prosound news

Volume 37 No. 8   www.prosoundnetwork.com   August 2015

InfoComm '15 Showcases Connectivity And Performance

BY KIRSTEN NELSON AND STROTHER BULLINS

ORLANDO, FL—The 2015 InfoComm conference and exhibition for professional audiovisual integrators saw record-breaking attendance numbers for the east coast show. InfoComm cited 39,105 attendees, from more than 108 countries, as at-

The ribbon cutting by InfoComm Board members marked the official opening of InfoComm 2015. From left, Gary Hall, CTS-D, secretary-treasurer; Craig Janssen, LEED AP, president-elect; Matt Emerson, CTS, president; David Labuskes, CTS, RCDD, executive director and CEO; Johanne Belanger, CPA, CA, LSC chair.
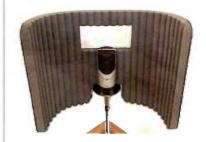
PHOTO BY JOHN STALEY

tending the mid-June event—up some 5.6 percent. AV innovations were on display by some 950 exhibitors across 515,000-net-square-feet of exhibit and special-event space.

The availability of increasingly interoperable audio devices was striking, largely thanks to the efforts of industry coalitions that recognize the need for unprecedented levels of user-friendliness via standards, resulting in what are becoming "plug-and-play" solutions.

Nice View

Primacoustic's latest incarnation of its VoxGuard, the VoxGuard VU, "features a clever Plexiglas window embedded within its proven nearfield vocal screen design," says Strother Bullins in his review, included with many more products in this month's *PAR* in *PSN* pages.

Avid Everywhere At Sundance And Pie Town

BY STROTHER BULLINS

Last month in this space, we covered engineer choices in project sharing for audio production, reporting that many engineers opt for free services such as Dropbox and others for digital collaboration and distribution. As our industry is overwhelmingly Pro Tools-oriented, Avid has touted its Avid Everywhere creative ecosystem over the past year as an efficient, focused, content-creation environment versus less audio production-specific options.

According to Avid, the Everywhere "vision" is a concept "of the most fluid end-to-end, distributed media production environment in the industry." Its core is Avid MediaCentral from which audio professionals can produce, manage, deliver and even create income streams. It's an ambitious setting that a range of end-users is already adopting.

From the entry-level end, Avid is now offering Pro Tools | Duet and Pro Tools | Quartet bundles that come with either a one-year subscription or perpetual license to Pro Tools, along with several groupings of content solutions. These include Artist Suite (including Pro Tools), Media Suite (a media man-

Front Fills For Gill

Always one to do things his own way, country mainstay Vince Gill is touring theaters and clubs using local PAs at every stop with his own VUE Audiotechnik boxes, brought along by production manager/FOH engineer Hugh Johnson for use as front fills.

STEPPING
IT UP

QL5

QL1

Acoustic Sounds Buys Doug Sax's Mastering Lab

SALINA, KS—Acoustic Sounds' CEO Chad Kassem has purchased The Mastering Lab (TML) from the estate of mastering engineer Doug Sax. The move comes three months after his buying 13 vintage record presses to help meet the surging demand for vinyl LPs.

The sale pairs Quality Record Pressings (QRP), an audiophile LP manufacturer that is a division of Acoustic Sounds, with the Grammy Award-winning sound engineering and LP lacquer cutting business started four decades ago by Sax, who passed away in April. Sax worked throughout his career with the likes of Pink Floyd, The Rolling Stones, The Who, Bob Dylan, Paul McCartney, Neil Young, Barbra Streisand, and dozens more.

Kassem said his strategy behind the purchase was to create a vertically integrated vinyl LP production facility. From mastering and record pressing to graphic design and printing to direct-to-consumer sales, QRP now has all the capabilities needed to bring LPs to market. "Expanding and rounding out our capabilities to meet the growing demand for vinyl was the key to this acquisition," said Kassem.

Plans call for relocating and incorporating the TML business, based in Ojai, CA, to Acoustic Sounds' headquarters in Salina, KS.

"I'm very confident that Chad will do everything he can to honor Doug's legacy by maintaining his high standards for quality," said Bill Schnee, a veteran producer/engineer and 11-time Grammy Award nominee. "It's also comforting to know there's going to be a little bit of Doug in everything that QRP produces."

Sax was a legend in the music industry—a mentor and friend to audio engineers, producers and musicians. With partners Lincoln Mayorga and older brother Sherwood Sax, he opened the doors to TML in Hollywood in December, 1967, later re-

locating north to Ojai in 2006. The Lab's custom, all-tube electronics and console are all designed and hand-crafted by Sherwood Sax. Additionally, TML was the first independent mastering facility and set itself apart by prioritizing sound quality, instead of the economic efficiencies favored by some of the major music labels.

Utilizing cutting lathes that have become legendary for vinyl LP production, the studio turned out many classic rock albums, including *The Wall, Who's Next, Nilsson Schmilsson,* the Rolling Stones' *Sticky Fingers* and the Eagles' debut album. Sax also established a pioneering set of procedures for testing and evaluating audio components by ear. Sax and Robert Hadley were also the first mastering engineers to win a Grammy Award for Best 5.1 Surround Album, for Ray Charles' *Genius Loves Company* in 2004.

"Maintaining Doug's reputation for quality will be our company's challenge and our reward," Kassem said.

Quality Record Pressings
qualityrecordpressings.com

THERE'S MORE ▶ Watch video explaining Acoustic Sounds' plans for The Mastering Lab's assets at prosoundnetwork.com/aug2015

LOOKING GOOD—The National Association of Music Merchants honored Vintage King Audio at Summer NAMM for something other than the usual sales honors for the NAMM Top 100 Dealers list member. The Summer NAMM Best Store Design award was presented by CMT radio and TV host Cody Alan (left) to Tom Menrath, director of strategic development at Vintage King. VKA has two retail locations, one in L.A. and one in Nashville. Vintage King Nashville previously received the 2014 TEC Award for outstanding creative achievement in the Studio Design Project category for its MixRoom, designed by Carl Tatz.

briefs

Sennheiser Posts Growth

WEDEMARK, GERMANY—The Sennheiser Group's annual results for fiscal year 2014 reveal an increase in total sales of around 7.5 percent. Compared to the previous year, total sales by the group reportedly rose by €44.3 million to €634.8 million, an increase of around 7.5 percent. Net earnings also increased by €20.4 million to a total of €34.7 million. The company, which is celebrating its 70th anniversary in 2015, grew in all regions worldwide, and Sennheiser (sennheiser.com) had a significant increase in sales noted in Asia and Australia. Contributions from SEC's Consumer and Professional Systems Divisions were almost equal.

Waves, Lawo Collaborate

ORLANDO, FL—At InfoComm, Waves Audio (waves.com) announced that it is working with Lawo (lawo.com) to integrate SoundGrid technology and Waves plug-ins into Lawo's mc2 consoles. Waves states that running the Waves MultiRack plug-in host application on Lawo consoles will offer users real-time, low-latency processing for live broadcasts, post-production, live mixing and theater sound. Waves' reverbs, equalizers, compressors, limiters, delays and more, will be able to run directly from within Lawo mc2 consoles.

Harman Acquires SVSi

NORTHRIDGE, CA—Harman (harman. com) has announced its acquisition of networked AV product manufacturer SVSi. Based in Huntsville, Alabama, SVSi (svsiav.com) manufactures and sells a variety of AV over IP products, including high-performance encoders and decoders, windowing/wall processors, and audio transceiver, video recorder and management software. SVSi will join Harman Professional's Video and Control Strategic Business Unit (SBU) led by Rashid Skaf and marketed under the AMX by Harman brand.

IIIIIII

Rat Sound Named Eighteen Sound Pro Provider

LOS ANGELES, CA—Rat Sound Systems has been named a U.S. Pro Provider for Eighteen Sound Srl of Reggio Emilia, Italy.

"Rat Sound is now a supplier of Eighteen Sound products as well as a provider of professional support and service to the pro audio industry," said Jeffrey Cox, director of sales, North America, Eighteen Sound. "As a registered service agent, they also provide re-coning and other services to Eighteen Sound's professional customer base."

The concept of a Pro Provider is

one that Cox conceived to provide greater access and direct support to Eighteen Sound products to North American customers.

"Nearly 10 years ago, while working with EAW on the design of the MicroWedge series of stage monitors, I was directly involved with the decision to use Eighteen Sound components," adds Rat. "More recently, the new Rat Sound SuperWedge 22 is based on all Eighteen Sound components. Becoming a Pro Provider is a welcomed and natural progression of this long and productive relationship."
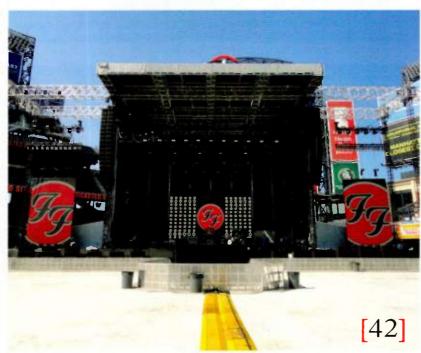

Eighteen Sound director Of Sales, North America and Rat Sound general manager Paul Freudenberg announce their new Pro Provider relationship during this year's InfoComm in Orlando.

Eighteen Sound
eighteensound.it

Rat Sound Systems
ratsound.com

pro sound news

vol. 37 no. 8   August 2015

[24]

[42]

CONTENTS

SPECIAL REPORT

Take a tour of the various demo rooms and technological innovations from this year's InfoComm in Orlando, FL with Kirsten Nelson and Strother Bullins. This year's NewBay Best Of Show Award winners are also highlighted.

COLUMNS/REVIEWS

Craig Anderton wonders if Windows 10 will take it to Eleven.

A full 27 years ago, Gordon Moore joined Lectrosonics as employee number 32, starting out in telemarketing sales. In June this year, he was named company president, and now shares his thoughts as to why, like its corporate motto, the company is "built to last."

Jaques Sonyieux talks with Gingger Shankar about her inspirational grandmother, working with Linda Perry and the difference between recording film scores and her new album, *Beautiful Imperfections*.

follow us ONLINE

subscriptions:
www.mypsnmag.com

facebook:
www.facebook.com/
pages/pro-sound-news-
magazine/71616690976

online:
www.prosoundnews.com

twitter:
www.twitter.com/
ProSoundNews

FRANK WELLS
fwells@nbmedia.com

When The Fans Are All Making Music, Who's Listening?

A story like this issue's feature on Propellerhead's new portable platform may give rise to a "Why is this in *PRO Sound News*?" query. And on one hand, you'd be right—the application covered (see page 22) facilitates social media-driven collaboration, turning every phone and tablet into a music-making machine that exists in an ecosphere of interactivity. Musician or would-be musician targeted, the environment is inevitably tilted towards music built on a foundation of beats and loops, offering even mere music fans the opportunity to experiment and learn.

It's a *PSN* story because, as audio professionals, we need to know what's going on at the consumer level, how music is being consumed and how it's being created outside of traditional workflows. A story like this gets me thinking.

Social media has already changed the way we communicate and interact (says Mr. Obvious). When reaching out recently to a few folks about an upcoming event—not as a group, but individually—social media tools were the primary method I employed, as that's where so many folks live these days; it's often the best place to go to get a response, superior to email and phone (who *talks* on their phones

these days? The younger you are, the less you seem to be so inclined).

Propellerhead says that a half-billion music-making apps have been installed on iOS devices alone. Whether such installed apps are in use or not is another question, but it does indicate a level of interest in music creation. As the tools make it simpler to experiment, the interest goes up. The collaborative nature of the software is designed for the musically curious living in a social media world, like a multi-player online gaming environment (or as Propellerhead suggests, having some elements akin to a dating app).

I can anticipate the reaction of many audio professionals to this kind of music making, deeming it as inferior, substandard and unworthy. To be sure, the easier it's gotten to make music and to record, the lower average age production quality has become. There is a lot pedestrian music being recorded poorly.

I've sensed a general disdain among many practitioners of the recording arts for all EDM, techno and simplistic rap or other such rhythm-driven genres of music. I'll confess that I've longed for a melody line or a change in tempo when listening to the lesser examples of such, and it's not what I seek out for a musical

experience. Such attitudes are in line with every generation being somewhat dismissive of the music of ensuing generations (yes, I know that's a generality with a lot of exceptions). As our columnist Craig Anderton is prone to suggest, ignore the DJ, the rapper and the rhythm programmer at your own long-term peril, business-wise.

Here and there, even in amateur music making, one can find flashes of creative genius, elements of insight, sincerity in expression, though bogged down in poor sounds and marred by bad mixes. The nature of the beats and loops model of production facilitates experimentation by those with no musical knowledge or training. We, as pros, do encourage attempts at self-expression and creativity, even while we may cringe at the results.

If music creation as social entertainment takes off in a substantial fashion, will it be another blow against an already beleaguered music industry? Will it whet the appetite of the music consumer nee creator for professional quality performances, professionally produced? Or, will it represent a migration away from the passive listening experience in exchange for a musical extension of digital social interactivity?

Mix Nashville Returns

PARTNERS WITH AES NASHVILLE SECTION

NASHVILLE, TN—NewBay Media, parent company of *Mix*, *Pro Sound News* and *Pro Audio Review*, has announced the return of Mix Nashville, an all-day professional audio exhibition and seminar series to be hosted August 29 at the refurbished facilities of Clair Global Nashville and The Blackbird Academy Live.

Following a successful four-year run from 2008-2012, Mix Nashville has been reborn in partnership with the Nashville Section of the Audio Engineering Society, hosts of the Nashville Recording Workshop + Expo series of events. By combining resources, programming and expertise, Mix Nashville and the AES Nashville Section will be bringing a one-of-a-kind intensive program and exhibition to Music City.

"We feel fortunate to be working with the AES Nashville Section," says Tom Kenny, editor of *Mix*. "We're confident that we will have a stellar event with panels, products and professional networking. In this day and age, it's more important than ever to stay educated and stay in contact, face to face."

Kicking off the event will be a Keynote Speech by noted author and technologist Craig Anderton, who will be speaking on the near-future of music production. Anderton, who currently holds the title Executive Vice President at Gibson Brands and is HarmonyCentral.com's Editorial Director, has been involved in music production and technology for more than 40 years as an author, producer and technology raconteur.

"As readers of his monthly *PSN* column know, Craig Anderton not only stays informed about technical evolution, but is adept at analyzing that evolution and prognosticating the impact on the real world of audio production," says Frank Wells, editor of *Pro Sound News*, a Past President/ Governor of the AES and long-time AES Nashville committee member. "When I was 18, I was building effects boxes based on Craig's books. Decades later, I'm still learning from Craig. His address, 'High Resolution Audio—So What?' will entertain and inform Mix Nashville attendees."

Clair Global Nashville is one of the world's leading facilities for tour rehearsal and technology development. The Blackbird Academy Live opened two years ago as an extension of the renowned Blackbird Academy, an intensive six-month audio program based in the world-famous Blackbird Studios in Nashville.
Mix Nashville
proaudioliveevent.com

Crown DCi Series Adopts CAF Format

ELKHART, IN—Crown Audio has adopted the Common Amplifier Format (CAF) for DriveCore Install (DCi) Series Amplifiers. Developed by SynAudCon, the CAF is a report format for presenting specifications and measured performance metrics of audio power amplifiers. Crown DCi Series amplifier specifications are now available in the CAF.
Common Amplifier Format
cafgroup.com

Harman
harman.com

Thunderbolt. By Focusrite.

Thunderbolt has changed recording forever. If done right, the reduction in latency makes the impossible, possible. Suddenly, your best-loved plug-ins can be used to record and monitor, as if latency never existed.

With Clarett, we've squeezed every last millisecond out of Thunderbolt, but without losing focus on the one thing that matters: sound. Thunderbolt is a game changer, but it doesn't change the rules. You still need the best mic pres and the cleanest converters. An audio interface also has to be easy to use and work reliably, almost as if it wasn't there.

The Focusrite Clarett range is Thunderbolt done right. Exactly as you'd expect from the world's number one interface company.

Clarett by Focusrite. Better. Faster. Easier.

focusrite.com/clarett-range

Focusrite®
SOUND IS EVERYTHING

AES 139th Convention Registration Begins

LIVE SOUND EXPO SESSIONS JOIN PROJECT STUDIO EXPO ON NYC EXHIBITS FLOOR

NEW YORK, NY—This year's 139th AES International Convention will take on the Big Apple, October 29–November 1, 2015, at the Jacob Javits Center. From the Special Events and Exhibition Floor presentations offered by the free Exhibits-Plus badge, to the four days of in-depth Tech Program available to holders of the premium All Access badge, the 139th AES Convention will offer a range of topics and technologies with points of interest for every aspect of the audio industry. Registration is now open and the AES has made arrangements with several hotels in the area to offer special pricing and reservations for AES attendees, exclusively available through the AES Housing website.

Several badge options are available for this year's Convention: the free Exhibits-Plus badge, the premium All Access badge, and One- and Two-Day All Access badges. With advance registration, Exhibits-Plus badges are a free pass to attending the world's largest dedicated professional audio Exhibition and Special Events, including the opening ceremonies.

Two popular programs making their return are the Live Sound Expo (LSE) and Project Studio Expo

If It's About AUDIO, It's At AES!

(PSE), both taking place on convention days 2, 3 and 4, and both accessible for all registered attendees. These Expos offer unique sets of programming that speak directly to these popular and growing segments of the industry.
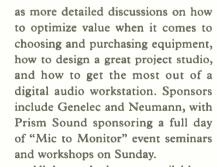
This year's Live Sound Expo, produced in association with Pro Sound News, offers expert advice for the broad spectrum of live sound engineers—some 25 percent of Convention attendees—with an emphasis on practical applications. Bringing together industry professionals with decades of experience to inspire and educate attendees, this second edition of the AES Live Sound Expo follows its highly successful debut at last year's AES Convention in L.A. This year, the LSE will be broken up topically across the three days, addressing important segments of Live Sound and Sound Reinforcement slated to include a "Broadway Day," a "House Of Worship Sound/Fixed Install Day," and a "Tour Sound Day"—each with dedicated programs consisting of presentations and panels featuring industry leaders. Sponsors for the LSE include DiGiCo, EAW, L-Acoustics, Optocore, Sennheiser, Waves Audio and Yamaha. This event also illustrates

the AES's attention to the live and installed sound market, as it follows the highly successful 59th AES Conference, on Sound Reinforcement Engineering and Technology.
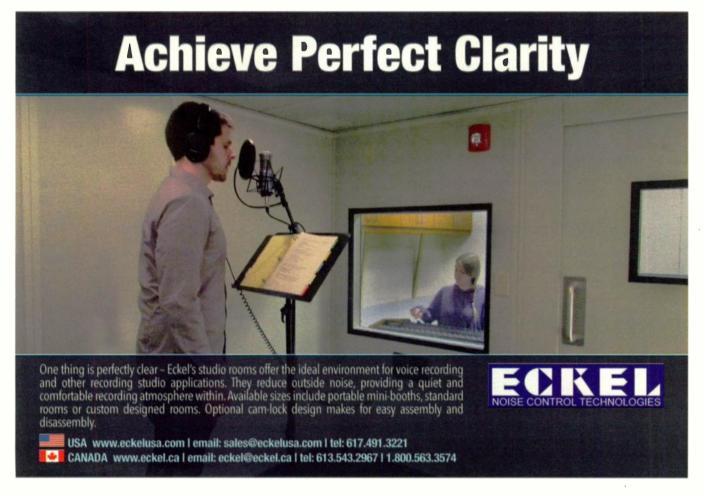
Presented in association with Sound on Sound, the Project Studio Expo, returning after several successful iterations during recent AES Conventions, offers a venue for focusing on some of the most timely and relevant areas of interest to today's personal and project studio environments. The PSE is intended to give home recordists a new perspective on how they can better use their tools and ears. Presenters will lead attendees through basics such as recording vocals, preparing multitracks for mixing and best practices for proper monitoring, as well
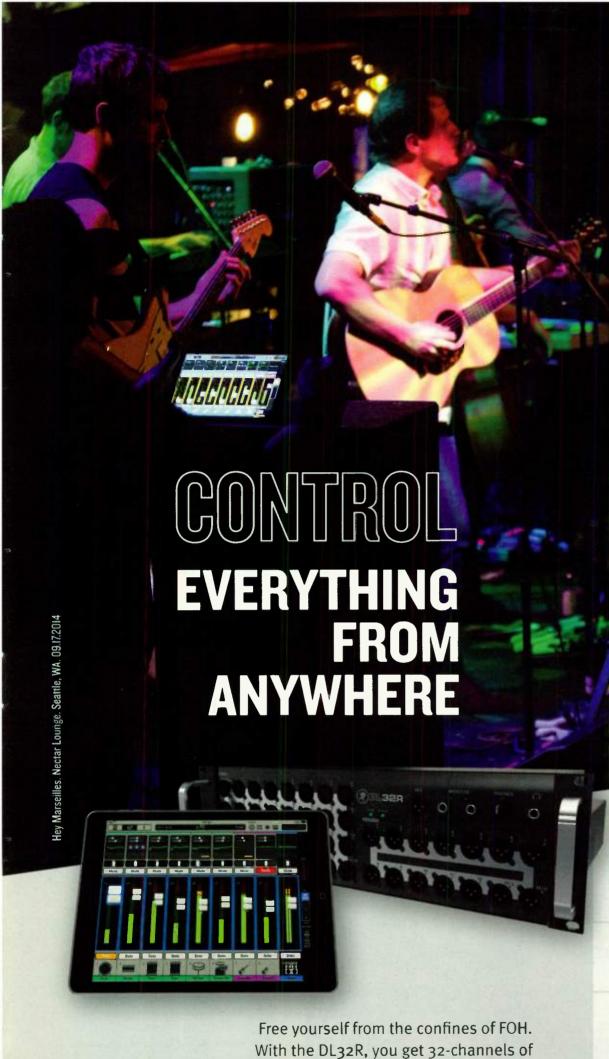
> The Live Sound Expo and Project Studio Expo offer programming that speaks directly to these industry segments.

as more detailed discussions on how to optimize value when it comes to choosing and purchasing equipment, how to design a great project studio, and how to get the most out of a digital audio workstation. Sponsors include Genelec and Neumann, with Prism Sound sponsoring a full day of "Mic to Monitor" event seminars and workshops on Sunday.

