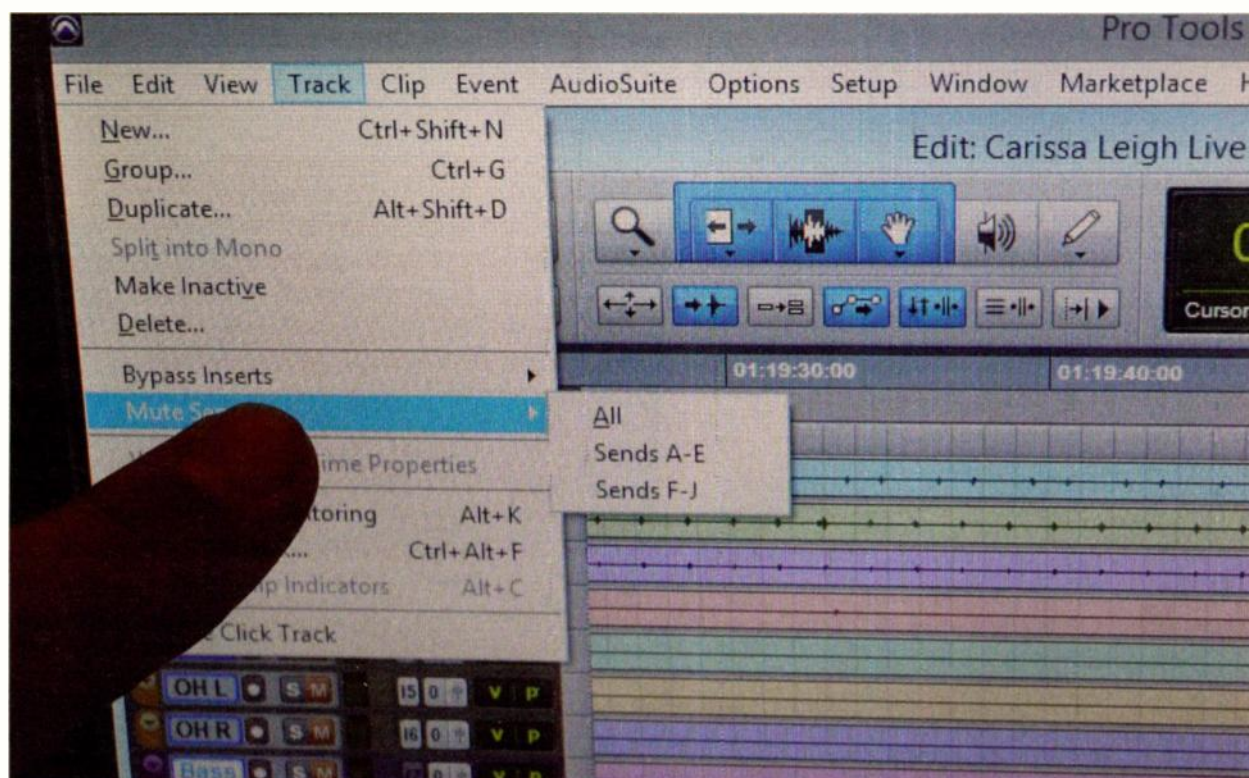
performance is the Adrenaline DR Recording Engine that houses iZ's proprietary tried-and-true Trinity Chip; it provides a near-zero jitter clock by utilizing a frequency synthesized digital PLL. The Adrenaline DR engine also frees up the host processor to provide better DAW/plugin performance.

The optional Session Controller (essentially a remote) provides full tactile control of up to eight RADARs; it has been mapped with operational shortcuts for seamless integration with Pro Tools. Additionally, there are three banks of 16 programmable macro keys providing more DAW operational customization. It takes a little time to learn, but once you get comfortable with it, driving Pro Tools with the Session Controller is an absolute pleasure and a huge time saver. (Lynn Fuston adds: "Macros are incredible time-savers on big orchestral sessions. Unarming 48 tracks and arming 18 more for the



BY RUSS LONG

Russ Long lives and works in Nashville, engineering and producing a wide variety of music and film projects. [russlong.ws](http://russlong.ws)



RADAR Studio's front panel touch screen in use with Avid's Pro Tools.



double requires only two keystrokes. Very speedy.”)

Depending on the configuration, a RADAR Studio system ranges from \$7,500 to \$21,000. The iZ website has a “Price a RADAR” page (<http://www.izcorp.com/dealers/price-a-radar/>) that allows easy pricing for a custom system. There, I virtually built my dream rig; it came in at \$16,940. At first glance, this seemed like a big number but once I examined all that is included, it is actually quite comparable, if not cheaper, than other high-end recording scenarios. iZ continues its tradition of exceptional user-support, too; I owned a RADAR for several years and their customer support truly is unbelievable. iZ offers great upgrade paths for current RADAR owners and each RADAR studio rig includes 10 years of free technical support.

The unit I reviewed was equipped

with 24 channels of Ultra-Nyquist converters and the pristine signal path sounds absolutely wonderful. With its ample RAM and high-speed SSDs, RADAR studio performance is quite remarkable. Boot time from completely powered down to being ready to record in RADAR mode is less than 30 seconds and boot time into Pro Tools—including creating and naming a new session—is 52 seconds. This is quite possibly the fastest system available today. In RADAR mode, total I/O latency is an impressive 1.75 ms at 48 kHz and 1.33 ms at 96 kHz. In Workstation mode, latency is just under 6 ms at 96 kHz and just over 10 ms at 48 kHz: not quite as impressive, but still good. Synchronization options include Wordclock/video, AES two-channel, S/PDIF, MIDI and SMPTE. I was disappointed to find that MIDI and SMPTE are currently only supported in RADAR

mode, but I’ve been informed that a future driver update will add their support in Workstation mode.

Having been a staple in high-end recording studios around the world for nearly a quarter of a century—the first RADAR was released in March 1991—it is arguable that iZ knows hard disk recording better than anyone else. Back in the 90s and before the rise of the DAW, when the industry was still in transition from analog to digital recording, RADAR became the standard in many, if not most, Nashville studios where I spent hundreds of long days working. I can count on the fingers of one hand the number of times I’ve ever had to restart because of a problem. Comparably, I’d say it’s rare for most DAW users to go a week without having to restart at least once. RADAR studio runs a stripped down version of Windows that is free of unnecessary bloat,

ensuring iZ’s reliability standard continues in RADAR studio. During my two months of testing RADAR studio, not once did I restart the machine because of a hiccup or crash.

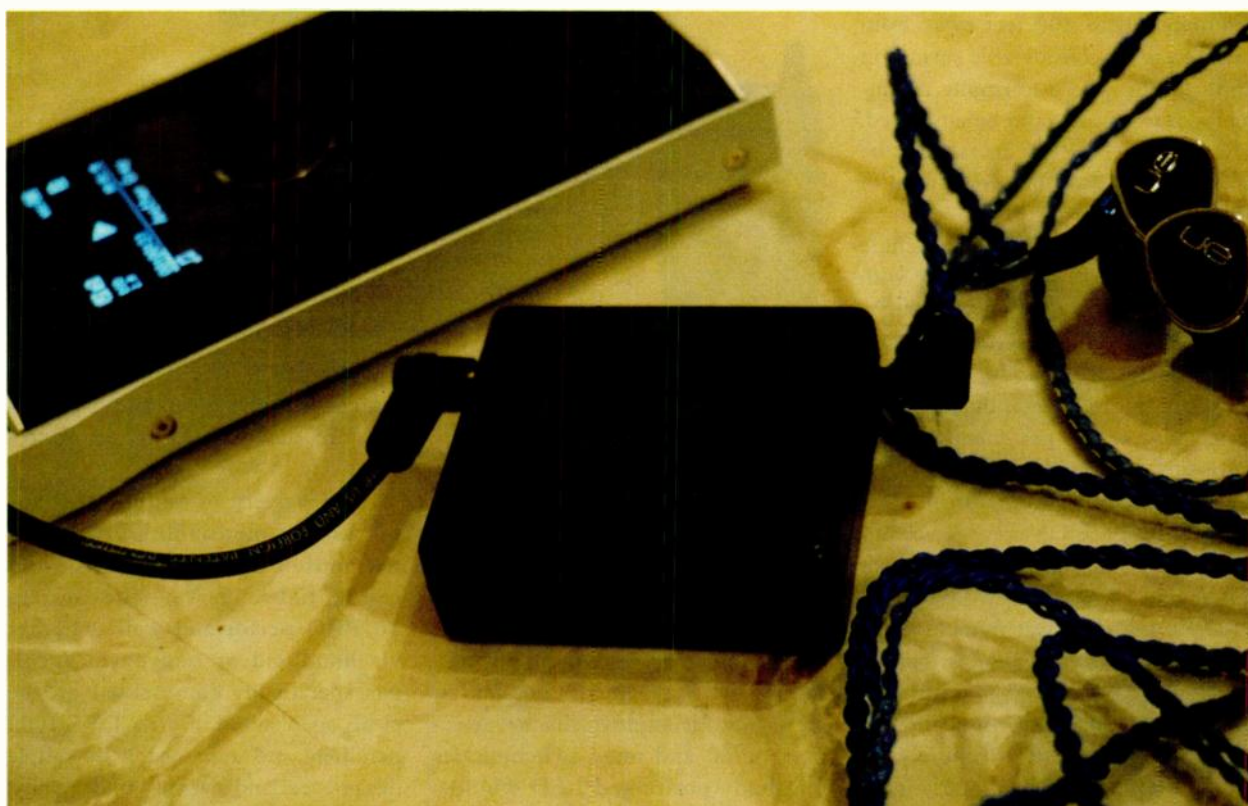
The concept behind RADAR Studio is that users simply turn it on and it’s ready to use. My experience is that it does exactly that, since it is essentially a high-performance PC optimized for audio. With up to 24 channels of I/O, it is equally effective connecting to a console or a summing box, or summing internally utilizing a DAW’s audio engine. Regardless of approach, it sounds fantastic.

Top engineers have always been drawn to RADAR because of the sound quality. Since that immaculate sound is now packaged into a single box that contains a full DAW, I expect to see RADAR studio finding its way into more and more of the world’s top studios and workflows.

## ULTIMATE EARS SOUND GUARD IEM PROCESSOR/LIMITER

Since developing in-ear monitoring (IEM) technology for the recording and live sound industries in 1995, Ultimate Ears (UE) has been at the forefront of personal monitoring products. Its innovation shows no signs of slowing, either; this past January, I had the opportunity to take a peek into the future of IEM technology with UE at Winter NAMM 2015. Gone are the days of an audiologist taking a mold of your ear cavity to assure the IEMs provide proper fit; UE now incorporates a digital scanner to capture digital ear impressions of the ear canal, then utilizes a 3D printer to build the earphone shell. This results in IEMs that fit perfectly and can be manufactured in a shorter period of time. This is a notable innovation when, for example, touring artists misplace their IEMs and need an immediate replacement or a new musician is hired who doesn’t have a set of IEMs but need a pair immediately. Check out coverage of the process through the links at [prosoundnetwork.com/july2015](http://prosoundnetwork.com/july2015).

Along with UE’s manufacturing process update, the company introduced a unique new product earlier this year, called Sound Guard. This small (2- x 2- x 0.5-inches), battery-powered \$199 box has the ability to radically improve IEM performance while providing a protective limiting circuit. Intended for UE Pro IEMs, it offers the same sonic improvement and protection for balanced armature design IEMs by other manufacturers. Sound Guard I/O works via a pair of eighth-inch stereo TRS jacks, and the unit includes a removable belt clip,



Ultimate Ears’ Sound Guard

6-inch patch cable and a pair of 3 VDC CR2450 lithium batteries. Power is activated via a recessed on/off switch. LEDs illuminate to indicate power status and battery condition, respectively.

Connecting in-line between the headphone output of a sound source and a pair of balanced armature IEMs, Sound Guard is a fantastic device. I’ve spent hours listening through it with both my UE Reference Monitor and UE 900S IEMs; in both instances, I found that its impedance matching circuitry significantly improved the performance of

the monitors, resulting in a smoother top end with improved clarity and rich low frequencies with improved definition.

