NAB 2015 SHOW ISSUE

prosound

NOW IN PSN ProAudio Review

Volume 37 No. 4 www.prosoundnetwork.com April 2015

ON THE LOWDOWN—John Lyons, owner of renowned nightclub, Avalon Hollywood, worked for over two years with manufacturers EAW and Powersoft to complete the "largest subwoofer club installation ever." As part of the world's first CLUB.one "Avalon by EAW" sound system, six sub cabinets were installed, each utilizing 40-inch Powersoft cones and Powersoft's patented M-Force moving magnet linear motor technology.

Immersive Sound: New Tools Of The Trade

BY STEVE HARVEY

SPECIALREPORT

HOLLYWOOD, CA—For decades, whatever the loudspeaker configuration, multichannel surround audio production was strictly the domain of the major film studios, until the arrival of optical disc-based delivery formats brought a democratization of the process through a proliferation of new tools, then adoption by television broadcast. In contrast, the newer channel- and object-based immersive production and delivery formats that add a height layer, such as Auro-3D, Dolby Atmos, DTS MDA and MPEG-H Audio, co-developed and championed by Fraunhofer, have arrived on the

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Fat Or Phat?

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Teegarden Audio's Fatboy Tube DI, full of character and versatile in live and studio applications, is among the products reviewed in this month's *PAR in PSN* pages, alongside products from the channel strip, mic, studio and live loudspeaker, sound library and interface categories.

AoIP Trend To Dominate NAB Show

BY STEVE HARVEY

Looking back over the past decade or so at the audio product previews released by manufacturers in the months leading up to the NAB Show, it's relatively easy to spot the trends. This year, barely a month out from the broadcast industry's annual Las Vegas convention, the spotlight appears to have turned to audio-over-IP (AoIP) networks.

Support for the many and various flavors of AoIP is becoming more and more commonplace, as demonstrated by the new product releases, from AEQ to Zaxcom, that are promised for this year's NAB confab. These days, it's getting harder to find a product that doesn't support open standards such as AES67 or AVB (Audio Video Bridging); the proprietary but widely licensed and adopted Dante, Livewire or RAVENNA protocols; or more brand-specific schemes such as QSC Audio's Q-LAN or Wheatstone's Wheat-Net-IP, individually or in various combinations.

Similarly, interfaces to, and bridges between, disparate networks as well as transport protocols, such as the ever-popular MADI, are also proliferating. Hand-in-

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ML Procise, 1953-2015

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As Troy Clair stated in remembrance, "Every industry has its legends, and ML was truly one of our own. He will certainly be missed by the numerous sound engineers, techs, production and artist managers who were privileged to have known and worked with him."

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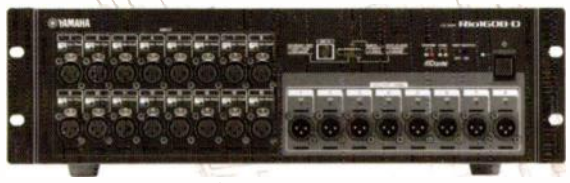

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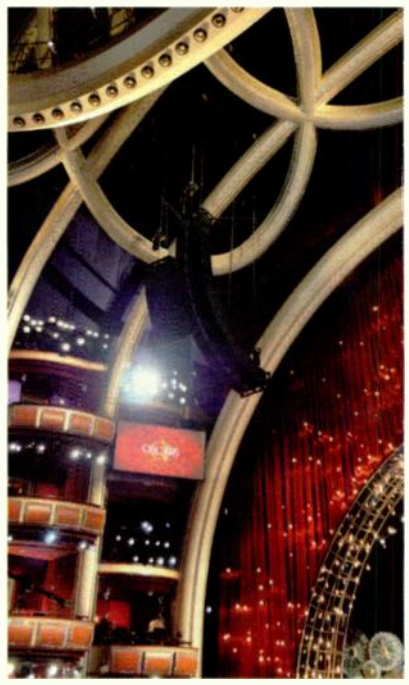
Oscar/CAS Sound Winners Announced

HOLLYWOOD, CA—*Birdman* grabbed the prestigious prizes at the Academy Awards celebration on Sunday, February 22, 2015, but Oscar spread the love in the craft categories, recognizing *American Sniper* and *Whiplash* for best sound. The Academy Awards also tapped Alan Robert Murray and Bub Asman for Best Sound Editing for their work on *American Sniper*; it was the seventh Academy Award nomination for Murray and the fifth Academy Award nomination for Asman.

First-time nominees Craig Mann, Ben Wilkins and Thomas Curley won Best Sound Mixing for *Whiplash*, beating out the big-budget competition. In other sound-related categories, "Glory" from *Selma* was a popular winner for Best Original Song, bringing Oscar gold to writers John Stephens and Lonnie Lynn. The win followed a moving live performance by John Legend and Common—the stage names of the two songwriters—plus a cast of extras. Best Original Score went to Alexandre Desplat for *The Grand Budapest Hotel*; Desplat was also nominated for *The Imitation Game*, marking the seventh and eighth nominations for the French composer, who had not previously won.

ANA GIBERT



Above: Rory Kennedy, Mike Minkler and the *Birdman* Sound Team at the CAS Awards
Rigth: For the 87th Academy Awards presentation at the Dolby Theater in Hollywood, ATK Audiotek once again provided the live sound reinforcement system. The system featured 30 VERTEC VT4889 fullsize line array elements, split between left and right arrays, plus 12 VT4880 fullsize arrayable subwoofers, also suspended in two arrays. Another 85 JBL loudspeakers were used for upper balcony, under balcony and VIP seating area coverage.

Just over a week before the Oscars, on February 14, The Cinema Audio Society handed out its awards for best sound in film and television in a ceremony at the Los Angeles Millennium Biltmore Hotel.

Hosted by radio personality Doug McIntyre, the 51st CAS Awards also celebrated the professional contributions of production sound mixer David Macmillan, CAS by honoring him with the CAS Career Achievement Award. A three-time Academy Award-winner for *The Right Stuff*, *Speed* and *Apollo 13*, Macmillan was feted by previous CAS Career Achievement honoree Scott Millan, CAS, along with Steve Bowerman, CAS and David Krischner.

Among other highlights, the Oscar-nominated director of *Boyhood*, Richard Linklater, received the CAS Filmmaker Award in a presentation that included remarks by Christopher Nolan, John Pritchett, CAS and Tricia Linklater.

Danny Maurer, a student at University of Colorado Denver, was awarded the CAS Student Recognition Award and presented with a check for $2,500.

The CAS Technical Achievement Awards were presented to Sound Devices Dante and MADI Audio Recorder model 970 for production and iZotope RX4-Advanced for Post-Production.

Winning for Outstanding Achievement in Sound Mixing for Motion Picture, Live Action was *Birdman* or *(The Unexpected Virtue of Ignorance)*: Production Mixer, Thomas Varga; Re-recording Mixers, Jon Taylor and Frank A. Montaño; Scoring Mixer, Gustavo Borner; ADR Mixer, Jason Oliver; and Foley Mixer, John Sanacore, CAS.

For Motion Picture—Animated, the winner was *Big Hero 6*: Original Dialogue Mixer, Gabriel Guy, CAS; Re-recording Mixers, David E. Fluhr and Gabriel Guy, CAS; Scoring Mixer, Alan Meyerson, CAS; and Foley Mixer, Mary Jo Lang, CAS.

Winning for Television Movie or Mini-Series was *Sherlock: His Last Vow*: Production Mixer, John Mooney; Re-recording Mixer, Howard Bargroff; Scoring Mixer, Nick Wollage; ADR Mixer, Peter Gleaves; and Foley Mixer, William Everett.

For One Hour Television Series episode, the winner was *Game of Thrones: The Children*: Production Mixers, Ronan Hill, CAS and Richard Dyer, CAS; Re-recording Mixers, Onnalee Blank, CAS and Mathew Waters, CAS; Foley Mixer, Brett Voss, CAS.

Modern Family: Australia won for Half-Hour Television Series: Production Mixer, Stephen A. Tibbo, CAS; Re-recording Mixers Dean Okrand, CAS and Brian Harman, CAS.

The *Foo Fighters Sonic Highways: Los Angeles* episode took the award in the Television Non-Fiction, Variety or Music Series or Specials: Re-Recording Mixers, Eddie Kim and Jeff Fuller.

Academy Awards
www.oscar.go.com

Cinema Audio Society
cinemaaudiosociety.org

briefs

Focusrite Launches Mix Competition

LOS ANGELES, CA—Focusrite (us.focusrite.com) is running a competition to celebrate the thirtieth anniversary of the original creation of the first of its classic designs. Buyers of a Focusrite ISA or Red 1 500-Series product who register their product and use it on a track before September 1, 2015, could win having their song mixed by mix engineer Damian Taylor.

SMPTE Calls for Papers

WHITE PLAINS, NY—The Society of Motion Picture and Television Engineers (SMPTE, smpte.org) is seeking proposals for technical papers for the SMPTE 2015 Annual Technical Conference & Exhibition, October 26-29 in Hollywood, CA.

The proposed papers must be informational and address technical theory, research, innovation, application, or practice specific to any of the evolving technologies associated with the media technology industry. Proposals, comprising a topic heading, paper title, and one-page abstract, must be submitted no later than June 26. SMPTE encourages authors to submit their paper proposals early.

Philly's Sigma Sound Studios Sold

BY CLIVE YOUNG

PHILADELPHIA, PA—The building that houses historic Sigma Sound Studios in Philadelphia has been sold for $1.55 million, with the intention of renovating the space for office, retail or residential use. A key part of "The Sound of Philadelphia," the facility recorded countless hits that helped define R&B and disco throughout the late 1960s and most of the 1970s.

Over the years, the N. 12th Street studio, founded by Joseph Tarsia in 1968, recorded hits for the likes of Whitney Houston, Madonna, Lou Rawls, Billy Joel, The Roots, Boyz II Men, the Jacksons, Bonnie Raitt and more. The facility included three studios sporting multiple SSL consoles, a 2,300-square-foot multi-use soundstage and a sizable mic locker.

While the building's sale marks the end of an era, the historic work created there lives on, as most of the facility's 6,200 tapes were donated in 2005 to Drexel University for preservation. The Sigma Sound Studios Collection in the Drexel University Audio Archives is overseen by Toby Seay, project director of the Audio Archives and associate professor in the Westphal College of Media Arts & Design. Seay is currently building a database to catalog the vast archive's contents, which includes unreleased songs from David Bowie's *Young Americans* album, recorded at Sigma in 1974.

Sigma Sound
sigmasound.com

Drexel University Audio Archives
drexel.edu/now/archive/2014/October/Bowie-Archives/

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Of Bandwidth And Quality

When the television broadcast industry finally embraced digital technology with the HDTV transition, it marked a major shift in the quality of the consumer experience. Even with lossy compression, a necessary part of constraining the delivery data bandwidth into the broadcast spectrum bandwidth, picture quality and sound improved dramatically.

Imagine what the consumer could experience without the constraints of bandwidth. Actually, you don't have to use your imagination too much if you have had the experience of watching a well-produced movie at a top-shelf theater. Digital projection of image and high-resolution immersive sound represent the top end of what consumers can now enjoy. Theaters, though still facing some constraint in bandwidth for image, and less so for sound, are a reasonably agile platform for the application of technology. The delivery channel and venues are less constrained by bandwidth and more readily able to deploy new technologies, though perhaps you are still waiting, as I am, for digital projection and immersive sound systems to become universal in your local area.

For broadcast, bandwidth constraints do put caps on the ultimate levels of delivery quality at the consumer level—only so much entertainment as data can be crammed into a broadcast signal. Cable-only channels face similar constraints because of compliance with the broadcast standards (though if you've ever had the opportunity to flip between a pure cable networks' broadcast of a sports event to your local broadcast station's signal, you might have noticed that the video quality can be superior from the cable network, in part due to the local stations embracing the ability to split off some of their bandwidth into subchannels). Even as a new standard for ATSC (HDTV to the consumer) broadcast is being developed to incorporate emerging picture and sound technologies (see page 14), the bandwidth constraints are not being relaxed.

Consumers are now embracing internet-delivered content as consumption patterns shift towards lifestyle-driven applications of technology. The VCR, then the DVR, and now streaming media are following the pattern the music industry experienced with the vinyl record, compact cassette, CD, digital download and now streaming audio. Consumers want the media they want, when they want it. They want it how they want it, on whatever device they favor.

Netflix and its ilk were first a replacement for the local movie rental storefront. Now, with internet delivery, they are capitalizing on consumer usage patterns, not merely passing along the output of Hollywood and the broadcast/cable networks, but rather driving the market by creating their own original content. Younger consumers are gathering less to watch programming at the specific time of original broadcast. As with the telephone, where wired signals have largely given way to mobile devices at the individual level, so are traditional television viewing patterns shifting with the impact of YouTube, Netflix, Amazon Prime and other services. Particularly with young consumers, the local cable company is becoming less valued as a source of access to broadcast and cable channels but rather being seen as a necessary evil to acquire fast internet access.

For now, bandwidth restrictions do affect these emerging patterns. Reliance on WiFi for wireless connectivity often can mean a throttling-down of quality for convenience. Then there are the constraints of the audio experience on personal devices—first, that they are personal and not shareable; second, that discrete surround is not possible, though headphone-delivered emulations are steadily improving.

Technological trends and intertwined consumer usage patterns will continue to be disruptive to the status quo. The broadcast marketplace of the near future is going to be a moving target.

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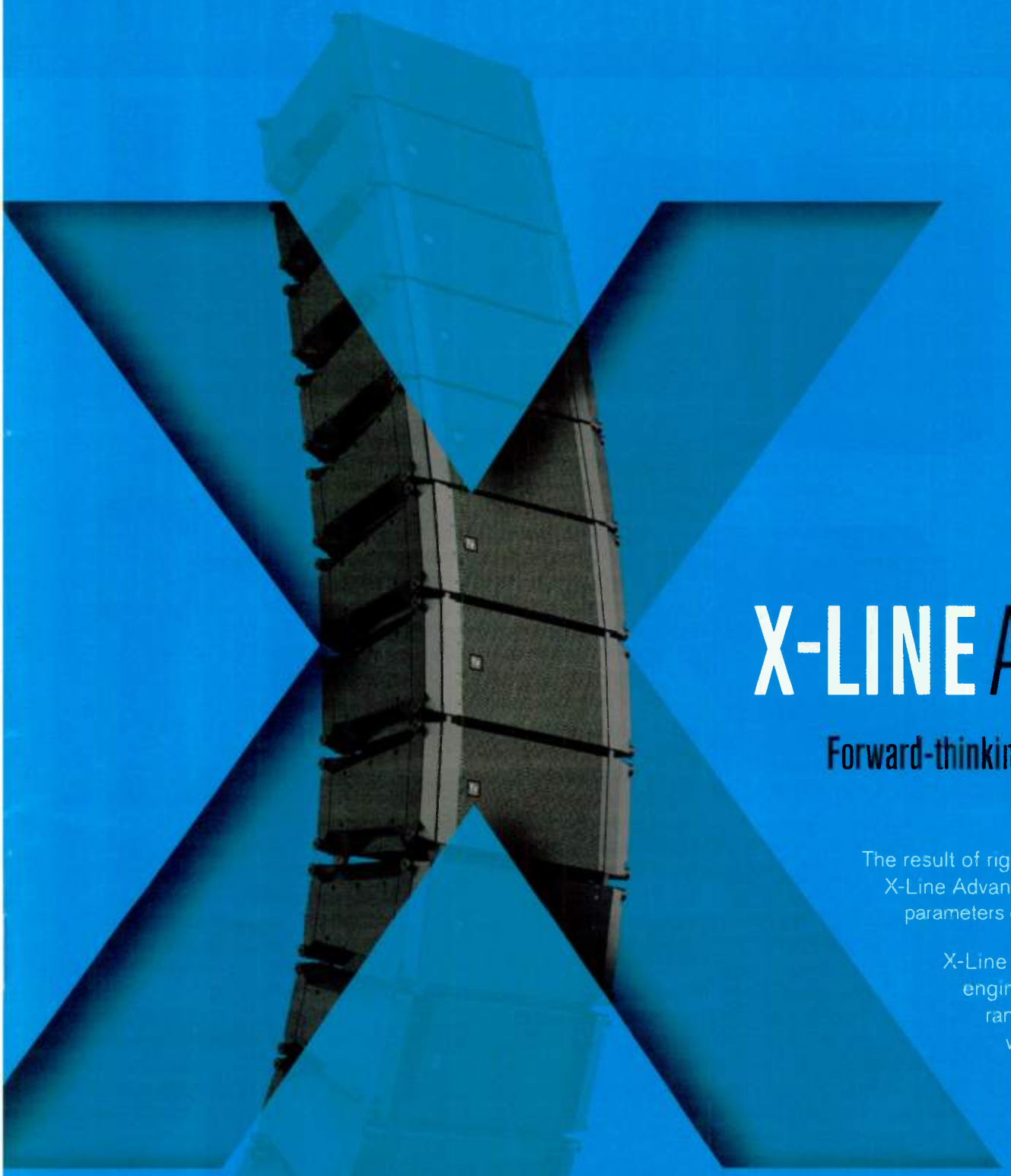

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YouTube-Borne, Multifaceted Success

BY STEVE HARVEY

BROOKLYN, NY—In some ways, Fall On Your Sword is a tricky entity to define: Is it a group of YouTube stars, a performing and recording band, a multi-media sonic art collective, a music production company or music-driven video artists? The answer is all of the above, while also being—perhaps a little more prosaically—a full-service audio post production facility that recently opened a second room at its home base in Williamsburg.