All Access badges are available to visitors looking to take their knowledge and professional career to the next level. AES will once again deliver a diverse Tech Program of Workshops, Tutorials, Papers and more on the latest developments in professional audio. All Access badgeholders may attend all on-site AES events. (Tickets for tech tours cost extra and can be purchased at the Convention.)

This year, due to overwhelming response, AES is also offering two additional badge designations. One- and Two-Day All Access badges are available for those who cannot attend all four days of the Convention.
139th AES Convention
aes.org/events/139/

CONTROL

EVERYTHING FROM ANYWHERE

Hey Marseilles. Nectar Lounge. Seattle, WA. 09.17.2014

MACKIE.

DL32R

Freedom from FOH – mix from anywhere!

Free yourself from the confines of FOH. With the DL32R, you get 32-channels of powerful digital mixing that's **completely** controlled wirelessly — MIX FREE.

mackie.com/DL32R

prosound MIX **WINNER BEST of SHOW**
InfoComm 2015

01 Hardware: Flexible, professional I/O in an incredibly compact 3U rackmount design

02 Wireless: From mic pre gain to control over multi-track recording and playback

03 Recording/Playback: Complete wireless control over multi-track direct-to-drive recording and playback

04 DSP: Powerful processing on all inputs and outputs that replaces racks of outboard gear

05 Master Fader: Intuitive wireless control over everything, proven at more than 2 million live mixes

Digital Cinema Sold to Warner

NEW YORK CITY—Bill Marino and Ken Hahn, founders and principles of Sync Sound, have sold their Digital Cinema, LLC facility to Warner Bros.

Since opening in 1997, Digital Cinema, located in midtown Manhattan, has provided mixing and sound editorial services for feature film and television and is home to New York City's largest feature mixing stage. Marino and Hahn reportedly chose the name Digital Cinema almost 20 years ago in anticipation of the switch from magnetic, sprocketed audio systems to digital audio in post-production. During the recent two-year collaboration, Marino and Hahn built-out eight new sound design and picture editing suites, added an ad-

ditional mix stage, an ADR stage and worked with Warner Bros. to re-equip the existing re-recording stage. Digital Cinema has provided sound facilities for numerous major motion pictures, including *The Secret Life of Walter Mitty*, *Into the Woods*, *Her* and *The Giver*.

Marino and Hahn will continue to operate their flagship Sync Sound audio post production facility, which opened in 1984. Co-owner Ken Hahn said, "For over 30 years, Bill and I have had the privilege of collaborating with some of the most creative and talented people in the business of producing programing for television and features. We look at this as the beginning of a new chapter at Sync Sound." Current projects

include Netflix's *Unbreakable Kimmy Schmidt* and FX's *The Americans*.

During the past decade, the Sync Sound neighborhood has seen a transformation from a warehouse district to a vibrant residential scene with an abundance of restaurants and a lively nightlife. Hahn commented, "The community changes around here have really invigorated our post-production business, but we also realize that our creative talent is as important as the latest technology. We encourage our clientele to draw on our talent pool for their projects here at Sync Sound or to take them off-site when it makes sense logistically."
Sync Sound
syncsound.com

Foos to Lead Sony's HRA Drive

TOKYO, JAPAN—Sony Corporation and Foo Fighters plan to work together to promote and deliver High-Resolution Audio versions of the band's songs worldwide, according to the manufacturer.

Foo Fighters, in a group statement, commented, "Preserving the human element in the recording of music has been a huge part of Foo Fighters' mission, and our commitment to High Resolution Audio is a major part of this. We've always wanted the flesh and blood and emotion

of our songs to get through to every listener and Hi-Res Audio is the best way for our fans to hear the music as we want them to hear it: in its purest quality and truest form." Foo Fighters celebrate the 20th anniversary of the band's 1995 debut album this year, and the group has sold over 20 million albums and won 11 Grammys to date.

Since 2013, Sony has been expanding its lineup of Hi Res-compatible products with audio technologies, and establishing collaborations

across the music industry in order to spread the growth of Hi-Res Audio—a format which reproduces the original recording, and enables users to enjoy music the way the artists truly intended. A Sony statement notes that, among its collaborators, it considers Foo Fighters a particularly important partner with great potential for conveying the allure and value of Hi-Res to audiences worldwide.
Sony
sony.com

Microsoft Adds More Focusrite RedNet

LOS ANGELES, CALIFORNIA—Microsoft Production Studios, the media hub for Microsoft International Headquarters, is expanding its collection of Focusrite's RedNet audio-networking interfaces. In addition to RedNet 4 Mic Pre, RedNet 5 HD Bridge, RedNet 6 MADI units and RedNet PCIe cards already in use at the 65,000-square-foot complex on the software giant's Redmond, Washington state campus (which comprises four soundstages, sixteen edit bays and four audio studios), Microsoft Production Studios has taken delivery of eight RedNet MP8R 8-channel remote-controlled mic pre interfaces and will soon take delivery of one dozen RedNet D64R MADI Bridge interfaces. These second-generation RedNet units feature dual power supply and network redundancy for fail-safe operation. Seattle-based firm Lift-AV provided the Audinate Dante AoIP protocol devices.

Microsoft Production Studios communicates product launches and corporate presentations to Microsoft staff around Washington and the world, utilizing a networked-audio signal transport paradigm, that features Cisco switches and a fiber backbone. There are now more than 100 Dante-enabled audio units on that network. "Eighty of those are on full-time, twenty are in use part-time and twelve others are used remotely," explained John L. Ball, systems engineer at Microsoft Production Studios. "The MP8R's are already integrated into the network and are working great, and the D64R MADI units will be put to use as soon as they arrive."
Focusrite
focusrite.com/rednet

The World Leader in Steerable Sound

Renkus-Heinz Iconyx arrays provide an elegant solution to long standing acoustical problems with slim enclosures that blend into any environment.

Individual driver control maximizes the acoustical advantages of this design. The result is unsurpassed vertical pattern control – essential for delivering intelligible speech in reverberant spaces.

Iconyx beams can be steered up or down while the array remains vertical – and nearly invisible.

Ask your local rep for a demo.

www.renkus-heinz.com

RENKUS-HEINZ

The World Leader in Steerable Sound

Covering 120,000 at Glastonbury

The Who were among the acts that played the Pyramid State at this year's Glastonbury Festival, all of which were heard via RG Jones Sound Engineering's Martin Audio MLA System.

SOMERSET, UK—At the Glastonbury Festival, held in late June near Somerset, England, RG Jones Sound Engineering was faced with having to cover 120,000 people in attendance at the massive Pyramid Stage.

As it did last year, albeit in a slightly different arrangement with the addition of extra delay systems and a second FOH position, the company opted to use a Martin Audio Multi-Cellular Loudspeaker Array (MLA) system.

System tech, Andy Davies, said, "We drove each acoustic cell in each MLA to direct sound at the audience, and then cut it off sharply just beyond the perimeter of the field to dramatically reduce noise pollution. As a result, acts including The Who, Florence and the Machine, Kanye West, Paul Weller and Motorhead could comfortably play at 104-105dBA. When a FOH engineer doesn't have to constantly worry about sound levels, they focus on what they do best—mixing—and so they enjoy the experience more and that translates to the audience experience too."

FOH engineer for Motorhead, Arnie Annables, noted, "I wasn't looking forward to Glastonbury because of the noise restrictions; as you can imagine, we like to play loud. However, things went surprisingly well and I was very happy with the outcome. The system sounded good, not what I am used to, but my ears were pleased. The RG Jones guys did a fantastic job looking after me, as did everyone on stage; it's been a real pleasure."

Mixing on a DiGiCo SD7 desk,
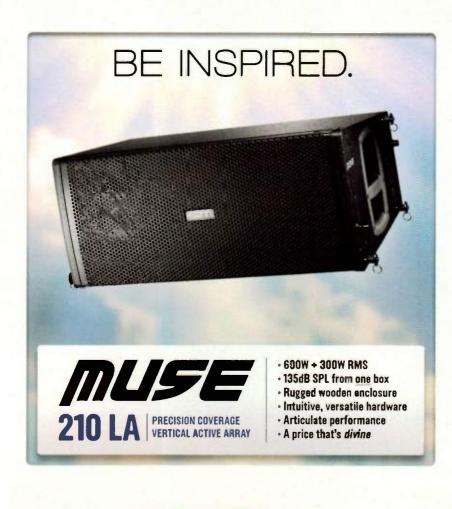
Christopher Lee, FOH engineer for Pharrell Williams, said, "Pharrell likes the bass and mix to be identical to the record, so the subs were a real surprise to me, right up there where I needed them every time. I was really impressed, not just with the configuration, but also with the excellent tuning of the system."

System design was similar to last year, including 72 MLA for the main hangs, eight MLA Compact for stereo infill at the pit barrier and a total of six delay positions of both MLA and MLA Compact as required.

One key change this year was the addition of two extra delay systems. RG Jones' project manager, Simon Honywill, said, "This was primarily because Glastonbury production decided to split the FOH control platform from one to two platforms located left and right in front of the stage. They also moved the platforms closer to the stage, and along with them, the first set of delay towers." With the center of the field opened up visually, the aim of the festival site was to increase the experience for the audience right at the back of the field close to the camping area, a space previously regarded as out of coverage for the Pyramid stage. These changes necessitated the extra MLA Compact delays.

There was also a broadside array of 38 MLX stretched across the entire width of the stage to provide sub-bass support to the entire system. "The system has knitted together really well," said Davies. "It has allowed us to put more energy through the middle two delays and push a big thrust of power up the center of the site. We then use the outer delays to fill in and keep coverage going out to the edge, which has worked really well."

Martin Audio
martin-audio.com

Studer Joins Frankfurt Opera

frankfurt, germany—A Studer Vista X digital console was recently added to the Frankfurt Opera, where it will be used both for live performances and for in-house productions in 96 kHz.
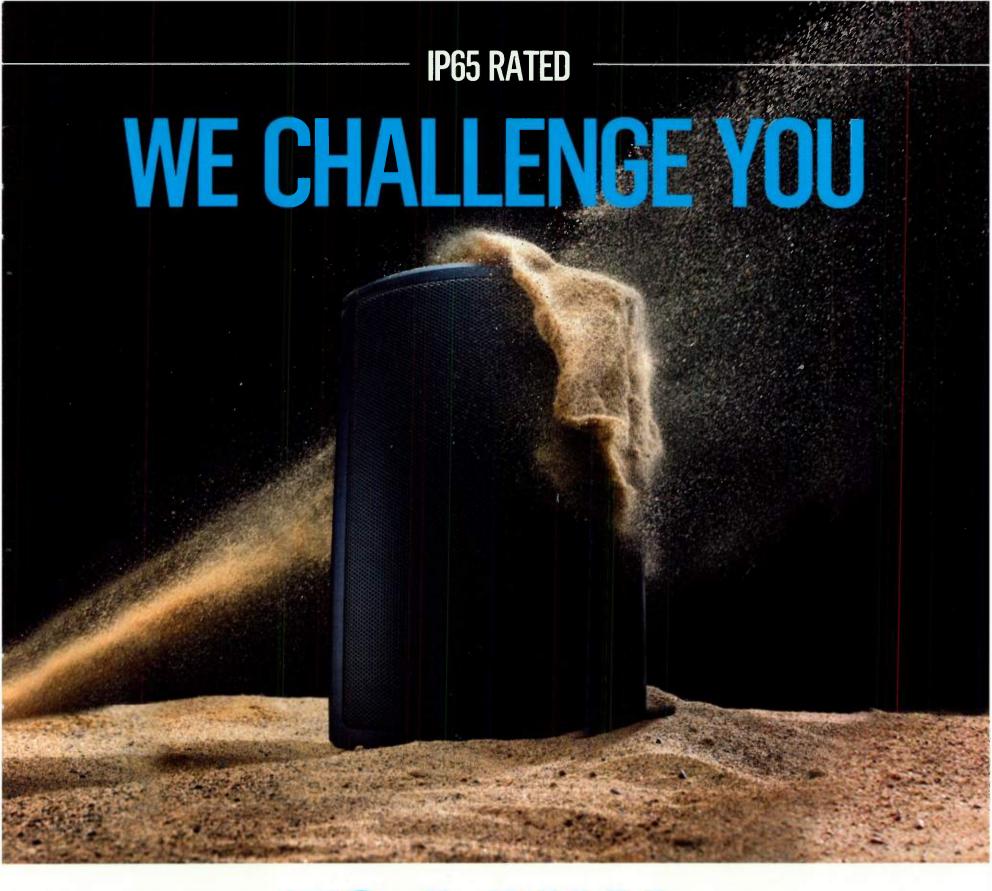
The console surface is equipped with 32 faders and is built for an extension of 10 more faders. With the new console, approximately 400 DSP channels can be processed, optionally at 48 kHz or 96 kHz sampling rates.

The Vista X Infinity was initially installed in the recording studio of the Frankfurt Opera, where it could be set up without time con-

straints and in line with the needs posed by the Frankfurt Opera's performance schedules. This also allowed for transfer of show files from the Opera's previous console to the new Vista X. The console's move to the opera house will be completed during the theatre's summer recess.

The "Städtischen Bühnen Frankfurt" (Municipal Theatres of Frankfurt) is the largest municipal theatre operation in Germany and consists of two artistic disciplines: the opera and theatrical performances.

Studer by Harman
studer.ch

The Care and Feeding of Songwriters

In a recent blog post, reviews editor Strother Bullins looked at how streaming and its effect on the album format are affecting professional songwriters, and asks what that may mean for pro studios down the line.

While songwriters still thrive on terrestrial radio, Desmond Child is focused on securing a 50/50-split licensing model on all music usage with labels through measures such as the Songwriter Equity Act, "coming through Congress this year," he notes. "Terrestrial radio will die. It's on the way out. It's over. The entire country of Norway has stopped terrestrial radio...and Sweden's next, the rest of Europe, the UK, then it's going to be here, too, and in Canada. In 10 years, there will be no terrestrial radio...and if it's tilted in that direction, where we get 4 percent, the music creators, and they—the record labels and the performers—get 96 percent, it really hurts music. Then people aren't going to choose this as a career."

"Think about this," he continues. "When I came to Nashville in '91, there were over 5,000 signed writers to publishing companies within the [Interstate] 440 circle. As of the last count, there were 237...In 20 years, that's how much music has diminished."

For the full blog post, visit prosoundnetwork.com/aug2015.

sweet tweet links

Pro Sound News brings you audio news every weekday on prosoundnetwork.com, Twitter (@prosoundnews) and Facebook (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/aug2015.

▶ Jeff Bridges' estate is for sale—$29+ mil. The rug really ties the home studio together.

▶ This rapper supposedly recorded his new album on the sly on an Apple Store display mac.

▶ Video: Gin Blossoms singer Robin Wilson closes Tempe, AZ's Uranus Recording.

▶ The story behind The Premises, a London-based solar-powered recording studio.

▶ RF distribution pioneer Ben Tongue has passed.

BLOGGINGS

SNEAK PEEK: AKG'S N90Q BY QUINCY JONES HEADPHONES

Focused as we are on Pro Audio, we don't usually wade into the waters of commercial audio products, but when AKG invited us to the launch of its new N90Q By Quincy Jones headphones, we were intrigued. The N90Qs, due out September 7, 2015, are being touted as "the first headphones with personalized sound;" sporting technologies such as TruNote, which shoots your ears to create customized correction filters; DSP presets; high-end materials and more, that may well be the case.
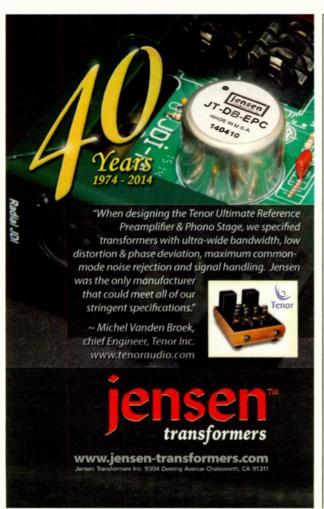
FANARCHY VS. THE USUAL WAY

It's easy to get stuck in "the same old way of doing things," just because that's how we've always done them. If we're lucky, every so often, something comes along that shows us a different approach or at least reminds us why we do things certain ways. PSN's managing editor had that kind of moment back in March, when he was interviewed for Fanarchy, a documentary that premiered on Epix in July.

Find these blog posts at prosoundnetwork.com/aug2015.

video vault

Back To Amy

Producer Mark Ronson may have had the biggest hit of this year with "Uptown Funk," but he also plays a major part in the new documentary, *Amy*, about English soul singer Amy Winehouse. This fascinating clip goes back to 2006, watching the producer and singer as they capture the smoky title track to her second—and last—album, *Back To Black*. Recorded in New York to tape, the track is today considered one of her signature songs. Catch the clip at prosoundnetwork.com/aug2015.

soundRECORDING||||

Propellerhead Proffers Pocket Production

BY STEVE HARVEY

SAN FRANCISCO, CA—Propellerhead, the Swedish software developer behind such products as Reason, ReCycle and ReBirth, has launched a new social music-making platform that enables musicians worldwide to collaborate. Leveraging the company's mobile apps and global access to the cloud, the Make Music initiative, launched June 1, enables participants to upload tracks for other Propellerhead users to further develop, remix or edit.

"We think there's a real revolution underfoot," says Doug Provisor, SVP of sales and marketing, Propellerhead Software, in San Francisco. "We see the future for making music being highly mobile-based. People have got a studio in their pocket; all they need is the software and the motivation to use it."

The new platform addresses some of the limitations of the traditional MI industry, Propellerhead believes, opening up the creative process to people of all ages, any gender and

Propellerhead has developed new portable music-creation apps and an accompanying ecosystem for musicians and consumers.

regardless of economic circumstances or geographic location. "It turns out that these people, if they're younger, are growing up on mobile," Provisor explains. "We estimate that there's at least half a billion installs of music-making apps on iOS alone, from at least 1,000 unique apps, including GarageBand. That's a huge number and dwarfs anything in the MI space."

But these non-professional music makers are typically working in isolation, he also notes. "They're lonely islands, generally with no way to connect with other music makers to ex-

perience what magic there is when you make music with other people."

Propellerhead has already built a significant user base for its mobile apps via Apple, including Take, a 3-track vocal recorder, and Figure, a music creation tool. "We've had over 2.4 million installs of Figure, which launched a few years ago," Provisor reports. Take is intended as a dedicated tool for the many music makers who have been using the Voice Memos app that comes with Apple's iOS.

For Propellerhead's new social platform, "Our simple use model is that you can create a piece of music, drop it to the service, somebody else can create something on top of it and drop it back. You can enter the service by creating something, or by looking and discovering something that inspires you."

Any registered user can work on the uploaded sounds. "If I record something and drop it to the service and you open it, you can do with it whatever you want—even edit it or

Big Orange Sheep Jazzes Up Brooklyn

BY STEVE HARVEY

BROOKLYN, NY—When Chris Benham told his girlfriend at the time—now his wife—to look out for the big horn sheep while she was vacationing in Yellowstone Park, poor cellphone reception caused her to mishear what he said. "Later, she sent me a postcard that mentioned 'big orange sheep;' when I decided to build a studio, I knew that had to be the name," laughs Benham.

Big Orange Sheep officially opened for business at the end of March this year, after a brief hiccup in musician and composer Benham's plans and a two-year build-out. Occupying 2,000 square feet on the fourth floor of a commercial building just a stone's throw from the South Brooklyn Marine Terminal, the facility is influenced by a bygone era, featuring natural light and a flexible room layout suited to recording Benham's passion, live jazz.