The limiter works well, too. It activates when a signal reaches approximately 107 dBA; once it kicks in, it becomes somewhat audible but not until then. The limiter instantly suppresses audio spikes and surges caused by feedback, wireless interference, microphone drops, etc., making it a wonderful asset for performers. While the plug-and-play approach makes for simple operation, users who like to monitor extremely loud

may wish it kicked in at slightly louder volumes. Perhaps a three-position sensitivity switch would make it a bit more versatile. That said, I like my music to rock and I was always able to monitor without the limiter kicking in.

The batteries provide around 20 hours of use. That’s great, but stock up, since the CR2450 isn’t always the easiest battery to find; the unit ships with an extra pair of batteries. The back of the Sound Guard has a removable battery compartment cover and a pair of threaded holes located to accommodate the belt clip.



# Audio-Technica System 10 PRO and Sennheiser MK 8 Mics

## AUDIO-TECHNICA SYSTEM 10 PRO 2.4 GHZ WIRELESS SYSTEM

Budget-conscious audio pros, venues and discriminating DIY musicians can benefit greatly from the 2.4 GHz technology now available in many wireless systems: it's the most user-friendly range of wireless transducer technology (probably ever), is irresistibly affordable and it sounds great. The 24-bit/48 kHz ATW-1312 package from A-T (\$1,089 list)—a dual channel bodypack/handheld system—is an ideal example of 2.4 GHz's modern appeal.

A System 10 PRO rig is comprised of a half-rack chassis with two receiver unit slots. Via Ethernet, each rig's receivers can also be mounted remotely, up to 300 feet away from the chassis—a considerable savings in applications where normally an antenna distributor would be employed. Five System 10 PRO chassis can be linked via RJ12 cabling for a total of 10 channels per system.

System 10 PRO features include the LCD Dual System Display with RF signal level, system ID, transmitter battery level and system link status for both channels. Its Frequency Diversity feature utilizes dual auto-selected frequencies per channel; Time Diversity uses multiple time slots per channel to avoid multipath interference; and Space Diversity is accomplished via two antennas per transmitter and receiver. Each System 10 PRO Rack-Mount system includes an ATW-RC13 receiver chassis, one or two ATW-RU13 receiver units, one or two AT8690 receiver-unit mounting brackets, one RJ12 cable, two rack mounting brackets, one joining



plate, one AC adaptor, and one or two ATW-T1001 UniPak bodypack and/or ATW-T1002 handheld transmitters. Our ATW-1312 review unit featured two receivers, one bodypack and one handheld.

The ATW-1312 system is incredibly easy to use. Handheld-wise, the ATW-T1002 is a solid, good-sounding microphone with a multifunction, A-T logoed "press/hold" style button on its end for intuitive channel selection, on/off and mute switching. Its mid-body positioned LED window

offers a bright blue number indicating channel plus green and red lights for "on" and "mute" indicators, respectively.

In a variety of venues and applications—metropolitan club/venue, house-of-worship, outdoor and residential/rehearsal—the System 10 PRO performed well, whether via handheld or bodypack. Vocalists specifically commented on the clear, open sound of the ATW-T1002 handheld and appreciated its simple design, feel and overall build quality,



BY STROTHER BULLINS,  
REVIEWS EDITOR, NEWBAY  
MEDIA AV/PRO AUDIO GROUP

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the latter proven by one or two impromptu concrete floor drops.

When pushing the far limits of its range (with both receivers in the chassis), the System 10 PRO never "broke up;" rather signal level temporarily sagged in just a few spots; this only happened in arguably unrealistic performance scenarios: walking outside of a rock-walled HOW and into an adjacent concrete building, for example. Considering that the system's dual ATW-RU13 can be remote-mounted up to 600 feet away from each other (with the chassis in the middle), the System 10 PRO provides more than ample available range to work with for most every application.

I've been sold on the license-free/2.4 GHz wireless concept since my review of Line 6's early wireless systems years ago. Today, these systems are proven and just keep getting better and better. A-T's System 10 PRO is a solid, flexible and scalable wireless investment that I will enthusiastically recommend.

Audio-Technica  
[www.audio-technica.com](http://www.audio-technica.com)

## SENNHEISER MK 8 MULTIPATTERN LARGE DIAPHRAGM CONDENSER (LDC) MICROPHONE

The studio realm of pro audio product marketing tends to nurture "champagne wishes and caviar dreams." Microphone-wise, the multi-pattern large diaphragm condenser (LDC) is often a focus in aspirational studio glamour shots—mostly because it's a key, useful tool and partly because it's generally one of the priciest items in a pro's kit. Recognizing both the needs and desires of both savvy self-financed re-

cordists and budget-minded pros, Sennheiser's MK Series has recently expanded to two models, offering the taste, vibe and features of high-end LDCs at very reasonable prices.

Having previously reviewed the excellent MK 4—a Sennheiser cardioid LDC made at the company's HQ in Germany for \$299 street—I jumped at the opportunity to try its multi-pattern sibling, the MK 8 (\$699 street) that is also made in Germany. It's a super

useful workhorse for many potential users and applications. And, like the MK 4, the MK 8 isn't a budget mic; it's just a bargain.

Key features include a 24-carat gold-plated 1-inch dual diaphragm transducer; omni, wide cardioid, cardioid, super-cardioid and figure eight polar patterns; -10 dB and -20 dB pads; -6 dB/octave at 100 Hz and -18 dB/octave at 60 Hz high-pass filters; and a 142 dB SPL maximum (with

0 attenuation setting). It comes with the functional yet spartan MZQ 4 microphone clamp, pouch and instruction manual. From its front, the MK 8 is nearly identical to the MK 4; on the reverse are HPF, pattern and attenuation, respectively. The MK Series is pretty; for reference, its silver metal body and black accents looks nearly identical to the Mac Book Pro. It feels sturdy, strong and refined in

(continued on page 39)



## Marshall

(continued from page 34)

mic; FET features Josephson e22, Neumann U87 and (oddly the non-FET) Coles 4038 ribbon room mics; and Dynamic features Shure SM57 and Sennheiser e609 room mics.

At the bottom of the Channel Strip, there are three mic choices available; they automatically switch when selecting the Cabinet Microphone Select switch. Mic 1, Mic 2 and Room Mic all have individual Solo and Pan controls as well as fader volume control.

Full disclosure: I've used just about every guitar plug-in out there. And this one is one of the best by far.

## Sennheiser

(continued from page 38)

the hand too.

Response-wise, the MK 8 is remarkably flat across the 20 Hz to 20 kHz frequency range with between 2 to 3 dB of added high-end emphasis between 5 and 14 kHz, depending on the pattern (omni and wide cardioid emphasis is nearer to 10 kHz while supercardioid and figure eight rises and falls between 3 to 10 kHz).

Overall the MK 8 offers an open, efficient and clean interpretation. In order of usefulness, I applied it in lead vocal, multiple vocal, acoustic guitar, drum room, room overhead, acoustic ensemble, electric bass guitar cabinet, and other jobs. Tracks were eminent-

ly usable, and vocal, acoustic instrument and room/overhead sound sources were remarkably good; for \$1,400 street, a pair of these would work well most everywhere multi-pattern LDCs are used. I doubt many would ever know they weren't a far more expensive German microphone.

I love the niche Sennheiser has carved out for the MK Series. The brand already inspires confidence, and now it offers a largely uncolored LDC Series made alongside Neu-

mann models at an amazingly good price. Knowing that, I'd say that the MK 8 practically sells itself.

Sennheiser

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

The reason I say that is when I instantiated it for the first time (with a Les Paul Custom), it was right on point; it had the sound. I couldn't get over it, either; I played for probably 15 minutes without touching anything, just because I loved what I heard. It was thick, nasty and filled with gobs of tone. Turning down the bass, adding some Presence and kicking up Input 1 (the brighter of the two), it turned into something even nastier.

I opened up the Channel Strip panel and experimented with different mic volumes. If you use the mono/stereo, you can make use of the different panning options, for example, moving the close mics to the left and the room mic to the right.

Another small but important detail is that this plug-in has ridiculously low hum on the input. That's one of my greatest plug-in amp sim pet peeves: the crazy hum you normally

get when driving amps (and hey—we all sit near monitors). I then tried a variety of presets (some better than others, of course), and tracked a few cuts right away. I was so impressed I had the other studios I work with buy it right away for use every time I come to record. It's a must have.

So, Softube, will you make more guitar amps like this for us? Like, say, Fender, Gibson and Magnatone? Please?



Sennheiser  
MK 8

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## GENELEC SAM RANGE: NEW MODELS

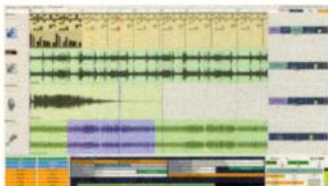
Genelec's automatic adaptive active monitoring series—Smart Active Monitoring (SAM)—has gained three new models: 8320 and 8330 two-way monitors and the complimentary 7350 subwoofer, which comprise the series' smallest offerings. These new offerings are now available in stereo and stereo-plus-sub packages. Also new for SAM is Genelec's Loudspeaker Manager V2 software with proprietary measurement microphone and network adapter unit.



The 8320 and 8330 feature a four- and five-inch woofer, respectively, each with a 0.75-inch metal dome tweeter; each model is bi-amplified, featuring a 50 W Class D amplifier per driver. The 7350 subwoofer features an eight-inch driver powered by a 150 W Class D amplifier. Other full-range model features include Minimum Diffraction Enclosure (MDE) recycled die-cast aluminum enclosures and Directivity Control Waveguide (DCW) technology.

## TRACKTION 6 MUSIC PRODUCTION SOFTWARE

After its four-month public beta test period, the latest major upgrade to Tracktion is now available in Version 6 (\$60 per new license, \$30 per upgrade). New features include Z-Plane's Elastique Pro time-stretch technology; Tracktion Warp Time time correction toolkit; tape-style start/stop effect handles for audio clips; upgraded plug-in management system; "Super Comp" audio compiling tool; and Marketplace, Tracktion's new in-app retail portal to audition, purchase, download and install various plug-ins, sounds and instruments without leaving an opened Tracktion project.



## DANGEROUS MUSIC 2-BUS+ ANALOG SUMMING DEVICE

Dangerous Music has redesigned its analog summing device, the 2-BUS, from the bottom up, resulting in the



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## firstlook

### AUDIENT iD14 TWO-CHANNEL USB AUDIO INTERFACE

Expanding its iD USB audio interface range, Hampshire England's Audient has unveiled its iD14, conceived for self-recordists and pros on the go. Closely resembling Audient's iD22, the all-metal iD14 features two classic Audient console preamps—from the ASP8024 analog console—plus 10-in/4-out AD/DA converters (using Burr-Brown chipsets); JFET instrument input; ADAT expandability for adding external mic preamps; Audient ScrollControl DAW functionality; full monitor control via software and low-latency DSP mixer; main speaker stereo output; independent headphone output; bus-powered capability for portable/laptop DAW applications; and more.



Stay tuned to PSN for a full review of the iD14.

2-BUS+ 16-channel analog summing mixer with both XLR and D-Sub inputs (\$2,999 list). Key new features include three separate custom audio processors for adding tone and colorization: its Harmonics processor, a tuned harmonic distortion generator for parallel processing with blend; Paralimit FET limiter built-in; and X-Former switchable custom transformers for the stereo mix. Each new tone control parameter can be active at once, and the order of signal flow through distortion and limiting can be flipped.

## SUNBURST GEAR M6BR8 SIX-CHANNEL PORTABLE MONITOR SPEAKER SYSTEM

Elite Acoustics Designs' Sunburst Gear has unveiled its flagship model in its MM Series of portable and Bluetooth-ready monitor speakers, the six-channel M6BR8 (\$499 each, list). Designed, built and tested in the US, the 24 lb M6BR8 serves well as a studio monitor for pros-on-the-go, a personal live monitor, and a range of applications in between. Key features include six input channels (four XLR) with comprehensive I/O options, independent volume controls, mute and pan per channel, three-band EQ on output, a 15-hour internal rechargeable battery, and an notable pro-grade built quality overall.