"Fall On Your Sword in its very earliest incarnation started out as a video art project," explains UK-born Will Bates, a composer, producer, multi-instrumentalist and company founder. "It actually began with YouTube, making these crazy video mashups. As a result of the YouTube successes I started performing these videos live. The whole time I was doing that, I was working at a much larger company, scoring commercials and smaller independent films. I left there, brought in Lucy [Alper, executive producer and Bates' business partner], and started Fall On Your Sword as a company, springing out of the band and video art project."

Foys second studio, The Foundry, is a 700-square-foot, Pro Tools-based room featuring an Avid S6 M40 console and a Martinsound MultiMAX EX surround monitor controller. Currently used in 7.1 surround mode, The Foundry is wired for eventual Dolby Atmos work.

FOYS moved into its 2000-sq.-ft. facility in 2009. "We were fortunate enough to get what is probably the last bit of commercial real estate in Williamsburg," says Bates

"At the time, it didn't feel like there were many business here aside from your standard retail," says Alper. "So we were definitely worried that we would have trouble getting our clients over here."

As things have turned out, Alper and Bates need not have been too worried about clients making the trek across the river to Williamsburg. Commercial clients have included Coca-Cola, Google, Nike and Siemens. As a composer, Bates has scored *Going Clear*, Alex Gibney's documentary about Scientology; *Another World*, about the Occupy Wall Street movement; and numerous other long- and short-form projects, including *Steve Jobs: Man in the Machine*, also by Gibney, which debuts at SXSW.

"Having music production, mix, sound design, Foley and ADR all in one place—that was our business plan initially," says Bates, "to be able to offer that to filmmakers, commercial directors and the like, for them to be able to get all of their audio done in one joint, essentially. We still do a lot of those kinds of projects, where we do the music, score, sound design, music supervision, the mix and everything, but we also separate those per-project as well. Where larger projects just want to mix here, and the score has been done elsewhere, we do that as well."

The company has grown organically, starting out with The Forge, a 300-square-foot, 7.1-capable room centered on a Pro Tools 11 HD Native system driven by a D-Command. They built an office next to it, then more space became available down

(continued on page 29)

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briefs

Gershin Installs Barefoots

LOS ANGELES, CA—Ten-time Golden Reel Award-winner Scott Gershin, a supervising sound editor and sound designer at The Formosa Group in Los Angeles who has been credited with bringing film quality sound into the interactive entertainment industry, has installed Barefoot Sound (barefootsound.com) MicroMain 27 monitors is his post production studio.

Lectrosonics Nets Cowboys

VANCOUVER, BC, CANADA—Mark Barry, lead sound consultant for extreme reality TV series *Cold Water Cowboys*, employed Lectrosonics (lectrosonics.com) Digital Hybrid Wireless gear during the current season, outfitting each boat with a five-channel Venue receiver and ALP650 antennas, fishing crews with WM bodypack transmitters and Countryman B6 lav mics, and each director with a UCR411a compact receiver.

DPA Mics Taken to Paris

PARIS, FRANCE—French sound engineer Stéphane Bucher used DPA (dpamicrophones.com) d:screet mics to capture dialog on the set of *Taken 3*, the third and final installment of the Liam Neeson action trilogy, hiding 4060 miniature mics in costumes and putting MMC4018-ES supercardioid mics with MMP-ES active cables with side cable, supplied by DPA's French distributor Audio2, in car sun visors.

Riedel Fiber Supports Sochi F1

WUPPERTAL, GERMANY—Riedel (riedel.net) was heavily involved in creating the specifications for the TV production requirements at the new Sochi Autodrom where more than 15,000 meters of Riedel fiber optic cables were laid in time for Russia's inaugural F1 Grand Prix race in October, 2014, providing the infrastructure for the transmission of video, audio and intercom signals for the circuit.

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AES Issues AES69-2015 3D Audio Standard

NEW YORK, NY—The Audio Engineering Society has published the AES69-2015 standard, which provides a framework for the growing binaural and 3D personal audio industries. The standard, which describes the format and exchange of spatial acoustics files, is the product of the AES Standards Committee.

Binaural listening is growing due to increased usage of smartphones, tablets and other individual entertainment systems that primarily present audio using headphones. An understanding of the way that the listener experiences binaural sound, expressed as head-related transfer functions (HRTF), opens the way to 3D personal audio. The lack of a standard for the exchange of HRTF data makes it difficult for developers to exchange binaural capture and rendering algorithms effectively. While 3D audio continues to gain popularity among end users, binaural listening could be the very first 3D audio vector with sufficient fidelity of HRTF.

The new AES69-2015 standard defines a file format to exchange space-related acoustic data in various forms. These include HRTF, as well as directional room impulse responses (DRIR). The format is designed to be scalable to match the available rendering process and is designed to be sufficiently flexible to include source materials from different databases.

This project was developed in AES Standards Working Group SC-02-08, with the writing group being led by Matthieu Parmentier and principal authors Piotr Majdak and Markus Noisternig. The standard builds upon an earlier project to define a spatially-oriented format for acoustics (SOFA), which aimed at storing HRTF data in a general way, capable of supporting any transfer-function data measured with microphone arrays and loudspeaker arrays.

The use of convolution-based reverberation processors in 3D virtual audio environments has also grown with the increase of available computing power. Convolution-based reverberators help guarantee an authentic and natural listening experience, but also depend on the acoustic quality of the applied directional room impulse response (DRIR). Many such issues have been of growing concern in the industry, as were discussed in depth at the recent AES 57th International Conference in Hollywood, CA, which addressed topics including immersive audio delivery standards, headphone design and performance, 3D audio in ambisonics, binaural audio, more (*PSN* will have a full report on the conference in next month's issue).

The following requirements are supported:

- Description of a measurement setup with arbitrary geometry; that is, not limited to special cases like a regular grid, or a constant distance.
- Self-describing data with a consistent definition; that is, all the required information about the measurement setup must be provided as metadata in the file.
- Flexibility to describe data of multiple conditions (listeners, distances, etc.) in a single file.
- Predefined descriptions for the most common measurement setups, which are referred to as "conventions"

AES Standards Committee Chair Bruce Olson states, "AES69 represents a fundamental piece of architecture for taking personal audio to a new level of performance. Using this, product developers will be able to take advantage of transfer-function databases from all over the world to produce a truly immersive 3D audio experience."

AES Standards Committee
www.aes.org/standards

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ATSC Begins Next-Gen Technology Review

WASHINGTON, DC—The Advanced Television Systems Committee (ATSC) has begun a technical review of three immersive audio delivery proposals for ATSC 3.0, the next-generation television broadcast standard. ATSC 3.0 audio is expected to "provide consumers with a more compelling, personalized and immersive experience," said Mark Richer, president, ATSC. This next-generation standard must provide improvements in performance, functionality and efficiency that are significant enough to warrant the challenges of a transition to a new system.

Three audio system proponents—Dolby Laboratories, DTS and an alliance of Fraunhofer, Qualcomm and Technicolor—have submitted detailed technical proposals for the audio subsystem for ATSC 3.0. This summer, the three proposed systems will be tested discretely and in their entirety, as comprehensive, end-to-end systems for use as the audio layer for the ATSC 3.0 signal. The goal is to establish the ATSC 3.0 Audio System Candidate Standard this fall.

PROPOSAL EXCERPT FROM DOLBY:

"The Dolby Audio system provides a practical, scalable and flexible set of tools built upon state-of-the-art technology and proven know-how. It enables the most efficient production, distribution and delivery of consumer broadcast experiences for all audiences today and in the future. This comprehensive solution spans content creation, distribution/interchange and consumer delivery that makes next-generation consumer broadcast experiences possible and includes seamless support for today's consumer broadcast experiences."

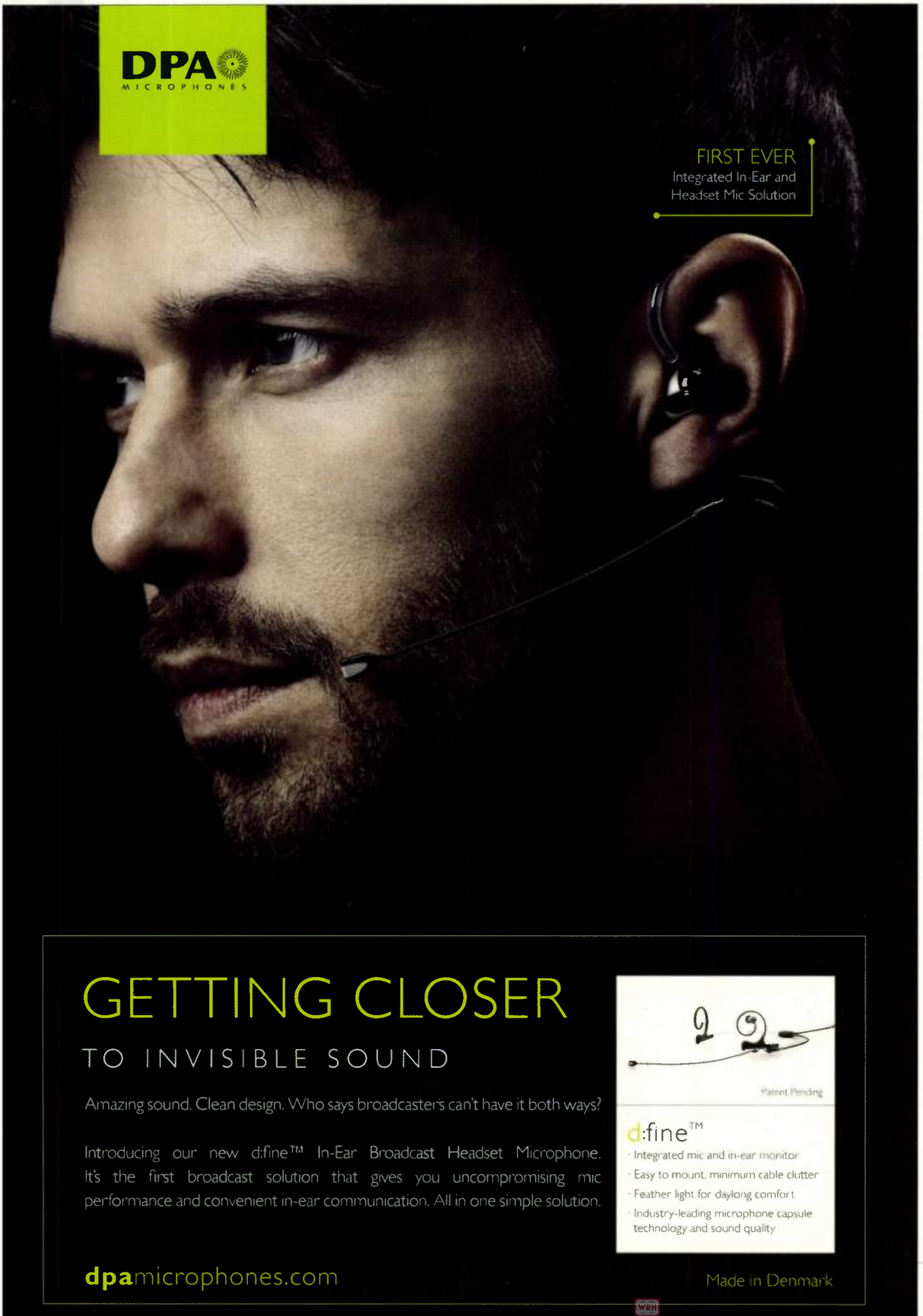
PROPOSAL EXCERPT FROM DTS:

"DTS:X is the next-generation object-based codec technology from DTS. This release is the successor to DTS-HD and marks another milestone in DTS's long line of industry-leading sound innovations. DTS:X delivers the ultimate in flexibility, immersion and interactivity to listeners of all forms of entertainment. The DTS:X solution for ATSC 3.0 is an end-to-end broadcast chain that includes support for key elements including both audio channels and objects, advanced loudness and dynamics management, device and environmental playback processing, and is integrated with DTS's Headphone:X technology."

PROPOSAL EXCERPT FROM FRAUNHOFER, QUALCOMM AND TECHNICOLOR:

"MPEG-H Audio is a holistically designed suite of functionalities built around a highly efficient core audio codec. For the immersive reproduction of content it is possible to use channels based and/or sound scene based technology in combination with audio objects. Audio objects also add interactivity and personalization capabilities to the mix. Enhanced loudness and dynamic range processing allows adaption to device specific audio characteristics. Flexible rendering technology is included to allow the best adaptation of the content to the actual listening environment and compensate for misplaced speakers. For 5.1 surround sound, bit-rates of 96 to 256 kbps deliver good to excellent quality, whereas immersive reproduction can be achieved with commonly used broadcast audio data rates of 384 kbps."

The Advanced Television Systems Committee
www.atsc.org



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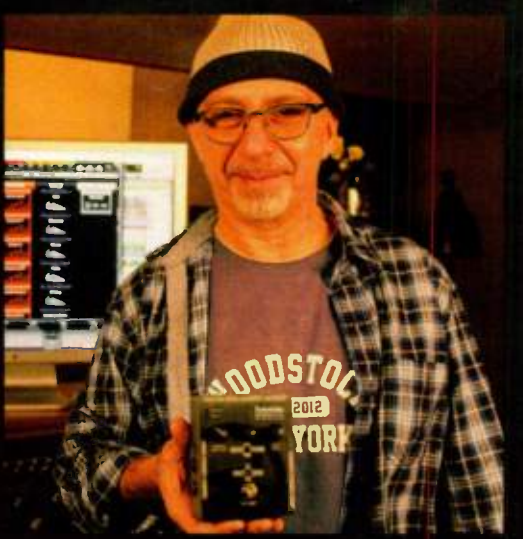

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Lyon Roars in Canada

CANADA—Meyer Sound Lyon systems were recently installed in Edmonton's Northern Alberta Jubilee Auditorium (NAJA) and Calgary's Southern Alberta Jubilee Auditorium (SAJA).

Both Meyer Sound users since 1983, the 2,538-seat auditoriums selected Lyon when they upgraded M2D line array loudspeakers, a decision made jointly by Mark Belkie and Paul Schmitz, technical coordinators for audio at SAJA and NAJA, respectively. "In our extensive listening and assessment process, Lyon set the benchmark that all other competing loudspeakers had to meet or exceed, and none could do so," reports Belkie.

Edmonton's Northern Alberta Jubilee Auditorium recently had a Meyer Sound Lyon loudspeaker system installed.

The upgrade for both auditoriums included 22 Lyon-M main line array loudspeakers and a half-dozen 1100-LFC low-frequency control elements. Six-each Mina and M'elodie line array loudspeakers were installed as center downfill clusters in SAJA and NAJA, respectively. For system drive and optimization, two Galileo Callisto 616 array processors were added to each theatre's existing Galileo loudspeaker management systems. The systems were supplied by Allstar Show Industries of Calgary and Edmonton, with integration and installation by technical staff at the respective auditoriums.

Other Meyer Sound loudspeakers deployed at the auditoriums include UPQ-1P and M1D line array loudspeakers and 700-HP subwoofers, in addition to MJF-210, MJF-212A, UM-100P, and UM-1P stage monitors. SAJA also uses CQ-1, UPJ-1P VariO, and UPM-1P loudspeakers, while NAJA uses M3D-Sub directional subwoofers.

Both locations also have a SIM 3 audio analyzer permanently in-house. SAJA is notable as the world's first purchaser of a Meyer Sound SIM analyzer, having placed its order in 1986.

Meyer Sound Laboratories, Inc.
meyersound.com

Soundcraft Monitors Massive Attack

EUROPE—Massive Attack recently finished a world tour that found it playing everywhere from Italy to Iceland. Throughout the jaunt, monitor engineer Paul Hatt used a Soundcraft Vi4 console at stageside.

The Vi4, chosen in part for having a small footprint, was joined by a 32-channel Soundcraft Compact Stagebox for input extension beyond the fully loaded Vi stage rack, plus a 64-channel Soundcraft Stagebox for additional inputs.

"I think this tour has been the most arduous outing I've put the Vi through to date," said Hatt. "The desk just keeps going and duly boots up every day without issues."