"I just wanted to make a studio that I would want to record in," he

says. "A lot of studios—I don't want to be insulting but—they're shitholes. There's an idea that underground is cool, and I'm sympathetic to that. But I wanted to make something a little more classic."

Benham, a drummer, studied music performance in Las Vegas. "My buddy was into recording engineering and was a paid intern at one of the local studios. They were doing a lot of jingles and he got the bright idea that we could do the same thing. So three of us got together and pooled our resources. A couple of agencies gave us a chance; after a while, we landed a couple of pretty big accounts, and used the money to convert a house in downtown Las Vegas into a studio."

But the commercial music business changed and the partners went their separate ways, Benham relocating to New York. "I started doing projects out of my apartment," he recalls, tracking at commercial facilities in the region. At one studio, "I

Chris Benham at his Argosy-mounted Soundcraft Ghost console in the Big Orange Sheep control room.

Cphonic Mastering: Modular and Minimalistic

BY STROTHER BULLINS

THE TRIANGLE, NC—Kevin McNoldy now resides in the Raleigh-Durham metropolitan area of North Carolina, but has experienced the American recording scene unlike most "secondary market" audio engineers today. His childhood beginnings as a songwriter—McNoldy wrote nearly 1,000 songs before high school graduation—led him to enroll and ultimately graduate from Berklee College of Music, concentrating in recording production and engineering.

With numerous RealTraps on the walls and ceiling, Cphonic boasts "an absolutely flat monitor response due to the massive depth of our built-in bass trapping."

"That catapulted me into Nashville, where I built a studio and was soon doing jingles, some Country music off Music Row, and so on," he recalls. "Later, I built a studio in Charlottesville, Virginia, where I had my first hit, the debut Seven Mary Three album featuring the single "Cumbersome." That was also the time when Dave Matthews Band was coming up, so there was a lot of energy around the area."

From there, he made a loop to LA, built a studio for his development deal work for labels and eventually returned to Virginia to build Crystalphonic, a world-class tracking and mixing facility unlike any the state had ever seen. "It was a $5 million, 5,000-square-foot studio, and my goal was to draw acts to what is a secondary market. It was beautiful: one of the last from that era, purpose-built for rock music. But I eventually left it to get back to production: running the studio took me away from the rooms. It was the classic story of building a dream studio, then being so busy that it was impossible to actually work in the studio. It was killing me."

The Crystalphonic experience led to McNoldy's career epiphany: He needed to build a more efficient studio, one that allowed him to work with artists anywhere, depending on no locale except for an overall lifestyle-based appeal. "There's a lot to be said about lifestyle in a secondary market," he explains. "So now, in North Carolina, I'm once again in a secondary market, drawing clients, but my room is completely modular and my clients are from anywhere around the world. And I can take all of my studio's components and set up anywhere. It's the ultimate hybrid environment where you get the best of in-the-box and outboard options, when desired."

Cphonic Online Mastering balances two main categories of clientele, both of which rarely visit its 430-square-foot control room. "I'm living in two worlds, essentially," McNoldy explains. "One where people are sending me great mixes in-the-box, and another where artists are recording really great songs, but they recognize their need for help with the mixing."

Designed with a minimalist approach to gear, McNoldy sits at a floated, custom mastering desk amongst a dizzying number of RealTraps acoustic fixtures throughout, comprising a uniquely attractive and

STUDIO: CPHONIC ONLINE MASTERING OWNER: KEVIN MCNOLDY LOCATION: THE TRIANGLE, NC

There's more ▶ Find out more about Cphonic Mastering via prosoundnetwork.com/aug2015

Big Orange Sheep

noticed my editing chops were equal to, maybe even better, than the guy who was engineering. He was a good engineer, but I thought, I could do this."

His initial plan was to build just a small studio. "I found a 1,000-square-foot space, got the architect and mechanical engineer, and was leasing the space for a year. But when it came time to pull the permits, I found that the building wasn't zoned correctly. It was a wasted year, and I'd paid out all this money."

He laughs: "The answer was to double down. I realized if I got a larger space, divided it up and had some tenants, I might be able rent a space twice the size for about the same price and do a lot more with it."

To save money, he had previously hired an architect with no studio experience, and ended up doing all the

> "I noticed my editing chops were equal to, maybe even better, than the guy who was engineering."
>
> *Chris Benham, Big Orange Sheep*

research himself. "By the end of the process, I knew what needed to be done. Why should I pay a guy? It was a lot quicker for me to just do it."

Benham did much of the construction at Big Orange Sheep—from the walls, floors and suspended ceilings to the acoustic treatment and sand-filled soundproof doors. A seven-foot 1914 Steinway B Concert Grand piano takes pride of place in the 500-square-foot main tracking space, surrounded by four iso rooms, which Benham designed to accommodate jazz and other ensembles.

"I realized there was an underserved niche. If you wanted to record a big band, you couldn't have your rhythm section isolated from the horns in any studio that I knew of at the time. The flexibility of being able to play live in the live room, or to have it isolated, was what was missing."

Benham, who has worked with Robert Goulet, Tony Orlando and the Smothers Brothers, as well as jazz greats including Jack Montrose, Don Menza and Stefan Karlsson, was out of the local scene for a while during construction. But now he is getting back into the swing of things: "I play for a club date service and there's

a jam session at the Kitano Hotel where I play in the house band once or twice a month."

The centerpiece of the new control room is an Argosy Console 90 Series desk with an integrated 32-channel Soundcraft Ghost analog mixing console, which Benham and his partners bought in 1998 for their studio in Vegas. "I was mixing in the box while thinking everything we mixed on the Ghost sounded better. Having it back,

I still feel the same way—it just glues things together a little nicer."

The Argosy makes a great first impression on clients, he says. "The Argosy looks more professional; it has clean lines, and it's self-contained." On-board rackbays house a custom patchbay and a 32-channel Antelope Orion 32 converter and audio interface.

The Argosy console is about the only piece of studio furniture that Benham didn't personally build. His

outboard equipment racks house dbx, Demeter, Empirical Labs, Purple Audio and Urei dynamics processors plus Alesis and Lexicon effects units. "But I knew I wouldn't be able to do as good a job as Argosy with the console," he says.

Argosy Console
argosyconsole.com

Big Orange Sheep
bigorangesheep.com

SOFTWAREtech IIII

Will Windows 10 Take It to Eleven?

BY CRAIG ANDERTON

One of the big surprises at Summer NAMM was Microsoft's courtship of the audio industry, with both a general overview in the Davidson Ballroom, and a later A3E session that took a deeper, and more specific, dive. Windows audio and MIDI has always lagged behind the Core Audio protocol Apple introduced in OS X; with rich media becoming more important on all devices, from the diminishing desktop market to the growing mobile market, Windows audio and MIDI are overdue for a sweeping makeover.

For us, Windows 10 won't go to eleven just yet. For professional audio performance, ASIO—which is not affiliated with Microsoft—remains your best bet, and will for the foreseeable future. Microsoft is concentrating on making it easier for developers to work with audio on Windows across all platforms—desktop, tablet, Xbox and phones. So, most of the changes relate more to consumers than pro audio.

However, our industry has always lived on the trickle-down from mass-market acceptance. A consumer starting with Apple's GarageBand will have a better experience than trying to deal with Windows on-board audio; many times, it's necessary to use MME, and endure latencies of 50 ms or more. (Although ASIO4ALL is one option, it's only a wrapper that tricks your audio application into "seeing" ASIO.) One of the persistent desires of the music industry is to reach a younger demographic and involve it in making music. If Windows users can engage easily with music, that could indeed help grow our MI economy—something we haven't seen for a while.

Microsoft is concentrating on several elements, starting with latency. This won't affect ASIO, although preliminary Windows 10 audio performance is getting closer to ASIO. But even if there was an ASIO equivalent tomorrow, there's no incentive for hardware manufacturers to come up with new drivers—or software to accommodate them—when we already have something that works. However, just as Core Audio replaced ASIO on the Mac, someday the same might happen for Windows... ditto interface aggregation, which remains awkward at best. (Then again Windows 10 will adopt a rolling release concept instead of massive, infrequent updates, so if audio improvements start getting traction, we may see more enhancements in months instead of years.)

Lossless audio codecs (FLAC and Apple's equivalent) will be baked into the operating system, as Microsoft moves away from lossless Windows Media Audio formats. Microsoft is also pushing "gapless audio," but that doesn't mean what we mean—they're referring to the pause that happens with MP3s between cuts on, for example, a live album.

One reason for higher audio latencies is saving power, so hardware will be able to choose the optimum latency automatically. A consumer might experience 10 ms latency with a desktop sound card, while a phone might be around 25 ms—still acceptable for many consumer applications. Microsoft also identifies touch-to-sound as a separate latency issue, and is working on that as well.

Another technique is core isolation to lock out a core and dedicate it to audio. While this won't help DAWs that slam a bunch of cores, it will help consumers and a variation may come our way in the future. Resampling is also done more transparently, and Microsoft will be making effects available for audio (that's a little scary given what other "enhancements" do, but we'll see).

MIDI's resurgence is also getting attention. The biggest improvement is shared MIDI device access so that more than one application can deal with I/O, but there was also a pretty interesting demonstration of MIDI working bi-directionally with Novation's Launchpad, along with an announcement of Windows 10-embedded systems appearing later this year in products from Akai Professional. And Raspberry Pi, Microsoft's credit card-sized microcomputer, includes a MIDI GS wavetable synthesizer. Microsoft recognizes that it's neglected MIDI over the years, and is attacking the code bottlenecks that limit performance.

Another element that could touch our industry is the new Edge browser (Internet Explorer is history). It's intended to be very web audio-friendly, which given the internet dependency of our industry on everything from collaboration to online sales to demos, could be significant.

Often, Microsoft's promised audio improvements have fallen short of expectations (MIDI port limit issues, anyone?). But this time feels different. Microsoft clearly wants to take the Windows experience beyond accounting departments running spreadsheets—and the very public splash at NAMM is a hopeful sign of what's to come. Author/musician Craig Anderton has given seminars on technology and the arts in 38 states, 10 countries, and three languages. Hear his music at youtube.

> Windows audio and MIDI are overdue for a sweeping makeover.

Propellerhead

make it unrecognizable from what I put out there."

Although the cloud offers unlimited storage capacity, for the moment, says Provisor, "We've got an arbitrary limit of 10 minutes on music pieces. That could be a song or a loop or noise."

Displayed with each uploaded piece are metrics such as the Propellerhead app originally used to create the music, the number of plays it has received and the number of versions that it has further generated. "We have one piece that has had about 200 reuses," he reports.

Tracing that branching and a piece's lineage offers potential in the future for things like music licensing, he also comments: "You can tell who contributed to what."

Results thus far have been a mixed bag, as might be expected. "But we're seeing some really interesting collaborations," he says. For example, "We've got people in China making beats, and rappers in Saudi Arabia rapping over them."

For the moment, the developer is approaching the initiative like an internet start-up, studying what users are doing and listening to what they want, so the platform could well evolve. For instance, other cloud-based services such as Blend and Splice offer a collaboration platform to professional users. Eventually, Propellerhead might enable pro users to create a "studio" where they can collaborate privately, for a fee, he says.

"We don't have a revenue or business model associated with this; it's free. For people using it a lot, for the purpose of commercial music production or trying to develop their skills, we may have a paid service with unlimited storage. Advertising might be one of the business models in the future, like Facebook."

There is also interest from Apple, Avid and other developers to integrate with Propellerhead's platform, he reports. "We've created an SDK that allows third-party apps to connect to our social network. When that occurs, it means that if you're using GarageBand or Pro Tools or any of the other 1,000 apps, they will be able to be front ends to this social network."

But initially, says Provisor, "We're focusing on what we think is an unmet need out there, which is music-making for people who just want to do it for the love and joy of it. You can look at this as a dating service, matching people with similar interests in music.

> "People have got a studio in their pocket; all they need is the software and the motivation to use it."
>
> *Doug Provisor, Propellerhead Software*
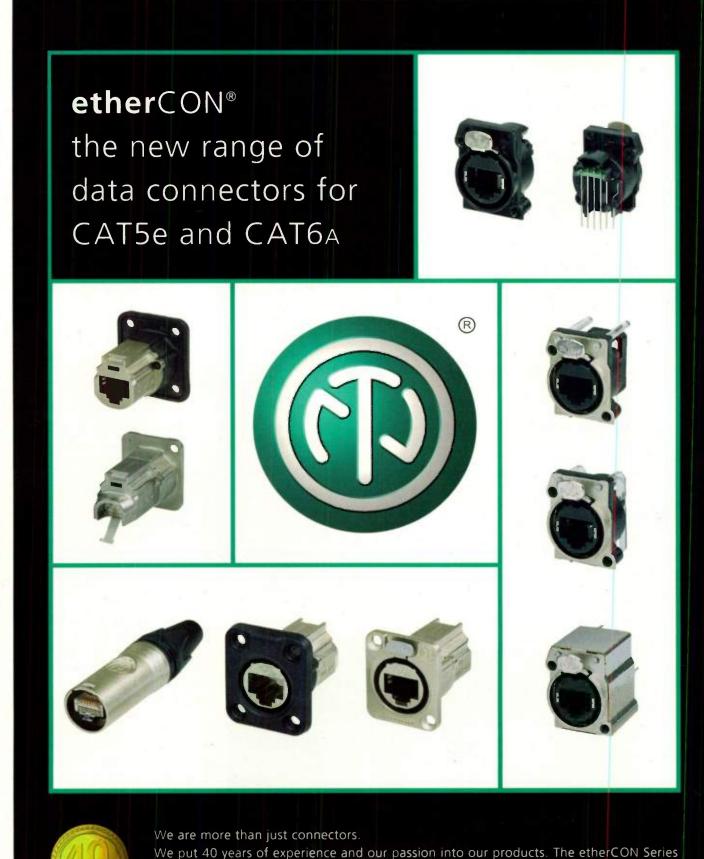
"But the real innovation, we think, is that it could be somebody who is just a self-taught rapper and does it for fun. Now they have a legitimate way to express themselves and collaborate with other people."
Propellerhead Software
www.propellerhead.se

THERE'S MORE ▲ Watch Propellerhead's introductory video
https://youtu.be/yNP5TJblkFQ

CSC: Data Demands Continue Exponential Growth

BY STEVE HARVEY

LOS ANGELES, CA—This year's annual Creative Storage Conference in Los Angeles revealed that storage demands in the media and entertainment (M&E) industry are continuing on the steep upward trajectory that began around the turn of the millennium. Driven by higher resolution content, higher frame rates, more bits per pixel and new immersive formats, the demand for storage could reach one exabyte per project within a decade.

Conference organizer Tom Coughlin of Coughlin Associates noted in his opening remarks that 4k production is becoming commonplace, 8k is getting off the ground and 16k—16,000 pixels on the long axis—is coming. Cameras routinely run at 40 and 60 frames per second, with some models capable of much faster rates. "There are cameras that can shoot at thousands of frames per second for special effects," he said.

Looking 10 years up the road, he said, innovative projects—virtual or augmented reality, for example—produced in 16k by 8k, 24 bits per pixel, 300 fps could potentially generate 115 gigabytes/second data rates or

> **"Maybe in the future, we won't have to deal with migrational challenges. But the truth of the matter is we will for the next few years."**
>
> *Brian Campanotti, Oracle*

414 terabytes/hour. "I think we'll be seeing single projects reaching an exabyte of raw content generated," he said. In decimal terms, an exabyte is roughly one billion gigabytes.

Every year, Coughlin reports on his latest survey of the M&E industry's storage demands. There is typically good and bad news regarding archiving. Nearly half of respondents said their annual archive growth rate is greater than 6 percent. Digital tape is favored by 40 percent of those surveyed with LTO, at 72 percent, the predominant format; camera tape is a distant second. About 28 percent use hard disk drives, 16 percent local storage networks, 5 percent the cloud and 6 percent various optical disks.

"But about 46 percent of survey participants said they never update their archives. Shame on them," said Coughlin.

Getting The Game On: U.S. Open

BY PAT SULLIVAN, PRESIDENT, GAME CREEK VIDEO

HUDSON, NH—Game Creek Video handles mobile television production for the world's largest TV networks, production companies, and news organizations. We've earned a reputation for flawless coverage of sports and entertainment shows, which is why you'll find our OB trucks and production teams in the truck compound for major events such as the Super Bowl, the World Series, NASCAR races, and the FIS World Skiing Championship.

One of the biggest changes I have seen in sports coverage over the past 15 years is an increased emphasis on and commitment to audio by the broadcast networks. The networks have determined that the viewers' audio experience is as important as the video. Audio has gone from being an afterthought to a key part of the production.

FOX Sports is one of the leaders in that charge. Last year, when covering the 2014 U.S. Open golf championship, we began planning with FOX Sports for coverage of the 2015 event. Game Creek would provide the ad hoc network at Chambers Bay golf course in Washington state, and FOX Sports would operate it. FOX is known for placing special importance on audio, particularly surround sound, because it understands the value of a high-quality audio production.

Brad Cheney, director of technical operations for FOX Sports, said it best: "We are out to capture the sounds of the course in an all-encompassing way, so we put equal emphasis on sound at every hole. It's so important that we've even got additional audio engineers working in our ISO replay rooms to make sure the sounds are consistent on-air and online."

Today's productions place enormous demands on audio processing, and those demands would be multiplied for this event. We had to build a network to deal with 118 cameras, more than 200 microphones, and a massive number of line inputs. Audio would be coming in from a number of sources besides the microphones.

A Calrec Apollo digital audio console was the centerpiece in the Game Creek Video production truck used for the US Open—one of seven Calrec consoles deployed for the Fox Sports coverage of the event.

Data Demands

Use of public and private cloud storage has taken off in the non-linear editing community. In 2012, 15 percent of respondents stored data in the cloud; now, it's 30 percent, he said. "Cloud storage is being used to create collaborative workflows for people across time and space. The more stuff there is in a cloud environment, the more things you tend to do there—because that's where the data is."

Back on terra firma, how data is being moved is also changing. Mike Oakes of DDN noted that the financial services industry was moving away from fiber channels as Ethernet speeds increase through 100 Gb/s, with 400GbE on the horizon. "They need bandwidth, low latency and high transfer rates; some of that is going to push into our industry," he said, adding, "I'm not saying one is better than the other."

Last year, said Oakes, "About $21 billion was spent on Ethernet switches. That's a lot of money. Same space, fiber, was about $2.5 billion."

"M&E is becoming a Moore's Law-driven industry," stated Neil Smith, LumaForge Systems. Intel's Gordon Moore predicted in 1965 that processor power would double every 18 months; meanwhile, prices also decrease. "That applies to everything," said Smith, including CPUs, GPUs, RAM and networking.

Smith highlighted LumaForge's solution for VR and VFX, two compact machines communicating at 2,000 Mbps over a single piece of Cat 7. "In 30 years, we've gone from water-cooled mainframes to something shoebox-sized," he said.

Cloud-based workflows came up in one panel discussion after another. As Oakes noted, the cloud offers efficiencies, such as a 24-hour global work cycle, with one location handing off a project at the end of its workday as another location begins its day. "I can get my stuff done that much quicker, and I can have a better quality product because my people aren't tired."

But reliance on the cloud also has its downside, as noted by cybersecurity expert Uzi Yair, GTB Technologies. Yair observed that a "frenemy"—an unwitting employee—could accidentally synchronize content to the internet and no one would be any the wiser. With a reported 12,000 cloud providers in addition to big names like Dropbox, he said, malware could potentially open its own account and reroute pirated content.

The conference often offers a glimpse of future tech. Two organizations are using predictive sequencing to store data using the four base pairs of DNA, reported Oracle's Brian Campanotti. "The density is 2 petabytes per gram of DNA material. MIT is showing two or three times that density." The method offers a projected shelf life of 10,000-plus years. Of course, he noted, "We have proof that this will last millions of years. Maybe in the future, we won't have to deal with migrational challenges. But the truth of the matter is we will for the next few years."
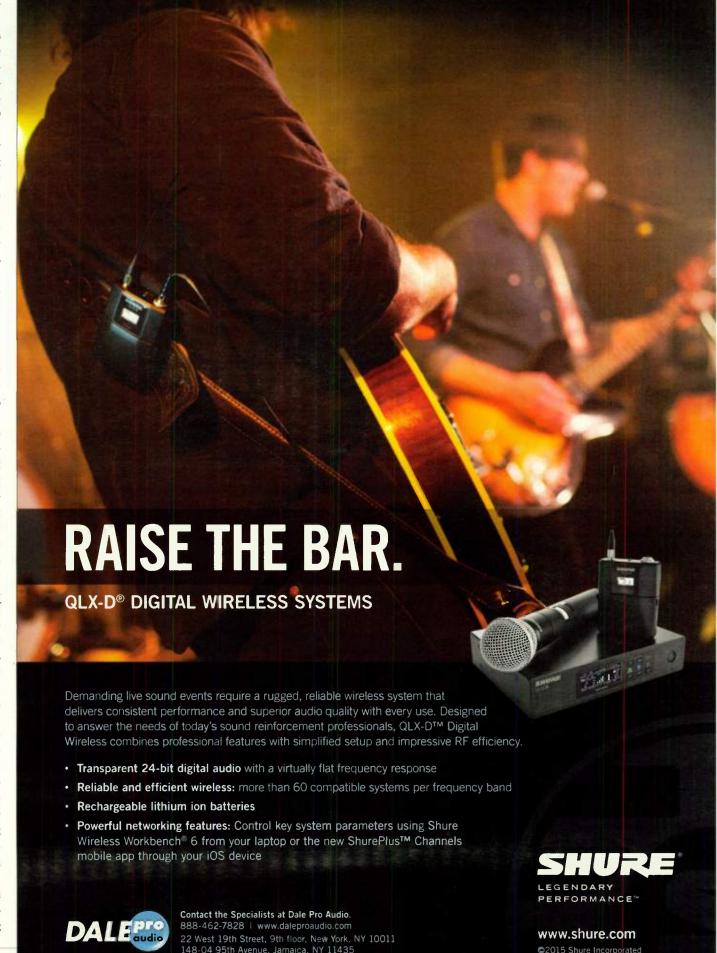
"How often do you replace your storage?" asked keynote speaker Alex Grossman of Quantum. "Every three to five years. Why? Because you have to migrate off it."