Reviewed earlier this year in PSN, the three-channel M3BR8 "could be the most useful multipurpose monitoring tool I've ever used," noted Reviews Editor Strother Bullins.

## WAVES AUDIO H-REVERB PLUG-IN

Waves now offers the H-Reverb plug-in based on algorithmic Finite Impulse Response (FIR) reverb technology; according to Waves, it provides "richer, deeper reverb tails," allowing for the shaping and customization of decay envelopes "beyond the standard linear forms, resulting in perfectly gated, real reverse and dense reverb tails that don't muddy up the mix." H-Reverb also includes Waves' analog modeling technology with drive control, which mimics signal behavior within popular and familiar hardware reverb devices. Key features include EQ and dynamics modules, pre-delay BPM sync, 5.1-channel surround setup support, famous artist presets, and more.



There's more information on all the products featured at [prosoundnetwork.com/july2015](http://prosoundnetwork.com/july2015).



## ADAMSON S-SERIES SUB-COMPACT LINE ARRAY

Conceived for mid-sized arena, theater, church and dance club applications, Adamson's latest loudspeaker series is comprised of the S10 line array enclosure, S119 subwoofer, Blueprint AV and the Lab.gruppen-amplified E-rack—the company's new rack-based solution. The S10 is a two-way, full-range, sub-compact line array enclosure loaded with dual 10-inch ND10-LM Kevlar Neodymium LF drivers and an NH4TA2 1.5-inch exit high frequency compression driver mounted to a wave-shaping sound chamber.



According to Adamson, the chamber exhibits "increased vertical response with minimal sacrifice of high-frequency energy in the far-field." Both S10 and S119 enclosures are made of marine-grade birch plywood and aircraft grade steel, and provide Speakon NL8 connectors.

## ELECTROSONICS SSM SUPER SLIGHT MICRO BODYPACK MIC TRANSMITTER

Reportedly the world's smallest UHF bodypack mic transmitter—2.52 by 1.48 by 0.57 inches—Lectrosonics' all-metal SSM features a wide tuning bandwidth of three standard Lectrosonics blocks or up to about 76 MHz, depending on the specific frequency range. RF power is selectable at 25 mW or 50 mW. Features include a Lemo 3-pin mic connector; infrared sync port; backlit LCD screen; micro-B USB port for firmware updates; and preset values for third-party mics from DPA, Countryman, Sanken and Sennheiser as well as standard dynamic mics and line-level input sources. The SSM is powered by an included 3.7 VDC rechargeable lithium ion flat pack battery.



## MEYER SOUND LEOPARD ARRAY AND 900-LFC LOW FREQUENCY CONTROL ELEMENT

The smallest components of Meyer Sound's LEO series, LEOPARD line array components and the 900-LFC low-frequency control element are suggested for use together, the combined units being claimed to provide efficiency at an "appealing" power-to-size ratio and "ultra-low" distortion. All LEOPARD components feature new Meyer Sound Class D amplification, further reducing weight while reportedly consuming less power and generating less heat.



Designed to perform without a distinct harmonic tone, which Meyer Sound insists most subwoofers intrinsically have, the flyable 900-LFC is a self-powered subwoofer conceived to match with LEOPARD arrays in both install and touring applications.

## DBX DRIVERACK VENU360 LOUDSPEAKER MANAGEMENT SYSTEM

Successor to the DriveRack 260, dbx's VENU360 is designed to enable a live or installed speaker system to be optimized for the "best possible sound quality," with a bevy of new features including mobile device control, more input channels and improved DSP functionality. Key components include AFS (Advanced Feedback Suppression), 31-band graphic EQ, 12-band parametric EQ, dbx compression, subharmonic synthesis, backline time delay and noise gating.

DriveRack Venu360 can be set up and operated via iOS, Android, Windows or Mac devices via a downloaded app and a standard WiFi router connected to the unit's rear-panel Ethernet port.



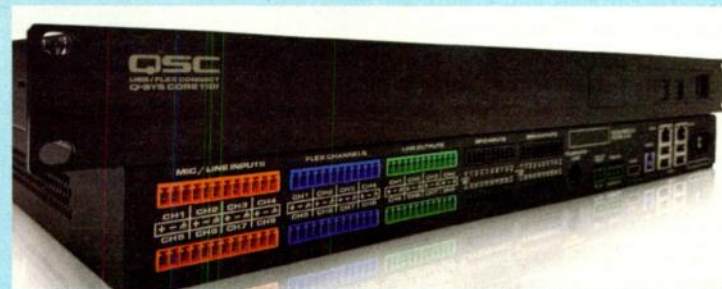
## NEUTRIK ETHERCON CAT6A LINE

Neutrik USA has introduced its etherCON Cat6A line of products, which includes a cable carrier with a Cat 6A RJ45 connector for self-termination, feed-through D-size chassis connectors, and IDC-termination D-size connectors.

The cable carriers are available in both nickel and black plating, and accept a cable OD range of 7 mm to 9.5 mm. The chassis connectors (both feedthrough and IDC styles) are available in three finishes. The etherCON Cat6A is fully downward-compatible with etherCON Cat 5; both etherCON Cat5 and Cat6A cable carriers mate to both etherCON Cat5 and Cat6A chassis connectors. Neutrik's etherCON Cat6A is PoE+ compliant to 802.3at Type2.



## firstlook



### QSC Q-SYS Core 110f

QSC has introduced its new Q-SYS Core 110f network audio solution, providing networking integration via Q-LAN, which uses IT standard Layer-3 protocols. Additionally, the Core 110f is AES67-ready to provide interoperability with numerous third-party network audio products which will support the standard.

The unit features software-based implementation of DSP, providing processing power and allowing integrators to add AEC channels without additional hardware, designated in software. Flex analog audio channels can be selected as inputs or outputs for nearly any matrix size, and VoIP, POTS, or both telephony connectivity options can be used without purchasing additional hardware.

ground loop hum  
unbalanced cable noise  
50 Hz or 60 Hz Hum  
unBalAncED CaBle ISSUES  
Mismatched Cables  
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HE-8: Eight channel single space rack with 1/4" smart jacks (TS or TRS)

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## From Studio 6-B In Rockefeller Center, It's *The Tonight Show's* House Sound

BY CLIVE YOUNG

NEW YORK, NY—Music has always been an element of *The Tonight Show*, but the current incarnation lives and breathes it. Whether it's because musicians regularly appear in comedy sketches with host Jimmy Fallon, or because three-time Grammy-winners The Roots are the house band, or just because every good party has killer tunes, music has become an essential ingredient.

Bringing those tunes into your home every night is music mixer Lawrence Manchester, and ensuring the studio audience likewise catches every nuance is FOH engineer Nathaniel Hare. Regardless of whether it's music or comedy coming out of the studio's PA, getting the audience rocking is a must, because a loud, receptive crowd makes for a better program. "I think it's a big part of what makes watching the show exciting," said Manchester, "because there is a sense of 'Even though I'm not in the room, I'm participating as an audience member in this very real-time experience.'"

An excited crowd doesn't just add spice to the broadcast mix, said Hare: "My job in the end is to do as much as I can to get the audience in the room engaged, because the more they're responding and giving feed-



A plethora of Shure mics surround Questlove's drums on the set of the *Tonight Show*, with Black Thought's KSM9HS vocal mic nearby.

back to the performers, the better the performances."

Throughout the show, Hare mixes house sound on three Avid Venue Profile consoles—one for the guest band, one for The Roots and one for production mics. That last desk also takes submixes from the other Profiles and in turn feeds them and its own mixes into a Meyer Sound D-Mitri digital signal processing and distribution system, which sends audio to a range of Meyer self-powered speakers around the studio.

"We also use a Meyer Constellation system which shapes the

acoustics of the room as needed," said Hare. "We can move the acoustic energy of the audience to Jimmy, whether he's at mono mark or at home base, so that he feels a little bit more like the audience is right with him. That was a very careful system to put in, tune and program; it allowed us to build the room to be as dead as possible and then just flavor to taste where we need a little bit of liveness or crowd."

Having The Roots on-hand gives the program some extra musical authority, and the band's presence has

(continued on page 48)

## Rucker Rolls With SES

WINSTON-SALEM, NC—F. Scott Fitzgerald said, "There are no second acts in American lives," but then again, Darius Rucker wasn't alive back then. After riding the rollercoaster of Hootie & the Blowfish's mid-Nineties success, Rucker reinvented himself as a chart-topping country music artist. Currently on the road for his fourth studio album, *Southern Style*, he still works the same sound company he did during Hootie's heyday—Winston-Salem, NC-based Special Event Services (SES)—and the audio vendor is still setting him up with the latest L-Acoustics PAs.

SES went on the road with the band in the wake of its 1994 major-label debut, *Cracked Rear View*, and by 2000, it was touring ex-

clusively with an SES L-Acoustics V-Dosc system. "They told us, 'You were there for us in the beginning, so now that we're on a major label, we're taking you with us,'" Jason Farah, co-founder and co-owner, remembers. "They took us to national prominence and we've been with Darius ever since."



Special Event Services is deploying an L-Acoustics K1 system for the tour.

Today, the Darius Rucker Band is out on tour with SES' newly acquired L-Acoustics K1 system, using a split system of eight K1 speakers atop eight K2 speakers per side, plus eight SB28 subs per side groundstacked below. A dozen Arc enclosures are used as needed for ancillary fills, and six dV-Dosc serve as lip fills for the stage, all powered by 24 LA8 amplified controllers housed in eight LA-Raks.

"We get such a powerful throw out of this system, which is exactly what we need to reach the lawns for these shed shows, and the 10-degree interelement angle on those K2s gives us punch in the nearfield, which used to be a challenge," explains Bryan Kiger, systems engineer for SES on the *Southern Style* tour. "This configuration gives us a nice wide coverage, which is perfect for these kinds of venues."

L-Acoustics, Inc.

l-acoustics.com

### briefs

#### Nexo Sits In at Valpo Jazz

VALPARAISO, IN—Natalie Cole was the headliner for Valparaiso University's 30th annual Jazz Fest, held at the campus' Athletics-Recreation Center. Sound Works Productions of Frankfort, IL supplied audio production that included a 20-box Nexo (Yamahaca.com) Geo S12 line array, four PS10s used for side fills and eight RS18 Ray Subs, all powered by Nexo 4x4 amplifiers. The company also provided a Yamaha PM5D for monitors.

#### Church Revamps With d&b

CHARLOTTE, NC—Central Church in Charlotte, NC recently upgraded the audio system in its fan-shaped sanctuary; James Brawley of James Brawley and Associates and Jerry Temple, founder of XLmediaworks Inc, designed the system installation. As a result, the room wound up with a d&b audiotechnik (dbaudio.com) V-Series loudspeaker system that included arrays of V-Tops with flown V-Subs and J-Infras to each side, all powered by a selection of d&b D80/D12 amplifiers.

#### Cuba Libre Serves Up Bose

ORLANDO, FL—Nightspot Cuba Libre Orlando just finished a audio overhaul that turns the 20,000-square-foot restaurant into a dance venue on weekends. A total of four Bose (pro.bose.com) RoomMatch modules, 19 RoomMatch Utility loudspeakers and three RoomMatch RMS subwoofers fill performance spaces on both floors, while over 40 FreeSpace speakers cover the rest of the venue, and it's all powered by PowerMatch PM8500N, PM8250N and PM4500N networked power amplifiers.

#### Church Updates With WorxAudio

GAHANNA, OH—New Life Church Gahanna in Ohio recently upgraded its sound reinforcement system, with help from Creative Sound and Lighting Solutions (Cape Coral, FL), which installed a WorxAudio (worxaudio.com) XLSi-P loudspeaker system. Due to the speakers' 160-degree throw, the system replaced a three-box center cluster and two additional outside edge speakers placed 30 feet to the left and right.



## Delicate Productions Heats Up KROQ Weenie Roast

IRVINE, CA—Los Angeles radio station has held its annual KROQ Weenie Roast and Fiesta for years, and the 2015 edition served up the likes of Cold War Kids, Vance Joy, Awolnation, Walk The Moon, Panic! At The Disco, Death Cab For Cutie, Florence + The Machine, Of Monsters and Men and MUSE, among others. Asked to provide audio once again for the event, Delicate Productions brought in a sizable sound system at Meadows Amphitheater's main stage.