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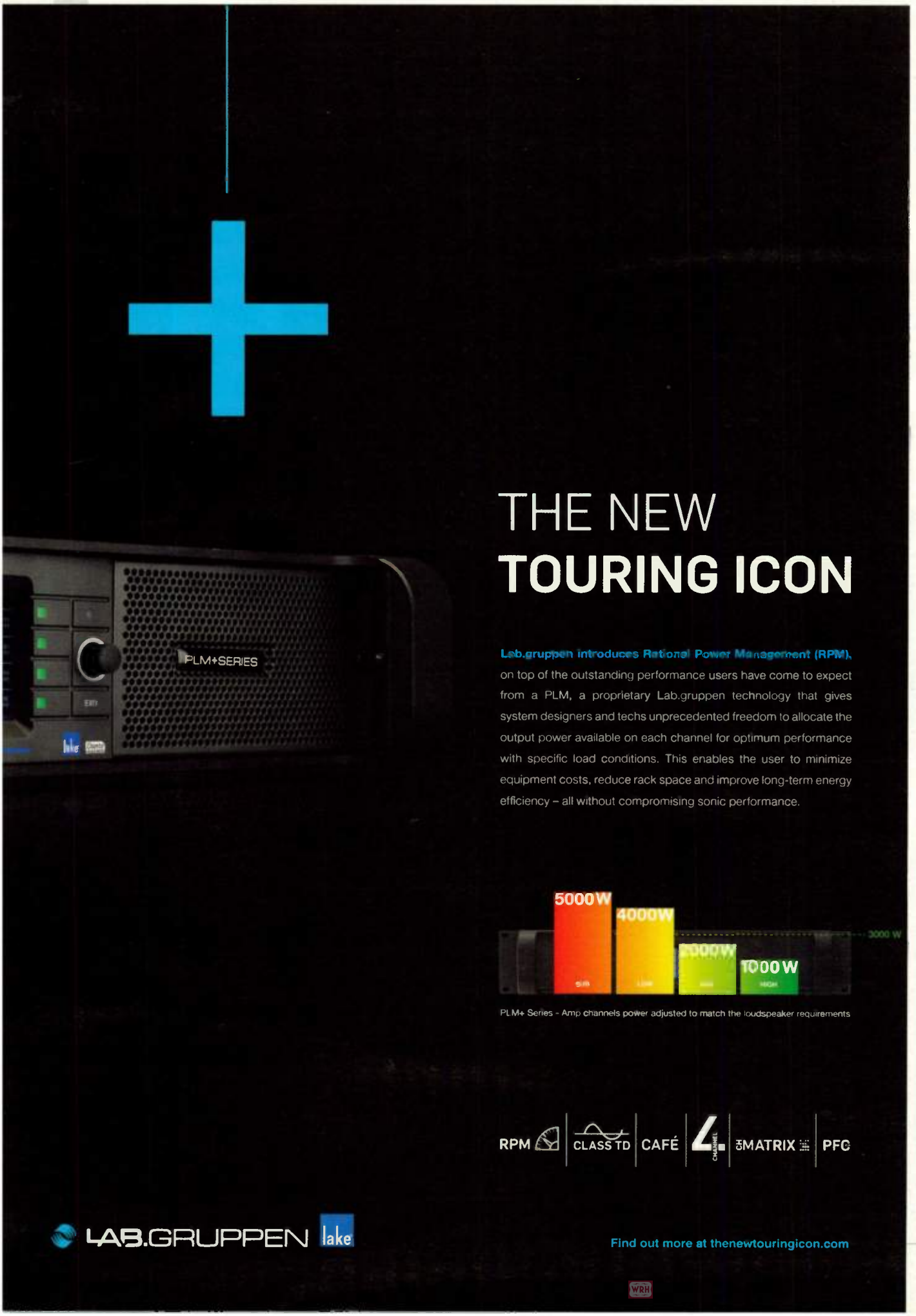

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WRH

CONTENT COMMENTS

Last month on the *PSN* Blog in *Radio Shack Goes The Way of American Leisure*, reviews editor Strother Bullins took a look at the implications of Radio Shack's bankruptcy. Readers had a lot to say in the Comments:

"Good luck to all of us next time we need to find something like a 1/4"-to-XLR line level transformer at the last minute or an RCA Y adaptor." —*Ralph Score*

"In a town with so much vintage audio gear as Nashville, there is no place to buy components locally. At least I can still visit Shields when I'm in Knoxville." —*David Patterson*

"They spent too much time, energy and money trying to continuously reinvent themselves, instead of sticking to what they did best: being a source for hobbyists." —*Bob Tamburri*

"Soooo sad. I would "shop" for hours, asking the experts a million questions, slowly building my understanding of electronics, fixing things and building them DIY." —*Rob Tavaglione*

"When Radio Shack no longer offered products that were exclusive to Shack and instead re-branded other company's products, it was no longer a viable business in the day of discount stores." —*Jim Hartzell*

"Really gonna miss Radio Shack! As a kid...we used to take the bus there and hang out at both RS and Tandy Leather. All of my first band's mics, stands and cables came from there." —*Dusty Wakeman*

For all the comments, visit prosoundnetwork.com/april2015.

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/april2015.

- Easily distracted by sound? According to a study from Northwestern University, you might be a creative genius.
- Trumpeter for Steely Dan and Mark Ronson may be evicted for using apt. as recording studio—but it's complicated.
- Drake gave a $75K studio to Philly's toughest high school; it opened in Feb and is now taking off.
- The day after The Rolling Stones' first recording session, they decided to pay the engineer. He got six bucks.
- Fun list of studio accidents that that were kept in the final mix.

BLOGGINGS

A LOOK INSIDE UNIVERSAL AUDIO'S HERITAGE STUDIO

At the NAMM Show, Universal Audio took visitors back in time via the UA Heritage Studio, a photo op area filled with gear and hosts, circa the late 1950s. UA recently shared online all 1,280 photos taken over the four days of NAMM, so we went through all of them to see who stopped by—like, for instance, Martin Gore of Depeche Mode (seated, right).

MARTIN AUDIO'S MASSIVE LEGO GLASTONBURY

The Glastonbury Festival is legendary in the UK festival world; founded in 1970, the five-day event has become the premiere music event of the year, held annually the last weekend of June. For those who just can't wait for their yearly helping of great music and acres of mud, Martin Audio has commissioned this fantastic Lego recreation of the iconic Pyramid Stage, which it will display at ProLight+Sound in Frankfurt this month, April 15-18.

Find these blog posts at prosoundnetwork.com/april2015.

video vault

No Phones For The Ramones

Back in the early days of punk rock, FOH engineers had to make sure the console didn't get hit by The Three Bs: Beers, Bodies and Blood. Today, that doesn't happen as much—are punk audiences better behaved now? Heck no! It's 'cause the crowd is too busy holding iPhones in the air, blocking everyone's view—including the FOH engineer's. If you can't see the stage from the mix position thanks to all the outstretched arms, here's Marky Ramone with a very DIY solution. Catch the video at prosoundnetwork.com/april2015.

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LA Opera Records In High Def with Soundmirror

BY STEVE HARVEY

Soundmirror's Mark Donahue (left) and Blanton Alspaugh traveled to LA to capture performances with a slate of gear from SmartAV, Lectrosonics, Merging Technology, Schoeps, DPA and Neumann.

LOS ANGELES, CA—Soundmirror, based in Boston, MA, took up residence in Los Angeles during February at the Dorothy Chandler Pavilion, one of four venues on the downtown Music Center campus, to capture the LA Opera's latest production for release by Dutch classical music label Pentatone. The recording, of composer John Corigliano's *The Ghosts of Versailles*, commissioned in 1991 by the Metropolitan Opera, was notable for its use of the first 13 LT Digital Hybrid Wireless bodypack transmitters to come off the Lectrosonics production line.

"We're using 24 DPA 4071 [lavalier] microphones with Lectrosonics transmitters and Venue receivers," says Soundmirror's Blanton Alspaugh, a four-time Grammy Award-winner, including one for Producer of the Year, Classical in 2012. The production utilized 11 Lectrosonics SMQV transmitters in addition to the 13 new LT bodypacks with the DPA lavs.

The DPA mics were affixed at each performer's wigline, protruding approximately one-quarter inch. Soundmirror recording engineer Mark Donahue, with five Grammy Awards to his credit, comments, "Those 4071s are designed for hairline applications. They have the right boost on them, so they sound natural at that position."

Donahue continues, "The 24 wireless get paired up with another 30-something mics in the [orchestra] pit, and another 15 or so mics on the stage and buried in the set. All of that goes into Merging Horus interfaces. Those all come out on a piece of Cat 5 and get recorded on a couple of computers." The stage mics, all Schoeps, included CMIT shotguns with MK 21 capsules positioned by the footlights.

(continued on page 24)

Fidelity And Workflow Improvements At Rensselaer Polytechnic's EMPAC

TROY, NY—Founded in 1824, Rensselaer Polytechnic Institute (RPI) is the nation's oldest technological research University. The private research University recently installed two Yamaha NUAGE Advanced Production DAW Systems provided by Parsons Audio LLC (Wellesley, MA).

The NUAGE systems are available to external clients, though used primarily by RPI staff and students. "We read a lot of press on the NUAGE System while researching alternatives to our recording and mix system," states Todd Vos, audio systems lead, The Curtis R. Priem Experimental Media and Performing Arts Center (EMPAC) at RPI. "Once we determined NUAGE might be the way to go, we were given two really great demos by Parsons Audio, which closed the deal."

One of two Yamaha NUAGE Advanced Production DAW Systems installed in Rensselaer Polytechnic Institute's EMPAC studios.

Both Vos and fellow engineers Jeff Svatek and Steve Mclaughlin determined NUAGE had a tight DAW-to-control surface integration. "We were attracted to the programming flexibility of VST architecture, and were basically sick of the Digidesign workflow, exclusionary software/hardware model, master section functionality (or lack thereof), and sonic shortcomings, Vos says. It all came down to timing; we were ready to move on shortly after the NUAGE System had been released, it was garnering decent feedback from users, so we pursued it.

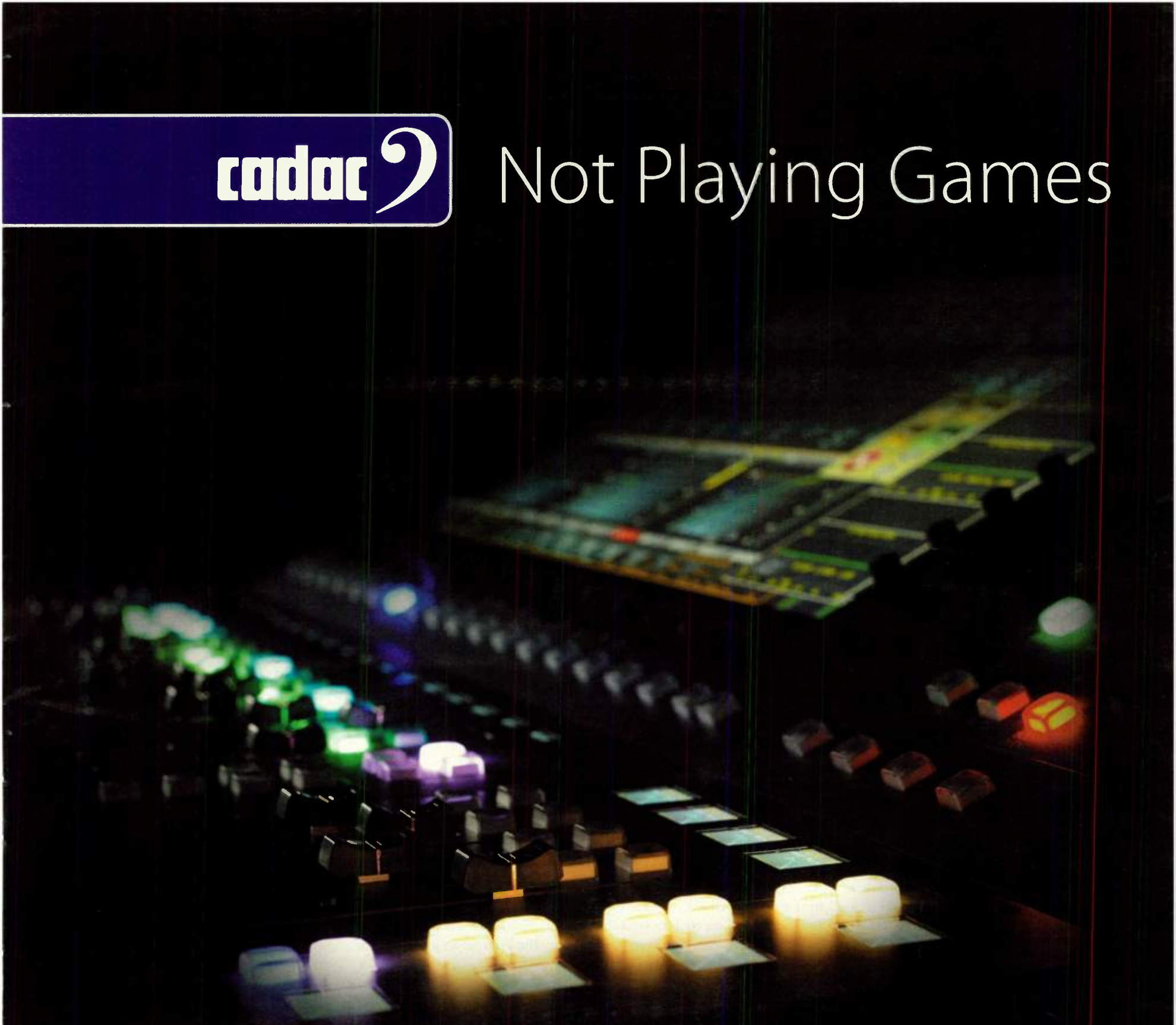
"NUAGE presents Nuendo to the operating engineer in a manner reminiscent of a traditional audio console," Vos continued. "The line between controller and DAW is really blurred, this layout was incredibly attractive to us and the price point was amazing. But the biggest upside of our decision to move recording and mixing operations onto the NUAGE/Nuendo platform was the bump in fidelity. The edge of our Lawo network has these fabulous Lawo mic pres; sadly, the sonic bottleneck of the system was Pro Tools. Now that we are running Nuendo with NUAGE, I am hard-pressed to identify where things are being mutilated (negatively speaking); it was immediately apparent to us, Nuendo is just a significantly better-sounding DAW."

The first EMPAC NUAGE System is 32-faders plus a Master section with a JL Cooper Panner. The second NUAGE System has a 16

(continued on page 24)

cadac 9

Not Playing Games



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Expanding Opportunity And Space For Students

BY STROTHER BULLINS

CANANDAIGUA, NY—After experiencing incredible student body growth over the past few years, Finger Lakes Community College recently bequeathed its former cafeteria space to the Audio Sciences department. This increased the AS degree program's Walters-Storyk Design Group-designed instructional control rooms to a total of five. Along with the physical expansion, the department was also given a generous budget to purchase two new world-class analog consoles and facility-wide matching nearfield monitors alongside new outboard gear and microphones.

"We were running out of space due to the number of students coming into the program," explains Bob Potter, Finger Lakes Recording studio manager and technical specialist. Finger Lakes' AS degree program consists of four semesters of audio engineering instruction, including lab and studio sessions, music theory, performance ensembles, music business, sound reinforcement/live recording and audio for film classes. "As we are a community college, our program is, quite frankly, much more affordable than others. So, with a big influx of students, we needed more space. Three studios proved not to be enough, even with 24/7 available access. Being one of the largest programs on campus, the college gave us an entire floor to renovate into practice rooms, classrooms and mainly the new studios."

A 48-channel API Vision resides in Finger Lakes' new stereo mix room.

Potter attended the 2013 US AES Convention to research the best possible choice in consoles. Little did he know that he wouldn't have to select just one. "At that point, we were so excited about the possibilities," Potter recalls. "If were going to go 'big-time,' what should we do? We knew we wanted large format and analog. We debated the attributes of the API Vision and the SSL Duality, thinking that we would only get one and the other control room would be a smaller mixing suite. But after returning from AES, having had the opportunity to sit down with both parties there and look closer at our budget, we were able to get both." As such, an API Vision now resides in the large-format stereo mix room and the other room, a surround mix room, hosts the SSL Duality. Both are 48-channel consoles.

"We wanted to give our third- and fourth-semester students a professional, real-world scenario of working in a major market studio," explains Potter of their choices. "Too often, you don't often leave a recording program with very much hands-on experience with a large-

(continued on page 51)

STUDIO: FINGER LAKES MUSIC PRODUCTION OWNER: FINGER LAKES COMMUNITY COLLEGE LOCATION: CANADAIGUA, NEW YORK

There's more ▼ Take a virtual tour of Finger Lakes Community College's studios by visiting prosoundnetwork.com/april2015

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Billy Joel
Billy Ray Cyrus
Billy Sheehan
Björk
The Black Crowes
The Black Eyed Peas
The Black Keys
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Chuck Rainey
Cyndi Lauper
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Clint Black
Coldplay
Colin James
The Corrs
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Damien Rice
Dandy Warhols
Daniel Lanois
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Diana Krall
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Doobie Brothers
Doves
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Dwight Yoakam
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Econoline Crush
Elton John
Eminem
Emmylou Harris
Enrique Iglesias
Eric Clapton
Eric Johnson
Erykah Badu
Evanescence
Extreme
Faith Hill
The Flecktones
Fleetwood Mac
Flogging Molly
Florida Georgia Line
Foo Fighters
Foreigner
Frank Filipetti
Franz Ferdinand
Garbage
Gavin DeGraw
Genesis
Gino Vannelli
Glen Ballard
Godsmack
Gomez
Goo Goo Dolls
Good Charlotte
Gov't Mule
Grand Ole Opry
Green Day
Gregg Allman
Guns N' Roses
Gwen Stefani
Hall & Oates
Herbie Hancock
Hoobastank
House of Blues
Hunter Hayes
INXS
Imagine Dragons
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Joe Jackson
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Joe Walsh
Joey DeFrancesco
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John Jorgenson
John Mayer
John Patitucci
John Petrucci
John Rzeznik
Josh Groban
Journey
Juanes
Justin Timberlake
Kaiser Chiefs
Kanye West
Kasabian
Katy Perry
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Keb' Mo'
Keith Urban
Kellie Pickler
Kenny Chesney
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Tommy Emmanuel
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Tony Levin
Tony Maserati
Toots & The Maytals
Tragically Hip
U2
Usher
Van Halen
Victor Wooten
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LA Opera

(continued from page 20)

The wireless channels were providing additional vocal intelligibility to the zone mics, according to Donahue. "You still get the stereo of the zone miking and the proper perspective on stage. I don't pan the wireless mics—they all go into the center and add a little bit of dialogue clarity."