With so much content being stored, archived and remonetized, automation now plays a key role, according to Grossman. "This is where things are changing. People tend to call this software-defined storage."

There are numerous storage solutions available, based on components from the three hard-drive vendors still in business, he noted. Head-to-media speeds have remained fairly constant; the bottlenecks are elsewhere, making hybrid hard disk/solid state drive storage solutions attractive. "Look at the workflow stages and optimize the storage for each stage," he advised.
Creative Storage Conference
creativestorage.org

U.S. Open

(continued from page 30)

For example, each replay device would have 16 channels of 5.1 audio. There would be audio associated with graphics. There would be primary and backup systems onsite.

There would also be 24 Calrec fieldboxes (small-format I/O units) sitting around the course, sending 5.1 audio to the trucks via fiber, providing a huge efficiency advantage. Not only would they save us from running DT-12, but fiber is lighter, less obtrusive, and can carry more signals than DT-12.

FOX would be producing content for its linear networks, FOX and FOX Sports1, along with complementary programming for usopen.com, usga.org and foxsports.com. In early talks, it was clear that capturing the sound FOX viewers have come to expect would require a large net-

Calrec's Artemis console was used for the U.S. Open release mix.

work of audio consoles and operators. FOX had already done its homework and determined that the only way to do it right was with Calrec consoles, specifically the Apollo.

Game Creek is an all-Calrec fleet. We built the network for FOX with four Apollo consoles, one Artemis console and two Summa consoles, all inside of our production trucks. This would be the largest network we had ever created.

The biggest challenge with a network of that size was tying all of the assets together and making them work with each other while giving the operators maximum flexibility. We had never attempted to tie five consoles together in a seamless package before. Without Calrec's built-in Hydra2 technology, we wouldn't have been able to do it.

FOX operators mixed the broadcast with one Apollo desk and did

the submix with another. They used the Artemis console for the release mix from the ISO replay rooms and mixed additional digital programming with an Apollo and two Summa consoles. While not on the network, SD10B consoles from Calrec's sister company, DiGiCo, in the ISO production rooms, were connected via MADI to the main production truck to provide hole coverage via replay into both the main and digital programming.

The network meant FOX's audio engineers could cover any part of the course at any moment with the full resources that are normally only available to the main show. The im-

portance of this flexible networking capability cannot be overstated.

There were plenty of other benefits to using Calrec consoles. Over time, Calrec has expanded the number of audio sources its consoles can handle, in a way that's efficient and instinctive for operators. That ensured that we could design a system that got the job done in the most efficient and least time-consuming way. And we knew the system would be robust and reliable—something we had to consider given the Pacific Northwest's unpredictable June weather.

Another Calrec advantage is the company's outstanding customer support. Their people are experts who not only helped us specify to configure the system but joined us in

> ["We are out to capture the sounds of the course in an all-encompassing way, so we put equal emphasis on sound at every hole."
> *Brad Cheney, FOX Sports*]

the field to help us set up the system to yield the best performance. That's why Game Creek Video is a repeat customer.

The bottom line: Our business is all about making the customer happy. We know when we purchase Calrec equipment we're going to get great reliability, great sound, great performance, great flexibility for the operator and great service, so that ultimately we can help the customer create the very best production.

Game Creek Video
gamecreekvideo.com

Calrec
calrec.com

innovations: the manufacturer's view

A Workstation With A Console Heart

HARRISON MIXBUS VERSION3

BY BEN LOFTIS

Harrison is a world-renowned manufacturer of ultra-high-end mixing consoles. In the 70s and 80s, Harrison mixers were used on iconic pop albums by Michael Jackson, Queen, AC/DC, Abba, Sade and many more. By the 90s, however, our highly-automated consoles had found their place in elite film studios. Remember, there weren't any powerful DAWs back then; an automated console was the only way to switch your settings quickly between scenes. Since then, Harrison has maintained a high-profile position in film mixing, and perhaps become less well-known in the music world. But when Universal Audio modeled Bruce Swedien's Harrison 32c for a plug-in a few years ago, we were reminded that there are still users who are seeking that "Harrison" vibe.

Mixbus marks Harrison's re-entry into music production. Developed by Harrison as a "reboot" of the computer DAW, Mixbus pro-

The Track Editor window from Harrison's Mixbus version3 DAW atop the main mixer screen.

changed—mix engineers continued to use the same control surface. This transition was not undertaken by any other company, and it has provided us with techniques that we have incorporated into all of our highend mixers and, of course, Mixbus.

Mixbus version3 (released July 6) is the latest version of Harrison's full-featured digital audio workstation with "True Analog Mixing." The development of Mixbus has followed a truly unique path.

are three products that have nearly seamless interoperability.

Returning to the story of Mixbus: In 2008, I bumped into Paul at the Tonmeistertagung audio show in Leipzig, Germany. He wanted Harrison to make a channelstrip "plug-in" for Ardour. So as a side project, I developed a little EQ/Compressor plug-in that could be added to Ardour. But during the process, I developed a strong feeling that "this doesn't feel like a console at all!" When you make a plug-in, you don't have access to the fader, aux sends or any of the fundamental elements in the mixer. You have no control over the gain stages or dither or bussing at all; therefore you have very little opportunity to optimize the signal paths. If you look at a Harrison digital console, literally half of the hardware is dedicated to the summing buses. When making a plug-in, we were leaving half of our knowledge on the table—and that was the genesis of the Mixbus concept. We wanted to reinvent the DAW as something a mixer company would make. Not just a plug-in host, but an actual mixing system with our own sound and a sensible workflow.

Mixbus is developing very quickly now. We've added 64-bit, multi-core processing, MIDI tracks and virtual instruments in the latest version; and that sets us up with a platform where we continue development very quickly and are bringing some of our large-format console expertise to bear. We already provide a suite of add-on plug-ins which come pre-installed with each new update of Mixbus, and can be individually enabled with a license. We also plan to develop some associated hardware products, such as a dedicated control surface. Eventually we'd like to completely bridge the gap between Mixbus and our large-format consoles, providing a suite of products that can take someone from a bedroom recording studio though to the largest and most revered facilities where you'll currently find our consoles.

Ben Loftis serves as Harrison Consoles' Mixbus Product Manager.

Harrison Consoles
harrisonconsoles.com/site/mixbus.html

> ## We wanted to reinvent the DAW as an actual mixing system with our own sound and a sensible workflow.

vides a knob-per-feature workflow and DSP that is derived from our large-format consoles.

We've had lots of questions about the remarkable sound quality of Mixbus. We attribute these differences to the techniques we developed while creating high-end digital consoles, which is a completely different direction than typical DAW development. For example, in the mid80s, we developed fully automated, digitally controlled analog mixer technology which was adopted by premiere filmmixing facilities around the world. When the digital revolution came, we were asked to convert the analog "processor" into a digital processor. This required us to develop a digital audio engine that operated exactly like the analog mixer they were using for previous projects; it had to sound exactly the same because only the backend was

In 2007, Harrison was asked by our customers to create a film "dubber"—a machine used for recording the final music, dialogue and effects stems of a movie. It needed to have destructive recording, timecode sync, basic editing, and other DAW-like features. Because our consoles used Linux, we preferred to use Linux for this product as well; there was only one popular Linux workstation at the time—Ardour—developed by Paul Davis. Paul was the first employee of Amazon.com, and was largely responsible for its 1-click online payment system. Rather than develop our own workstation from scratch, we chose to do it "the Linux way" and collaborate with Paul. We commissioned Paul to add "destructive recording" features that we needed, and launched the Xdubber at the 2007 NAB.

That collaboration sparked a series of projects for Paul, and the open-source platform that would eventually become Mixbus. One of these collaborators was SSL—someone you might consider a direct competitor with Harrison. In 2008, I found myself in the strange situation of speaking at SSL's press conference at AES, where it announced its official support for the open-source Ardour platform in collaboration with Harrison Consoles. SSL further developed the Mac version, and added support for AudioUnit plug-ins, among other features. While SSL ended its interest only a year later, its contributions remain a part of the Mixbus DNA.

Similar collaborations have continued until today; for example, Waves used the Ardour platform for its product Waves Tracks Live. It has contributed some really nice features, such as a new audio backend that interfaces directly with ASIO and CoreAudio. And, of course, Waves contributed heavily to the testing, optimization and stability that are necessary with a "live" product. By sharing improvements in the open-source realm, everyone gets a better product: Waves, Ardour and Harrison. Even Google has a part of this story: It funded the initial Windows port of Ardour, as part of its "Summer of Code" program. Based on these collaborations, Mixbus has grown to work on nearly every flavor of desktop: Mac, Windows and Linux, 32-bit and 64-bit. We also share the same session format as these other products. In a realm where standards bodies have not been able to make any headway with "session interchange" formats, here

Spectrasonics Omnisphere 2 Hybrid Digital Synthesizer Plug-in

After a lengthy wait (as in several years!), the new Omnisphere 2 Hybrid Digital Synthesizer from Eric Persing and the gang at Spectrasonics is finally out. As I learned, there was good reason for the delay: The new version has over 12,000 sounds with 4,500 brand-new patches and sound sources. There's a completely redesigned interface, new browser, 25 new effects units, more than 400 new waveforms and even the ability to import your own audio as a sound source. Needless to say, this thing is deep.

Omnisphere's Chorus Echo preset selection.

The first thing I noticed upon opening it up in my Pro Tools rig is the increased size of the instrument itself. This is good; in my opinion, more is better when it comes to viewing software plug-ins. There's an all-important mini Patch Browser pane on the left side that can be expanded to full screen, allowing for enhanced searching. I won't go into the basic layout of the instrument itself, as it's quite similar to the older version (with a few tweaks, of course). Personally, I was far more interested in what is inside.

With 12,000 sounds, you certainly need a good search function, and the new version is far better than the previous.

The Patch Browser window, a directory to the Omnisphere Library.

For example, type in "Piano" and a huge list of all piano-related sounds is retrieved. Once you load in a patch, you can then use Spectrasonics' Sound Match to find other sounds that are similar in nature. I stumbled across E-bowed Piano Groove 2 this way and couldn't stop playing it! I also noticed that the patches in this version load much faster than in Omnisphere 1 or Atmosphere.

Another cool feature is called Sound Lock, which "locks" in certain aspects of sounds as you browse. The drop-down menu allows users to choose from such parameters as Arpeggiator, Tuning Scale, Polyphony, Solo, Effect, Filters, Envelopes and more—very powerful stuff!

Its ability to take a stock patch and manipulate it is extensive. It allows the creation of sounds that are unique to each individual's creativity; it's one of key features of this synth, adding to its usefulness and longevity. For example, I took Bowed Colors > Bowed Drones > Joyful > Crescendo of Bowing Light and loaded it. On its own, it was very cool, consisting of two sound sources: something called Elephant Bow Bass (A) and Bowed Acoustic Guitar (B).

As indicated on the screen, the mod wheel modulates a Harmonia mix, adding a high and airy vibe. First, I reversed the Elephant Bow Bass using the Reverse button on Tab A. I then used the Gran (Granular) button in Oscillator Zoom A to turn on the preset Barber Pole Sweep FX.

Next, I clicked on the FX tab and added the new Innerspace to the rack using a drop-down menu to load two patches [for Innerspace, users load impulses rather than patches] within it called HyperBrush Wiggle 1 and Air Blow Decay 1. I then adjusted the balance between the two using the plug-in's A/B balance knob. Next I added ProVerb reverb to the subsequent rack space, followed by Bassman, a cabinet simulator.

That's just a few of the things you can do, and there's plenty more. Needless to say, the sound was creatively inspirational; it took a matter of just a few minutes to create a patch (using the Utility > Save Patch menu), placing it in my own custom folder for future use. I had to write some dark TV cues for one of those mystery crime shows; a few notes of this wild sound was all it took.

With Omnisphere 2, the sheer diversity and *quality* of sounds is stunning. To build something of this magnitude is no easy undertaking, and Spectrasonics should be applauded. It will certainly take more time to truly learn how deep this goes, but that's part of the fun of exploring new software.

Since installation, I find myself turning to it constantly for inspired composing. The only thing I would like to see in future versions is a numbering system of patches, which would just help even further with organization. From way-cool pianos, strings and EDM sounds to melodic cave stalactites (yes, really!), it can be used as a traditional synth or a wild sound design tool, seemingly limited only by what your mind can think of. I can only type so many words about it; it's simply something that you have to hear for yourself.

Spectrasonics
spectrasonics.net/products/omnisphere/

> The new version has over 12,000 sounds with 4,500 brand-new patches and sound sources.

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

THERE'S MORE ▲ Catch an extensive introduction video for Spectrasonics Omnisphere 2 via prosoundnetwork.com/aug2015

AVALON V5 PREAMPLIFIER/DI/RE-AMPING BOX ■ HAMMOND USA LESLIE STUDIO 12 ACTIVE SPEAKER CABINET ■ BLUE HUMMINGBIRD SMALL DIAPHRAGM CONDENSER MICROPHONE ■ JOEY STURGIS TONES (JST) GAIN REDUCTION DELUXE PLUG-IN ■ METRIC HALO PRODUCTION BUNDLE PLUG-IN SUITE

BY ROB TAVAGLIONE

Rob Tavaglione owns and operates Charlotte's Catalyst Recording and has been a long-time Studio Contributor to *Pro Audio Review*. https://twitter.com/robtavaglione

AVALON V5 PREAMPLIFIER/DI/RE-AMPING BOX

If you're talking about a "touring bass rig," you're often talking about an Ampeg SVT with an Avalon U5 DI preamp to provide the routing, impedance dropping and signal balancing to directly inject bass into FOH, monitors and the bass rig itself. Reasons? Durability, clean punch, musicality and seemingly flat frequency response—unless of course you're using one of the U5's many voicing curves to get the EQ right from the source (and who doesn't love that?).

To get from the U5 to the V5 (approximately $1,345 street), add a new gain stage (with +66 dB potential gain) and a mic preamp (w/ phantom) plus re-amp facilities. More details are here: avalondesign.com/v5.html. With it, my passive bass delivered instantly great results with +44 dB of gain and no filters; it was that distinctive U5 tone, perhaps a little fatter. The overall warm, flattering plumpness and pure musicality would have many a novice thinking "tube" when of course it's due to those proprietary Avalon transformers (as in the flagship 737 channel strip).

The Avalon V5 half-rack width DI and mic preamplifier.

Here's my audio clip as an example: soundcloud.com/pro-audio-review-magazine/avalon-v5-passive-bass-di.

Active bass via V5 was impressive. Compared side-by-side with the Manley Force and Radial Firefly—both fine bass tone suppliers in their own right—the active bass by way of the Avalon delivered the most unrestricted punch, the flattest frequency response and, with its set of 10 passive filters,

the widest tonal versatility. The versatility employing the filters opens up worlds of wildly different tones for the multi-axe-toting bassist. Here's my active bass clip, for example: https://soundcloud.com/pro-audio-review-magazine/avalon-v5-active-bass-di.

The V5 mic preamp is clean, quiet and warm; its 2 dB gain steps are perfectly incremented. Its re-amper (routing +4 dB balanced tracking output

from DAW into Line Input of V5, routing -18 dB unbalanced impedance-corrected Amp output to guitar amp) worked like a charm; it delivered great tone and transformer isolation (the latter a necessity). The power of both the preamp and the re-amper was multiplied with those not-exactly-subtle filters, especially when re-amping where high-passing or 400 Hz notching is often what the doctor ordered.

Of course, there are many more affordable DI solutions to be found, but I am specifically recommending the V5 to young rock and R&B producers (two genres where Avalon tone seems generally appreciated) who don't have a proper "front-end." Get a V5 and I'll say you are only a compressor shy of having a killer input channel usable on every track. Best of all, it's an investment for the long term, no matter how your arsenal grows.
Avalon Design
avalondesign.com/v5.html

JOEY STURGIS TONES (JST) GAIN REDUCTION DELUXE PLUG-IN

Metalcore producer Joey Sturgis has developed JST, an interesting line of super-affordable plug-ins seemingly aimed at heavy music creators, though they promise utility far beyond genre-based boundaries. I recently downloaded Gain Reduction Deluxe, essentially a colorful compressor with a unique range of controls.

Visually, a single, large VU lights up when the unit is engaged, indicating up to -20 of gain reduction. Curiously, this On (bypass) control is post Input level (-96 to +24 dB), which allows for easier in/out comparisons. There is no Threshold control, so Input works in accordance with Slay (ratio) to achieve gain reduction. Slay also seems to add distortion on its own, as ratios are increased. This distortion is further controlled by some interesting options; the output Gain control (from 0 to +36 dB) begins to saturate at +27 dB (with no worries as it's marked on the legend and

numerical control values can be manually typed in—an option I highly value). Its distortion/saturation isn't the bright/irritating type; it's more thick and wooly so that Body control is welcome, with its ability to roll off up to -10 dB of bottom end. All this sonic color screams for parallel processing and the Mix control provides such blending. If that's not enough, there is a Lo-Fi switch that engages that classic "big mid peak cradled by two bandpasses" for easy walkie-talkie and AM radio effects.

For heavy rock and metal vocals, Gain Reduction Deluxe is a one-stop-shop. Start out with a thick, dark dynamic mic (like a Shure SM7B or E-V RE320); hit a clean, fast preamp (or maybe a Neve-type 1073) to capture

The JST plug-in interface window atop a DAW track view.

all the rounded-off detail; insert GRD on the track and quickly control EQ, dynamics and the amount of grit—all in one plug-in. Here's a client's poorly recorded heavy-metal vocal, processed with only GRD: soundcloud.com/pro-audio-review-magazine/jst-gain-reduction-deluxe-metalcore-vox.

Clean bass DI turns into a growly behemoth using the same configu-

ration as above, albeit without much of the body rolled-off. Already distorted guitars can be further dirtied (without top-end nastiness or bloated mud) by using a little Slay or Gain saturation, a touch of Body filtering and approximately a 90/10 dry/wet blend at Mix. Whole mixes (or subgroups) can be saturated or overdriven in a similar way, although such sensitive work can get out of hand easily and patience is required.

Like all of JST's plug-ins, the prices are all lower than you'd expect; at $59, Gain Reduction Deluxe is either a fun diversion, a versatile tool you'll use daily or a secret weapon (if you're into metal, hardcore and punk).
Joey Sturgis Tones
joeysturgistones.com

BLUE HUMMINGBIRD SMALL DIAPHRAGM CONDENSER MIC

Like many small diaphragm condensers (SDCs), there's not much to describe about the new Hummingbird from Blue. It's a small, cylindrical body with a small diaphragm capsule (based on Blue's popular Bottle B1), no switched filters or pads and discrete Class A electronics. Yet the capsule pivots 180 degrees!

We are creatures of convenience: I was likely intrigued at the thought of quickly rough-positioning mics and then easily fine-adjusting its heads at the source. And you should be, as this one small innovation is quite useful, especially for self-recordists, phase-coherence experts, and those miking drums and percussion.

A pair of Blue Microphone Hummingbird small diaphragm condenser mics.

Hummingbirds are pressure-gradient condensers with a cardioid pickup pattern, full-bandwidth response up to 20 kHz and are quite sensitive with only 8.5 dB of A-weighted self-noise (quite good for an SDC, many of which are comparably noisy). Each Hummingbird is 6.7-inches long (a little longer than many SDCs). Here are full details, courtesy of Blue: bluemic.com/hummingbird/.

I'm normally a traditional Sennheiser MD 421-kind of guy on toms, but these swiveling heads make for some super-easy mic placement. The sound is very crisp on toms—quick, with notable at-

tack and generally exciting. Even if off-axis, cymbals were a good bit more rude than with dynamic mics. Drum room, snare (the swiveling head is so useful on this app), overheads, hat and ride were all suitable for the Hummingbird, with lots of detail (sometimes slightly more than may be needed) and no SPL problems (padding the preamp may be necessary) with a fine overall balance and little hype way up high (10 kHz to 12 kHz). Check out my audio example here: soundcloud.com/pro-audio-review-magazine/blue-hummingbirds-drum-rooms.