Delicate fielded a Martin Audio MLA system consisting of 15 MLA and one MLD cabinet per side for the main hangs, 10 ground-stacked MLX sub bass cabinets per side, and 10 MLA Compact cabinets per side for side hangs. A total of eight W8LM cabinets were used for front fill. Meanwhile, FOH setups included an Avid Venue Profile 48-channel console with Waves Live V9, and a production desk and playback system with DiGiCo SD11 consoles.

Over in monitorworld, a pair of Yamaha PM5D-RH consoles were used for monitor setups, while a duo of Martin Audio WS218X sub bass cabinets, four W8CS bass cabinets and four W8C 3-way mid/hi cabinets were used for sidefill and cue systems common to both monitor set ups.

Delicate's crew for the show included Makoto Araki (system engineer), Craig Robertson (FOH tech), Andrew Turner (FOH tech), Michael Souder (monitor tech), Francois Pare (monitor tech), Peter Baigent (stage tech), Ryan Trefethen (stage tech), Tony Luna Talamantes (stage tech).

Project manager Meegan Holmes said, "These shows continue to be a technical challenge. Integrating many other vendors' systems in with Delicate's in a short period of time to make a successful, cohesive show takes communication, teamwork and patience. Everyone rose to the task of making the show a great success. One venue-related challenge that we face each



Bands were dwarfed by the Martin Audio MLA system that Delicate Productions fielded at the KROQ Weenie Roast and Fiesta.

year is the surrounding neighborhood and the venue dB limit. We've found that the accuracy of the MLA enables us to push louder and keep the energy from the PA within the venue. This year was no exception. Engineers were free to use the system and horsepower

they had and we went the whole evening without a single noise complaint."

Delicate Productions  
Delicate.com

Martin Audio  
Martin-audio.com

## The Lion King Takes Masque To Mexico



New Jersey-based Masque Sound took on providing sound for the Spanish-language production of *The Lion King* that recently opened in Mexico City, Mexico.

MEXICO CITY, MEXICO—The second Spanish-language production of *The Lion King* recently opened at the Telcel Theatre in Mexico City, Mexico, sporting audio support from Masque Sound, which worked with veteran sound designer Steve Canyon Kennedy and associate sound designers John Shivers and Hugh Sweeney.

"When designing the sound for any type of entertainment show, the goal is to provide an even, balanced sound to every seat in the house," says Shivers. "The trick is to do it unobtrusively. I think the best sound design is one that simply doesn't call attention to itself."

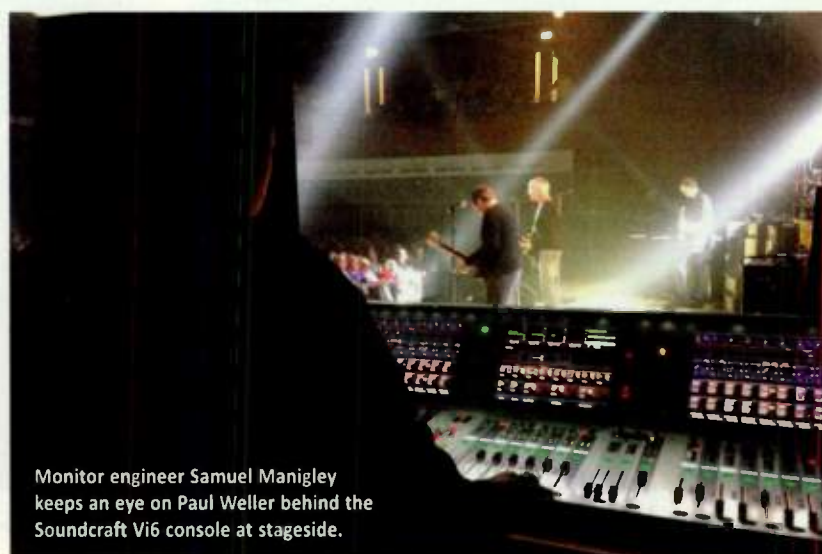
In order to achieve this vision, the designers worked closely with Masque Sound to create a custom audio equipment package centered around a DiGiCo SD7 digital mixing console, which has been the standard console on *The Lion King* for the past six years. Also put to

use was a sizable Meyer Sound PA.

The microphone system supplied by Masque Sound included DPA d:screet 4061s with Sennheiser MKE-1s as back up for the performers. The orchestra was equipped with Shure SM57 and SM81 instrument microphones, DPA d:vot 4099S clip microphones, Neumann TLM 102 large-diaphragm studio condenser microphones and KM 84s, as well as Radial Direct boxes. In addition, Sennheiser SK 5212 transmitters were used for the show's 46 channels of RF and QLab 3 for the effects playback and TC Electronic S6000 for reverb.

"I love Masque Sound," Shivers concludes. "I think that they are the best shop in the industry when it comes to providing for our needs. In the past, we've gone with other companies for some foreign productions and had mixed success. With Masque Sound, I am consistently confident in their services and know that the audio package will be well put together and technically sound. The equipment always arrives in its entirety so that all we have to do is unpack it and integrate it into the show. With Masque Sound behind us, we knew that we would have no concerns in implementing a stellar sound system for this Mexico production."

Masque Sound  
MasqueSound.com



Monitor engineer Samuel Manigley keeps an eye on Paul Weller behind the Soundcraft Vi6 console at stageside.

## Paul Weller Rolls With Soundcraft Vi6

NEW YORK, NY—Former Jam/Style Council frontman Paul Weller toured the U.S. in June behind his new album, *Saturn's Pattern*. On the road overseas since January, Weller's monitor engineer Samuel Manigley has used a Harman Soundcraft Vi6 digital mixing console all along the way, with SSE Hire supplying the board.

Weller's current touring band is comprised of six musicians including Weller, with a second drum kit having been added to the instrumentation in January. Along with the Vi6, Manigley has a 64-channel Soundcraft Vi Stagebox, plus a Compact Stagebox for additional inputs. "It's 64 inputs just from the band on stage, so we needed some extra room and the

Stageboxes have worked out great," he said.

Manigley became familiar with the Vi Series consoles last year while mixing monitors for Courtney Love's UK academy tour. Manigley found features like the Vistonics II control interface and FaderGlow fader illumination technology useful. "We used in-house consoles everywhere we played and a lot of these academies had Vi4 or Vi6 desks," Manigley said. "The ease of use with those desks is incredible and the way they're laid out, you see exactly what you need right in front of you. So I pushed hard for us to get a Vi6 for this tour."

Harman  
harman.com



## Something is Rockin' in the State of Denmark

BY CLIVE YOUNG

Volbeat may have been founded in Copenhagen, Denmark, but the heavy metal band is known around the globe—as its headlining run through North America proved this past spring. Providing audio for the journey was Denmark-based Victory Tour Production, with support from Montreal-based Solotech, and at the controls were FOH engineer Mads Mikkelsen and monitor engineer Kristoffer Hinrichsen.



Volbeat, seen here at the SK Brandt Centre in Regina, Canada, uses a Meyer Sound Leo and Lyon-based loudspeaker system throughout its world tour.

### VITALstats

#### Volbeat

Victory Tour Production Copenhagen, Denmark  
Solotech Montreal, Canada

#### FOH Engineer:

Mads Mikkelsen

#### Monitor Engineer:

Kristoffer Hinrichsen

#### Systems Engineer:

Theis Romme

#### Techs:

Étienne Lapré, David Barriault

#### FOH Console:

DiGiCo SD10

#### Monitor Console:

DiGiCo SD10

#### House Speakers:

Meyer Sound Leo-M, Lyon-M, Lyon-W, 1100-LFC, M'elodie

#### Monitor Speakers:

Meyer Sound MJF-212A, 1100-LFC, 500-HP, JM-1P

#### Personal Monitors:

Sennheiser

#### FOH Equipment/Plug-Ins:

DiGiGrid MGB; Waves MultiRack SoundGrid Server One, C6 Multiband Compressor, MaxxBass, SSL G-Master Buss Compressor, Renaissance Reverb, TrueVerb, Doubler, H-Delay, InPhase; Rational Acoustics Smaart v.7; 10EaZy

#### Microphones:

Audix OM7, D6, I5, D3, Micro-D, Adx51, D2, D4, D6

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Ever since the band began carrying production, Mikkelsen has opted for DiGiCo consoles and currently uses a well-connected SD10: "I am mainly running my desk as a big patchbay to get in and out of Waves—all my dynamic processing, most of my EQ and all of my effects are done in Waves MultiRack SoundGrid." As a result, MADI port 1 is connected via a DiGiGrid MGB interface to an Apple Macintosh running Waves Tracks Live—used for recording "official bootlegs" and material for virtual soundchecks—and Rational Acoustics' Smaart v.7 software. Meanwhile, MADI port 2 connects via another MGB to a SoundGrid Server One, used to run Waves plug-ins. Another Mac Mini is outfitted with both SD10 software and 10EaZy sound level measurement software.

Key among the plug-ins is the C6 Multiband Compressor, used on the bass and electric guitars, vocal and LR main buss. "I also have some C6 just processing key vocal channels, to sidechain into my main vocal gates, because Volbeat is extremely loud on stage and I

need to gate the vocals a bit to get rid of the bleed," he noted. Other Waves plug-ins on hand include MaxxBass for adding heft to guitars and bass; the SSL G-Master Buss Compressor on drums; Renaissance Reverb on snare; TrueVerb on toms and vocals; and Doubler and H-Delay on vocals, too.

"Then there is InPhase," he said. "I use that to align the kick trigger with the kick mic, align the top and bottom snare mics, and to widen the stereo image of the guitars. I do not pan the guitars—that way you won't miss some guitars if you are only listening to one cluster of speakers, but you still get a big 'wrap around your head' mix when you are in the center of the venue or sitting between the main and outer hangs. As a rule, I never pan a mono source—it will be lost for half the audience if I start to pan stuff left or right."

The band uses similar Meyer Sound PAs around the globe. "Since the band is an international artist, we needed an international speaker manufacturer to make sure we get the same quality all over the world," said Mikkelsen. That means Volbeat is heard through a Meyer Sound Leo and Lyon-based loudspeaker system, comprised of dual front hangs that each sport 12



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Leo-Ms over two Lyon-M main and Lyon-W wide-coverage line array loudspeakers. Meanwhile, two-dozen 1100-LFC low-frequency control elements are split between flown and

ground-stacked arrays, side hangs each have eight Leo-Ms over two Lyon-W loudspeakers, and front fill is provided by eight M'elodie loudspeakers. Keeping tabs on all that is

a Galileo loudspeaker management system with one Galileo 616 and three Galileo Callisto 616 array processors for drive and optimization.

Even though some band-members use Sennheiser in-ear systems monitors, most of the mixes Hinrichsen creates on his SD10 at stageside are delivered by a plethora of Meyer boxes, including 16 MJF-212A stage monitors, four 1100-LFC elements, one 500-HP subwoofer and six JM-

"We are not in a studio. This is very much a live band, so I mix it to sound live—but I try very much to make it consistent every night."