Massachusetts-based independent RF expert David Williams, the third member of the Soundmirror team, was managing the Lectrosonics wireless gear, including three Venue receivers. "It was really nice to have the LT," says Williams, since the new transmitter tunes across a wide 75 MHz range. "We planned on eight, eight and eight [channels] in three separate blocks: 21, 22 and 23. But I got a phone call from the Bexel guy a week ago saying you are SOL for block 23. He found six channels for us, but that meant we had to put 10 channels in block 22. The SMQVs are locked into a block but the LTs have that three-block range," so they could be tuned accordingly.

Located in a trailer temporarily located at the venue's loading dock, Alspaugh and Donahue were essentially performing QC as each performance was recorded. "We're listening for audio quality issues. We sit here in the fabulous 'audio palace' and monitor it all," laughs Donahue.

> "You still get the stereo of the zone miking and the proper perspective on stage. I don't pan the wireless mics—they all go into the center and add a little bit of dialogue clarity."
> *Mark Donahue, Soundmirror*

The SmartAV Tango control surface was set up with the 24 wireless mics plus eight VCA groups, for rebalancing the orchestra, immediately at hand. "As Blanton is marking the score, he's giving me on/off cues [for the RF channels]. There are certain groups that happen together, but there's no way to set up mute groups for it—people leave the scene and come back. It's like whack-a-mole."

Alspaugh and Donahue were monitoring through a 5.1 setup of Neumann KH 120 speakers. "Our normal speaker complement is B&W 801s; we've been using those for 30 years," says Donahue. "But the Neumann is a great small monitor."

Ordinarily Soundmirror would have recorded the production to DXD format, says Donahue, but the unusually large number of wireless mic channels exceeded the 64-channel transport capabilities at that sample rate, so they elected to track the 80 channels at 192 kHz. "We're recording to [Merging Technologies] Pyramix. We have two systems, plus I'm running a laptop—which we modified to take a PCI card—with RAVENNA, as a backup."

LA Opera's *The Ghosts of Versailles*—the West Coast premiere and the first full-scale U.S. production since 1995—was running for six performances in repertory with the two classic "Figaro" operas that inspired it, *The Barber of Seville* and *The Marriage of Figaro.* "We're capturing three performances," explains Alspaugh. "Then we're going to need 140, 150 hours of editing, mixing and mastering. That will be spread out over months. You've got to send copies to the composer, the conductor; you fit it into everybody's schedule and pretty soon you're halfway through the year." According to Pentatone label founder Jop Maarse, also in attendance, the hybrid SACD release can be expected in 2016.

Donahue adds, "This is a cooperative production. There's the production at the front of the house—the normal archiving production—then our production is laid on top of that. There are a whole bunch of mics that are split between the two of us, and then there are a bunch of mics that just go to the truck.

"We have the easy job; this man," Donahue says, indicating Jeff Kleeman, LA Opera's technical director, "has the hard job. We just try and stay out of the way."

Lectrosonics
lectrosonics.com

Soundmirror
soundmirror.com

THERE'S MORE ▸ Watch a clip of LA Opera's performance of *The Ghosts of Versailles* by visiting prosoundnetwork.com/april2015

RPI

(continued from page 20)

fader unit, master section, also with a JL Cooper Panner. Both systems are connected to a large Lawo Nova 73 MADI network via PC-based DAWs running either 96 or 192 channel RME MADI cards with two UAD QUAD accelerators, SSD record drives and a Black Magic SDI link to the facility's Harris router for post work.

While the two NUAGE Systems are used both internal and external to campus in support of all EMPAC productions, including video shoots, music production, film post, event documentation, media research, archival and restoration, Vos revealed that "a music engineering curriculum will start next fall at RPI that I imagine will be using the NUAGE production spaces as well."

Good news started rolling in over holiday break as music magazines, radio stations, blogs, and awards organizations selected a number of albums produced at EMPAC for 'year-end' lists. Ben Frost's *AURORA*, Vicky Chow and Tristan Perich's *Surface Image*, David Brynjar Franzson's *The Negotiation of Context*, and Michael Gordon's *Rushes* were all commissioned by EMPAC, developed through the artist-in-residence program, and recorded either in full or in part at EMPAC. The highest honor was given to Frost, whose record was chosen as the No. 1 avant-garde album of the year by *Rolling Stone*.

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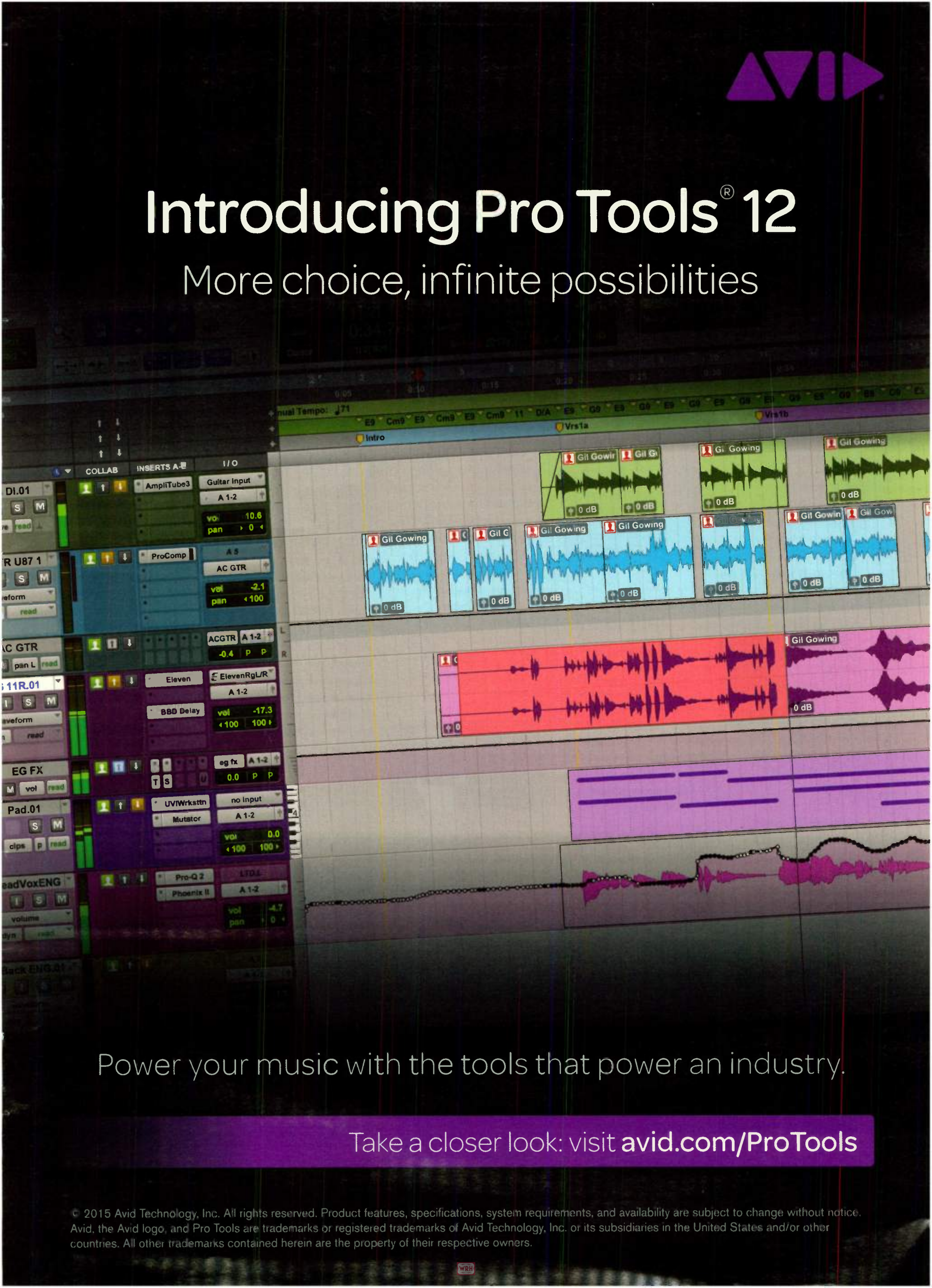

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tracks LOOK AT THE RECORDING SCENE

ARTIST: BUMBLEFOOT
RELEASE: LITTLE BROTHER IS WATCHING
LABEL: BUMBLEFOOT MUSIC, LLC
PERSONNEL:
Produced by: Ron 'Bumblefoot' Thal
Engineered by: Ron 'Bumblefoot' Thal
Assistant Engineer: Dennis Leeflang
Studios: Bumblefoot Studio (Princeton, NJ)
Mastered by: Ron 'Bumblefoot' Thal at Bumblefoot Studio
EQUIPMENT NOTES: Steinberg Nuendo v2.1; JBL monitors

ARTIST: MOOJI
RELEASE: PRIME EP
LABEL: SECTIONZ RECORDS
PERSONNEL:
Produced by: Frederik Mooij
Engineered by: Frederik Mooij
Studios: Loudroom Headquarters
Mastered by: Frederik Mooij
EQUIPMENT NOTES: Mackie HR824 studio monitors; Steinberg, Ableton software

ARTIST: PANIC IS PERFECT
RELEASE: BEHIND YOUR EYELIDS
LABEL: STRANGE LOOP MUSIC
PERSONNEL:
Produced by: Mike Hoffman, Jeremy Belzer, Chris Zane
Engineered by: Aaron De Matteo, Damodrick Jack, Billy Pavone
Studios: SF Soundworks (San Francisco, CA); Gigantic Studios (New York, NY); home studios
Mastered by: Eric Oberthaler
EQUIPMENT NOTES: Neve, SSL consoles; Avid Pro Tools 10; Yamaha NS-10, HS-7 studio monitors

ARTIST: MIRK
RELEASE: "LET IT GO" SINGLE
LABEL: NEW FAMILIAR GROUP
PERSONNEL:
Produced by: Joshua "Mirk" Mirsky
Engineered by: Joshua "Mirk" Mirsky, Michael Thornton, Steve Struss
Studios: Foster House Studios (Albany, NY)
Mastered by: Joshua "Mirk" Mirsky
EQUIPMENT NOTES: Yamaha O2R console; Apple Logic 9; Avid Pro Tools 9/10; Event PS5, JBL LSR308 studio monitors

ARTIST: 18TH & ADDISON
RELEASE: LITTLE PARASITES
LABEL: 18TH & ADDISON LLC.
PERSONNEL:
Produced by: Charlie Berezansky
Engineered by: Charlie Berezansky
Studios: Skywire Studios (West Creek, NJ); Rival Sound (Manahawkin, NJ)
Mastered by: Alan Douches at West West Side Music (New Windsor, NY)
EQUIPMENT NOTES: Toft ATB 32 console; Avid Pro Tools; Event Opal, PreSonus Eris E8 studio monitors

ARTIST: BARREN EARTH
RELEASE: ON LONELY TOWERS
LABEL: CENTURY MEDIA RECORDS
PERSONNEL:
Produced by: Barren Earth
Engineered by: Petri Majuri
Studios: Studio Block (Faroe Islands, Denmark)
Mastered by: Tony Lindgren at Fascination Studios (St. Örebro, Sweden)
EQUIPMENT NOTES: SSL AWS900 console; Avid Pro Tools; Genelec studio monitors

ARTIST: CAKED UP
RELEASE: "RAVE POLICE" SINGLE
LABEL: DIM MAK RECORDS
PERSONNEL:
Produced by: Oscar Wylde
Engineered by: Oscar Wylde
Studios: Private Studio (Las Vegas, NV)
Mastered by: Dim Mak
EQUIPMENT NOTES: Ableton 9; KRK Rokit 8 studio monitors

ARTIST: CODE
RELEASE: MUT
LABEL: AGONIA RECORDS
PERSONNEL:
Produced by: Code, Paul 'Win' Winstanley
Engineered by: Paul 'Win' Winstanley
Studios: Brighton Electric (Brighton, UK)
Mastered by: Paul 'Win' Winstanley
EQUIPMENT NOTES: Neve 5316 console; Avid Pro Tools; ATC SCM100A, Yamaha NS10M, Genelec 1030a, Bryston 3B studio monitors

ARTIST: DORTHIA COTTRELL
RELEASE: DORTHIA COTTRELL
LABEL: FORCEFIELD RECORDS
PERSONNEL:
Produced by: Producer: Daniel Deckelman
Engineered by: Producer: Daniel Deckelman
Studios: Snake Oil Studios (Richmond, VA)
Mastered by: Paul Gold
EQUIPMENT NOTES: Modified Soundcraft 600 console; Avid Pro Tools 10; K+H O300D studio monitors

ARTIST: GAMMA PULSE
RELEASE: DEAD BUT DREAMING
LABEL: BULLET TOOTH
PERSONNEL:
Produced by: Brian "Bone" Thorburn
Engineered by: Brian "Bone" Thorburn
Studios: Threshold Studios (Indianapolis, IN)
Mastered by: Brian "Bone" Thorburn
EQUIPMENT NOTES: Avid Pro Tools

notes

Royer Captures Jets, Sharks

SAN FRANCISCO, CA—Jack Vad, engineer/producer of the San Francisco Symphony, captured the Grammy-nominated recording of West Sice Story using Royer Labs (royerlabs.com) ribbon mics, including a Royer SF-24 as the primary drum kit mic; three SF-2 mics for celli, solo bass, and piano; plus an R-122 to capture the saxophone ensemble.

Lazar Masters with Antelope

SANTA MONICA, CA—Emily Lazar of The Lodge in New York City mastered indie band Beauty Pill's new album, *Beauty Pill Describes Things As They Are*, mixed on an API 1608 at Arlington, VA-based Bastille Recording Services and delivered at 192 kHz, using Antelope Audio's (antelopeaudio.com) Isochrone 10M Atomic Clock, a pair of OCX-V Master Clocks and an Eclipse 384 converter.

Hay Records with Lauten

LOS ANGELES, CA—Grammy-winning recording artist Colin Hay, founding member of 1980s Australian band Men at Work, added a pair of Lauten Audio's (lautenaudio.com) Atlantis FC-387 multi-voicing studio microphones to his studio in time to work on his latest solo release, *Next Year People*, using them on vocals, acoustic guitar, tres, tablas, congas and acoustic bass.

WSDG Designs VO Studio

CALGARY, AB, CANADA—Walters-Storyk Design Group (wsdg.com) designed a 200-square-foot personal voiceover recording studio for Graeme Judd in his family home in Calgary that is outfitted with Avid HD OMNI, Pro Tools HD Native PCIe, Genelec 8030, 7050 and 6010 monitors, Neumann M 149 Tube and U 87 Ai, Sennheiser MKH 416 and Telefunken ELA M 260 mics, and a wide selection of outboard gear.

The Big Ten

BY CRAIG ANDERTON

Did you get your questionnaire from Apple and Microsoft about what audio/video-oriented features you wanted in their latest operating systems? Neither did I, so as usual, we cross our fingers that the next OS to which we upgrade will fix more things than it breaks. Sometimes we strike gold—Core Audio comes to mind—and sometimes we don't (Windows 8, anyone?).

Now the Mac is up to OS X 10 (Yosemite), so thankfully people don't refer to OS X as "OS 10" anymore, or we'd have "OS Ten Ten." In further nomenclature silliness, Microsoft has skipped Windows 9 altogether, and is proceeding to Windows 10. I'm not making either of these up.

While OS X 10 is out, W10 remains in preview mode. But there's a common theme: Mobile matters. Although OS X 10's sexiest features relate to integration with iOS hardware, desktop/mobile application integration remains elusive—which is where Microsoft hopes to shine. The W10 team has more of a mobile orientation, and while that causes fear among some ("Windows will turn my desktop into a *tablet!*"), I'm cautiously optimistic. Mobile is hard to get right and is arguably easier to scale to a desktop than the reverse. If Windows can access mobile apps on your desktop, that's a good thing—assuming anyone cares about mobile Windows apps.

But tablets may be a different matter because Windows tablets and notebook-type computers are striving for serious power, touch control, and cost-effectiveness—those commercials over Christmas showing a MacBook Air and Surface 3 were strong counters to yesteryear's Mac vs. PC commercials. Of course the Mac hasn't been asleep; the emphasis on "any-day-now-it's-gonna-be-huge" Thunderbolt can greatly extend a laptop's power. But it seems Microsoft sees a major opportunity in the schism between OS X and iOS to go one-up on Apple in the mobile world.