On vocals, the Hummingbird provided a really nice bottom end and detailed imaging, yet needed a little top roll-off, to my tastes. This balance suited acoustic instruments well. Using a pair—one Hummingbird on a guitar's body and the other aimed at the neck/body joint—provided a nicely articulated guitar sound with very little EQ, although I required a ribbon mic to add some chesty bottom-end to this B-Grade guitar model. Example: soundcloud.com/pro-audio-review-magazine/blue-hummingbirds-guitars.

My most preferred application for the Hummingbird is in Foley work. The bottom end is completly without unrealistic hype; the mids have the requisite transient accuracy; and the top-end pulls out lifelike detail, imaging and action. Its low self-noise, pop filter and rotatable caps sure don't hurt, either.

To summarize, the Hummingbird sounds fantastic and feels expensive, though it's only $299 each, street. With its super convenient swiveling head, I'd guarantee it's a solid choice for drums, instruments, Foley and "tapers" (music fans who record live music with a stereo pair and a portable recorder, often in ORTF, see photo).

Blue Microphones
bluemic.com/hummingbird/

Second Opinion: Blue Hummingbird

As a long time fan of Blue microphones, I've long awaited the release of the company's next studio-grade quality microphone. Over the past few years, in addition to entering the headphone market with one of the finest performing headphones to date, Blue has led the industry in "iDevice" recording accessories. Unfortunately, there haven't been any Blue studio microphones introduced for quite some time, so the Hummingbird is welcome.

I've been testing a pair of Hummingbirds for several weeks and I absolutely love them. While it's no surprise they do a wonderful job capturing drum overheads and acoustic guitar, I found they work equally well on electric guitar and harmonica, and the rotating head allows the mic to be easily placed in positions not possible with fixed position fixed-head microphones.

I'm not typically a fan of small diaphragm microphones on vocals, but I opted to give the Hummingbird a try while recording Brian Redahan's voice on a recent project. I've recorded Brian a lot; he has one of the best rock voices that I've encountered. I typically use a Shure SM7B or AEA A440 to capture his huge, larger-than-life, raspy tone, as both mics are both perfectly suited for his vocal sound. Skeptical at first, I was astounded at the way the Hummingbird captured his vocal. On Brian's voice, the Hummingbird has all of the rich, thick bottom and mid-range of the A440 and all of the presence of the SM7B with an added sparkle on top.

Able to do an amazing job recording virtually any sound source, the Blue Hummingbird is the most versatile microphone I've encountered in a long time.

—*Russ Long*

HAMMOND USA LESLIE STUDIO 12 ACTIVE SPEAKER CABINET

Recording purists often talk about "moving air" as the ideal way to capture worthwhile sounds. This is debatable, as plug-ins and digital effects often get the job done adequately—except when it comes to the Leslie rotating speaker effect. Its wonderfully swooshing, phase-heavy, swirling warmth is punctuated with tube-ish growls and non-linear anomalies; these just don't seem to be authentic unless coming from a high-maintenance, high-dollar, highly immobile Leslie cabinet.

Hammond USA's latest Leslie offerings may just provide an ideal recording solution. I recently purchased the Studio 12 which employs a rotating 12-inch woofer, rotating high-frequency horn, a preamp with a tube gain stage, two foot-switchable channels (the high gain channel has contour control) and 100 W of power, all within a reasonably portable size. Although the woofer itself doesn't rotate, a styrofoam reflector spins in accordance with the rotating horn; yes, the spin is foot-switchable at two speeds or is continuously variable with an additional Leslie-brand foot switch.

In small churches throughout the South, it's easy to find many congregations where a drummer, a

leader, a choir and Hammond/Leslie combo provide the entirety of the music at ear-shattering levels, with both bass notes and upper registers via Leslie(s) and the distortion of the cabinet's all-tube amp delivering a sonic wallop not unlike a loud rock band. The Studio 12 won't do all that—yet it will deliver close to that, with the clean channel providing clear, bell-like tones and the distinctive Leslie warble that suits old-school R&B, classic country and the wedding march; the dirty channel will overdrive pretty nicely and the EQ/contour foot switch provides numerous dynamic and tonal options.

In fact, guitar tones are quite possible (both clean and dirty) and the warble when changing speeds (up or down) will light up a guitarist's face every time, especially with just a touch of distortion for sustain. I've witnessed the successes.

Here's a webclip as performed by keyboardist Jason Atkins with my Hammond L-222 organ, the Studio 12, a stereo large diaphragm condenser (LDC) up top and an AEA ribbon down low: soundcloud.com/pro-audio-review-magazine/hammond-leslie-studio-12-w-jason-atkins.

At $1,499, the Studio 12 isn't ex-

METRIC HALO PRODUCTION BUNDLE PLUG-IN SUITE

Control screens from elements of Metric Halo's Production Bundle of plug-ins.

Metric Halo (MH) has largely made its name on the merits of high-quality hardware and converters, specifically DAW interfaces like its LIO and ULN. It now offers a suite of plug-ins known as the Production Bundle, covering all the basics (and a few novelties) of signal processing ($699 direct). Sale priced at a heavily discounted $299 (for the moment), MH's Production Bundle is screaming for your attention. Eight plug-in modules make up the bundle, and are as follows:

Channel Strip: Includes gate/expander (with tunable side-chain), compressor (fully-featured with continuously variable knee and a tunable side-chain), six-band parametric EQ (with numerous selectable filter types); output limiter, fader, polarity flip, lots of metering and SpectraFoo frequency analysis. Channel Strip has just about everything needed to effec-

tively manage a mono signal, except to add some character.

Character: MH modeled 20 different analog devices to capture its "euphonic distortion" and reject all undesirables (phase shift, noise, hum, etc). Character's 20 preset names evasively indicate what analog sources are modeled, yet the actual operation leaves few questions. Drive and Gain provide the plug's only controls, dialing in subtle transformer and tube non-linearities in useful ways (mostly subtle enough for tracks and mixes), avoiding the cartoonish destruction a cynic might have expected.

Halo Verb: Based on MH's hardware reverbs, this plug-in offers pre- and post-filters, adjustable width control, damping, pre-delay and essentially the whole nine yards. Oddly, users must select a preset to select a room type, but this plug-in is otherwise efficient. There's something

about these room algorithms I really like. Across the Halo Verb palette, all are useful and musically adaptive (rooms, halls, arenas, plates, etc) and are offered in both Aux bus and Mix bus varieties.
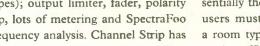
Dirty Delay: This unique plug-in is ideal for lovers of echo and delay who especially prefer a little grit in their repeats. Dual delay lines are offered (with Feedback and Crossfeed controls) with dual gain controls and delay time, tapped or synced; the key is the choice of colorations (with both Drive and Gain controls). Very much "today" for pop vocals, this plug-in is a dream come true for EDM producers who have never bloomed an echo repeat without coloring and texturizing it (and likely automating some aspect of the process for even more uniqueness). This is my new go-to plug for lightly-colored, straight-up

Hammond

(continued from page 36)

actly a steal, but the authenticity it lends a Hammond synth patch is tremendous; the real-deal authenticity when paired with an actual Hammond organ (which are dirt-cheap without a cabinet these days) is synergistic; and the flexibility the Studio 12 brings to guitars, vocal re-amps and synth re-amps is enough to entice curious clients looking to actually move a little air.

Hammond USA
hammondorganco.com/products/leslie/studio-12/

Hammond's Studio 12 Leslie cabinet.

Crane Song INSIGNA Tube EQ for 500 Series

BY WES MAEBE FOR *AUDIO MEDIA INTERNATIONAL*

We are constantly inundated with new 500 Series units. Many manufacturers have jumped on the bandwagon; it seems to be a pretty sure-fire way of selling boxes. But when a top designer like Crane Song's Dave Hill decides to release a 500 Series valve EQ, we engineers get excited.

The INSIGNA ($1,299 street) is based around a dual-triode circuit with a 12AX7 valve. It features two shelving EQs, a parametric mid-band EQ (gyrator) and a low- and high-pass filter set. The filters are both 24 dB/octave with seven frequencies each. The high- and low-frequency shelving bands and the mid-frequency peak band all feature eight frequencies. All three bands employ buffered RC circuitry in the negative feedback path around the valve amps. The output stage sports a shielded Lundahl high-level line output transformer to combat any potential noise.

All of the INSIGNA's stepped frequency controls are high-quality Grayhill 56 Series rotary switches. The unit also features continuous Bourns pots for gain and a front panel hard bypass switch.

The INSIGNA's frequency set is rather extensive. High-pass filters range from 25 Hz to 150 Hz at seven frequencies; the low-pass filters range from 6 kHz to 20 kHz at seven

frequencies. Its filters are powerful enough to clean up low rumble, low end on LF-centric instruments as well as control harshness at the top—like guitars, for example. The HF shelf gently ranges from 3.2 kHz to 20 kHz at seven frequencies with the addition of an ultra-high AIR band.

On the other side of the spectrum, the LF band shelves from an extremely low 10 Hz to 200 Hz. Straddling the middle, the Mid peaking band deals with anything from 150 Hz to 7.2 kHz and is centered on a proportional Q (bandwidth). All three bands allow +/-12 dB boost and cut.

Following last year's AES Convention in Los Angeles, I brought one of the first units back home and have been using it on a wide variety of material ever since. I started using it in a mix for two songs from Italian rock star Gloria Nuti. The multitracks would arrive—recorded in various studios across Italy—and I'd generally sling the INSIGNA across the vocals to introduce analog warmth and valve bite. It became quickly clear that this EQ can be pushed quite aggressively without it ever sounding harsh.

For review purposes, I then decided to do something I generally don't do: track with the EQ in the chain. It turns out that this beast is an extremely useful tool when you're recording in less than optimal environments. I've recently started producing an EP for Country singer Georgia

Nevada. While still in preproduction, we got into the swing of things but didn't have time to go into a recording studio. I quickly slung up a couple of mics in my mix room to lay down the acoustic and electric guitars, lead vocals and BGVs. The INSIGNA instantly became part of the recording path, cleaning up the top end and low mush with its filters. It created different colors for layered parts as I used its three frequency bands. Since that session, it's been a permanent fixture in my Lunchbox.

Later, I was working on a very cool project rescued from a reel of 2-inch, recorded in New York in 1980. There were a few parts that we can't replace as the performers have passed away, but we felt that the rhythm track could've been a stronger performance. We lined up musicians and recorded them live, with a couple of mics, in a high-ceiling room. In addition to some creative mic placement,

The INSIGNA is a tube EQ for the 500 Series format featuring rich second harmonic triode tube colorization.

I needed a bit of EQ to shape the sound we were going after and the INSIGNA did just that. It worked well on kick and when it came to mixing, it proved to be the perfect EQ for some extra snap and bottom-end punch out of the snare.

Clearly the INSIGNA sits in the higher price bracket of 500 series EQs and is worth every penny. It is extremely well built, as we've come to expect from Crane Song. This EQ will give you serious corrective power, character and clarity, and it just sounds so fat and musical. It's one of those modern EQs that harkens back to the good old days, where you can go a little mad, push it to the limit and pull some very exciting sounds out of valve circuitry.

Crane Song
cranesong.com

> [It turns out that this beast is an extremely useful tool when you're recording in less than optimal environments...The INSIGNA instantly became part of the recording path, cleaning up the top end and low mush with its filters. It created different colors for layered parts as I used its three frequency bands. Since that session, it's been a permanent fixture in my Lunchbox.]

Metric Halo

vocal repeats (even if I look elsewhere for the really weird and filtery stuff).

De-Esser: It's a fully-featured sibilance and excessive high-energy remover that has ample provisions. Everything is included—excellent metering, tune-ability, ratio, attack and release, but most importantly users can monitor the de-essed signal, the sibilance itself, or the out-of-band signal (helpful in finding the right frequency). Like most de-essers, it can be finicky about which singers/mics/sound sources it enhances (all three of my de-essers get frequent use, sometimes daisy-chained up in succession). That said, this is as good

as my equally-finicky favorites, and sometimes better.

Multiband Dynamics: This processor is ready to make things loud and steady. Features include three bands, an output limiter, Mid-Side (M-S) processing, switchable autogain and ample metering. There's enough power here to radically rebalance a poor mix or completely screw up a fine mix; in my opinion, that's the mark of a properly powerful multi-band processor. Most notably, it's on par with similar offerings from Universal Audio, MOTU and Waves, all of which I regularly employ.

Multiband Expander: With three frequency bands, threshold, attack, release and SpectraFoo analysis, this plug-in allows downward expansion. Such a process could be

used for noise reduction (allowing users to hone in on hum or buzz), for the rhythmic control of a loop, or for drum leakage management. It's not something I use everyday, but it's a capable and useful tool nonetheless.

TransientControl: For altering the ADSR envelope of a sound event—not unlike SPL's beloved Transient Designer—TransientControl allows dynamic management and "forwardness" control. There's lots of power contained here, enough to radically alter the envelope with fast-attack, slow-attack and release controls found on both the Transient and Sustain sections. I really like this module a lot, as it injects life into crappy snares and toms, allows artfully over-the-top reconstruction

of snare samples and has a earned a permanent place in all my rock mixes.

I went into this MH Production Bundle review thinking that the last thing I needed were more plug-ins, but it won me over with near-effortless install/validation, simple and uncluttered GUIs, deep feature sets, direct numerical value entry and surprisingly useful sounds/tones/effects. I wish the windows were re-sizable, but that's really my only complaint. At this current sales price of $299, it is an easy recommendation. I'd still recommend it even if Transient Control, Dirty Delay and Character were the only modules!

Metric Halo
mhsecure.com/metric_halo/products/
software/prod-bundle.html

Primacoustic VoxGuard VU Nearfield Absorber

I've long found Primacoustic—the acoustic materials firm birthed from Canada's respected Radial Engineering—to be a rich source of absorptive and diffusive materials for improving the many lackluster environments we must often use in audio capture and monitoring. Not only are its foam products attractive, fire-resistant and well-made, they boast well-chosen sound absorption characteristics for most residential, commercial and institutional (read: non-acoustically designed) spaces.

Years ago, I reviewed—and subsequently purchased—Primacoustic's Broadway Series of acoustic products during a complete refurbishment of my primary audio workspace. With design guidance from Primacoustic's Jay Porter, it was a major improvement overall, both in monitoring accuracy and overall sound. Since then, I've moved my mixing location twice, with the Broadway panels along for the ride, proving to me their resilience and flexibility.

On the most affordable side of Primacoustic's offerings, I recently checked out the VoxGuard VU ($99 street), a microphone-surrounding ambient noise attenuator from the company's IsoTools acoustic accessories series. It is comprised of a durable polypropylene shell with eight strategically-placed slit openings; scalloped, hard foamcore absorptive material on its "performance" side; and a 3-inch x 7-inch Plexiglas window, better enabling vocal cues and group tracking collaboration. The VoxGuard VU mounts directly to any standard microphone stand; it can be used with a side-address studio microphone, a front-address microphone, or a studio mic with large boom extension; each configuration is detailed in the VoxGuard VU's user guide. Also included is an extension bar to adjust the distance between microphone and the VoxGuard VU's absorptive side.
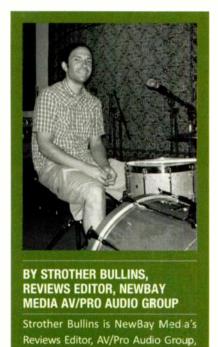
In use, I was impressed by the VoxGuard VU's effectiveness. Most notably, it excelled in ensemble applications, where a vocalist can be captured via microphone while surrounded by other instruments; while it couldn't isolate the preferred sound source completely, it

Primacoustic's latest incarnation of its VoxGuard, the VoxGuard VU, features a clever Plexiglas window embedded within its proven nearfield vocal screen design.

did significantly reduce some "make or break" bleed from other sources, ultimately allowing the signal to be cleaner, more direct and a useful bit less reverberant. The "VU" aspect of Primacoustic's VoxGuard upgrade is significant; for vocalists and brass/wind instrumentalists, I can't imagine using it without the window after having access to the VU model. While the window isn't exactly needed on drum applications, I loved using the VoxGuard between hi-hats and a nearby miked guitar amp; Prima-

coustic offers a purpose-built product for this very app (CrashGuard, essentially a "micro-VoxGuard" for drums and percussion).

I also applied the VoxGuard VU in non-musical applications, recording spoken word and phone tree messages in the kind of cinderblock-walled room often found in commercial and institutional environments. Using a large diaphragm condenser with a tight cardioid pattern, the "VoxGuarded" recordings were far more usable and "more profession-

al" sounding than those captured without, for direct comparison. I'd recommend a VoxGuard for HOWs, schools, and other applications to reduce springy "bad room" reverberation in daily announcements, for just one example; at less than $100, it's worth the cost as it would likely find uses in other institutional A/V applications, too.
Primacoustic
primacoustic.com

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

Strother Bullins is NewBay Media's Reviews Editor, AV/Pro Audio Group, active musician, recordist and club-level sound reinforcement wrangler. sbullins@nbmedia.com

soundPRODUCTS||||

InfoComm 2015 Best of Show Awards

The Pro Audio division of NewBay Media's AV/Pro Audio Group announced its Best of Show Award winners following the 2015 InfoComm Show. The Pro Audio division is comprised of NewBay Media titles *Pro Sound News* (*PSN*), *Mix* and *Pro Audio Review* (*PAR*). NewBay Media's Best of Show Awards are gleaned from submitted nominations and subsequent evaluation by a panel of engineers, industry experts and NewBay editors.

ALLEN & HEATH dLIVE DIGITAL MIXER SERIES

Built for live touring and world-class installation applications, the dLive Series offers a worksurface with "daylight" viewable color touchscreen and multi-gesture control for drag, drop, pinch and zoom manipulation; a customized, proprietary GUI widget section; color-based LED cascade view; and more. Bolstering this user-friendly feature set is a number of pro-grade tech specs: 24-bit, 96 kHz operation; expandability to 828 inputs, 848 outputs; and 2 x 128 channel 24-bit/96 kHz option slots, all available in three surface sizes ranging from a single 12-inch color screen (S3000) to the 36-fader dual 12-inch color screen model (S7000). A&H's MR Series Digital Mix Racks comprise the "brains" of the dLive, with dual redundant Gigabit links to its surface-mount, hot-swappable onboard power supply, 128 x 64 mix cores, reversible rack installation rails, the Me-1 Personal Monitor port, dual redundant DX ports for future expansions, and 3 x 128 channel 24-bit/96 kHz option ports for connection to third party networks.

AUDINATE DANTE VIA SOFTWARE

Dante Via software connects seemingly disparate I/O technologies—using computer-based USB, FireWire and Thunderbolt audio devices and varying applications—to a Dante network as well as to one another. As such, Dante Via extends the range and capabilities of pre-existing equipment, with the intention of converting local devices into shared network resources. Audinate foresees uses such as connecting headphones directly to a Dante network for device monitoring and channel checks via laptop; deploying audio to overflow areas using a computer and connected loudspeakers; and creating standalone audio networks using only computers running Dante Via, allowing USB and FireWire products to be used over greater distances and in new combinations.

AVID VENUE | S6L LIVE SOUND MIXING SYSTEM

Avid's VENUE | S6L is a touch-based live sound mixing interface with tight integration with Pro Tools, touted as a front-end to the Avid MediaCentral Platform, an end-to-end media management and distribution platform. Fully modular and scalable, it is "touch-based" via touchscreen workflows, ergonomics and proprietary visual feedback, and is intended to offer users the power to handle "huge channel and plug-in counts at the lowest possible latency," notes Avid. All processing is at 96 kHz, and support for higher sample rates is possible. It can be scaled via the VENUE | Stage 64 rack; each Stage 64 can be stocked with up to 64 inputs and 32 outputs, selected from a variety of analog and digital option cards. Notably, VENUE | S6L uses "open" Ethernet AVB across all of its components, requiring either lightweight, inexpensive Cat5e cables for runs up to 100 meters, or fiber-optic cables for longer runs up to 500 meters.

DAN DUGAN SOUND DESIGN MODEL N AUTOMIXER WITH DANTE

Dugan's automatic microphone mixer combines the company's auto-mixing algorithms with Dante I/O, targeting live sound applications, broadcast fa-

cilities and institutional or corporate conferencing uses. The Model N has primary and secondary Dante network connectors and is Power over Ethernet (PoE) capable. It provides 32 channels of Dugan automixing at a 96 kHz sampling rate (64 channels at 48 kHz). Dugan Speech System, Music System and Gain Limiting algorithms are all supported. Model N also boasts a new feature—scene memory—that can record and recall all operating settings, globally or by unit, in a library of named scenes. Dugan Model N can be controlled from its front panel, the Dugan Control Panel for Java (supplied free), the updated Dugan Control Panel for iPad (upcoming), and/or the Dugan Modek K Tactile Control Panel.