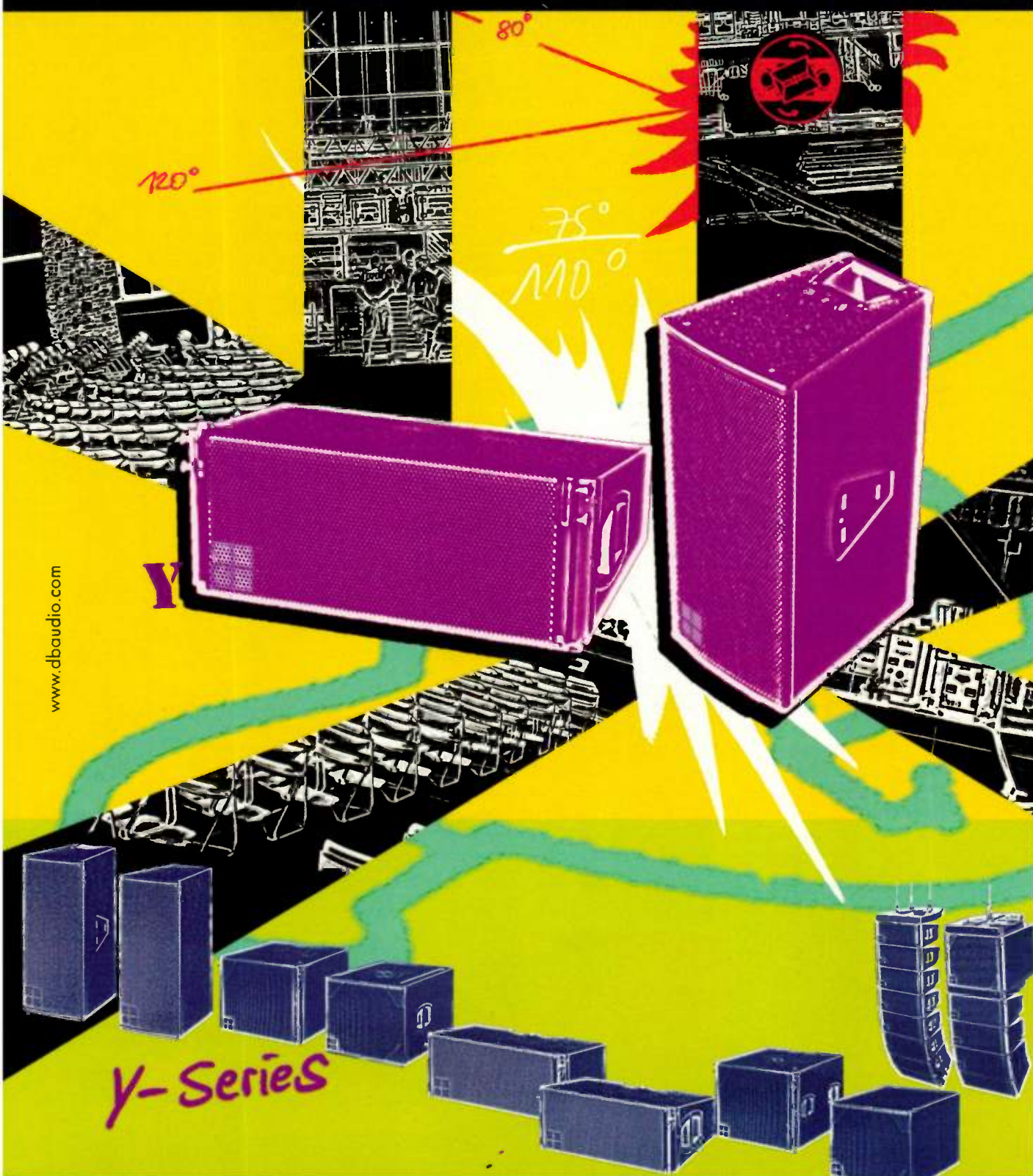
*Mads Mikkelsen, FOH engineer, Volbeat*



FOH engineer Mads Mikkelsen mixes every show on a well-equipped DiGiCo SD10 console.

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1P loudspeakers. The result is, as Mikkelsen put it, "Loud! The center vocal position is around 125 dB, just vocal. I have to work around the fact that there is a lot of noise on stage; that's actually one of the reasons I like to do a L-R sub configuration under the main hang—so I have as few delay times in the system as possible because I have so many different times coming from guitar speakers, sidefill, wedges and so on."

The band has been on Audix mics since day one, said Mikkelsen: "We use the OM7 for vocals—it has a very narrow pattern so you have to get in really close, but you can be extremely loud on stage before feedback and that is something we need with this band." Drums are captured with a D6 on the kick, I5 and D3 on the snare, Micro-D and Adx51 on cymbals, and D2s, D4s and D6s on toms, internally mounted to prevent stage bleed. Guitars and bass come direct out of Palmer PDI03s and a TC Electronic bass amp for the same reason.

All of that adds up to a signature sound that Mikkelsen aims for at every show. "We are not in a studio," he said. "This is very much a live band, so I mix it to sound live—but I try very much to make it consistent every night. The fans that come to hear and see Volbeat love rock and roll, and so do I, so I try to make it a big-sounding rock show. I make sure that all the little guitar riffs and lyrics are audible, but I still make sure that the audience is blown away!"

Meyer Sound  
Meyersound.com

Audix  
Audixusa.com

DiGiCo  
Digico.biz

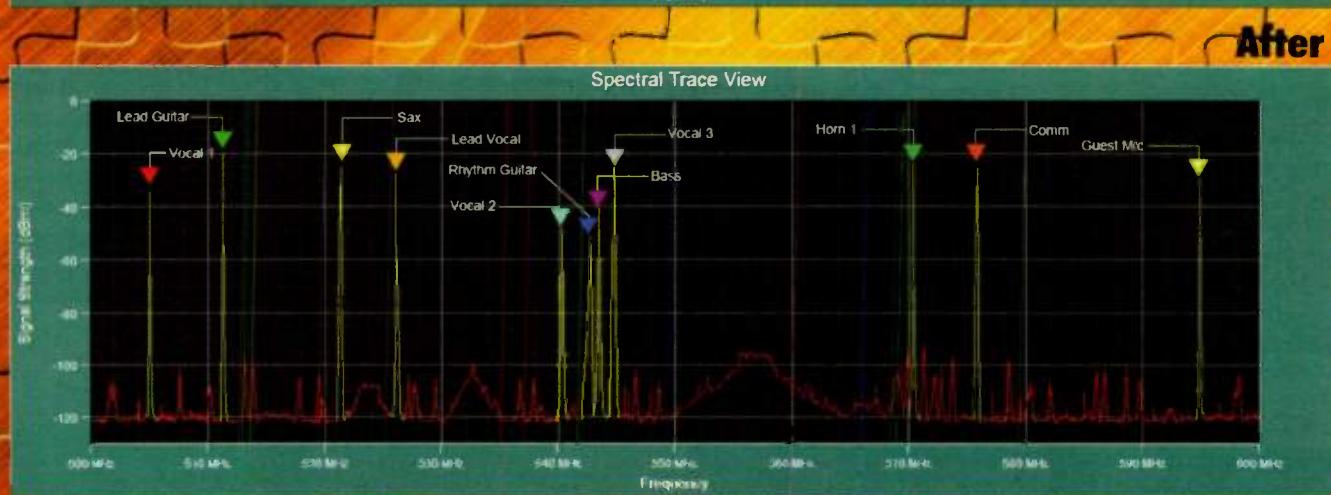
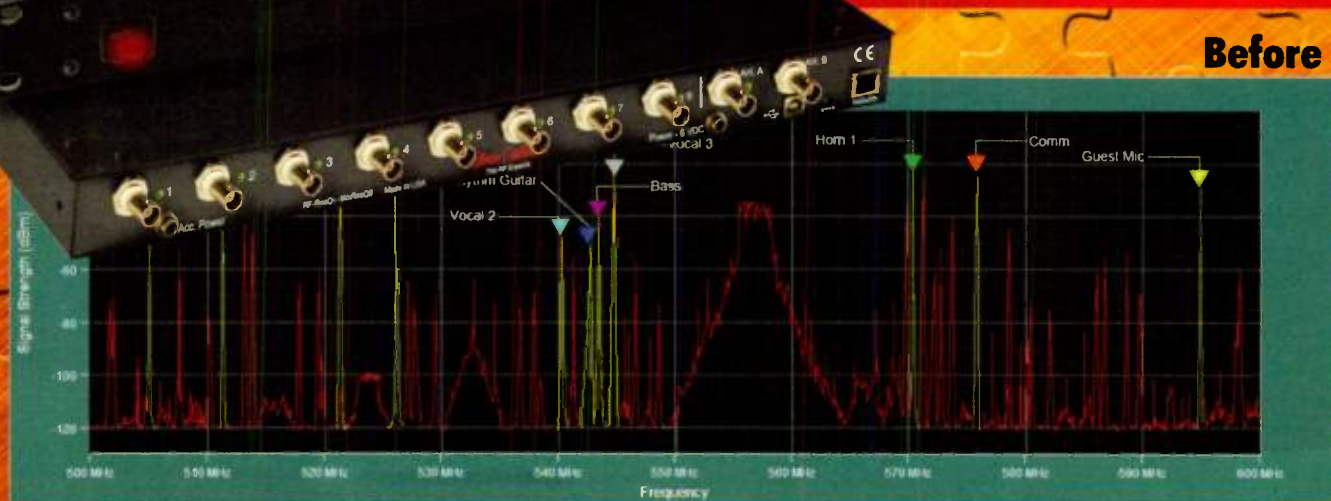
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## Tonight Show

(continued from page 42)

helped inform different aspects of the show's sound, from the microphones to the placement of the musical guests' monitor console. "We have a different philosophy of how we treat bands," said Keith McPhee, music supervisor/Roots production man-

ager. "Most shows have one monitor console and they mix from wherever that is. We tried to make this show as artist-friendly as possible, so the guest band monitor console is where it should normally be—next to the band. We also have a monitor console underneath the stage that is for The Roots, so Dan Horton, the monitor engineer, spends most of the show down there, and changes positions to the musical guest console as need-

ed—which is unheard of with most shows."

Taking care of musical guests sometimes extends to taking longer than a commercial break to get them onstage. "Jimmy's so into music and is such a musician that it enables us to give people a little bit of leeway that normally wouldn't happen," said McPhee. "We do everything—line check, make sure everything's right—and then we go. Jimmy's very accom-

modating when it comes to allowing people time to make sure that stuff sounds great and that they are comfortable before they perform."

While the show sports a selection of Sennheiser, Shure and Neumann mics for guests, The Roots are Shure endorsees and thus are captured by a variety of mics plugged into Lawo preamps, with lead MC Tariq "Black Thought" Trotter on a KSM9HS, and all backing vocals captured with Beta 58s. Meanwhile, Ahmir "Questlove" Thompson's drumkit is variously surrounded by a Beta 98AMP on the drum rack; a KSM137 on the Hi-Hat; Beta 181 on snare top and bottom with an additional KSM32 on snare top; and both a Beta 91A and Beta 52 on the kick. Elsewhere around the band are a string of Beta 98AMPs on percussion; KSM32s on sax and guitar; a KSM313 on trumpet; and an SM58S on flute. The band also uses Shure in-ear monitors, opting for ear pieces from Future Sonics for *The Tonight Show* and from Sensaphonics when on the road.

"The way The Roots use their in-ear monitoring system is pretty unique," said Manchester. "Yes, that's how they hear when they're playing music, but it's also how they communicate with each other during the show about the next piece of music that they might be doing, or making an audible decision to play different music than what's on the set list."

That, in turn, has led to some of the most surprising moments on the show, as Hare recalled: "Bruce Springsteen and Stevie Nicks were doing a talk segment and mentioned that when they first started playing together down on the Jersey Shore, they'd play a super obscure song they called 'Wiggle Waggle' [which was in fact "Wiggle Wobble" by Les Cooper and the Soul Rockers—Ed.]. Questlove's got a laptop next to him, so he hopped on YouTube, found a clip, played it, the whole band heard it in their ears, figured out the song and then as Jimmy threw to commercial, they started playing and Springsteen jumped up, going 'Oh my God, the band's playing "Wiggle Waggle!"'"

The Roots have pulled that trick numerous times since then, said Manchester: "That's the beauty of having this band doing this show with this host and this infrastructure that allows everyone to move in whatever is the right direction in the moment, where we can depart from the game plan and just go with it because that's the funny or entertaining thing to do. The fingers are always on the faders, because you never know what's coming next."