So Apple is parlaying its cachet into more interoperability, while Microsoft is attempting the integration that was slated for Windows 8. But the dark side of this force is hardware.

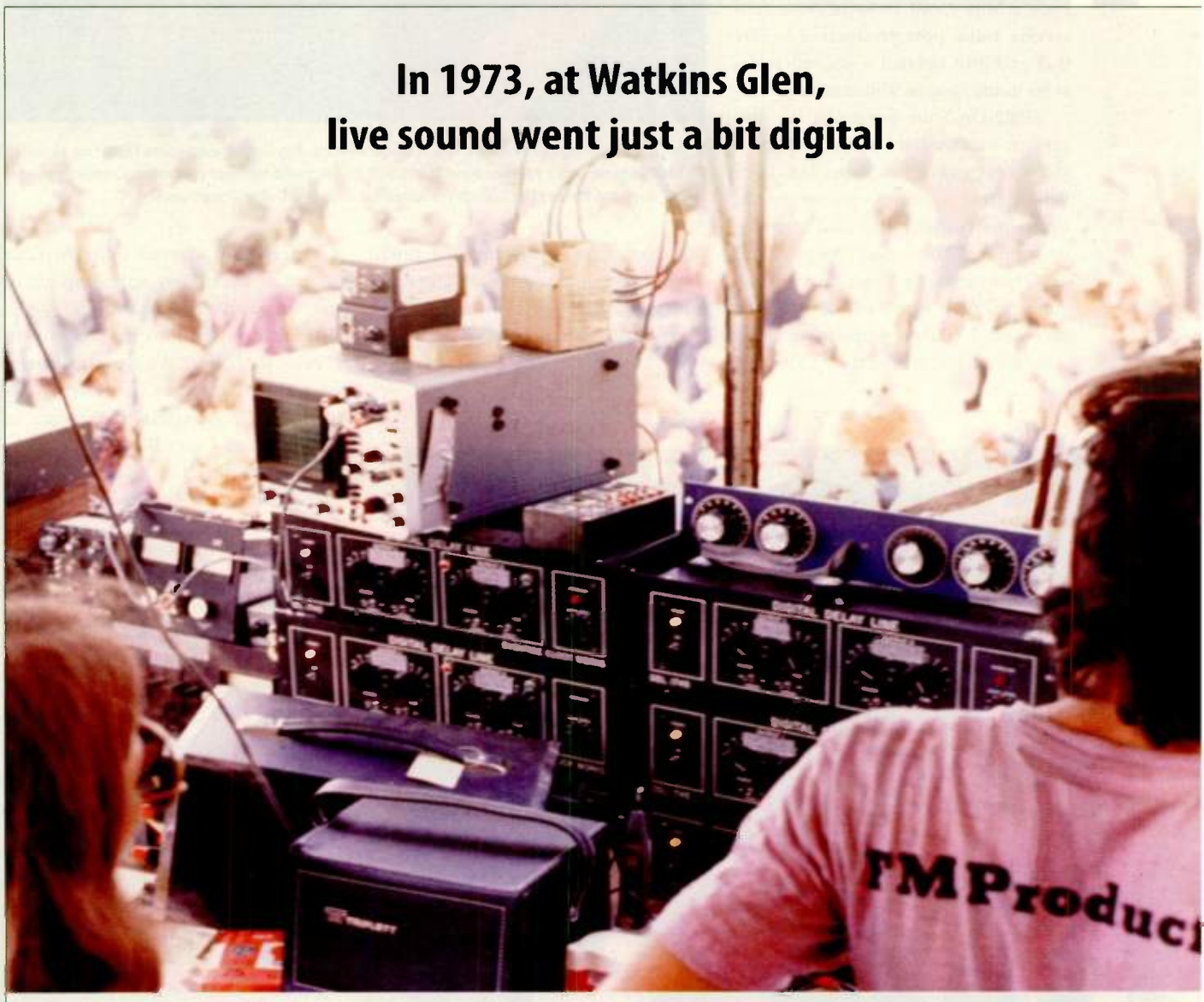
I know several people who automatically buy a new computer to run a new operating system; they start over rather than upgrade. On the Mac, upgrading is easy—Yosemite can upgrade over Mavericks—but upgrading from Windows 7 to Windows 8.1 requires re-installing your compatible programs. However, although some users report seamless Mac upgrades, others highly recommend starting over with a clean install.

There's also controversy about OS X 10 "slowing down" machines (we'll overlook the wi-fi issues for now). Dig deeper, and you'll generally see that the older the Mac, the less happy the user. Granted, giving away an OS for free is not exactly a profit center, so you want people to upgrade their Apple hardware. Still, the myriad customer reviews have an uncomfortable number of "I regret upgrading" comments that offset at least some of the "works great!" verdict from those with newer machines.

Microsoft's Upgrade Assistant advises if your hardware will do the job, and checks your applications too. But while most machines that

(continued on page 57)

In 1973, at Watkins Glen, live sound went just a bit digital.



"In the beginning, audio was analog. And, almost anything was possible."

Everything but delay. And so the Digital Delay Line (DDL) was born. DDLs were simple and limited to just delay. Today, forty one years after a stack of Eventide DDLs delayed the audio feeds to the speaker towers at Watkins Glen, Eventide introduces the DDL·500. Designed to be 'as analog as possible', the DDL·500 will make your 500 series lunch box "just a bit digital."

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YouTube-Borne, Multifaceted Success

BY STEVE HARVEY

Foys second studio, The Foundry, is a 700-square-foot, Pro Tools-based room featuring an Avid S6 M40 console and a Martinsound MultiMAX EX surround monitor controller. Currently used in 7.1 surround mode, The Foundry is wired for eventual Dolby Atmos work.

BROOKLYN, NY—In some ways, Fall On Your Sword is a tricky entity to define: Is it a group of YouTube stars, a performing and recording band, a multi-media sonic art collective, a music production company or music-driven video artists? The answer is all of the above, while also being—perhaps a little more prosaically—a full-service audio post production facility that recently opened a second room at its home base in Williamsburg.

"Fall On Your Sword in its very earliest incarnation started out as a video art project," explains UK-born Will Bates, a composer, producer, multi-instrumentalist and company founder. "It actually began with YouTube, making these crazy video mashups. As a result of the YouTube successes I started performing these videos live. The whole time I was doing that, I was working at a much larger company, scoring commercials and smaller independent films. I left there, brought in Lucy [Alper, executive producer and Bates' business partner], and started Fall On Your Sword as a company, springing out of the band and video art project."

FOYS moved into its 2000-sq.-ft. facility in 2009. "We were fortunate enough to get what is probably the last bit of commercial real estate in Williamsburg," says Bates

"At the time, it didn't feel like there were many business here aside from your standard retail," says Alper. "So we were definitely worried that we would have trouble getting our clients over here."

As things have turned out, Alper and Bates need not have been too worried about clients making the trek across the river to Williamsburg. Commercial clients have included Coca-Cola, Google, Nike and Siemens. As a composer, Bates has scored *Going Clear*, Alex Gibney's documentary about Scientology; *Another World*, about the Occupy Wall Street movement; and numerous other long- and short-form projects, including *Steve Jobs: Man in the Machine*, also by Gibney, which debuts at SXSW.

"Having music production, mix, sound design, Foley and ADR all in one place—that was our business plan initially," says Bates, "to be able to offer that to filmmakers, commercial directors and the like, for them to be able to get all of their audio done in one joint, essentially. We still do a lot of those kinds of projects, where we do the music, score, sound design, music supervision, the mix and everything, but we also separate those per-project as well. Where larger projects just want to mix here, and the score has been done elsewhere, we do that as well."

The company has grown organically, starting out with The Forge, a 300-square-foot, 7.1-capable room centered on a Pro Tools 11 HD Native system driven by a D-Command. They built an office next to it, then more space became available down

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briefs

Gershin Installs Barefoots

LOS ANGELES, CA—Ten-time Golden Reel Award-winner Scott Gershin, a supervising sound editor and sound designer at The Formosa Group in Los Angeles who has been credited with bringing film quality sound into the interactive entertainment industry, has installed Barefoot Sound (barefootsound.com) MicroMain 27 monitors is his post production studio.

Lectrosonics Nets Cowboys

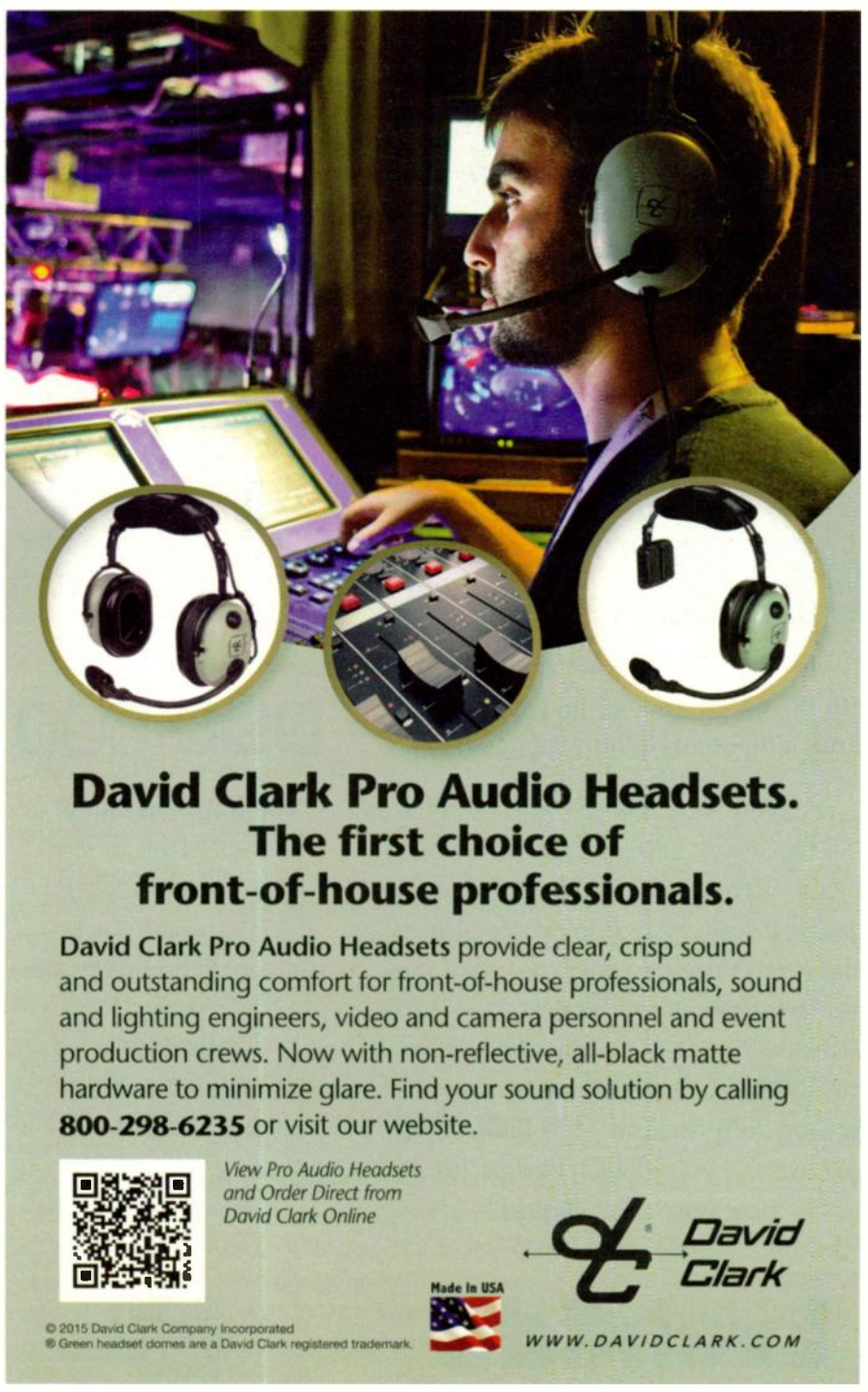
VANCOUVER, BC, CANADA—Mark Barry, lead sound consultant for extreme reality TV series *Cold Water Cowboys*, employed Lectrosonics (lectrosonics.com) Digital Hybrid Wireless gear during the current season, outfitting each boat with a five-channel Venue receiver and ALP650 antennas, fishing crews with WM bodypack transmitters and Countryman B6 lav mics, and each director with a UCR411a compact receiver.

DPA Mics Taken to Paris

PARIS, FRANCE—French sound engineer Stéphane Bucher used DPA (dpamicrophones.com) d:screet mics to capture dialog on the set of *Taken 3*, the third and final installment of the Liam Neeson action trilogy, hiding 4060 miniature mics in costumes and putting MMC4018-ES supercardioic mics with MMP-ES active cables with side cable, supplied by DPA's French distributor Audio2, in car sun visors.

Riedel Fiber Supports Sochi F1

WUPPERTAL, GERMANY—Riedel (riedel.net) was heavily involved in creating the specifications for the TV production requirements at the new Sochi Autodrom where more than 15,000 meters of Riedel fiber optic cables were laid in time for Russia's inaugural F1 Grand Prix race in October, 2014, providing the infrastructure for the transmission of video, audio and intercom signals for the circuit.



FOYS

(continued from page 28)

the hall, Bates recalls: "It has naturally progressed, and in a weird way has been dictated by the real estate that's been available to us. We're taking up New York one hallway at a time."

Two years ago, they started planning and building The Foundry, which recently opened. The larger room, at 700-square feet, is also Pro Tools-based. Chris Harmaty of Audio Structures provided studio design.

The Foundry features an Avid S6 M40 console. "We were really talked into [the S6] by Avid," says Bates. "Having looked at all the options, it seems like the most obvious choice for us. We have the D-Command in the other room, and obviously they stopped making that. I was sick of things being discontinued. So we have the S6—it's somewhat future-proof, and we wanted the most recent piece of gear in there. We're very happy with it."

The S6, which is paired with a Martinsound MultiMAX EX surround monitor controller, will serve as a springboard for the next phase of The Foundry, he expects: "The room is currently being used as 7.1, but it's wired for Atmos."

As for plug-ins, he says, you name it and they've got it. "We have a lot of mixes come through here, which is wonderful—we love there being all sorts of different characters and traffic here—but one problem is that everyone has a different set of tools that they use. So we found that we just have to have everything."

As The Foundry opened in mid-December, 2014, George Dellinger joined to manage both rooms. "We also have a number of fulltime assistants, and a couple of engineers and designers and mixers who are in and out," says Alper.

The building houses more than the audio post facility. "My wife is a painter," says Bates. "Her studios are next door to the new room, so there's a Fall On Your Sword art department now. She's actively involved in creating the look of the place; we have a very specific aesthetic. The Forge, we were going for a nineteenth-century bordello feel. I feel like The Foundry is more of a 1920s gentlemen's club."

Interactive art pieces have largely replaced his live performances, says Bates, who last played at Sundance 2013. One interactive art installation, "Private Drive-In," is a 1974

THERE'S MORE ▸ Watch *Shatner of the Mount* by Fall On Your Sword at prosoundnetwork.com/april2015

> "Having music production, mix, sound design, Foley and ADR all in one place—that was our business plan initially: to be able to offer that to filmmakers, commercial directors and the like, for them to be able to get all of their audio done in one joint."
>
> *Will Bates, FOYS*

VW Beetle outfitted with a surround sound system. A new piece, "Greed Is Good," debuting at New York's Spring/Break Art Show in March 2015, features a giant sphere and spinning Champagne bottles with music and video by FOYS.

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innovations: the manufacturer's view

Integrating Improved Speech Intelligibility

ISP TECHNOLOGIES' VIP (VOCAL INTELLIGIBILITY PROCESSOR)

BY JAMES "BUCK" WALLER

ISP Technologies was presented with a design challenge from one of our integrators: to improve the voice clarity and intelligibility of announcers for broadcast sporting events as heard in the sports bar environment. The fundamental challenge is that most sports bar audio suffers from a number of detrimental sonic problems that collectively mask the announcer's dialogue, destroying the intelligibility. The typical problems include poor midrange performance of commonly installed speakers, less than desirable acoustics from highly reflective surfaces in the environment, plus the masking effect of a room full of people eating and talking with a typical SPL noise floor of 85 dB to 90 dB. This combination makes it impossible to clearly understand sporting-event audio when using common sound reinforcement systems. The spectral build up of the masking sound manifests in the lower midrange portion of the audio spectrum; simple EQ, while helpful, simply cannot overcome the problem and may actually cause clipping of the sound system, creating further problems with intelligibility. Adding to the problem, the typical installed speakers are not flat; many have a peak in their response in the upper midrange portion of the spectrum, which over-emphasizes the sibilance of the announcer and the squeak of tennis shoes on the basketball court, further denigrating sound quality. The broadcast audio also suffers from equalization enhancement that can cause overly sibilant sports announcer vocals.