EAW REDLINE POWERED LOUDSPEAKER SERIES

Eastern Acoustic Works' (EAW) Redline consists of two powered, two-way loudspeakers—the RL12 12-inch and RL15 15-inch—along with the RL18S18-inch powered subwoofer.

Redline loudspeakers contain customized, proprietary drivers; RL12 and RL15 provide directivity via beamwidth-matched crossovers on 90 x 60 degree user-rotatable horns. Four-aperture ports provide bass support, reduced turbulence, and maximized, transducer-cooling air flow. Features include 1,250 W Class D amplification, DynO processing, 18-gauge steel sculpted grills and 15 mm hardwood cabinetry coated with EAW's own RoadCoat protective treatment. To suit strict riders and corporate aesthetic needs, the series' "red line stripe" is magnetic and removable.

MACKIE DESIGNS DL32R WIRELESS DIGITAL MIXER WITH DANTE

Mackie's DL32R is a 32-channel digital live mixer controlled wirelessly from an iPad featuring 32x32 direct-to-drive multi-track recording/playback within a 3U rackmount chassis. Key features include 32 Onyx+ mic pres and 28 busses, Mackie's Master Fader control app, and most recently, Mackie now offers the optional DL Dante Expansion Card for DL32R providing 32x32 channels of network audio I/O, allowing the mixer to be connected to any Dante-powered AV network.

PSN reviewed the buzzed-about DL32R earlier this year, reporting that it "covers the broadest range of audio tasks in the simplest way of any single product I've reviewed," offers reviews editor Strother Bullins. "Considering its feature set and Mackie's presence and power in the industry, the DL32R is poised to be the next big thing in all-inclusive audio capture, control, mixing and live recording production at $1,999 street. Add iPad, mics, cables and powered loudspeakers plus a CPU-based DAW or remote USB drive; that's all for a complete and super-capable live sound reinforcement + multichannel recording system."

MEYER SOUND LEOPARD LINEAR SOUND REINFORCEMENT SYSTEM

The Leopard linear sound reinforcement system is the smallest and lightest Meyer Sound offering within the Leo range. The patent-pending Leopard line array loudspeaker and its 900-LFC low-frequency control element come with a full suite of tools for systems design, array configuration and final commissioning. A two-way, self-powered system, Leopard measures less than 30 inch-
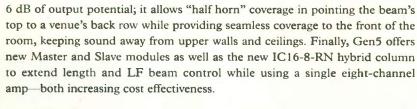
es wide and is intended for installations where sight lines and visual aesthetics are a concern. Key features include an array of Meyer Sound technologies included such as MAPP XT for acoustic prediction, Compass RMS for real-time system performance monitoring, Galileo Callisto loudspeaker management system, and the MDM-5000 distribution module for routing AC power, audio and RMS signals. Like all Meyer Sound products, Leopard systems are built and QC'd onsite at Meyer Sound HQ in Berkeley, California.

RENKUS-HEINZ ICONYX GEN5 LINE ARRAY

The nearly decade-old ICONYX beam-steerable line array series is now in its fifth generation, with extended capabilities. First, RHAON II System Designer software works via TCP/IP control with a 200-plus percentage increase in speed of operations. Renkus-Heinz's new UniBeam (Universal Beam) advanced beam steering algorithms provide an additional 3db to

6 dB of output potential; it allows "half horn" coverage in pointing the beam's top to a venue's back row while providing seamless coverage to the front of the room, keeping sound away from upper walls and ceilings. Finally, Gen5 offers new Master and Slave modules as well as the new IC16-8-RN hybrid column to extend length and LF beam control while using a single eight-channel amp—both increasing cost effectiveness.

TANNOY AMS SERIES LOUDSPEAKERS

Designed to match the sonic characteristics of Tannoy's CMS 3.0 ceiling loudspeaker, the AMS Series was conceived to provide a uniform sound signature throughout multi-zoned venues that feature both ceiling and wall-mount Tannoys. The AMS Series offers further development of Tannoy's Dual Concentric design with a new driver featuring Omnimagnet technology Torus Ogive Waveguide, which reportedly delivers more consistent directivity and improved high frequency response. Tannoy notes that its DC-powered models are voiced more similarly to studio monitors than old technology installation speakers and feature custom color availability, a high rating of IP65 in environmental testing, and impressive flexibility in both power requirements and consumption.

More New Products from InfoComm 2015

RADIAL DECODER MS (MID-SIDE) INTERFACE

Radial Engineering's Decoder is built to create stereo imaging with variable stereo width—the appeal of Mid-Side microphone technique—when combining a stereo mic with a second middle microphone. The Decoder offers three XLR inputs—input 1 is for the center mic, input 2 (a) is for a single output figure-eight mic or 2 (b) for users with two cardioids. Features include on-off and level control per channel, 48 VDC phantom power, high-pass filter, and a 180-degree switch to reverse the polarity of mic 2 (b). Selector switches allow microphones or line level sources when applying MS imaging to pre-recorded tracks. Housed in a 14-gauge steel chassis, the Decoder may also be rack-mounted via optional Radial SA rack-mount kit.

GENELEC ACTIVE INSTALLATION SERIES

At InfoComm 2015, Genelec featured its line of discreet, low-profile active speaker products such as the AIW25 Active In-Wall Loudspeaker, the AIC25 Active In-Ceiling Loudspeaker, and the AIWS5041A Active In-Wall Subwoofer—all part of Genelec's world-class architectural sound solutions. Both the AIW25 and the AIC25 feature matched, separate RAM2 remote amplifier modules with paintable metal enclosures. Also available is Genelec's Active On-Wall Speaker, the AOW312 (pictured), a three-way active model designed for medium to large commercial installations. Features include a 12-inch woofer, 5-inch midrange and one-inch tweeter with Directivity Control Waveguide (DCW) technology; a 37 Hz to 20 kHz (+/- 2.5 dB) frequency response; maximum peak SPL of ≥116 dB; dimensions of 59 1/16-inch x 15 3/4-inch x 6 7/8-inch (H x W x D, respectively).

AURALEX SUSTAIN BAMBOO DIFFUSORS, V2

Auralex unveiled enhanced versions of Sustain Bamboo Sound Diffusors in its Version 2 incarnation. Based on customer requests and further testing at Auralex HQ, the handmade and "green" Sustain now feature sharper angles, evolved construction techniques, and new models. Joining the Sustain lineup is Metro, a diffusor featuring a cityscape design; previously existing models have also been updated.

Auralex Sustain v2 features sustainably grown and harvested bamboo; optional absorption and advanced diffusion models, with back-filled Mineral Fiber or Studiofoam options; 23-inch x 23-inch sizes with variable depths, depending on the model; wall, ceiling or drop grid mounting options; and more.

SENNHEISER SL HEADMIC 1 PRESENTER'S MICROPHONE

At a near-weightless 0.2 ounces and available in black or beige, Sennheiser's new SL Headmic 1 headworn condenser microphone utilizes the omnidirectional MKE 1 capsule and is easily connected to a bodypack transmitter via 3.5 mm jack cable, also included. For bodypacks with a 3-pin audio socket, an adapter is available for additional cost. The SL Headmic 1 kit includes a windshield, frequency response cap to raise higher frequencies when the windshield is employed, and a soft case with room for the user's preferred bodypack transmitter.

AMPLIVOX PORTABLE PA WITH BLUETOOTH

AmpliVox Sound Systems has upgraded most of its portable PA (PPA) systems to include Bluetooth wireless connectivity—all at no additional charge. The SW720 (pictured) is a lightweight (11.5 lbs.) all-in-one PPA featuring wireless handheld microphone, wired handheld microphone, iOS-compatibility with recharging capability, 3-4 hour play time from a fully-charged battery, and a 7-10 hour recharge time.

There's more information on all the products featured at prosoundnetwork.com/aug2015.

soundREINFORCEMENT IIII

Music To Tune A PA By

BY CLIVE YOUNG

The advent of digital recording has forever changed the music industry, and it's certainly affected the live sound experience, too. Most touring FOH engineers are now tasked with preserving every show for eternity on hard drives, and the front rows of any concert have become a forest of outstretched arms capturing video on smart phones. And with the growing number of digital console systems offering Virtual Soundcheck-like capabilities, one would expect that those features would supplant the long-standing tradition of engineers checking the PA by listening to familiar favorites—the cliché example being Steely Dan and Donald Fagan tracks. Perhaps surprisingly, however, using pre-recorded music to listen for anomalies remains the way to go. We asked engineers on a variety of tours about what they're listening to when they're tuning the PA, and the answers were surprisingly broad.

George Thorogood and the Destroyers play through the PA of the day, so production manager/FOH engineer Jeff Pitt has plenty of ex-

The massive L-Acoustics K1/K2 system fielded by Delicate Productions for the current Foo Fighters tour gets tuned daily with tracks ranging from Alison Krauss to Massive Attack's "Angel."

perience getting a system in shape for a night of growling vocals and guitars to match. "For source tuning material, I utilize a couple of tracks from Jonny Lang's *Lie To Me* record," he said, "because it has incredible space, and the mix style is very similar to that of my own. It's a thick but punchy bottom end; the guitars

and vocal tend to pop out and will show the ugly tonality of a PA in the 2.5 k range, as well as the low-mid thickness in the 250-400 range. The other predominate piece I'll use is the classic Dire Straits track, 'Money For Nothing.' It just has all of the pieces I need and is very musical. I do use

Front Fill For Gill

NASHVILLE, TN—Throughout his storied career, country music mainstay Vince Gill has taken his own considered approach to things, so it stands to reason that his current 2015 tour, playing theaters, festivals and events across the U.S., has its own unique take on house sound as well. While the production is using local systems at each stop, production manager and long-time FOH engineer, Hugh Johnson, ensured that the tour would carry its own front fills to complement the "PA du jour."
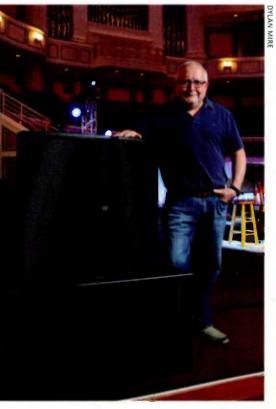
"Playing the venues we are, it makes no sense to carry a full PA," said Johnson, "But at the same time, it's important to have the tools to get the best sound out of the systems we encounter. That's why I've carried my own front-fill system since our full-production days ended. These VUE Audiotechnik components are so musical, and they give me coverage for the front rows that is lacking in so many line array systems."

Johnson's approach to front fill starts with full-range, self-powered stacks on both corners of the stage. They consist of VUE's h-15W and h-15N loudspeakers paired togeth-

er atop the hs-28 dual 18-inch subwoofer system. Between those corner stacks, he deploys up to eight a-8 loudspeakers at the lip of the stage.

"The h-15s are trapezoid boxes—one with a narrow dispersion pattern and one wide," said Johnson. "The wide box, the h-15W, has a 100-degree horn that faces almost straight on. The 50-degree box (h-15N) is on the inside, toed in so that it crossfires to hit the middle of the downstage front rows. That covers the little pie-shaped piece of real estate in the center that most line arrays have a hard time getting to."

On the stage deck, the hs-28 subwoofers are oriented horizontally and make use of the boxes' hybrid subwoofer design intended to reduce distortion while optimizing amplitude and phase response, with separate on-board power

Production manager/FOH engineer Hugh Johnson has been using VUE Audiotechnik h-15W and h-15N loudspeakers with hs-28 subs for front fills on the current Vince Gill tour.

supplies and DSP algorithms for each 18-inch driver.

"This subwoofer is turning into one of my favorite loudspeakers," said Johnson. "It's rare among 18-inch

Midler Returns to Road with Solotech

NEW YORK, NY—Bette Midler's "Divine Intervention" arena tour—her first global tour in over a decade—recently closed out its North American leg, carrying extensive audio production from Montreal-based Solotech, including DiGiCo SD7 consoles and a sizable L-Acoustics K1/K2 PA.

Because of the complexity of the production, the sound system has to be flown higher, and the left and right hangs of the system need to be positioned wider apart, than would be typical for these types of arena shows. "The show has some physical requirements that cause us to have to position some elements of the PA system in order to accommodate sightlines," said FOH engineer Steve Guest.

Guest noted that he and system technician Frédéric Cantin use the time before and during soundchecks to fine-tune the system in each new venue, using the wireless capability of

Solotech System Technician Frédéric Cantin (left) and Bette Midler's FOH Engineer, Steve Guest, at the tour's house mix position.

L-Acoustics' LA Network Manager and its Array Morphing tool for tonal balance adjustment. "After I get the sound exactly as I want it at the FOH position, we can move to different seating areas and tune system to allow each area of the venue to experience what I experience as I mix the show," said Guest, who has mixed Midler's live shows in the past, including some

during her 2008-2010 residency at Caesars Palace, as well as tours for artists including Janet Jackson, Ricky Martin, The Backstreet Boys and David Bowie. "I can't put the boxes exactly where I'd want them on this show, but L-Acoustics gives me the tools to compensate for that."

Cantin adds, "The great thing about the L-Acoustics enclosures is that they sound great right out of the box. They are very, very musical, and that helps us with challenging situations like these can be."

The system is comprised per side of 14 K1 and four K2, as well as eight flown K1-SB and four SB28 floor subs, 16 additional K2 as side hangs, three coaxial 8XT and one 12XT front fills, three Kudo side fills, and three more 12XT for onstage monitors, all powered by 51 LA8 amplified controllers loaded into 17 LA-RAKs.
Solotech
solotech.com

L-Acoustics
l-acoustics.com

Taking On *Classic Quadrophenia* at the RAH

LONDON, ENGLAND—A classical music reinterpretation of one of The Who's most intriguing concept albums, *Classic Quadrophenia* was recently presented at the Royal Albert Hall in London. The production featured the Royal Philharmonic Orchestra, the London Oriana Choir, and guest singers Billy Idol, Phil Daniels and Alfie Boe.

The PA was provided by Capital Sound, along with a Allen & Heath iLive mixing system comprised of two modular iDR10 MixRacks installed on stage and linked using ACE, with an iLive-112 control surface at FOH position linked to the racks, using fiber optic and Cat 5 working in tandem. The system needed to manage a total of 128 inputs, with approximately 12 outputs, 16 DCAs, and providing orchestral stems to the monitor board, the main venue L/R, and recording feed to the mobile broadcast trucks.

"The iLive-112 surface has a compact footprint which is ideal for theater situations," said FOH engineer Ian Barfoot, "but the impressive thing is that I can run the console as a 224-strip surface, us-

ing the soft keys to recall different control strip configurations as scene recalls, greatly expanding the scope of what I see in my layers. By programming various soft keys to provide completely different control strip setups for different parts of the orchestra, I can instantaneously recall a different channel configuration all at the touch of a

Ian Barfoot with the Allen & Heath iLive-112 control surface he used at the FOH position during the Royal Albert Hall's presentation of *Classic Quadrophenia*.

button. In fact, I could multiply up to 9 times the 112 channels...but that's madness."

Barfoot also used a laptop running iLive Editor as an extra meter bridge so the system technician could monitor the first 50 microphones (mainly the string section).
Allen & Heath
www.allen-heath.com

Meyer Sound Fares The Grateful Dead Well

CHICAGO, IL—July saw the Grateful Dead close out its career at the 50-year mark with its final "Fare Thee Well" shows in Chicago, but the short mini tour kicked off, however, at Levi's Stadium in Santa Clara, CA, using a Meyer Sound Leo PA to create a quadraphonic surround setup for the 60,000 fans in attendance each night. A nearly identical Leo system was used for the Chicago shows as well.

It all marked a milestone in the band's decades-long association with Meyer Sound CEO John Meyer, as the Grateful Dead's original sound engineer, Owsley "Bear" Stanley, first tapped Meyer to create acoustic solutions for the legendary "Wall of Sound" system in the 1970s.

The Meyer Sound Leo system with its accompanying 1100-LFC low-frequency control element was used to create an immersive fan experience in Levi's Stadium and supported an experimental segment devised by drummer/percussionist Mickey Hart. Using the system to transmit ultra-low frequencies in surround sound, Hart probed how the brain perceived audible and below-audible rhythms.

"John Meyer's 1100-LFC loudspeakers empower the rhythmic voice and enable percussionists to manifest new ideas," said Hart. "They are sonic tools for reliably transmitting vibrations that affect neurologic function in a special way we are only beginning to understand, enabling us to explore healing properties embedded in low-frequency sound—a dream come true for us all."

The PA system comprised four front arrays of 17 Leo-M and three Mica line array loudspeakers each, with dual side columns of 14-each

Pro Media/UltraSound fielded a massive Meyer Sound system for the final shows by The Grateful Dead, seen here at Levi's Stadium in Santa Clara, CA.

1100-LFC low-frequency control elements and a center column of 22 700-HP subwoofers in an end-fire pattern. Side and offstage coverage was supplied by 32 Lyon and 32 Milo line array loudspeakers, respectively, with an additional 30 Mica loudspeakers providing behind-stage coverage.

Filling in the far ends of the stadiums were four delay towers with a total of 56 Milo loudspeakers and eight 700-HP subwoofers. Two additional towers of eight Lyon loudspeakers each faced the stage for quad surround effects, with six CQ-1 and four Lyon loudspeakers providing front fill. A Galileo Callisto loudspeaker

management system handled drive and optimization, and 16 MJF-212A stage monitors provided onstage foldback.

Audio requirements for the shows were handled by Martinez, CA-based Pro Media/UltraSound, with system design by Derek Featherstone, the audio vendor's vice president of touring and rental and the band's FOH engineer since 2005. Additional equipment support for the five shows came from Blackhawk Audio, Rainbow Production Services, Show Systems, and Solotech.

"The Leo and 1100-LFC system can handle everything we put into it," says Featherstone. "We are also

very impressed with the quality control of the Meyer Sound self-powered equipment. Being able to acquire 650 loudspeakers from several different vendors located in multiple states, assemble the large system on site, and have it work seamlessly is no small feat."

John Meyer's work with the Grateful Dead extends to the mid-1970s when the band's concerts were heard through McCune Sound Service's JM-10 systems designed by Meyer.
Pro Media/UltraSound
Promediaultrasound.com

Meyer Sound
Meyersound.com

Giving Luke Bryan An Earful

NASHVILLE, TN—Luke Bryan's Kick The Dust Up Tour has been crossing the U.S. with a mix of stadium and amphitheater dates interspersed with major country music festivals. At stageside for each show is monitor engineer Ed Janiszewski, who has mixed the singer's monitors since 2008, when Bryan was playing honky-tonks.

The level of familiarity created by having the same audio team and gear every time help Bryan focus on entertaining the crowds. "My job is to take what ev-

Ed Janiszewski has mixed country artist Luke Bryan's monitors since 2008 when the singer was playing honky-tonks.

erybody is playing and mix it down in a way that sounds musical and is useful to the guys on stage," said Janisze-

wski, who has the artist on Sensaphonics 2MAX personal monitors, and with good reason. "Luke does part of his set on a secondary stage out in the audience, in front of the PA," notes Janiszewski. "Those are rock-show sound levels out there, and the extra isolation from the solid silicone earpieces means he doesn't have to turn it up as much to hear clearly. That's something Luke is really aware of. He's definitely concerned with maintaining and conserving his hearing."

During a recent show in Orlando, Sensaphonics president Michael Santucci was backstage and did fresh ear impressions for Bryan and several band and crew members. "Luke even had Dr. Santucci do impressions for Musicians Earplugs for his nephew," recalls Janiszewski. "Between sound checks, opening acts, then our own 90-minute set, that's a lot of loud. We're both very aware of the need to limit our exposure. In fact, every time we play Chicago, I make it a point to stop by Sensaphonics for a hearing test. I just did that recently, and was very happy with the results. Which means that what we're doing is working."
Sensaphonics
sensaphonics.com

Vince Gill

systems in that it actually delivers a musical note, not just thump. For instance, the bass guitar coming through the hs-28 sounds really nice and even, very melodic but with plenty of impact."

Eight compact a-8 loudspeakers also cover the front rows via an 8-inch low-frequency driver and a 1-inch compression driver. "Depending on the stage and the PA, I'll use anywhere from six to eight of them spaced along the stage lip," he said. "They've got a rotatable 70-by-55 degree horn, which we've set to give us 70-degree dispersion when they lay

A Big Dam Truck Launch

HOOVER DAM, NV—When Daimler Trucks North America recently debuted its new Freightliner Inspiration Truck at the Hoover Dam.

Creative Technology (CT) delivered a video reveal and immersive sound to the invited audience and used three Radio Active Designs UV-1G wireless intercoms for the production.