Shure  
Shure.com

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## ACT / STATISTICS

## CREW

## EQUIPMENT

**1 KENNY CHESNEY |  
MORRIS LIGHT AND  
SOUND INC.**

John Mills (cc/se); Chris Rabold (be); Bryan Baxley (bme); Phill Robinson (me-Chesney); Justin Meeks, Phil Spina, Kyle Fletcher, Tanner Freese, Preston Grey (techs); Jamison Beck (patch)

HC: Midas Pro9; MC: (2) Midas Pro9; HS: 100+ Nexo STM; IEM: Shure PSM 1000 (Chesney), Sennheiser (band); HA: Nexo NUAR Universal Amp Racks; **HARDWIRED MICS:** Heil; Shure SM57, Beta52, SM58; Sennheiser; Audio-Technica; Radial JD6, JDI, Bassbone; **WIRELESS MICS:** Shure Axient with KSM9HS capsule

**2 THE ROLLING STONES |  
CLAIR GLOBAL**

Dale Skjerseth (pd); George Reeves (pm); Dave Natale (he); Robert Bull (me); Thomas Huntington (cc); Kirk Shreiner (se); Steve Carter (mtech); Matt Van Hook, Jeremy Bolton, Ernest Woodard, Kevin Leas, Taylor Holden, Nichole Wakefield, Chris Daniels (pa techs)

HC: Yamaha PM4000; Avid Venue Profile; MC: Midas XL; Avid Venue Profile; HS: Clair i-5, i-5b, P-2; MS: Clair 12am, i-5b, R-4 III; IEM: Shure PSM 1000; HA: Crown; MA: Lab.gruppen; **MICS:** Shure UR Series; Radial JX44, J48, JDI Stereo, Twin Iso; **FOH EQUIPMENT:** Aphex 612; Lexicon PCM 80; dbx 903; Alesis ML-9600 CDR; Clair iO processor; **MONITOR EQUIPMENT:** TC Electronic 1128; dbx 160a; SPL Transient Designer 4

**3 NEIL DIAMOND |  
SOUND IMAGE**

Stan Miller (he/be); Bernard Becker (me); Greg "Chico" Lopez (cc); John Drane (se); Jonathan Meton (ae); Scott Lawhead, John Tompkins, Wayne "Chan" Teaster (techs)

HC: Yamaha CL5; MC: (2) Yamaha CL1; HS: (32) JBL VTX25, (24) VTX-S28, (62) VTX20, (20) VT4886; MS: (6) JBL VT4886; IEM: AKG SST 4500; HA: (96) Crown I-T12000 HD; MA: Crown I-T12000 HD; **HARDWIRED MICS:** AKG D5, C414, C430, C547 BL, D12 VR; Radial OX8r; **WIRELESS MICS:** AKG DMS700; **FOH EQUIPMENT:** dbx 120a

**4 U2 | CLAIR GLOBAL**

Joe O'Herlihy (be); Alastair McMillan, Richard Rainey; CJ Eiriksson (me); Jo Ravitch (cc/se); Joel Merrill (ase); Niall Slevin (stage eng/cc, RF); Brandon Schuette (a stage eng); Chris Fulton, Mike LaCroix, Jen Smola, Pascal Harlaut (techs)

HC: (2) DiGiCo SD7; MC: (3) DiGiCo SD7; HS: Clair Cohesion 12; Cohesion 8; i-3; Cohesion CP-218 Sub-lows; MS: Clair Cohesion CP-118 Sub-lows; IEM: Sennheiser 2000 Series; HA: Lab.gruppen; MA: Lab.gruppen; **HARDWIRED MICS:** Shure Beta91, Beta52, SM57, SM 98; AKG 414; Audio-Technica AT4071, AT4050; Sennheiser MD-421; DPA 4099; Radial ProD8; **WIRELESS MICS:** Shure Axient; **FOH EQUIPMENT:** TC Electronic 2290; Lexicon PCM70, 480L; Summit DCL-200; Manley VoxBox; Yamaha SPX-1000; Avalon VT-737SP; Eventide H3500; Klark-Teknik DN6000; **MONITOR EQUIPMENT:** Bricasti M7; Yamaha SPX-990, SPX-1000; AMS RMX16; TC Electronic M5000; Lexicon PCM80

**5 ERIC CLAPTON | CLAIR  
GLOBAL**

Robert Collins (he); John "JJ" James (me); Dave Coyle (cc/se); Simon Matthews (ae); Dave Wiseman, Steve Hupkowitz (tech); Hannah Charlesworth (pm)

HC: DiGiCo SD7; MC: DiGiCo SD7; HS: Clair i-5, BT-218, P-2, i-3; MS: Clair 12AM; IEM: Sennheiser 2050; HA: Lab.gruppen; MA: Lab.gruppen; **EQUIPMENT:** Summit TLA-100; dbx 160SL, Quantum; TC Electronic M6000; Radial Firefly on bass

**6 ERIC CHURCH | CLAIR  
GLOBAL**

Billy Moore (be); Marc Earp (me); Jared Lawrie (se); Rachael Aull (m tech); Bryce Beauregard, Matthew Patterson (tech)

HC: (2) Midas Heritage 3000; MC: Avid Venue Profile, Venue SC48; HS: Clair i-5, i-5b, i-3, CO-8, CP-218, FF-2; IEM: Sennheiser G3; HA: Lab.gruppen PLM 20000Q; **HARDWIRED MICS:** Shure; Sennheiser; Royer; **WIRELESS MICS:** Shure; **FOH EQUIPMENT:** Manley VoxBox; Avalon VT-747SP, VT-737SP; Summit DCL-200; Tube Tech LCA 2B; Drawmer DS201; dbx 903; Yamaha SPX990; TC Electronic D-Two; Eventide H3500; **MONITOR PLUG-INS:** Waves Live Bundle; Crane Song Phoenix

**7 FLORIDA-GEORGIA LINE |  
CLAIR GLOBAL**

Jared Blumenburg (be); Juan Gomez-Marin (me); Phil Kriz (se); Elliott Wiley (ae); Brett Rodgers (tech)

HC: Avid Venue Profile; MC: DiGiCo SD10; HS: Clair i5, Clair i-5B, i-3, CP-218, FF-2; IEM: Shure PSM 1000; Clair Fractal antennas; HA: Lab.gruppen PLM 20000; MA: Crown; **HARDWIRED MICS:** Shure; Sennheiser; Radial Firefly Tube DI, SW8, PZ-Pre ProDI, J48; **WIRELESS MICS:** Shure; **FOH EQUIPMENT:** Waves; Antares

**8 BILLY JOEL | CLAIR  
GLOBAL**

Brian Ruggles (he); Josh Weibel (me); Rich Schoenadel (cc/se); Jay Yochem (m tech); Tom Ford, Bryan Darling (tech)

HC: DiGiCo SD5; MC: DiGiCo SD10; HS: Clair i-5, i-5b, i-3, P-2, CP-218; MS: Clair CM-22, SRM, ML-18; IEM: Sennheiser 2050; HA: Clair StakRak (Lab.gruppen); MA: Lab.gruppen; **HARDWIRED MICS:** Shure; AKG; Sennheiser; Audio-Technica; Radial DI, SW8, Firefly; **WIRELESS MICS:** Shure UR Series; **FOH EQUIPMENT:** Waves

**9 STEVIE WONDER |  
EIGHTH DAY SOUND**

Danny Leake (he); James Berry, Rico Gonzales (me); Victor Arko (cc); Edgardo Vertanessian (se); Krysten Dean (ae); Chris Bellamy, Ben Smith (tech)

HC: DiGiCo SD7; MC: (2) DiGiCo SD7; HS: d&b Audiotechnik J8, J12, J Sub, B2; MS: d&b Audiotechnik M2, M4; HA: d&b Audiotechnik D80; MA: d&b Audiotechnik D12; **HARDWIRED MICS:** DPA; Shure; Neumann; **WIRELESS MICS:** Shure; **FOH EQUIPMENT:** Eventide, Lexicon, TC Electronic; **MONITOR EQUIPMENT:** TC Electronic

**10 JASON ALDEAN |  
SPECTRUM SOUND**

Chris Stephens (he); Evan Richner (me); Joseph Lloyd (pm); Jeremy Seawell (se); Ryan Stotts (mtech); Bob Campbell (tech)

HC: SSL Live; MC: SSL Live; HS: d&b audiotechnik (64) J8, (8) J12, (16) J Sub, (24) B2, (8) Q10; IEM: Shure PSM 1000; Ultimate Ears UE-7, UE-11; HA: d&b audiotechnik D12; **HARDWIRED MICS:** Audio-Technica AE6100, AE2500, ATM350, ATM450, AT4050, AT4081, AE3000, AT4047/SV; Shure SM57; Radial JX44, SG-44; **WIRELESS MICS:** Audio-Technica Artist Elite 5000 series wireless with T6100, T1000 transmitters; **FOH EQUIPMENT:** Lake LM44; ATI DDA 212XLR; Waves Platinum Bundle; Crane Song Phoenix; SPL Transient Designer; Massey De:Esser, vt3; **MONITOR EQUIPMENT:** Massey L2007, vt3, De:Esser

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

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



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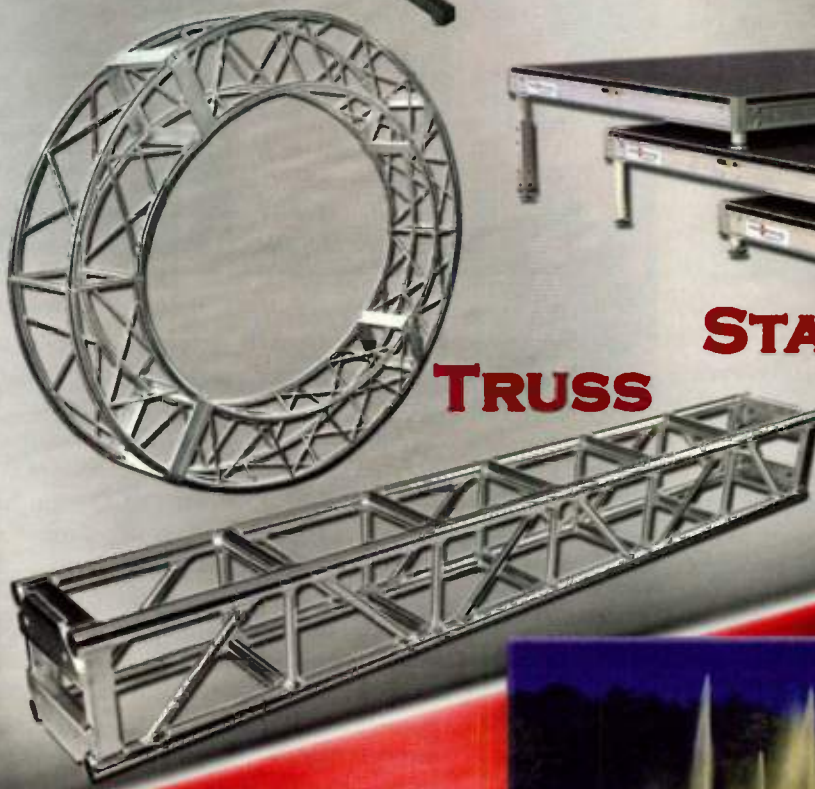
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Christine Cordova

Neutrik has appointed **Christine Cordova** to the position of regional manager. In her new capacity, Cordova will be responsible for sales activities throughout California, Oregon, Washington and Nevada. This will include Neutrik USA's Independent Rep Firms English Technical Sales and Bridge Marketing. Cordova's new position is a promotion from her previous position of Accounts Receivable Specialist, which she held since November of 2010.



David Schuster

Renkus-Heinz has announced the appointment of **David Schuster** to the position of production manager. A veteran in manufacturing and operations, Schuster has held high-level positions with companies including General Dynamics, Pacific Scientific, Kaiser Electro-Precision and JWC Environmental. He holds a degree in Engineering Technology.



Rick Plushner

Allen Sides, founder of Ocean Way Audio, announced the appointment of industry veteran **Rick Plushner** as president. Plushner will be responsible for guiding the direction of Ocean Way Audio while capitalizing on his experience in product development, merchandising, vendor relations, distribution, supply management and direct marketing. Prior to joining Ocean Way Audio, Plushner held executive positions with pro audio operations including Guitar Center's professional division GC Pro (vice president), Solid State Logic (president), Euphonix (VP of Sales) and AMS-Neve (general manager).

Ocean Way Audio has plans to expand its studio monitor line, extend its audiophile offerings, launch a line of professional outboard audio equipment and to offer acoustical designs with full studio integration in conjunction with the Malvicino Design Group.