To overcome these problems, ISP Technologies has developed the VIP (Vocal Intelligibility Processor). The VIP is designed to dynamically analyze the spectral energy distribution of the voice band of broadcast sporting events and dynamically enhance the formant energy and the harmonics of the broadcast vocal so as to greatly improve vocal intelligibility, clarity and definition. A second dynamic enhancement of high-frequency spectral compression, similar to de-essing, is applied to remove the sibilance of broadcast vocals and the squeak of tennis shoes on the court for basketball broadcast. The VIP requires a fixed reference level of the broadcast audio in order to properly track and will dynamically enhance the critical voice band and apply high frequency de-essing as needed. The resulting intelligibility can improve vocal clarity by up to 10 db, which can make a huge difference in the enjoyment level for sports bar customers.

> "The VIP is designed to dynamically analyze the spectral energy distribution of the voice band of broadcast sporting events and dynamically enhance the formant energy and the harmonics of the broadcast vocal so as to greatly improve vocal intelligibility, clarity and definition."

ISP Technologies has been a leader in the area of real-time noise reduction and has sold hundreds of thousands of channels of Decimator noise reduction to remove unwanted noise for professional and semi-professional guitar players. ISP holds multiple signal-processing patents for the Decimator noise-reduction processes, and relied on this knowledge to develop the VIP system. Decimator noise reduction operates by dynamically removing the background noise encountered by musicians and operates on the masking principals of noise reduction, employing a combination of low-level expansion and dynamic high-frequency low-pass filtering. Life would be great if we could apply a Decimator to the background noise in the sports bar, but it would be impossible to remove the masking noise in the sports bar environment without removing the people. However, it became apparent that the same basic dynamic functions of the Decimator control could be applied in the design of the VIP to dynamically enhance the voice band. The core patents in the Decimator are based on what we term "Time Vector Processing," allowing the Decimator noise reduction to dynamically change its time constants and track the envelope of the audio signal for controlling the response of downward expansion and dynamic filtering. In essence, we can track the input signal and change the release time constant of a downward expander and dynamic filter. The processing adapts to the audio signal (amazingly accurately) so as to maintain masking of the noise by the audio signal and avoid noise intrusion as the signal decays. By applying the patented Time Vector Processing circuit to control the response of the vocal formant enhancement and the upper harmonics, we can provide a dynamic spectral boost as required to enhance or elevate the voice band formants and harmonics in the broadcast signal. The Time Vector Processing circuit is used to control the dynamic spectral boost specifically in the critical voice band using a combination of compression and expansion. Most dynamics-based signal processors incorporate a fixed or pre-defined attack and release response. Using a variable response for attack and release of the dynamics processing circuit, we can apply much more specific enhancement of the voice, rather than a simple EQ boost in the voice band. Another critical aspect of the VIP operation is that the dynamic enhancement is above the spectral portion of the masking background noise in the sports bar. It would require improved headroom to process the 100 Hz to 400 Hz portion of the audio spectrum where the majority of the masking noise is present (the masking noise will extend far above this portion of the spectrum, but this frequency range has the largest spectral build up). By analyzing the low frequency formants in this portion of the spectrum, and providing enhancement of the harmonics above the masking spectrum, we can greatly improve the clarity and intelligibility of the voice band of the broadcast audio.

The VIP hardware system is designed with two independent channels that are inserted between the selected audio source and the power amplifiers of the system. The VIP becomes operational when broadcast sports are selected. For those interested in more detailed reading of the operation of ISP Technologies' "Time Vector Processing," the main patent is US patent number 7,532,730.

ISP Technologies
ispproaudio.com

Buck Waller is the founder and CEO of ISP Technologies.

HOUSE OF WORSHIP SOUND

APRIL 2015 // BROUGHT TO YOU BY prosound

At the Manhattan Seventh-day Adventist Church in New York City's Greenwich Village, built in 1828, the entire 1,000-seat sanctuary is covered by two Renkus-Heinz IC24-R-II digitally steerable column arrays mounted on pillars either side of the stage.

- **LICENSE-FREE 2.4 GHZ DIGITAL WIRELESS** PAGE 3
- **TOUCHSCREEN MIXING IN HOW** PAGE 6
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Beyond the manufacturers, industry retailers, end users and the pro audio press have largely collaborated to remind end users—especially HOW-based ones—that our licensed UHF spectrum is shrinking. Meanwhile, as contemporary worship styles incorporate more audio and video, thus more technology across the board, simplified, self-guided technology like 2.4 GHz wireless systems are valuable, indeed. Still, there are limits to 2.4 GHz capabilities, which is where traditional wireless kicks back in.

"2.4 GHz systems are great for those rooms where you don't have a dedicated technical staff and just want to use a couple of channels," explains Waehner. "Auto-

"SIMPLICITY IS DESIRED, BUT SOUND QUALITY AND RELIABILITY ARE ALWAYS IMPORTANT."
NICK WOOD, SHURE

matic frequency management found in 2.4 GHz systems is a big deal; if you turn on a bunch of these things, they avoid each other and manage themselves, finding the best frequencies in real time. Despite the benefits, one of the constraints of 2.4GHz is in how many channels you can operate safely—that's probably eight channels; we're sharing space with Wi-Fi. As the UHF spectrum is shrinking, we have to be efficient about what we use."

"If you need long distance coverage and 10 or more channels on air, other options may be better," says Nick Wood, product manager at Shure, echoing Waehner's sentiment. "Shure has a wide range of systems available, optimized for different applications, and none of them

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SIMPLICITY AND RELIABILITY

2.4 GHz wireless systems generally need little input from the user: they're truly plug-and-play. "It does offer simplicity, at least in the user interface aspect of the technology," explains Wood, referring specifically to the company's GLX-D Digital Wireless Systems. "We're taking advantage of frequency hopping and automatic frequency selection—very desirable features. What does this mean for the customer? Setting it up is very straightforward. If you only need one wireless microphone, you literally turn on the transmitter, turn on the receiver and they arrange themselves. And you really never have to create that pairing again."

With its largely volunteer user base, HOWs have been faced with countless pro audio innovations over the past few years—some of them user-friendly, some of them not. The ones most embraced in the marketplace thus far prove that simplicity is a top priority for buyers of technology for use in worship environments.

"2.4 GHz technology really avails itself to simplified user interfaces," explains Devino. "That first comes into play, even at the highest levels, with the end users—the instrumentalists on stage. Giving them wireless on stage separate of the massive frequency coordination tasks is nice. Giving them a system with a useful interface with valuable information is important, too. We can just give them a channel and put the carriers wherever to avoid the Wi-Fi in the room."

"The 'house of worship market' isn't a one-size, singular entity," reminds Wood. "If it's not a venue pushing the envelope on the number of channels, some of the attributes of higher-rent wireless systems may not be important. Simplicity is desired, but sound quality and reliability are always important."

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"There's a lot of thought power being put into, 'How do we get more performance out of products for the end user?'" poses Waehner. "You hear this in the recording space a lot, and increasingly in live sound: 'I just want to get back to making music.' It's fine to be tweaky, but not everyone wants to do that. When we're designing a product and it's taking a lot time to get down to the customer's needs, we joke that the top three goals are reliability, reliability, and reliability. The thing's gotta work or there's no reason to do it, and this is especially true for musician-operable wireless products. Users can just turn ours on and use it, resting assured on Sennheiser's nearly 60 years of experience with wireless systems."

VALUE

As with musician "weekend warrior"-type customers, according to Devino, budget-conscious HOW buyers of 2.4 GHz systems come for the value. "There's a strong concern about the value of investment made in this particular market," he explains. "It's important to remember that churches don't receive rental income from their wireless systems, unlike large rental firms with high-end, comprehensive wireless rigs. They have to make sure that their investment is valuable for a long time."

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Digital, Wireless And License-Free 2.4 GHZ TECHNOLOGY FOR HOUSES-OF-WORSHIP

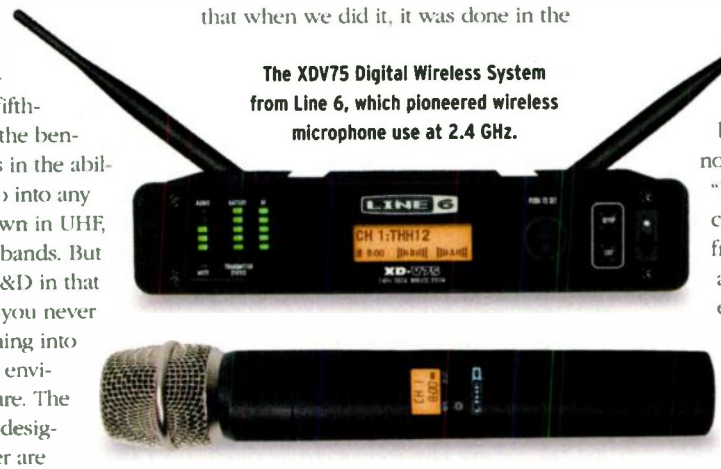
BY **STROTHER BULLINS**

Most likely, we were all introduced to the 2.4 GHz operating frequency via consumer electronics—cordless phones, Bluetooth accessories, Wi-Fi, even our garage door openers. Yet today, pro audio has embraced the frequency to build simplified, user-friendly wireless systems that are especially helpful in houses-of-worship (HOW) environments.

At first, only a few embraced 2.4 GHz (actually a band of spectrum centered on 2.4 GHz set aside by the FCC for unlicensed device usage) for pro audio wireless. For example, Line 6—known for prioritizing the pro audio user/operator—introduced its XD Wireless Series years ago against no competition. Today it's a proven, successful product line.

"2.4 GHz is a vehicle in which manufacturers have developed their 'digital radios,' if you will," offers Steven Devino, Line 6 Wireless Systems product manager, on the motivations for 2.4 GHz technology development. "And we're in our fifth-generation radio. One of the benefits we saw early on was in the ability to put that digital radio into any band—even 5.8 GHz, down in UHF, or any of the other open bands. But 2.4 GHz has driven the R&D in that area. It's unique because you never have to worry about running into TV channels or changing environments wherever you are. The first half-dozen channels designated by the manufacturer are usually far away from the Wi-Fi channels; Wi-Fi sits around channels 1, 6 and 11. We make sure that the first three channels are as far away from those as possible."

As 2.4 GHz blossomed in pro audio and buyers were identified, more manufacturers joined in. "We're the first to acknowledge that we're not the first to this party," confirms Kevin Waehner, manager of Professional and Integrated Systems at Sennheiser, which launched the evolution wireless D1 system at January 2015's NAMM Show. "We wanted to make sure that when we did it, it was done in the best possible way, with all our engineering power behind it, and with a conscious effort to get it right."



The XDV75 Digital Wireless System from Line 6, which pioneered wireless microphone use at 2.4 GHz.

WHO SHOULD USE 2.4 GHZ?

In Houses Of Worship, adopting 2.4 GHz wireless technology over traditional UHF spectrum-based systems should depend on key factors such as required channel count and staff knowledge of audio technology.

"They are the volunteers," explains Waehner of typical HOW-based 2.4 GHz end-users. "[The technology] is intended for the customer that wants to get the message out while not focusing on the technology and other 'tweaky' things that make it all work. Whether it's a band playing gigs or a church, it's all about less features that are handled adaptively, for you. These users shouldn't have to think about what they need; instead, they turn it on and it's all taken care of. Without a dedicated, highly educated technical staff, it's nearly necessary."

A HOW's location—rural, urban, or someplace in between—makes no difference to 2.4 GHz wireless technology either, which is something that can't be said for UHF. "There's really no difference," confirms Devino. "It's a handful of very high-quality channels without the need for frequency coordination or worries about what else is out there in the environment, whether it's a lot or very little."

Devino offers an example of how well 2.4 GHz works for "portable churches" or traveling ministries, allowing it to be

impervious to outside interferences. "I play a juvenile camp every Saturday morning," he explains. "It's a quick, simple setup where you just pick a channel and go; it's critical to have wireless success there."

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for enough battery life to get through a show, performance or service. Considering a battery system as a long-term solution, we estimate that the battery in a GLX-D solution would replace 2,500 alkaline batteries in its normal lifetime, plus it offers a number of other benefits, including approximately 16 hours of battery life per charge and accurate metering in hours and minutes. This is all meaningful and useful, especially for HOWs."

"While form factor isn't necessarily about 2.4 GHz, we felt that including durable, physically oriented features into our systems was important," Wood continues. "Details include the belt clip that stays on well, the better-quality guitar cable that's included, a charging slot in the receiver (as the charger doesn't have to be a separate component), and the guitar pedal form-factor of the receiver. All those choices were as important as anything else. We were thinking about the musician, the praise band and the owner/operator of the system."

Shure's GLX-D Series sports features designed to make the system simple to deploy and use, including advanced battery technology.

A PORTAL TO OTHER UPGRADES

As HOWs continue to ease into the "easy" technology of 2.4 GHz wireless, folks like Wood hope that the users will migrate onto other potentially more helpful technologies as well. "Following 2.4 GHz, I would recommend having conversations about going wireless with in-ear monitoring, too," he says. "IEMs have a number of tangible benefits to the congregation and the audio team, including a huge reduction in the amount of sound coming off the stage and some key monitoring benefits for the band."

Indeed, one technological innovation begs another. For HOW audio buyers, 2.4 GHz is a great place to start with satisfying, immediate results.

Touchscreen Mixing in HOW Environments

BY **STROTHER BULLINS**

2015 marks the availability of a wider, broader range of touchscreen-based mixing products for live sound applications—products especially well-suited for house-of-worship (HOW) applications.

Why should touchscreens prove to be especially helpful to HOW end users, you ask? It's an amalgamation of several factors, including the ubiquitous familiarity of touch consumer products and their prevalence in the marketplace—think tablets and smartphones with their wireless capabilities and evolved GUIs—and the near-limitless possibilities of sophisticated routing and networking features of easily-upgradable modern audio mixing software.

As the editor of *Pro Audio Review*—now incorporated into each issue of *Pro Sound News*—I've reviewed and researched quite a collection of HOW-friendly touch mixers or mixers offering iOS, Windows and/or Android compatibility. Let's look closer at the appeal of these now-shipping products and why one of them could be your HOW's ultimate mixing solution.

PREVALENCE AND FAMILIARITY

Even more than a year ago—in January 2014, as reported by an official Pew Research Center poll—50 percent of Americans already owned an iOS/Android tablet or e-reader. Considering that a year prior, the percentage was approximately 35 percent, it's a reasonable guess that a sizable majority of Americans now own devices that can download mix apps from Mackie, PreSonus or others that provide features rivaling traditional analog and digital mixers potentially costing thousands of dollars—just add hardware. Further, touchscreens are found nearly everywhere in the modern marketplace: grocery stores, banks/ATMs, restaurants, etc. Whether they are tablet-based or embedded in proprietary systems, consumers are generally familiar with how to use a touchscreen.

With this kind of market saturation, non-professional pro audio users—the kind of volunteers that comprise most HOW audio teams—are poised to learn touchscreen mixing techniques and, in many cases, will even bring their worksurface home with them after the service for additional practice and research.

Further, the fact is touchscreen GUIs have been found in pro audio products, especially mixers, for quite a while now—but alongside traditional faders and knobs, too. Only recently has completely touchscreen mixing become a reality, which is what we're largely addressing here.

The hardware component of Mackie's latest DL Series iOS-based digital mixing platform, the DL32R.

FEATURES

From the high-channel count of Mackie's latest DL Series iOS-based digital mixing platform, the DL32R ($1,999 street), to Harman's new small, HTML5-operable Ui Series—uniquely allowing app-free mixing on any WiFi-enabled device—options abound. The touchscreen marketplace now more closely resembles the options available to HOWs in traditional mixers, just at a lower price point across the board when considering built-in effects and routing features.

Still, most pro audio users will attest that using physical faders and knobs "feels right." That means the challenge faced by manufacturers is to emulate this vibe as closely as possible on a touchscreen interface, knowing that the scale of application, price and details such as the technical knowledge of the user can make a touchscreen model a more viable solution.