"It was an incredible undertaking," said Danny Guerrero, systems engineer at Creative Technology. "There were 60 projectors set up in scaffolding more than 2,500 feet from the Hoover Dam. Each of the three viewing sites were equipped with sound. We ran from 500 feet to 5,000 feet of fiber to tie in all production and spectator sites; the entire event was really quite spectacular."
Radio Active Designs
RadioActiveRF.com

A total of 60 projectors put video on the Hoover Dam while delivering an immersive sound experience, all coordinated using Radio Active Designs wireless intercoms.

on their side. I'm easily covering the first two, three rows with them."

Out at front of house, Johnson is also carrying a pair of VUE i-6a speakers as nearfield monitors. "I mostly just use them as my personal fill speakers for the mains, with one on each corner of the console doghouse," Hugh explains. "At a lot of theaters, I might be stuck under a balcony or in some other bad position. But by timing the delay just

right and just barely cracking the nearfields open, I can get a good picture of the venue sound."

Johnson decided to bring the VUE boxes out on the road after first taking them into Sound Image's Nashville shop to hear them in a closer environment. Having now had them on tour, it won't be the last time they hit the road with Gill. "I will absolutely be taking them out with me again," said Johnson. "The front fill system

has performed remarkably well. The key is to make a seamless transition between the VUE front fills and the house PA, and it has just been effortless in getting them to match up. I usually get my system tuned in about 10 to 15 minutes a day."
VUE Audiotechnik
www.vueaudio.com

Sound Image
www.sound-image.com

centerSTAGE TOP 10 TOURS OF THE MONTH

ACT / STATISTICS	CREW	EQUIPMENT
1 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-4000; 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; **WIRELESS MICS:** Shure UR Series; **EQUIPMENT:** Aphex 612; Lexicon PCM 80; dbx 903; Alesis ML-9600 CDR; Clair iO processor; Radial Twin-Iso, JX44, Duplex; **MONITOR EQUIPMENT:** TC Electronic 1128; dbx 160a; SPL Transient Designer 4
2 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 Pro D8; **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
3 TAYLOR SWIFT | EIGHTH DAY SOUND	David Payne (he/be); Scott Wasilk (me); Jordan Kolenc (me/cc); Edgardo Vertanessian (se); Casey Stewart (ae); Bill Flugan (rf); Andy Dudash, Bill Fegley, Turner Pollari (tech)	**HC:** DiGiCo SD7; **MC:** (2) DiGiCo SD7; **HS:** d&b audiotechnik J and V series with array processing; **IEM:** Ultimate Ears; Sensaphonics; Shure PSM 1000; Albatross Audio PH9B; **HA:** d&b audiotechnik D80; **HARDWIRED MICS:** Shure Beta 91/52; Telefunken M80SH; Audio-Technica ATM450; DPA 4099; AKG 414; Sennheiser 935; **WIRELESS MICS:** Sennheiser 9000 Series with 9235 capsules, 5000 Series with 5235 capsules; **FOH EQUIPMENT:** Waves SD7 Pro Show Bundle; Rupert Neve Designs MBP and Portico II Channel; SPL TD4; Bricasti M7; Lexicon PCM 92; Elysia Nvelope; TK Audio BC1; **MONITOR EQUIPMENT:** Waves SD7 Pro Show Bundle; Rupert Neve Designs Portico II Channel; SPL TD4; Lexicon PCM 70, PCM 92; Eventide Eclipse; Bricasti M7; TC Electronic M-One XL; dbx 160x; UBK Fatso Jr.
4 SHANIA TWAIN | VER TOUR SOUND	Nigel Green (be); Connie Fernstrom (me); Kenny Sellars (cc/se); Ike Zimbel (rf tech); Carter Hassebrock (m tech); Joey Armada, Justin Keasling (techs)	**HC:** Avid D-Show, sidecar; **MC:** DiGiCo SD5; **HS:** Meyer Leo, Lyon, 1100 LFC, Mica, Mina; **MS:** d&b audiotechnik M4; **IEM:** Sennheiser SR 2050; **MA:** d&b audiotechnik D12; **HARDWIRED MICS:** Shure; Sennheiser; Royer; Earthworks; Radial Firefly, SW8; **WIRELESS MICS:** Sennheiser SKM5200; DPA 4088 Headsets; **FOH EQUIPMENT:** Venue Pack 4; Waves Mercury; Crane Song Phoenix
5 BETTE MIDLER | SOLOTECH	Steve Guest (he); Colin St-Jacques (cc); Frédéric Cantin (se); Alexandre Bibeau (m ast); Charles Déziel (rf/comm tech)	**HC:** DiGiCo SD7; **MC:** DiGiCo SD7; **HS:** L-Acoustics (28) K1, (40) K2, (16) K1SB, (8) SB-28, (6) 12XT; **MS:** L-Acoustics (10) 12XT, (6) Kudo Flown Side Fills; **IEM:** Shure PSM 1000; Future Sonics; JH Audio; **HA:** L-Acoustics LA8; **MA:** L-Acoustics LA8; **HARDWIRED MICS:** Octava; Rhodes; DPA, Royer; Neumann; Countryman; Yamahiko; Shure; Sennheiser; **WIRELESS MICS:** Shure Axient, UHFR; DPA D:facto capsule on Shure HSP4 headset; Shure KSM9 capsules on DPA 4088 headsets; Audio-Technica ATM350; **FOH EQUIPMENT:** Waves; Bricasti M7 Reverb
6 KENNY CHESNEY | MORRIS LIGHT AND SOUND INC.	Chris Rabold (he); Bryan Baxley (be); Phill Robinson (me-Chesney); Tanner Freese (foh tech); Rich Rossey (patch); Justin Meeks (cc); John Mills (se); Phil Spina, Ryan Lewis, Annie Hallquist (techs)	**HC:** SSL Live L500; **MC:** (2) Midas Pro9; **HS:** (184) Nexo STM; **IEM:** Shure PSM 1000; **HA:** Nexo NUAR Universal Amp Rack; **HARDWIRED MICS:** Shure SM57, Beta 52, SM58; Earthworks; Audio-Technica; Radial JDI, J48; Sonic Farm 2di4; **WIRELESS MICS:** Shure Axient with KSM9HS caps
7 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
8 ROMEO SANTOS | 3G PRODUCTIONS	Manny Perez (he/cc/se); Franklin Espinal (be); Javier "Chico" Morales (me); Ken Quinlan (se/cc), Sara Jean Holt (ae)	**HC:** Avid Venue; **MC:** Yamaha PM1D; **HS:** (18) d&b audiotechnik J Series mains, V Series sides, Y Series 270° hang, mixed J Infra/JSub sub array, Q10s Front Fills; **MS:** L-Acoustics flown Arcs; **IEM:** Sennheiser SR2050, G3; Aviom A16; **HA:** d&b audiotechnik D80; **MA:** L-Acoustic LA8; **HARDWIRED MICS:** Shure; Sennheiser; **WIRELESS MICS:** Shure UHF-R Beta 58; **FOH EQUIPMENT:** Dolby Lake; d&b audiotechnik R1 System control; Rational Acoustics Smaart 7
9 THE WHO | EIGHTH DAY SOUND	Robert Collins (he); Bob Pridden (me-Townshend); Simon Higgs (me); Chris "Chopper" Morrison (se); Trevor Waite (mtech); Ben Smith, Matt Strakis (tech)	**HC:** DiGiCo SD7; **MC:** DiGiCo SD7; Midas XL-3; **HS:** d&b audiotechnik J8, J12, J Subs, Y Series; **MS:** d&b audiotechnik M2, M4; **IEM:** JH Audio; Shure PSM 1000; **HA:** d&b audiotechnik D80; **MA:** d&b audiotechnik D12; **HARDWIRED MICS:** Shure; **FOH EQUIPMENT:** TC Electronic 6000, Summit TLA-100; **MONITOR EQUIPMENT:** Bricasti M7; TC Electronic EQ Station; Summit TLA-100, DCL-200; Lexicon PCM 60; Yamaha Rev7
10 RUSH | CLAIR GLOBAL	Brad Madix (he); Brent Carpenter (me); Anson Moore (se); Corey Harris (mse)	**HC:** Avid Venue Profile; **MC:** Avid Venue Profile; **HS:** Clair i-5, i-5B, Cohesion CP-218, Cohesion CO-8; **MS:** Clair Cohesion CP-218; **IEM:** Shure PSM 1000, PSM 600-HW; **HA:** Lab.gruppen PLM20000Q; **HARDWIRED MICS:** AKG 414/ULS; Audio-Technica AE2500, AE3000, AE6100, AT4050, AT4060, AT897, ATM23, ATM35, ATM350, ATM450; Neumann KM184; Shure Beta 91, Beta 98, SM57, SM58, SM91; Telefunken M81; **FOH EQUIPMENT:** Crane Song Phoenix; Digidesign Eleven; Eventide Anthology II

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. IEM: in-ear 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.

SSL Live Catches Train

NEW YORK, NY—July saw Train finish up a lengthy U.S. shed tour, all tackled with a pair of Solid State Logic L500 consoles in tow, used at FOH and monitorworld by Jason Moore and Rob Greene, respectively.

The tour marked the first time either engineer had used the SSL Live, supplied by LMG Touring. "What sold me was a combination of its pre-amps and everyone saying 'You've got to hear this console,'" said Moore. "The sound was really the number-one selling point."

Moore made use of the console control surface layout and routing architecture. "The ability to lay out the console the way I want has been great," said Greene. "I love being able to put the reverb for Pat [Monahan, lead singer] right next to his vocal channel. But, my favorite part of the console is the sound quality of those pre-amps."

Even though SSL Live has a dedicated optical MADI 'FX Loop' for a plug-in server, Moore isn't using plug-ins. "I decided I wanted to 'stay in-the-box' and see what SSL Live has to offer onboard," Moore said. "I'm very happy with the dynamic EQ on Pat's vocal. I can set it up as a de-esser, but it also has more EQ bands that I can use."
Solid State Logic
solidstatelogic.com

Jason Moore with the SSL Live L500 console used at the FOH position on the recent Train tour.

Firehouse Fires Up Festival

AUSTIN, TX—Firehouse Productions recently provided sound reinforcement for the recent iHeartRadio Country Festival, fielding a Crown-powered JBL VTX line array system.

Firehouse provided two hangs of 18 VTX V25-II loudspeakers for the main PA, two hangs of 14 VTX V25-II loudspeakers for outfill, three hangs of nine VerTec VT4889 loudspeakers for rear fills, eight VT4886 loudspeakers for front fills and 18 VTX G28 ground-stacked subwoofers. The entire system was powered by Crown I-Tech 12000HD amplifiers.

"We have done many arena and stadium events like this one, so we were prepared for every possible scenario during the event," said Mark Dittmar, lead design & integration engineer at Firehouse Productions. "Normally it would take some effort and calibration to reach the farthest seats in the arena, but the coverage and SPL of the new VTX V25-II boxes really made it easy."
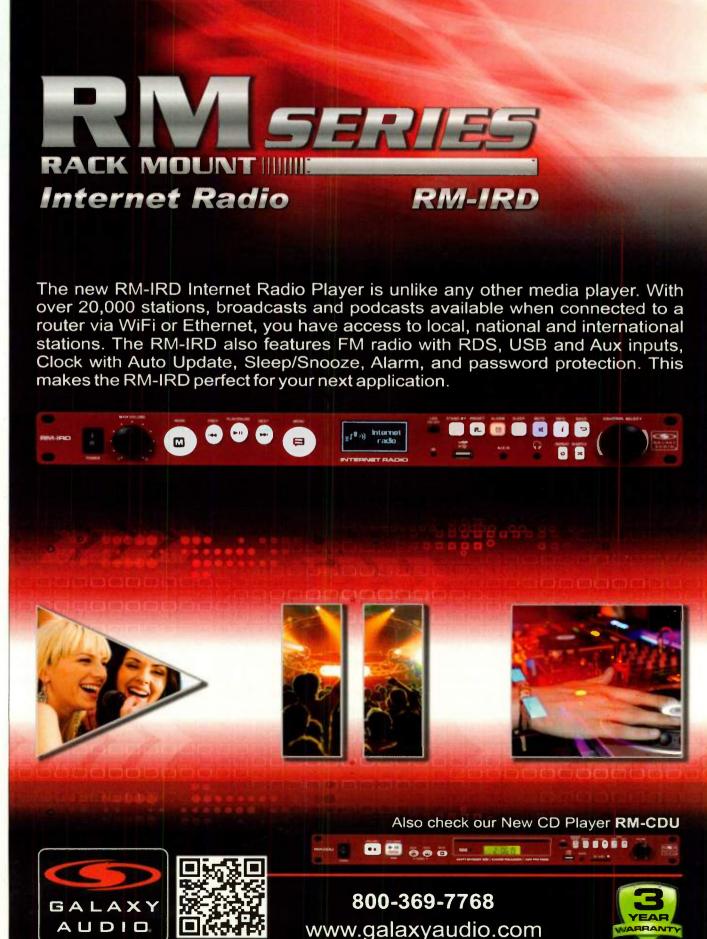Firehouse Productions
firehouseproductions.com

Harman
harman.com

Firehouse Productions provided a sizable JBL VTX PA system for the recent iHeartRadio Country Festival in Austin, TX.

Mixing FOH for FOB

CHICAGO, IL—Fall Out Boy has been crossing the country with rapper Wiz Khalifa on the Boys of Zummer tour this year, and along for the ride is a sizable audio system from Clair Global (Lititz, PA). Chad Olech, engineering FOH for FOB, has been making the most of the sizable Clair i3 cabinets and CP218 subs in the PA, and mixing on a DiGiCo SD5 console, marking his first time touring with the desk.

"I've been using another manufacturer's console for the last seven years and it's a great console functionally, but it often needs some help sonically," he said. "The workflow on the SD5 fits the way I work perfectly—I like to have everything in the same spot every time. I don't want to have to think when I mix; I just want to mix. The SD5 lets me do exactly that. For instance, I can have the entire EQ strip in front of me and don't have to page through to find things. I know exactly where the knobs are; it's muscle memory. The same goes for the compressors; everything is where I put it and where I want it."

His desk is also outfitted with Waves MultiRack, hosting a dozen Waves plug-ins. "I like having some of the Waves stuff here, and the SD5 is set up to integrate them nicely," he says. "But the SD5 also has a four-band EQ on its inputs, and I'd bet that if I were to just use that, the audience wouldn't notice the difference. That's how good the console sounds."

Monitor mixer Kevin Dennis is also on a DiGiCo desk—a SD10—which has inadvertently become a communications hub: "We have an extensive talkback system with everyone on in-ears, including the techs, and no speakers on the stage. Instead of hand signals, the techs can get onto the comms and let me know what they need, or vice versa. It's all matrixed through the SD10, which makes it very streamlined. And

FOH engineer Chad Olech, mixing Fall Out Boy on a DiGiCo SD5 console.

Chad's connected to this as well since we're using the same rack and it's all on fiber."

Fall Out Boy
www.falloutboy.com/tour

Clair Global
www.clairglobal.com

DiGiCo
www.DiGiCo.biz

Tune A PA

Virtual Soundcheck to qualify my source tuning if time permits."

Sometimes tuning a PA can change your life; that's what happened to Phil Reynolds, system engineer for Foo Fighters: "I was doing an install at church about 14 years ago, and we played Massive Attack's 'Angel.' It was the first time we fired up the rig—the bass hit and I said 'I'm quitting college. This is what I need to do.' I have a couple of tracks that I use—'Angel,' Tower of Power's 'Diggin' on James Brown,' Alison Krauss and a Tabla drum track that's really good for attack and tonality of time between front fills and mains. Then if I'm feeling it and want to hear what's going to come out of the desk, I'll do a little bit of virtual soundcheck—kick, snare, hat, bass, guitar—to see if everything's locking together."

Florida/Georgia Line's system engineer, Philip Kriz, tends to turn to Green Day tracks like "Know Your Enemy," noting, "The drums, the guitars and the vocal are really big in those songs, and we want those out

above it all. I use those songs to get what I need out of the PA and then I use another song to walk the room and do time alignment. If there's a song with a connection to a town, I'll use that—like when we were in Moline, IL the other day, I used 'John Deere Green' by Joe Diffy. So we use one or two tracks that are the same every day and then I try to switch it up, to not drive everybody insane."

Mads Mikkelsen, who tackles FOH mixing for Danish metal act Volbeat, shared, "I use music that I know exactly how it should sound if I tune the PA right, and then I use some songs that have extreme low-bass drops to test sub levels; this is also a very good way to test festival generators—if they can't keep up, you will see a power drop, and in the worst case, you will hear the digital equipment lose frames. I've made cut-up, looped versions of the tracks I use to tune, so the parts I need to hear are looped and the track doesn't end when I walk the field or venue floor. The tracks are Rammstein's 'Mein Herz brennt'—good kick and nice transparent sound; Nevermore's 'The River Dragon Has Come'—good guitars and a very tight kick sound, but in a different frequency than Rammstein; and the very loud

bass drop from Fear Factory's 'What Will Become.'"

Eric Roderick, FOH engineer with The Zac Brown Band, told PSN last year, "I used to use a lot of Amos Lee just because of pitch of his voice. If there's a really active room, his voice will excite those trouble areas—the 2 k or maybe a little 800. That was stuff I look for in ringing out PAs."

Not everyone turns to tracks, however. When FOH engineer Gordon Reddy was on tour with Fun., he wryly offered, "My favorite song is Pink Noise. I gave up on this whole thing of trying to impress the artist with the really obscure, bizarre track that I could pick to walk around the venue and listen to. Pink Noise is as short as I want, as long as I want, all the energy is everywhere, and once you get used to what that sounds like coming out of the PA, you know what it needs."

Eddie Mapp, out on the road right now with Papa Roach, also eschews tunes: "No music for me—I prefer to use Smaart 7 for all of my system tuning and alignment. Aside from first verifying that each part of the system is working together properly or at least in time together, I then tune the system to the frequency response that I prefer and know my mix will translate as I intend it to."

Still, there are plenty of engineers out there who continue to use Steely Dan albums and Donald Fagen's solo debut, The Nightfly, as go-to recordings for tuning a PA. So if everyone uses Steely Dan, what does a Steely Dan tour use?

Mark Dowdle, the band's FOH engineer, told us last year with a chuckle, "I've been tuning PAs all over the world with Steely Dan songs for almost 40 years, but I chose not to do that on this gig—you know, just didn't seem like the thing to do! I use a couple of things: Thomas Dolby's Aliens Ate My Buick—there's a cut on there called 'My Brain is Like a Sieve'—and then I also use a cut off Frank Zappa's Joe's Garage, 'Lucille.' That has a great, very natural sounding vocal, and that helps me get the PA close to where I want it. But primarily I use a microphone and talk through the PA. Every record's mixed differently, every cut is going to have a different frequency response, none of them are going to be the same, and to think that they're going to give you exactly what you need in a specific room? It's not going to happen—but a microphone's consistent, it's going to be the same every time you talk into it, and as far as I'm concerned, it's the best way to voice a PA."

CHRISTIAN DELFINO
Roland U.S.
Professional A/V division

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

A: Vice president of Sales and Marketing for Roland U.S. Professional A/V division. I recently took on responsibility for all aspects of the division, adding marketing and product management to my existing sales management role. My position entails coordinating our strategies for our pro audio and pro video products, and making sure our team's resources are aligned with meeting our goals. Another important element of my position is communicating the U.S. market's needs back to our factory and engineers in Japan and keeping in sync with the global Roland Pro A/V team.

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

A: In many ways, I've been headed in this direction from an early age. My very first job in sales was in home A/V retail, and I quickly learned that I loved the sales and management side as well as the technical product part of the business. I enjoyed installing the equipment for the customers as much as selling it to them. I saved up and built my first studio as a teenager and later studied business and marketing in college. When the opportunity with Roland came along, it was a perfect way to marry my personal passion for music and audio with my education in business. Over the past 16 years with Roland, I've worked for four different divisions and have been very fortunate to work with several mentors in the company who have continuously challenged me and helped me further develop my skills.

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

A: With our pro audio products, we have a unique story of backwards compatibility with REAC (Roland Ethernet Audio Communications protocol) for our new M-5000 Live Mixing Console. We didn't abandon those customers who bought our V-Mixers, Digital Snakes, personal mixers or other REAC products over the last 10 years, and we are now marketing to our existing customers in a whole new way than we have never done before – showing them the value proposition of investing in something that is both backwards-compatible and future-proof. And with our expansion cards for the M-5000, we are now able to address customers who are employing Dante, MADI or Waves SoundGrid.

The M-5000 is now getting in front of leading engineers in the industry and is making a really positive impression, so there will definitely be more stories in the media, providing a whole new set of references for Roland. Social media has become so much more than a place to post cool photos, and we are engaging with customers in conversations in a whole new way. We also just launched a long-awaited update to our website, http://proav.roland.com, that gives it a fresh new look and updated intuitive navigation.

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

A: We've recently achieved our short term goals for pro audio by establishing a strong support structure with dedicated sales engineers for the M-5000, added a very knowledgeable frontline tech support person and introduced new service policies to support both the most demanding touring professionals and systems integrators.