Munich-based live engineer **Björn Seeländer** has been appointed as live sound product specialist for Waves Audio. Seeländer has experience in studio and live engineering, in partic-



Björn Seeländer

ular as an FOH, monitor and system engineer. His credits include such diverse acts as Mark Knopfler (monitor support/stage), Prince (monitor/Pro Tools live recording), Justin Bieber (FOH), and system/FOH support for Usher, Taylor Swift, Rod Stewart and Lang Lang. In his capacity as Waves Live Sound product specialist, Seeländer will communicate with other live sound engineers across Europe, demonstrating Waves plugins, hardware and typical workflows.



Terry Dockrill

CAD Audio has appointed **Terry Dockrill** as regional sales manager for the Eastern half of the United States. A 25-year veteran of the music industry, Dockrill has held sales positions at St. Louis Music and Korg, among others.



Jennifer Conlin

Sound Devices has appointed **Jennifer Conlin** to director of Marketing Communications. Additionally, the company has promoted **Paul Isaacs** to director of Product Management and Design and **Ed Capp** to the position of vice president of Sales and Marketing.



Paul Isaacs

As director of Marketing Communications, Conlin will oversee all strategic marketing and communications efforts for the company. She began her career at Starcom, a division of Leo Burnett. More recently she has served as the director of Marketing for the Wisconsin Housing and Economic Development Authority (WHEDA); global product manager, Lunar, GE Healthcare; and director of Online Partnerships at Shoutlet (previously Sway), among other prominent positions. Conlin also volunteers with numerous organizations



Ed Capp

in the Madison, Wisconsin area. Since 2008, Isaacs has been a player in the definition, user-interface design and software development of Sound Devices' audio and video solutions. As director of Product Management and Design, he will immerse himself into further advancing both the Sound Devices and Video Devices product lines. During his tenure with Sound Devices, Capp has been instrumental in establishing the Southern California markets in the U.S. and has played a role in cultivating Sound Devices' presence in Asia.

## 60SECONDS



## FRANK LOYKO

Eastern Acoustic Works

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

**A:** As the vice president of sales for North America, I'm responsible for expanding sales and distribution throughout the continent. It's going to be exciting to not only work with EAW's core product lines—QX, KF, MK Series and more—but also to take a hands-on ap-

proach to the continued introduction of the Adaptive Technology line to the live sound and touring markets. Scott Pizzo has been heading up a fantastic sales team supported by Adam Shulman and the in-house Applications Support Group (ASG); I can't tell you how terrific it is to work with such a knowledgeable and hardworking group of people.

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

**A:** With more than 30 years in the industry, I feel like I'm prepared for just about anything. In my original role at EAW, when it was in its infancy, I helped build it into the number-one brand in stadiums, touring and clubs—and I have that in my sights again. In addition, my history with EAW translates into an in-depth knowledge of the company. I know EAW. I know the products, the engineers and the sales team. Without a doubt, this makes me incredibly prepared for this position and whatever comes with it.

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

**A:** It's a bit early to be making any definite statements, but it seems obvious to me that Adaptive Technology represents the future. EAW's Adaptive products are changing the game. They sound terrific, offer perfectly tailored coverage in minutes, are easy to hang, take up less space...the list goes on and on. We will continue to build that momentum while supporting our core products like QX, KF and the Avalon CLUB series.

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

**A:** Short term, I want to make sure that, as a sales team, we are providing the industry with the solutions it needs for specific applications. Adaptive, line source, point source—EAW has an amazing catalog of products that not only sound great but are serious problem solvers. It's our job to make sure that people take advantage of them. Long term? I'd like to build on EAW's continued success and become the number-one brand in North America.

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

**A:** There are so many ways to reach people with information. Maximizing the many channels at our disposal to ensure our products are at the forefront of people's minds is one challenge. I have some ideas that I'm hoping to implement to continue to build our brand. My other challenge may be keeping up with my sales team. These guys are the brightest in the industry, with minds that are built to solve problems—amazingly smart people who think fun is helping design efficient systems with incredible audio quality. Fortunately, I love challenges, so it promises to be a great year.



Jayant Datta

Ph.D., VP of Engineering, and Bruce Hofer, co-founder and chief analog engineer.

Datta, who most recently served as assistant vice president for Audio R&D at THX,

Ltd., brings to AP two-plus decades of audio experience and a track record of developing and implementing audio technologies. In addition to his corporate career and various roles with Discrete Laboratories, Motorola, and Wheatstone, Datta has been an adjunct professor with Syracuse University's Electrical Engineering & Computer Science Department since 1999. Datta holds master's degrees in electrical & computer engineering and music engineering.

in the Madison, Wisconsin area.

Since 2008, Isaacs has been a player in the definition, user-interface design and software development of Sound Devices' audio and video solutions. As director of Product Management and Design, he will immerse himself into further advancing both the Sound Devices and Video Devices product lines. During his tenure with Sound Devices, Capp has been instrumental in establishing the Southern California markets in the U.S. and has played a role in cultivating Sound Devices' presence in Asia.

Audio Precision has announced the appointment of **Jayant Datta** as chief technology officer, with responsibilities that will focus on the organization's technology strategy, product platform evolution and innovation efforts. In his role as CTO, Datta will collaborate closely with Tom Kite,





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# Making Music Creation A Cakewalk

MICHAEL HOOVER, PRESIDENT/GM, CAKEWALK

BY FRANK WELLS

BOSTON, MA—Michael Hoover began his professional audio career with a love of music and a necessity-born need for sound-system knowledge. “I was playing guitar in a band in college,” Hoover recalls, “trying to figure out how to stop the neighbors from calling the cops on us every time we practiced at our house.” He checked out a library book on sound engineering and “was surprised by how much more I enjoyed this type of science as compared to the earth sciences I studying in college.” This new passion solidified when Hoover got his hands on a Yamaha multi-track cassette recorder; he was enticed by the idea of being able to produce music outside of an expensive studio. He switched schools, moving to San Francisco where he got a degree in audio production.

Hoover slates his audio business career as beginning in 1992, in the international sales group at Passport Designs, developers of Master Tracks Pro, Encore and Alchemy. He progressed into product management at Passport then he “migrated back east to become a product manager at Cakewalk in 1998. After 17 years in various roles, I’m now managing the company as president/GM as an independent division of Gibson Brands.”

Hoover’s memories of “how cool it was to be able to compose and record a song on my own; the freedom to spend as much time as you like trying out new song ideas,” correlates with Cakewalk’s mission: “to give musicians the tools and environment they need to express themselves through music and sound—on their own.”

Cakewalk, founded in 1987 as Twelve Tone Systems by Greg Hendershott, joined the Roland family of products in 2008. Hendershott left the company in 2012, with Hoover taking over as CEO. In 2013, Gibson Brands bought Roland’s majority interest in Boston-based Cakewalk. “We focus on designing, building and testing the software,” says Hoover. “We have a team to develop and maintain our own web and social media, direct marketing and IT. We then work with Gibson’s sales teams for retail sales and distribution, as well as its Entertainment Relations and marketing teams for events, and we receive plenty of support from Gibson’s legal and HR teams. The relationship is great, because we get to focus on what we are best at and get to leverage the reach of Gibson Brands at the same time.”

Cakewalk’s employees have a passion for their jobs and products, says Hoover, based on an affinity with their customers. “I would say 95 per-

cent of our employees are also musicians, so they know the pain points that people have in creating music.” His job is in part, he says, “to create a vision that inspires our employees and allows them to harness all of their creativity, energy and passion in a positive way. My focus is to grow our company and make better products that fill a need in the market place. In most cases, happy customers equal success.”

Hoover cites the prosumer market as the biggest part of Cakewalk’s current business, which it serves with “professional products that are geared towards non-professionals who want the very best. Our flagship DAW, SONAR, is a powerful piece of software that rivals any major studio set-up for a fraction of the cost. If you think about what The Beatles were using to record and compare it

kets like Brazil and Russia, where price parity was an issue and piracy was high.”

“Our aim is to give our customers the tools that inspire them to create in ways our competitors don’t, won’t or can’t,” declares Hoover. “In the past few years, it’s been all about integrating workflows. In SONAR X3, we partnered with Melodyne to integrate its advanced audio time and pitch editing, and this year, we created VocalSync Editor and Drum Replacer for seriously powerful audio manipulation. Our goal is to provide world-class editing tools that are fully integrated so that our customers can access them right when and where

“Our aim is to give our customers the tools that inspire them to create in ways our competitors don’t, won’t or can’t.”

Michael Hoover, Cakewalk

to today’s standards, it’s night and day in terms of power and flexibility.” He lists affordability and the ability to work in their own homes on their own schedules as additional priorities for Cakewalk’s customers, now extending to mobility—anywhere, anytime recording—an area where he expects to see growth for Cakewalk and other audio companies.

Internationally, Hoover says, “we have always been very strong in Japan and we believe we can grow even more. We recently signed a new distributor deal in China and are looking forward to bringing SONAR to Chinese musicians. And we’ve made some good strides in emerging mar-

they need them.”

SONAR Membership is the company’s latest innovation—not a product on its own, but rather a retooling of the development and product release process. “It’s really about continuous innovation,” Hoover elaborates. “We used to release a major new upgrade every year and give it a new version number. It would include a lot of new features, enhancements and refinements to existing features and of course bug fixes and new content. Customers always love to get cool new stuff to play with, but learning that all at once can be frustrating. And for the company, releasing it all at once can be challeng-



Michael Hoover

ing, leading to short cuts and quality issues. Instead of releasing lots of new features at once, now we build it, perfect it and deliver it when it’s ready. Customers have less to learn, and we have fewer things to focus on at any given moment. The result is quality goes up, but, more importantly, the customer experience goes way up.”

Cakewalk has a legacy of technology leadership, says Hoover, being “forward-thinkers and five steps ahead. If you look back at our history, we’ve always been one of the first companies to adapt new technologies—64-bit, Touch, etcetera—and our new development process and business model is no different.”

Cakewalk Membership, explains Hoover, isn’t about “selling the software as a subscription or service.” Membership (a year’s worth of updates and enhancements included in the purchase price of Cakewalk software) is “a better way to develop, learn and use software.” Cakewalk software can still be purchased up front, or through monthly payment options. After a year, customers can decide whether to keep working at their current software level or to sign up for another year. Comparing it to Microsoft’s plans for Windows 10 development and upgrade, Hoover states, “We believe strongly that this is the future of software development.”

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## Worship Broadcast

(continued from page 1)

dio. It's a great platform for doing interviews where we don't need an operator in the room. I'm running mic levels and everything they need, and I'm not intruding," says Ozanne, who runs the software on a Windows 7 machine.

Wheatstone's Glass-E also offers a backup, in case of hardware failure, he adds. "What's nice is that the license is for the station, so I can put it on as many machines as I want."

The virtual mixer enables Ozanne, who has been a corporate and charter pilot for 30 years, remote access while traveling: "If I'm away and something breaks, I can jump in and fix it. You can remotely control your studios from anywhere that you have high-speed internet, so I could be in Zimbabwe and run an interview from there."

The WheatNet-IP Navigator software is equally valuable to the smooth operation of the facility, he continues. "The crosspoint routing setup allows you to virtually rewire the studios with the click of a mouse. I just save different crosspoint scenarios; all I have to do is load those configs and it completely reconfigures the studios."

Every week, the 40,000-member Prestonwood Baptist Church in Plano, TX produces a broadcast of its service that potentially reaches millions worldwide through radio, television and the internet, as well as mobile device apps. PowerPoint Ministries, the church's HD broadcast ministry, maintains an audio studio featuring a Studer Vista 9 console that is complemented by a pair of Vista 5 M2 42-fader consoles installed at the FOH and monitor positions in the sanctuary. A three-way passive split feeds separate Studer



One of the Wheatstone digital console and networking equipped studios at Prayz Network.

D21m preamps for each desk, avoiding the gain structure and level offset challenges typically associated with shared inputs on digital consoles.

In the studio, broadcast audio engineer Christopher Do often has his hands full. A typical Sunday can comprise 120 channels, including praise team, choir, orchestra, band and other mics, including ambience. The Studer desk makes it easy to keep everything organized, says Do. "The layout is very intuitive. You can move channels around and you can patch things very quickly; you can always adapt."