That said, a notable (and exceptional) product is QSC's compact TouchMix Series featuring a built-in touchscreen mixer combined with the necessary I/O, preamp pots, key physical input buttons as well as recording features and comprehensive iPad remote control. When reviewed in *PSN*'s January 2015 issue, contributor Morten Stove literally hopped around the globe on a pro-level jazz tour while completely depending on a TouchMix-16, "a 16-channel digital console with practically everything you can imagine built-in," he noted. "For what you get, the TouchMix-16's price [$1,299 street] is amazing. I will be travelling with the Touchmix16

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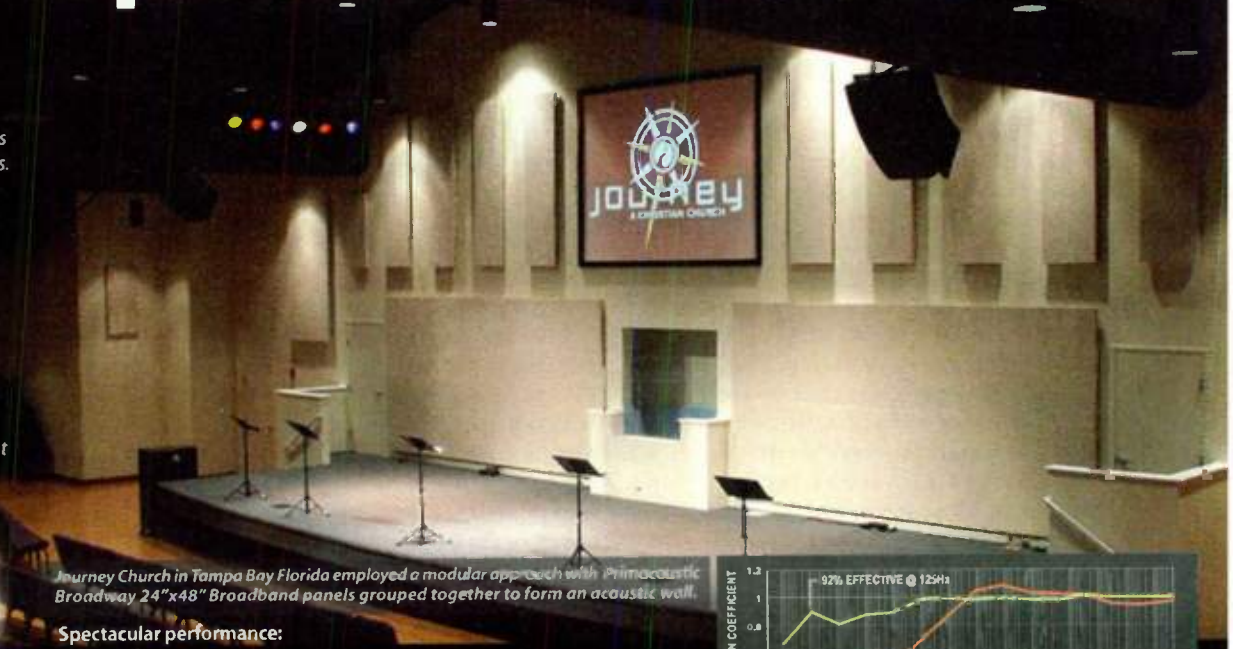

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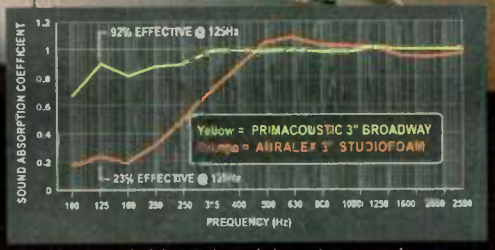

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where ever I go from now on." Notably, Støve used the iPad app in every venue.

Of course, not every live mixer will embrace flat-screen mixing. "Mixing at FOH for a big festival or large venue will not be done solely on a touchscreen anytime soon," poses Sean Karpowicz, product manager of Soundcraft's Ui Series, with the recently unveiled Ui 16 ($549 street) as the flagship model. "Faders and pots are what experienced engineers want and need, frankly. You have to be fast and completely in control and touchscreen GUIs, for now, can't deliver this in the same way faders and pots can. However, we do find that, for some small tours and venues, bands are choosing to mix their own monitors using touchscreen GUIs. Then, as you move away from touring and towards installations to portable PA, tablet mixing gets more acceptable."

Soundcraft's Ui 16 allows app-free mixing on any WiFi-enabled tablet.

Karpowicz notes that touchscreens are increasingly accepted in HOW-type environments because of the flexibility and portability they provide; that acceptance is also related to modern users' familiarity with DAWs, tablets and touchscreens, especially amongst millennial musicians and engineers—and those same users' unfamiliarity with mixing consoles and signal flow. "Because of the flexibility and portability, we see the Ui Series really finding a home where musicians have to do their own sound; they are the big winners with the Ui Series. That's why we put in Digitech Amp modeling and dbx AFS (Advanced Feedback Suppression) as well. Now those users don't need to bring along a guitar amp or worry about feedback; ringing out monitors is not an easy thing to do for non-professionals."

QSC's TouchMix-16 combines an embedded touchscreen mixer with key buttons and faders.

Such features allow both "porta-churches" and smaller churches—those thousands across America with congregations of less than 300 and proportionally smaller budgets—to add more user-friendly products purchased at retail when pro A/V contractors and the products they install are beyond their financial reach.

WIRELESS FREEDOM

In multiple product demonstrations over the past year or so, "wireless freedom" has been specifically referenced as a feature for those wireless touchscreen mixing in HOWs. Wi-Fi in churches is also more of a rule than an exception today, too, so the infrastructure is already in place for untethered mixing.

Even large, well-funded HOWs have notoriously suffered from bad mix positions over the years, as placing the engineer in an ideal spot is often an aesthetic no-no. Now the engineer can sit in an ideal mix position and/or roam to insure good coverage and sound around the sanctuary. Or, as church culture is inherently family-oriented, benefits can be as simple as audio staff members sitting with their loved ones while doing their job.

Wireless mixing also means that the mixer's necessary hardware—I/O and so on—can reside anywhere, too; most likely, it's best placed on "stage," behind the pulpit, or with the praise band. Further, products such as the iOS-dependent DL Series and PreSonus' StudioLive Series—both the initial "console" versions and the latest touch-controlled RM Series version (RM16AI at $1,399 street) via large screen Windows 8 touch CPUs or iOS—allow the band to mix themselves via free monitor mix software via Apple's AppStore, too. That's freedom, indeed.

SOPHISTICATED ROUTING AND NETWORKING

In review, one of the most compelling attributes of Mackie's DL32R was in its comprehensive routing and networking features, especially useful for HOWs. Beyond its 32-channel mixes, complete with multitrack recording and playback, up to 10 iOS-device controlled personal monitor mixes, and 6 matrix busses (providing auxiliary mixes for extra listening spaces such as outside club decks, church nursery cry rooms and so on), it provides a flexible patching matrix and AoIP (Audio Over Internet Protocol) capabilities via Dante compatibility.

PreSonus' RM16AI with a Windows 8 touch CPU—currently the largest surface available for live touch mixing.

"There are a couple of immediate benefits, of course," notes Ben Olswang, Mackie senior product manager of the 32R's advanced features and their usefulness in a HOW environment. "Any computer on the network, anywhere in the venue, can pop on there and record channels right off of a Dante network. In a church that has a dedicated record room elsewhere, users can record off of that network. Also, this all opens the door for incorporating other new Dante products into an audio system. In a church that has a Dante-enabled amplifier system, the DL32R allows users to link the mixer with those products—the new wireless Dante microphones in the marketplace, for one example."

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Sound Systems For Challenging Spaces

BY **STEVE HARVEY**

There can often be a tension between architecture and acoustics in houses of worship, where visual considerations may take precedence over speech intelligibility or high sound pressure levels. Interestingly, art and science were combined by ancient Greek architects in order to harmonize construction and speech in their theaters; yet, more than twenty-one centuries later, acousticians and audio system designers may find themselves challenged by architectural considerations.

The ancient Greeks positioned tuned brass vases around their auditoria that resonated and, according to contemporary writings, increased the clarity and harmoniousness of the voice. "It was a true Helmholtz resonator that functioned like blowing across a bottle," says Porter Falcon, an acoustician and president of Falcon Audio-Video, referring to the phenomenon first described in the modern era—in the 1850s—by German scientist Hermann von Helmholtz.

WELL-ROUNDED SOUND

Ancient civilizations favored circular and semi-circular amphitheaters. "Acoustics 101 says do not use curved surfaces," laughs Falcon, who has specialized in exactly those structures since 1983. That was the year he treated a cluster of five buildings for construction company Monolithic Dome.

The structures, built by inflating an airform then layering it with cement, rebar, high-density foam and other materials, are cost-effective and environmentally friendly, and popular with some church organizations. The largest dome church, in Alabama, has a 280-foot diameter and seats 3,000.

"The volume is so great—what do you do with the bass?" says Falcon, who has worked on dozens of domed facilities worldwide. He has designed acoustic panels for the application that are built by his Falcon Audio Labs. The curved panels are built out of common materials, have a perforated face and are lined with rigid mineral wool. "They will absorb frequencies below 100 Hz, and the mids and highs are scattered back into the atmosphere," he reports.

The beam steering capabilities of two Renkus-Heinz ICONYX IC Live ICL-FR-DUAL columns, hung from the ceiling to avoid damaging the walls, cover the main floor and balcony, and eliminate the need for front fills at Shawnee's First Baptist Church in Oklahoma.

Because of the volume in these domes, Falcon, who also designs, builds and installs sound and lighting systems, has developed another method for improving the acoustics. "We build a lid. Sometimes I'll produce a convoluted ceiling; we'll tilt that ceiling. I do want some reflections off the ceiling, so we'll use something like an Armstrong 505 tile, then one-inch rigid mineral wool on top of that." The new Dallas Stadium apparently uses that same design. "They copied my idea, those rascals," chuckles Falcon.

At the Living Word Bible Church in Mesa, AZ, a twin-dome structure, Falcon A/V retrofitted the sanctuary with an RCF speaker system. "They said, 'We want stereo.' I said there's a science to it; there's no stereo under certain conditions. But I was able to position those speakers and have them cross-fire and got a pretty good rendition of stereo in the middle of the church."

LURKING LOWS

There is a bass monster lurking in

every room, as discovered by another German scientist, Dr. Manfred Schroeder. In 1954, he identified the "cross-over frequency" (now known as the Schroeder frequency) below which—typically around 100 to 200 Hz—certain wavelengths resonate as discrete modes and above which mids and highs scatter and reverberate.

"From an acoustics perspective, the more you energize that room in the low end, the more you're going to rob yourself of intelligibility," observes Mike Hedden, chief steward in charge at Danley Sound Labs. "It's much more difficult to get the vocals out in front, because now you've picked a fight with the big monster—he's fully awake and ready to roar."

The answer in such situations, says Hedden, is extreme vertical pattern control. "The listening plane as expressed is a tiny sliver of the entire volume of the room. So acoustically, just energize that one area, or the reverb side of Dr. Schroeder's equation is going to raise its ugly head."

Danley has developed a product for just such an application, the SBH or Skinny Big Horn. "It looks like a column but it's not a column," says Hedden. An SBH-10 covers 140 degrees on the horizontal plane—but just 10 degrees vertically. "The vertical's so narrow, I can put it just at the top of the head of the first listener, so they're in -6 dB or -10 dB."

He continues, "We did a church, Peachtree Presbyterian, with a contractor in Atlanta. It's a very large, cruciform-shaped room with a couple of thousand seats. From the front of the chancel to the back wall of the main nave is in the neighborhood of 140 feet, and we did it with a left/right pair of SBHs. It's got a fairly deep under-balcony area; the SBHs reach under there with such clarity that they shut all their ceiling speakers off."

The solution is preferable to a distributed system, such as ceiling speakers, says Hedden. "It makes for a much more engaging worship experience. Your attention is drawn to the stage, as opposed to something right above you." The SBH therefore also works in low-ceilinged converted warehouse or shopping-mall church applications.

VERTICALLY CHALLENGED

Low ceilings are certainly a challenge, Hedden says, although not due to reverberant energy. "An old friend of mine used to say, 'If the ceiling's under 20 feet, you have to go distributed.' That's predicated on the room depth; if it's 50, 60 feet deep and the ceiling is down there at 10 to 15 feet, you start running into situations where the inverse square law is now your big bad enemy."

Hanging locations for the VUE Audiotechnik al-8 arrays were limited by the architectural features at World Agape Mission Church in Los Angeles, where VUE a-8w speakers provide coverage for the side seating area, which has a 9-foot ceiling.

One answer is one ceiling speaker per tile: "You can get extremely dense cone filters and lots of interaction, but at the end of the day, the intelligibility is going to be fairly good. The problem is that there's such a detached feeling; there's no sense of envelopment." Danley's Nano, and SHMini and SHMicro offer an alternative solution, he says, but they might be a hard sell compared to inexpensive ceiling units.

CHALLENGING EXPECTATIONS

Renkus-Heinz tends to get involved in challenging acoustic spaces, according to Rik Kirby, VP sales and marketing. But, he comments, "The first thing we've got to uncover is what they're trying to do. A church can now run the gamut from a pastor with a microphone through to a full-on rock concert. Even if it's not their house band, they may have aspirations to invite the latest evangelical touring groups through their church."

Kirby has seen expectations evolve over the past five years: Systems supporting contemporary music are now in greater demand. Happily, he says, Renkus-Heinz offers high SPL solutions with precise pattern control—the company is well-known for its beam-steerable products—to keep that beast at bay. "We're able to place the sound just on the people and to avoid the architectural features, be they historic features, as they might be in a large stone cathedral, or more modern features where it's the art and the style of the room that's going to get impacted."

In the past, he continues, "The traditional solution was to put a lot of big loudspeakers at one end and then as you get further into the room with the reverb and the reflections and the acoustic soup that happens, when you reach the point where they can't understand anymore, stick another loudspeaker in to improve intelligibility there. We've solved that by sticking with loudspeakers at one end of the room, but making sure the sound doesn't touch the room so we don't have that reverberation to start with. Where it's developed for us over the last seven years is that we've introduced higher power, larger drivers, bigger amplifier versions that allow us to take that up to full concert levels."

While the equipment cost might be higher for installing a steerable rather than a distributed solution, he points out, the actual finished project cost very often works out to be cheaper. "You're only installing a couple of loudspeakers at one end of the room. You might buy a ceiling speaker for $98 or whatever they run these days, but the cost of installation is now very significant compared to the cost of the product that's being installed."

FRONT-TO-BACK FIDELITY

A sound system renovation at World Agape Mission Church in Los Angeles further demonstrates some of the acoustical challenges facing integrators and manufacturers, and highlights that tension between art and science.

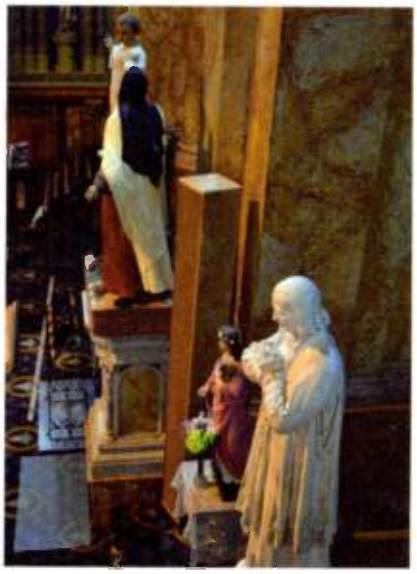
The senior pastor, a former professional audio engineer, wanted everyone in the congregation to have great sound, reports Michael Yoo, president of Genesis Technology, the Washington, DC-based systems integrator. Yet, because of a special, oval-shaped ceiling design and other interior architectural features, Yoo was limited in his options for positioning the VUE Audiotechnik speakers that he recommended for the project.

The church would not allow anything to be installed on a proscenium behind the altar, but also, explains Yoo, "Because of the unique ceiling design, we couldn't hang heavy speakers." Further, because the church wanted to show off the beautiful ceiling design, there was no possibility of flying delay speakers. Thankfully, he says, "VUE's al-8 arrays gave us light weight yet full sound and even coverage."

There was another challenge: "As you go further back, the floor inclines and thus the ceiling is only nine feet at the back seats. We chose the VUE a-8w for the delay side back seats—it really matches the sound characteristics of the al-8."

The church had something of a unique additional challenge. Located in a very densely populated area, neighboring apartments are only feet away. From his experience with previous systems, says Yoo, "When you push the sound to get evenly loud, you get one very hot spot and it causes complaints from the neighbors. This VUE system has such a tight control; we tuned the system with the windows open—because the air conditioning system was not completed that time—and the neighbors didn't mind."

Yoo reports, "The system sounds crystal clear; the vocal just pops out. And the surprising thing is, it sounds even better at higher SPLs."



St. Anthony of Padua Roman Catholic Church in New Bedford, MA, completed in 1912, installed two Danley SHB-10s, custom-painted to match the décor, to provide improved speech intelligibility in the church's highly reverberant sanctuary.

Fellowship Puts Faith In Community

WIRTZ, VA—Faith Fellowship Church has held its services in a "stressed membrane structure" since 1999, but last year, it updated the unusual venue's audio system with a new Community loudspeaker system that would cover the 88-foot by 120-foot space.

All Pro Sound in Pensacola, Florida had helped the church with previous upgrades, video projection and wireless microphones, so it was asked to come back and design a system that would provide coverage that would properly convey the energy of the full praise band and 15-person chorus.

A new house system, based around a trio of Community I Series IP8 1122/26 loudspeakers, covers everyone inside Faith Fellowship Church in Wirtz, VA.

All Pro's Jeff Knighten designed a system that uses three Community I Series IP8 1122/26 loudspeakers, distributed across the stage front, to cover the room's four seating areas. A pair of IS8 115 subwoofers provide extended low-frequency support. The system is light enough to hang safely from the building's steel frame and the white loudspeakers match the building's interior. The system is powered by Ashly amplifiers and All Pro added an Ashly Protea DSP for loudspeaker management. While some portions of the audio system were updated, an Allen & Heath GL2200 mixer, Audio-Technica wireless microphones and Shure handheld wired mics remain in use from the previous original system.

Faith Fellowship's Josh Cokendolpher says the church's upgraded audio system was completed in time for the 2014 Christmas holidays. "It was like going from black and white to color," he said. "We were always pushing the old system to its limits and some people complained about the coverage, but now we have more than enough headroom and everyone can hear."