Over the long term, we will introduce industry-leading training, including CTS-certified courses for systems integrators, and will continue to develop relationships within the pro-audio community to make the M-5000 a trusted name.

Q: What is the greatest challenge that you face?

A: Developing a solid reputation with the professional sound community is something you must earn. Fortunately for us, when sound professionals use the M-5000, they are impressed. Our biggest challenge is keeping up with the demand for trials and evaluations that aren't conducted over a simple meeting; they can require a weekend, a week or more. It takes a lot of work, logistics and planning. Somehow we make it happen, and all while developing an awesome pro video business at the same time!

---

d&b audiotechnik has appointed **Hans-Peter Nüdling** as chief sales officer. As a member of the Managing Board, Nüdling will be responsible for global sales and global services including education, application support and services.

Nüdling has worked in Europe, the Americas and

Hans-Peter Nüdling

Asia. He has served the last eight years as a CEO of two technology businesses in electronics and medical applications focusing on entrepreneurship and change management, resulting in profitable growth and optimized work-flows. Before that, he was in different management posi-

---

tions, including sales channel director EMEA, business development and marketing in Asia, and production management in the United States.

Brad Townsend

Fishman has announced the appointment of **Brad Townsend** as vice president of Global Retail Sales. Townsend has been in the music products industry since graduating from Rutgers University with a degree in music. He's worked for several companies, most notably Fender Musical Instruments where he held domestic and international sales and marketing positions for almost 20 years. Most recently, Fishman served as Senior vice president of Sales & Marketing for AXL Musical Instruments.

Niko Spanos

Roland U.S. has further expanded its team with new appointments in sales, management, marketing, support and finance. **Niko Spanos** joins the Roland executive management team as director of accessories. Based in the L.A. office, he will oversee the growth and promotion of Roland's guitar, technology and percussion accessories. A guitarist and music industry veteran with more than 20 years of experience, Spanos worked his way up from retail sales clerk to the Guitar Center corporate offices where he was a buyer/director. Most recently, he served as the director of accessories at Fender Musical Instruments.

Jetro da Silva

Jetro da Silva has been appointed Roland artist relations manager, focusing on developing new relationships and supporting existing relationships in the artist community, on behalf of Roland-branded products. A Grammy Music Educator Award nominee, da Silva comes to Roland from Berklee College of Music in Boston, where he was a professor in the Ensemble Department. He is a classically trained pianist who has been playing for more than 30 years, and is still a high-demand keyboardist in the U.S.

Kurt Kesedar and **Jason Williamson** have been named district sales managers (DSMs). Represent-

---

Jason Williamson   **Kurt Kesedar**

ing all product groups in their respective territories, they will work with existing retailers on sales programs, develop new dealer relations, and offer training, merchandising, account management and other retail support. Kesedar, who will oversee the New York City metro area, has over a dozen years of industry sales experience, having worked for Guitar Center and Peter E. Schmitt Co., as well as previous positions as Roland product and sales support specialists. Williamson, who will oversee the Northern California territory, has more than 30 years of experience as a guitarist, along with over 20 years of sales management experience. He comes to Roland most recently from Guitar Center, where he held a variety of positions, including sales manager, general manager, and district manager.

Roland Smith III

Roland Smith III joins the company as retail support representative. In his new role, Smith will help focus the newly expanded Dealer Support Department on delivering dealer support, and he will actively support the field sales management team.

Jeff Silverman

Jeff Silverman joins the Customer Support team in the role of guitar product specialist. In addition to his guitar knowledge, Silverman is a professional studio/live sound engineer and music technology trainer, having provided computer-based support in the MI industry for such companies as M-Audio and Focusrite. Silverman is also a certified Pro Tools trainer who taught at the L.A. Recording School.

Cherie Maciel

Cherie Maciel is the newest member of Roland's credit department. With more than 10 years of business, credit and financial experience, she will serve as credit administrator.

InfoComm 2015

An ideal example of this progression is represented in pro audio's recently announced, commonly-owned alliance Audiotonix, comprised of British-owned Allen & Heath, Calrec and DiGiCo mixing console companies.

"I can only speak for consoles," said DiGiCo marketing director Dave Webster, "but when we were all doing analog, the mixers all did the same thing in the same way; we just had more or less of something with most [parameters] even in the same place. Then with digital products, everything was totally different from each other, at least initially. Common digital console features—like scribble strips and color-coding—came from the best bits from each company and are now implemented in wide-ranging products you see here, allowing them all to become easier to operate. Today, the sonic capabilities of the products and their unique feature sets are what sets them apart from each other, like an improved version of the old analog days."

Allen & Heath R&D director Rob Clark described Audiotonix's first collective product, Orange Box—marketed as an "anything in, anything out" DMI card-based audio format converter—as a major milestone in this journey toward truly comprehensive audio networking. "From an interfacing perspective, Orange Box offers the customer more options in joining up systems," he explains. "We're offering the customer the abil-

ity to connect any interface and network into a mixer, and using tie-line routing within the console, the console can become the hub."

The art of the Audio Demo Room presentation is one that continues to evolve, with a new level of maturation evident at InfoComm.

At the TC Group, the new Tannoy AMS Series of IP-65 rated speakers were dressed to impress. "They're not just waterproof, they're corrosion resistant and undergo a tremendous number of environmental tests," emphasized Graham Hendry, VP of application engineering and training (AET) with Tannoy's AEC Group.

Tannoy was also spotlighting the North American debut of the VX-8M compact, lightweight PA system, which features the manufacturer's renowned dual-concentric design and is expected to serve well in the intelligibility department for speech and vocals.

In the Lab.gruppen section of TC Group-land was a new LUCIA 70 V-edition power amplifier and a bold demonstration of the D Series of DSP amplifiers introduced last year, with the amps running in conjunction with QSC Q-SYS, Harman BSS Soundweb and Peavey MediaMatrix platforms.

At Community Professional, creating the demo room playlist was a serious collaborative endeavor, said

Rich Bellando, strategic development manager for Community. "It's all about creating the oasis, entertainment," he said. Community was creating the sonic oasis with products from across its CODE (Community, Outdoor, Distributed and Engineered) speaker lines, including the mammoth R6-51 MAX, which can blast 96 dB SPL across 622 feet, and a new weatherized iSeries offering, both of which will be available in Q4 this year.

On demo in a elaborately staged ballroom was Meyer Sound's new Leopard line array, which was recalibrating all the air molecules in "native mode," meaning with no EQ whatsoever. The patent-pending Leopard is "a truly multipurpose system," according to Meyer Sound. "Leopard is ideally suited to everything from mid-sized touring and live theater to worship and live performance installations, and from symphony music to heavy metal."

On the live demo front, SLS Loudspeakers presented regular performances by Vicki Genfan, whose music is self-described by her own tagline of "Atomic Folk Fusion." Genfan played through the SLS CPC 1212 coplanar powered column array paired with a SP810P sub, and then the system was switched over to the passive CPA7600 biamped three-way,

coplanar modular array. Why do a real-world, live demo? Jeff Lowry, director of Marketing explained, "Nobody is buying this to listen to Steely Dan tracks." So, they asked themselves, "Why don't we get a musician and let these people really hear why they're buying this?"

At the Electro-Voice demo room, there was evidence to prove that "engineering's been busy this year," as observed by Guy Low, content and creative manager. The company launched the first members of the next generation of the X-Line family, with the new X1 aimed at mid-sized applications and the X2 representing more of a touring-spec box for larger applications. "We wanted to introduce something that reflected the market sensibility rather than just the engineered technology side of things," Low explained, "incorporating what we're hearing from our customers from the real world."

The QSC Demo room provided an effective update on convergence, emphasizing QSC's "IT-friendly" products conceived to make it easy for integrators to get in and sell to IT professionals. The QSC Q-SYS Core 110f solution is the manufacturer's first foray into the corporate AV market and offers integration with IT systems, software and the network. Diverging from the typical AV scenario in which the box is the application, "Our platform runs apps," said TJ Adams, installed DSP manager at QSC. Apps providing VoIP, AEC and networked audio (and more) can be assigned to various network segments.
InfoComm
infocommshow.org

Project Sharing

agement, distribution and monetization bundle), and Storage Suite (featuring Avid ISIS online and nearline shared storage, AirSpeed ingest/playout server and FastBreak broadcast automation), as well as Marketplaces and Global Services features. Customers receive their choice of two Avid plug-ins, including one Tier 2 ($299 value) and one Tier 3 premium plug-in ($499 value).

An example of Avid Everywhere at work can be found in North Hollywood, CA-based television production company Pie Town Productions' adoption of the technology. The studio juggles large volumes of deliverables and content as it strives

to meet the deadlines and budgets of 10 reality television series a year, knocking out more than 400 episodes annually. Known for reality TV productions like *House Hunters*, *House Hunters Renovation*, *Tiny House Hunters*, *Joan & Melissa: Joan Knows Best*, *Flip or Flop*, and *Say It To My Face*, Pie Town also has to ensure that all its highly technical network deliverables that are completed additionally meet iTunes and Video On Demand (VOD) requirements.

Avid ISIS 5500 shared storage solution with monitor.

The result was that, faced with so many production deadlines, high-volume workflows and an ever-broadening variety of content formats that had to be addressed and catered to, Pie Town needed a non-linear editing solution that could handle all of that. Ultimately, the company opted to facilitate its project sharing needs via Avid ISIS.

Dana Besnoy, vice president of Post Production for Pie Town, has found Avid ISIS integrates well with third-party systems, so that staying in the Avid ecosystem hasn't limited the company: "We now use Avid products from ingest to output and the entire post process happens internally, without going to outside facilities, which helps us save time and money. Our switch to Avid has also allowed us to expand our workforce as needed. As Avid is the industry standard for media editing, our switch to the Avid MediaCentral Platform has enabled us to significantly

broaden the talent pool and find a wide array of professionals who can immediately jump in on any project."

Meanwhile, the Sundance Institute Feature Film Program's Director's Lab in Utah has adopted Avid Everywhere as a teaching tool in which fledgling filmmakers use creative applications and shared storage solutions while learning their craft; the month-long lab is powered by Avid's MediaCentral platform. For 2015, the Lab is using Media Composer from the Artist Suite and Avid ISIS 5500 shared storage solution (pictured) from the Storage Suite. Together, the next generation of filmmakers are learning collaborate in a truly "connected" environment. "We're very grateful for Avid's continued support, which gives these singular filmmakers an invaluable opportunity to use the professional editing tools and workflows that the most accomplished film editors use," commented Michelle Satter, founding director of the program.

Cphonic

soothing work environment which he says has "an absolutely flat monitor response due to the massive depth of our built-in bass trapping." Other key gear choices, named in order of importance by McNoldy, include his rare ATR Services one-inch Ampex ATR-102 analog tape machine featuring Crane Song's Dave Hill-designed Aria Reference Series electronics; German audiophile reference monitors manufactured by KS Digital; and a complete conversion system from Antelope Audio featuring the Eclipse 384 mastering converter, 10M Atomic Clock, Antelope OCX-V master clock and Trinity master clock.

"I'm based here, but all the Real-Traps can be pulled off the wall and moved elsewhere," McNoldy explains. "If I want to mix or master on site, I can. [This configuration] gives me the ability to be that flexible, and with artists recording anywhere—such as EDM artists recording on laptops with headphones in hotels—we have to be that flexible, too."

McNoldy calls his ATR-102 "a big part of my signature. It's one of the few like it in the world. And I am so familiar with it; I tweak it every day. A lot of the sounds I get come from the EQ I apply based on how I align the tape deck." He often revels in the responses of clients once they hear their productions coming from tape. "It's just amazing. They may have mixed in-the-box, in their bedroom or wherever, and they have no idea how it translates elsewhere. They've never heard tape other than those things originally recorded on tape. With everything that has happened [in recording technology], emulations still can't touch it."

Other than a few key vintage analog outboard processors, McNoldy has largely sold off his "two moving trucks-full" of analog boxes that made the original trip to North Carolina, focusing on the efficiency of DAW-based recalls while selectively adding in vintage color. "I've paired things down things to be as simple as possible, knowing that anything I use needs to be recallable," he explains, saying that this approach allows him to balance a number of projects simultaneously. "If I want more vintage choices of tone, then those pieces are wheeled into the room, embedded into the track in Pro Tools, and wheeled out. I may be taking this concept a bit further than some others, but from my perspective, that's what it takes to keep up with artists these days."

Cphonic Online Mastering
cphonicmastering.com

Leaving stacks and racks behind, Cphonic's McNoldy now works from a streamlined, minimalistic custom mastering desk.

MUSICetc.||||

Beautiful Torchbearer

BY JACQUES SONYIEUX

Gingger Shankar burst onto the international music scene in 2004, with her emotionally compelling performances and collaborative work on the film score for *The Passion of the Christ*, which received an Oscar nomination. Hailing from an acclaimed, musically influential family that spans three generations and two continents, Shankar has gone on to compose several film scores and is the only female in the world to have mastered the 10-string double violin: an instrument that covers the entire range of an orchestra's double bass, cello, viola and violin.

Gingger Shankar

Her new album, *Beautiful Imperfections*, due this fall, displays her versatility as a performer while showcasing her strengths as an opera-trained vocalist, world-class violinist and multimedia-based performer.

ON MOVING TO THE FRONT BURNER:

My friend Sarah DeAun and I started writing these songs a couple of years ago and I really loved them. I wanted to make a record, but at that point, I was doing film work. So we would work on a few songs, then we would take a break; then we would do more songs, and then I would do a film. Finally, last year, we buckled down and decided to really start working. While we were working on the record, I had a chance to meet Linda Perry and work with her on a couple of songs, which was incredible because I have been such a big fan of hers for so long. At the same time, I started working with some really incredible producers. For example, Devin Parker came along and ended up producing the overall arc of the record, and Daniel Crean from The Semi Precious Weapons came on board and produced a couple of songs. When the record finally happened, it happened very quickly. We were in the studio for a couple of months and we just finished mastering the record in April.

ON PIVOTING FROM FILM:

The film world is very much based on picture, so how I approach recording a record is very different. When doing a film score, it often calls for many different things: For example, you can do a jazz score, a pop score or a western classical score. But for your own record, you can do exactly what you want and leverage all your influences. So that is pretty exciting

for me. There are so many different styles on this record. We have things that are a little bit more punk, and other things that are more dance-oriented. I think I went into it thinking that everything needed to follow a certain style, but once we started writing, we realized that all the songs had a very nice flow to them but were not necessarily the same style.

ON SONG SHAPING:

A lot of the shaping of these tunes actually happened live. We would write the songs, and once we started to perform them, many things became apparent: This song works better at this tempo, another song works better as a punk song or an acoustic song. So a lot of the shaping happened there. Once we got into the studio, we noticed things like "This verse is too long," or "This chorus needs to be this way." More of the structural song changes occurred as a result of our live shows though.

ON CAPTURING THE VIOLIN:

It can be very difficult to capture the depth of the tone of the violin. If you're not careful, it can just sound very tinny. When I am recording it in a hotel room or on my own in my studio, I always have my Apogee interface with me, and I record through that. Then I have all my settings set up in Logic, so when I hit record, I'm getting exactly the sound I am looking for. The best sound I ever got on my violin was while we were recording *The Passion of the Christ* at Abbey Road Studios. I am normally very picky about my sound, but when I heard the playback on the monitors, I said, "That sounds unbelievable." The sound that we got there is the ultimate benchmark for how I like my violin to sound.

ON TORCHBEARERS:

The overall arc of the album is about being a woman—and how im-

portant it is to be a strong woman. My true inspirations growing up were my mother and my grandmother. My grandmother was 18 when she starred in her first movie, and her acting career was over by her early '20s. Instead of packing it up and saying, "Well, that didn't work for me," she completely reinvented herself. She studied as a vocalist and became one of the top classical vocalists in India. She had a spirit that never gave up, and the message I got from both her and my mother was "never complain." The funniest thing was that in her late '70s, for the first time after putting out more than 50 records, she was nominated for a Grammy. It was really sweet to see that, because she was always really humble. None of us women in the family would be here if it weren't for the original torchbearers like my mother and grandmother.

ON INNOVATING AND REINVENTING:

For me, because I've worked in the film, virtual reality and multimedia worlds, any music performance has to be really interesting. With this record, I want to be more in the multimedia space and perform in museums, theaters, at film festivals and other places. When you think of the whole experience of audio, the visual aspect is so important now. If I go to a show, I am so much more interested in seeing a whole performance like that rather than just seeing a band standing there and playing. I think we are so past that now, and it is so important to give audiences a more complete experience. My goal is to perform this record all around the world with multi-screen projections and all different sorts of things.

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

OPEN & CLOSED

THE NEW FLAGSHIP STUDIO HEADPHONES

ATH-R70 PROFESSIONAL OPEN-BACK REFERENCE HEADPHONES
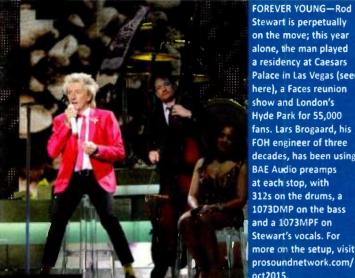**ATH-M70x** PROFESSIONAL MONITOR HEADPHONES

Audio-Technica introduces the new leaders in studio headphones: ATH-M70x and ATH-R70x. Both models offer extremely accurate audio reproduction along with the comfort, durability and convenient features that are bound to make them studio mainstays. So whether you prefer the sound isolation of the M70x or the spacious sound of the R70x, deciding on your next pair of studio headphones is an open and closed case. **audio-technica.com**

(A) audio-technica.
always listening

prosound news

Volume 37 No. 10　　　www.prosoundnetwork.com　　　October 2015

FOREVER YOUNG—Rod Stewart is perpetually on the move; this year alone, the man played a residency at Caesars Palace in Las Vegas (seen here), a Faces reunion show and London's Hyde Park for 55,000 fans. Lars Brogaard, his FOH engineer of three decades, has been using BAE Audio preamps at each stop, with 312s on the drums, a 1073DMP on the bass and a 1073MPF on Stewart's vocals. For more on the setup, visit prosoundnetwork.com/oct2015.

TODD KAPLAN/ATLASICONS.COM

Audio Pros Agree: AES Is Essential

BY STROTHER BULLINS

This year, the Audio Engineering Society (AES) returns to New York City to host its 139th International Convention, once again sharing its unique balance of craft-shaping ideas, educational opportunities and cutting-edge technologies displayed on its exhibition floor. Along with its trademark workshops, tech tours and more, popular events like the multi-day Live Sound Expo (sponsored by *Pro Sound News* and *Mix*) and Project Studio Expo are also returning, providing free classes and panels for all attendees.

Those are just the tip of the iceberg, however, which is why many attendees come to AES

Back With A Bang　◀ 5

Popular pro audio event Mix Nashville returned in late August, providing some of Twang Town's top producers and engineers with an opportunity to share their insights and experiences.

Exploring Broadcasting's Future in the IP Age

BY STEVE HARVEY

Television broadcasting has gone through numerous significant changes since the first station went on-air more than 80 years ago, but nothing may prove to have such an impact on the medium as IP technology. "A butterfly flaps its wings in Silicon Valley and now there's a tidal wave of change heading towards the broadcast industry," according to Joe Zaller, CEO of research firm Devoncroft, quoted by *TV Technology* magazine editor-in-chief Tom Butts.

According to the 2015 Global Market Valuation Report (GMVR), published by IABM DC LLC, a joint venture between IABM and Devoncroft Partners, this is a dynamic time for the broadcast and media industry. The GMVR gathers information on nearly 3,000 individual technology vendors and service providers to provide a definitive valuation of the broadcast and media technology supply market.

Close study of the aggregate performance of the market from 2009 through 2014 "provides evidence of a structural shift in the industry," the report concludes. Around 2011-2012, it finds, the market for products

Digging In, Direct-To-Disc　◀ 20

Josh Hoyer and Soul Colossal, a six-piece soul-R&B-funk band from Lincoln, NE, recently traveled to Nashville to record its latest album live direct-to-disc on a Neumann VMS70 vinyl lathe at Welcome to 1979 recording studio.

STEPPING
IT UP

QL5

QL1

V3

CL5

CL3

CL1

The standards stay, but innovation never ends. Going strong, V3 software for the popular CL and QL Series features a variety of upgrades making our family of digital mixing consoles more efficient than ever. This next step up includes an 8-band Parametric EQ Option with Notch Filters, Real Time Analyzer Function, 4 User Defined Key Banks, Surround Sound Panning and Monitoring and so much more.

Perhaps most notable is the addition of the Dan Dugan Automatic Mic Mixer for the CL Series. Already included in the QL Series, gain distribution for up to 16 speech microphone channels is automatically optimized in real time, achieving smooth, natural level control. What could be smarter than that?

For a complete list of features and to download the software free-of-charge, visit www.yamahaca.com.

CL SERIES
DIGITAL MIXING CONSOLES
The standards stay, but innovation never ends.

DIGITAL MIXING CONSOLE
QL SERIES
QL5/QL1

⊛ YAMAHA
commercial audio