For example, "If you're in a situation and you find that it's hard to get to a certain set of inputs, you can rearrange everything very quickly to a more comfortable setup, even during the event. You don't even need to use templates—it's essentially drag-and-drop."

Services are distributed live, including simulcasts to satellite campuses in nearby Prosper and Dallas, and are also recorded. "I'll mix that down for a more refined mix for the web," says Do.

The Prosper campus features an-

other Studer 5 M42 while the Dallas campus houses a DiGiCo SD10. The three campuses are linked via Riedel's Mediernet platform, which will be extended throughout the Plano campus later this year, according to audio engineer Armando Escobedo.

Each campus independently feeds 56 audio channels via MADI over

"We're an international ministry. We do a half-dozen live and recorded shows per day out of three studios."

David W. Jones, CBN

Mediernet. Escobedo also notes, "You can throw in SDI, peel off the audio channels and come out MADI or any flavor. That is very useful for us in that we're not locked in" to any particular format.

He adds, "You can go in and land those channels if you want, or just

isolate the few channels that you need for the application. Sometimes they're independent channels and sometimes they're mixes."

After due diligence and an in-house evaluation period with three different manufacturers' consoles, The Christian Broadcasting Network (CBN) installed a pair of Calrec Artemis Beam consoles at its facility in Virginia Beach, VA several years ago. "We're an international ministry," says David W. Jones, executive director, broadcast operations. "We do a half-dozen live and recorded shows per day out of three studios. These consoles serve all three studios. We also have a separate, smaller console for the news studio."

CBN's flagship program, *The 700 Club*, is a magazine-format show that airs every weekday in the U.S. and beyond. The show includes news and call-in segments and may even feature a band.

"Calrec's Hydra2 routing makes it so simple to share all of the resources that are on the router," says Jones. "If we want to have a separate mixer mix a large band for the live show, then it's easy; they go to the other studio and pull up the resources. Then we end up only having to bring up one fader for the show" on the main production desk.

Having two identical consoles offers another benefit. "We wanted that kind of redundancy, because it's live and it's nationwide—it's on ABC Family as well as a couple of hundred affiliates. If we had some sort of catastrophe in one control room, we could easily and seamlessly switch to doing the show from another control room," he says.

Easy configurability of the work-surface is also important to CBN's engineers. "Each show has a template, and within that, some operators have their preferences for where they want to see things so that they're comfortable. We utilize that for every show; it's very helpful," says Jones.

## Anderton

(continued from page 28)

up 1 dB because adding dynamics changed the mix's balance. And if you're putting together an album, algorithms can't choose the right order, or decide where to crossfade between cuts.

I was given a track and when I listened to it, I realized it could be mastered as a more ambient track, or more of a dance cut. So I ended up doing both. Which would the algorithm have chosen? (The artist

chose both.)

My concern isn't that "mastering by algorithm" has no value, but that mastering will cease to be seen as the final stage of the creative process and instead as a purely technical exercise. Another concern regards algorithms in general, as they base the future on the past. For example, online streaming services love to "suggest" new music based on what you listened to in the past. Yet with EDM on YouTube, views by 35 to 49-year-olds grew by 80 percent last year. If they listened to the music they

grew up with—Janet Jackson, Elton John, Usher, Mariah Carey—I don't see an algorithm saying "Hey, you might want to listen to Armin Van Buuren or Ilan Bluestone."

People often consider the 1960s as a period of unprecedented musical growth and innovation; I believe a lot of that was due to "de-categorization"—you could see a concert that opened with a folk singer, followed by a jazz group, and headlined by psychedelic rockers. FM radio playlists were wide open. Or consider how Elvis Presley combined R&B and country to cre-

ate something compelling...or the "happy accidents" that became the "hooks" we remember from various hits.

We create music, not audio. Art is indeed enamored of chance, and unless software algorithms can become artists as well as technicians, we'll need humans involved in the process of creating great music.

Author/musician Craig Anderton has given seminars on music and technology in 38 states, 10 countries, and three languages. Listen to his music at [youtube.com/thecraiganderton](http://youtube.com/thecraiganderton).



# Project Sharing

(continued from page 1)

dates and so on.”

There are issues in relying on Dropbox, says Long. “If someone is careless, they can easily delete my work—it can potentially be a disaster. If I’m working on a project in a shared Dropbox folder, I always copy the contents out of Dropbox so I have an archive outside of the shared folder. Then, when I’m finished with my work, I’ll copy the updated data back into the shared folder. I typically print my mixes to a Dropbox folder. This makes it easy to check them through my phone on my way home from the studio and reference in my project studio or my home theater.”

A more secure alternative to Dropbox, offers Long, is Gobbler, designed specifically for music production needs.

“I use Gobbler for cloud backup and to deliver mixes to my clients,” he explains. “I love Gobbler’s interface; best of all, it informs me of downloads. If I send a mix to an artist, the producer and label A&R, I get an email when each of them has

the mix, telling me specifically who downloaded it and when.” If a client doesn’t download a delivery, Gobbler will automatically send them a reminder the following day.

Grammy-nominated composer/sound designer and producer/engineer Rich Tozzoli insists that his FiOS service—a bundled media service from Verizon via fiber-optic network—is key to his project sharing workflow. “Much of my work is done with clients in LA, New York or Europe,” he explains. “Downloads come to me via YouSendIt or Dropbox. Those are the bigger files—full Pro Tools sessions with all the audio. For me, FiOS is very fast. Uploads and downloads average 50-plus Mbps; with small files under 10 MB, I will just email them the mixes as an attachment to keep things simple. Anything bigger is output by on Dropbox, YouSendIt, or via FTP”

When uploading, Tozzoli usually drops files directly onto his clients’ servers. “FTP is easy, fast and a good way to go back and forth,” he explains. “I don’t often have to work on sessions with other people. Being mostly self-contained, it’s simply a process of outputting the files, and immediately uploading them to clients via the

method of their choice. It’s amazing to write a TV track and have it in LA within minutes of mixing it.”

Rob Tavaglione, owner/proprietor of Catalyst Recording in Charlotte, NC, largely serves a local and regional client base with an increasing number of national and international clients. Of our review contributors, that makes his project-sharing tendencies the most widely ranging in method and scope.

“I find that jobs for out-of-state and even international clients are increasing, with about ten times more ‘virtual clients’ than even just a few years ago,” Tavaglione explains. “While I still find co-composing and musical collaboration to be much more fluid and rewarding when sharing the same room, when mixing and mastering, I find myself enjoying the advantages of distance; the impersonal nature of the process—essentially the lack of human distractions—allows me to focus on the work’s specific issues.”

Dropbox is generally the choice of Tavaglione’s clients, “whether sending individual tracks for mixes, stems for mixes or mixes for mastering,” he offers. “Google Play seems to be getting more popular—quickly, too. But when it comes to me submitting files to clients for proofs, I pretty much always

use MP3s for approval, simply attaching them to e-mails via Google Gmail. This seems to work well for recipients on desktops, laptops, tablets and phones—largely preventing panicky late-night ‘I can’t download today’s rough’ texts. For larger files, like WAV masters, I always use WeTransfer for its inherent simplicity: no passwords, no permissions, and no hassles. Also, CD masters are WeTransfer’ed as DDPs (Disc Description Protocol).”

Often working with DIY indie acts, Tavaglione has found SoundCloud to be a valuable asset for pre-production. “It works really well for bands with lots of material to share,” he explains, such as song ideas, rehearsal recordings, roughs and works in progress.

“There’s nothing at all I miss about the days of walking out of the studio by 9:10pm with a DAT in hand to make sure I make FedEx’s last pickup at 9:30pm,” recalls Long. “Regardless of whether I’m working with someone across town or on the other side of the world, we now have access to each other’s media—anytime and anywhere.”

Next month in this space, we’ll look forward to emerging project sharing and collaboration tools such as Avid Everywhere, among others.

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# MUSICetc. ||||

## Marchesano Journey

BY JAKUES SONYIEUX

Having built a successful career as a record producer since the late 1980s, California-based Michael James has gone on to become one of the music industry's most prolific producer/mix engineers. Always driven, James mixes around 250 songs per year, but recently pivoted from his 'day job' to create *Marchesano*—a deeply personal and introspective collection of instrumental, guitar-driven tunes that is a feast of tone and style. *Pro Sound News* caught up with James at the end of one of his busy mix sessions to talk about making music from the inside out.

### ON HIS FIRST BREAK:

When I was about 26, I got the keys to a studio called Radio Tokyo in Venice, CA. I had the place from midnight to 8 a.m. and then would attend classes at UCLA. Around then, a New York band called Too Much Joy came in. They were basically touring so they could record at this studio, which was a mecca for bands like The Minutemen, The Bangles, Jane's Addiction and a bunch of other up-and-coming L.A.-based bands. On one of the sessions, I was asked to do overdubs. I did the session, kept my mouth shut, got good sounds—and then in the 11th hour, the band was stuck on an arrangement and turned to me and said 'What do you think?' I gave them my opinion, and then everything just fell into place

and the session got a new lease on life. One thing led to another, and as fate would have it, I ended up producing the album. It received a very favorable review in *Rolling Stone*, and all of a sudden, I was a producer overnight.

### ON MARCHESANO:

This album is named after my family name, and I ended up doing it in part because of the guitar amplifier manufacturer Mesa Boogie. I started using their amps in 1982 and they eventually they took me on as the fifth Mesa Boogie endorser. Frequently, while I was testing their amps, I would play a guitar part through a new amp, then send the clips to Mesa so they could use them online so customers could select the



Michael James

sounds they liked. After doing a lot of this, the president of Mesa called me up and said, 'Look, dude, you've got to put an album out.' I said, 'No, I don't; I'm 50 years old and I don't want to get in a van and tour.' He told me that every time they put up a clip on his site, the phones would blow up. After thinking about it, I realized it made sense, because I do have something to say. So I did an album and agreed to use a different Mesa amp for each song. I wanted the melodies to reflect the things that were going on in my head and take listeners on a journey

### ON SONG SHAPING:

I started writing new compositions that were in part inspired by the way certain guitars and amps made me want to play. If you were to play a Boogie with too much gain, for example, it could change the whole flavor of a song. As I really got rolling with it, I started thinking of the titles of the songs, each being based on something about me, or the way that I live my life. Then I would ask myself 'What is the melody that I feel goes with the title?' I would demo the songs by just singing it into the voice memo app on the iPhone, making these sounds that were only decipherable by me. A lot of the stuff that came out of these exercises was unique. But then there were a couple of bits and pieces left over from earlier sessions I had where I contributed certain parts to tunes. For example on "Love Is The Spirit of Life," the claw picking came from a 2005 performance, but I used it in a completely different musical context. So the album is kind of a decoupage. As far as the textures were concerned, I made a couple of rules going into it: I wanted my guitar parts to be

loud and proud, not 'tucked into the mix' and not lathered with reverb in delay. I felt like if John Coltrane was playing guitar now, in 2015, how upfront would he want his guitar in the mix?

### ON COLLABORATION:

Most of the credited engineers were my friends already, people with whom I wanted to work. It was important for me to have that outside perspective. When I played the guitar part, I said everything I needed to say. But I didn't want to mix the tunes, and I didn't want to play any other instruments. So by the miracle that we call the Internet, I was able to have some remote contributors on this project. For example, the drummers each brought their own thing. Some of these were guys that I would send a tune to and say 'Hey, can you play new drums over this?' They would listen to the click, listen to what I played, and the next day they would send back their edited versions. But it wasn't just about getting a drum part, it was about getting their perspective; I really wanted this to be a collaborative effort.

### ON LINER NOTES:

Liner notes are very important to me, and the reality these days is that there are no liner notes. Pretty soon, there may be no physical product. On my album, I tried to crack the code and figure out a way that was sustainable to do liner notes. So in the physical CD packaging of *Marchesano*, there is a reference to more detailed liner notes on my site. The point is that people who don't buy the physical product should not be penalized for not buying it. All the credits are on the physical CD, but the behind the scenes material is all online.

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