Community Professional Loudspeakers
communitypro.com

Melbourne Temple Turns To Martin

MELBOURNE, AUSTRALIA—Temple Beth Israel in Melbourne, Australia recently upgraded its audio system in an effort to provide more flexibility for services and events. Founded in 1930, and nowadays the first synagogue in Australia to stream Shabbat services online, the Temple appointed of Hanson Associates as the acoustics and audio visual consulting engineers for the project, and Urban Intelligence as the project integrators. Ultimately, a decision was made to use a discreet OmniLine micro line array from Martin Audio. The eventual system comprised four 12-element line arrays, supplied by Technical Audio Group, Martin Audio's Australian distributors.

The system had to cover the Main Synagogue and adjacent Slome Hall—two large spaces with significant spatial volume, separated by an operable wall. In combined format, the spaces host large services, state funerals and music performances, accommodating up to 1,100 people. However, the space is generally subdivided, with worship occurring in the Main Synagogue and community events hosted in Slome Hall.

A total of four 12-element line arrays, comprised of Martin Audio OmniLine elements, cover Temple Beth Israel in Melbourne, Australia.

Variable beam steering presets were implemented for the Slome Hall line arrays, both with and without the operable wall retracted. During large services and events, the operable wall is retracted and the two pairs of OmniLine arrays are used in a main FOH and delay configuration. However, for most of the year, the wall is extended to separate Slome Hall from the Sanctuary. Hanson Associates' Mark Hanson noted, "Via the Display software, a second set of FIR filters was exported into an audio DSP preset to generate an entirely different pattern from the same physical array which cuts off sharply at the operable wall at the rear of the room. The results were stunning. Despite the live acoustic in Slome Hall, clarity of speech was instantly restored and the system was able to readily support day to day events at the tap of a touch screen."

Martin Audio
martin-audio.com

The audio team behind Mariners Church in Irvine, CA recently installed a pair of SSL Live L500 consoles for services.

SSL Settles Into Mariners Church

IRVINE, CA—A pair of SSL Live L500 consoles were recently installed inside Mariners Church's 3,400-seat worship center as part of an audio overhaul. Its current worship facility was built in 2006, so CCI Solutions, the integrator on the original sound system, handled creating and installing the new system.

"The clarity of the console and the way we can separate the mixing functions has been spectacular," says network technical arts director Jeff Stewart, who joined the church at the same time as the consoles. Previously a systems engineer at Willow Creek Community Church in Chicago, Stewart was faced with consulting on the purchase prior to the move. "During my transition from Willow, the team was still deciding what console to choose and I said, from an engineering standpoint, that I'd go with the SSL," he says. "I told them that SSL has been making consoles for 45 years, so they know what they are doing. My first day on the job, I installed the two L500 consoles."

"The first time we used the console was for our Christmas production, during which we had a choir and string, percussion and horn sections; still, with all of those things going on, I could still hear the shaker from the percussionist coming through," said Scott Clement, who has been mixing FOH at Mariners for the past year.

Mariners' two Solid State Logic L500 consoles share four 32-channel ML 32.32 analog stageboxes, for a total of 128 stage inputs. "We haven't had to use the full 128 yet, but we wanted something we could grow into as well," Clement explains. "For Christmas, the main stage had close to 100 people on it, and there was also a small ensemble out in the middle of the house, so we were pushing around 80 inputs. We know that our productions will keep getting bigger."

Solid State Logic
solidstatelogic.com

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ON POINT AUDIO OPA-181SP SUBWOOFER

The OPA-181SP is a high-output, low frequency subwoofer from On Point Audio. Intended for use in professional bi-amp applications, the new subwoofer features an 18-inch, low frequency transducer optimized for 35 Hz to 80 Hz applications. A peak system output of 127 dB SPL is achieved when 4th order filters are implemented.

According to One Systems, the OPA-181SP sports a rectangular enclosure with a larger internal volume than most conventional trapezoidal enclosures; as such, it reportedly results in increased low-frequency response.

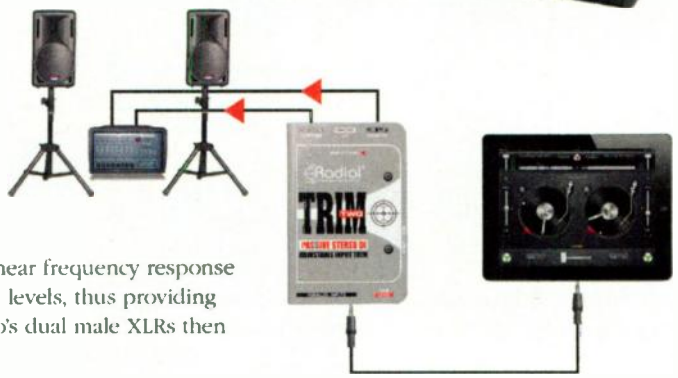
The input section consists of a single four-position barrier strip. System impedance is 8 ohms. Multiple M10 rigging points allow for either vertical or horizontal eyebolt suspension. The enclosure is void-free plywood and finished in On Point Audio's proprietary Power Coat polyurethane resin coating.

AUDIO-TECHNICA SYSTEM 10 PRO WIRELESS SYSTEM

A-T's new System 10 PRO digital wireless system operates in the 2.4 GHz range and houses one or two receiver units that can be operated locally within the chassis or removed and mounted remotely (up to 300 feet away) via Ethernet. Up to five System 10 PRO chassis (10 receivers) can be linked together using the RJ12 cable included with each system.

The chassis' LCD Dual System Display shows RF signal level, system ID, transmitter battery level and system link status for both channels. Like other System 10 products, the PRO rack-mount features 24-bit/48 kHz wireless operation and frequency, time and space diversity assurance with "extremely easy" operation.

RADIAL TRIM-TWO PASSIVE STEREO ISOLATOR



Radial Engineering's Trim-Two is a passive stereo isolator designed to simplify the use of laptop computers for AV presenters, DJ/KJs and instrumentalists by providing a "ready access" volume control for on-the-fly adjustments when performing on a live stage. Inputs include dual 1/4-inch jacks, a single 3.5 mm jack, and left and right RCAs; these are wired in parallel to allow the signal to be split off to feed an alternative signal patch, such as monitors. On the inside, two Eclipse transformers isolate and balance signals, delivering a linear frequency response from 20 Hz to 18 kHz, capable of handling up to +15 dB signal levels, thus providing typical -10 dB instruments with ample headroom. The Trim-Two's dual male XLRs then feed any PA system upon output.

MACKIE FREEPLAY PORTABLE PA

Mackie's FreePlay is a small and portable stereo personal PA featuring Bluetooth music streaming, a four-channel digital mixer, high-output 8-inch woofer and control app for iPhone and iPod touch. In addition to being AC-powered, the FreePlay can be battery-powered via standard D cell batteries or with the addition of an optional 10-hour rechargeable lithium-ion battery pack. Other options include a kick-stand/pole mount accessory for 45-degree tilting and a carry bag.

The FreePlay Connect app for iPhone and iPod touch offers level adjustments plus a built-in feedback eliminator, application-specific speaker voicing modes and 16 vocal/instrument effects.

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Vienna Symphonic Library featuring Solo Voices and Whistler

Left: MIR Pro Venue is a multi-impulse convolution application with purchasable RoomPacks featuring world-class concert halls, scoring stages, churches and more. Right: Comprehensive parameter displays are shown in the Advanced View window.

BY RICH TOZZOLI

Rich Tozzoli is a producer, mixer, engineer and musician/composer for programming such as A&E's *Duck Dynasty*, History Channel's *Pawn Stars*, Harpo Studios' *21-Day Meditation Challenge* and more.

Sometimes I use products for quite a while, yet still only skim the surface of what they can do. There are several reasons for this, but usually it's because there's only so much time to devote to each product. Regardless, I've found that when I do really learn a piece of gear or software, it pays dividends for years.

One such product that I (shamefully) just dug deeper into was my Vienna Symphonic Library. Sure, I've produced plenty of tracks with its Appassionata orchestral strings, brass and woodwinds, but only on a fairly basic level—though they still sounded great. With the release of Vienna Solo Voices and Vienna Whistler, I finally took the time to really learn what's inside that software window.

With the help of Vienna marketing manager Martin Tichy and excellent online tutorial videos, I came to understand that there are multiple levels of Vienna products that comprise the entire scope of its catalog. To begin with, I needed to approach all of Vienna's products like I'm picking up a new instrument and learning how to play it—not just the instruments or voices inside, but the various tangible features such as velocity crossfade, instrument stacking, adjustable tuning scales, articulations and others that allow humanized performances. Taking that approach made my parts much more interesting sonically.

FEATURES

On a basic level, Vienna Instruments Player, the company's proprietary sample player, comes free with any of its libraries. The Vienna Instruments Pro version is a paid product and, as expected, it has more features. Details such as built-in reverb, extended instrument ranges, Human Performance Control and an internal sequencer give it more power.

Included is Vienna MIR Pro, a multi-impulse convolution application with purchasable RoomPacks featuring world-class concert halls, scoring stages, churches, etc. MIR Pro is not just for the Vienna software; it can be used as a DAW plug-in (for all channels routed into the selected MIR Pro Hall) or accessed within Vienna Ensemble Pro.

Uniquely, MIR Pro features movable instruments—change their direction, stereo width and more—which all contribute to the sound of the instruments playing together in one acoustic space. MIR Pro 24 is the same product as MIR Pro, but with a limitation of 24 instruments—still plenty. Also available is the simpler, lower-cost MIRx; turn it on inside the sample player's window and instant reverb is available in the Vienna Konzerthaus (my personal favorite), plus a few other choice locations.

Vienna Ensemble Pro (currently at Version 5) is both mix (up to 7.1 surround) and host software with LAN and MIDI capability. Ensemble Pro operates as 32/64-bit standalone programs or inside of a host DAW. VSTi/AU plug-ins as well as MIR Pro can run together over a network of multiple Macs and PCs. Features include full plug-in latency compensation and mixer automation, plus it will slave to my host tempo. Ensemble Pro includes a 9 GB library called Epic Orchestra; its software elements can be freely arranged inside their main window or outside simply by undocking them. Like the other products, there is a free version—Vienna Ensemble—with fewer features.

Vienna Suite is a bundle of 11 VST, AU, AAX/RTAS mixing and mastering plug-ins specifically tailored to assist orchestral mixing featuring EQ, Exciter, Panner, Limiter, Analyzer, Reverbs and so on. I currently don't own it so I can't speak of its quality firsthand.

INTRODUCING SOLO VOICES AND WHISTLER

Most recently, I downloaded the new Vienna Solo Voices and Whistler releases. Solo Voices ($430, $325 and $205 list, for full, standard and extended packages, respectively) include four female and three male solo voices with Soprano, Mezzo Soprano, Coloratura Soprano, Alto, Tenor, Baritone and Bass. There are staccato, sustains and legato performances of "aahs" and "oohs," plus staccato repetitions of syllables like "ta," "pa," "su," etc., and dynamic nuances like sforzando, crescendo, diminuendo, trill and glissando: plenty of options to work with, all quite beautiful. Take these and place them in a MIRx reverb to make "a film score in a box."

Whistler (a $61 download) is the recording of many articulations of a single whistler (Marcus Schmidinger) on Vienna's own silent stage. I first thought to myself, "When would I use a whistler?" Sure enough, a few days later, I got a TV assignment for a "Dark Western Country" show and to my surprise—Whistler was perfect! I studied the classic The Good, The Bad and The Ugly soundtrack from the great Ennio Morricone, then dialed in Whistler. I created several tracks just based upon how great the whistling sounded, especially when placed way back in a good old EMT 140 plate and ambient hall.

SUMMARY

Though the Vienna Instruments software package is deep and quite comprehensive, it's nice to know that I can use it simply and still get great results. As I go deeper with it, my compositions keep getting better. Vienna Instruments makes great-sounding, highly inspirational products and I'm very appreciative. And who knew I would use a whistler so much?

Vienna Symphonic Library
vsl.co.at

There's More: For links to product details and examples, visit prosoundnetwork.com/april2015

Top 5 Software Tools: I Don't Leave Home Without 'Em

As I head to St. John for my annual recording retreat, my computer is loaded with an arsenal of toys. Here's the top five that I simply couldn't leave at home.

1. Audio Ease Altiverb: Everything sounds better in a good live room, temple or giant church from the 1700s.
2. Universal Audio AMS RMS16 Digital Reverb Plug-in: Snare drums in "non-lin" mode are my new favorite sounds—what's old is new.
3. Sonnox Oxford Limiter: It's the last thing on my master bus and it never steps on my mix.
4. Eventide H9 Harmonizer Effects Pedal with Bluetooth Control: Ultimate pedal control via my iPhone 6 Plus—software meets hardware.
5. Propellerheads Reason 8: It's easier to use than previous versions and an endless well of inspiration.

APOGEE SYMPHONY I/O ■ TEEGARDEN AUDIO FATBOY TUBE DI DIRECT BOX ■ HARRISON 32CS CHANNEL STRIP

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

WHY I BOUGHT IT: APOGEE SYMPHONY I/O

I've spent the better part of the last two years listening to many different converter systems.

I began by reviewing some impressive converter sets for *Pro Audio Review* and managed to bring clients in for test recordings and evaluations with their input from critical listening sessions. Even as I found myself impressed with offerings from Focusrite, Prism, Lavry, iZ, Benchmark Media, SPL, Mytek, SSL and others, my clients weren't at all wowed by any of the audio we recorded for evaluation at sample rates over 96 kHz. I stuck with my older MOTU rig, but began researching a much-buzzed-about new chip—the ESS Sabre32 32-bit DAC—found in the Duet 2, Duet for iPad and Mac, Ensemble, Quartet and Symphony I/O. It's actually found in numerous product lines, including those by Lynx and even MOTU. These converters promised improvements in distortion, noise floor, imaging, jitter and overall clarity. Although I'm really not a disciple of specs, I have found that THD+N (total harmonic distortion plus noise) is truly indicative of audible differences between different components, even when other specs aren't (e.g., frequency response linearity, where an array of converters sport similarly "flat" full ranges on paper). I finally brought a number of Sabre32-equipped models into my studio for evaluations after reading trustworthy endorsements from those pros who can use anything they want—guys like Bob Ludwig and Chris Lord-Alge—and after noting their significant spec-based improvements over older converters (as well as some rather noisy modern ones, too).

Tavaglione's new Apogee Symphony follows his longstanding MOTU I/O at Catalyst Recording.

I finally settled on an Apogee Symphony system, thus spending a substantial amount on one of the costlier converter systems available. I had three main reasons:

1. Clarity: The Symphony had all the clarity I desired without the somewhat clinical characteristics of some other models, especially noted at higher sample rates. Signal clarity can be costly and perhaps overrated—definitely the opinion of some of my clients—but nonetheless I sought transparency so as to not color my chosen mic/preamp pairings and so that my dirtiest of compression applications and crunchy tube amps are the added flavors.

2. Longevity: The Symphony's modularity eased my fears of obsolescence. Having seen once superior (and pricey) legacy converter units slip into obsolescence, I was very concerned about making a good choice today that would hold up over time. The Symphony's replaceable modules (a feature now available on many modern converter models) eliminated such concerns and allowed me to configure my purchase to my exact desires; I chose a full 24-channel analog I/O.

3. Flexibility: Symphony's flexibility also met my ever-changing interconnect needs with additional AES/SPDIF I/O and ADAT optical I/O. Furthermore, operation via USB (16 channels at up to 96 kHz with reasonable latency performance and throughput); PCIe card (with minimal latency and maximum performance levels as utilized in my eight-core Mac Pro); or Thunderbolt via Symphony 64 Thunderbridge (equaling PCIe performance and compatibility specs with newer "black cylinder" Mac Pros and MacBook Pros) ensure I can flex and create new setups for growth and/or reviewing.

Sonically, I think the large investment is paying off. Familiar clients have noticed improvements and are more excited about their mixes with fewer requested revisions. Overall stereo imaging has improved with more definition to the phantom center, more front/back depth, and much more precision to soft pans, even if the far sides are largely unchanged.

To my ears, the biggest audible difference is at the track level, which I didn't expect; I'm using very similar tracking methods as before the Symphony but have applied noticeably less EQ to tracks when mixing. It's not that I'm hearing big differences in frequency response; it is that my tracks just sit better in a mix, aren't at all harsh and seem more linear in their bottom end. Honestly, the improvements are hard to define, yet easy to enjoy—and to mix.

My choice wouldn't be right for everyone, and I won't say that clients should define a professional's choices in gear. I am saying that the cliché of "harsh digital" is no longer a reality. Converter technology in just the last two years has made very significant advances. For me, this converter update is proving to be a great way to stay competitive in 2015.

Apogee Electronics
apogeedigital.com

HARRISON 32CS CHANNEL STRIP

It was 1975 when Dave Harrison began marketing his 32 Series console, the first 32-bus inline console design. The 32 Series utilized a transformer at the input; a fully differential output (with no transformers); versatile four-band EQ and a unique filter set with LPF and HPF—both tunable; plus a resonant boost (Bump). It all combined for a sonic signature unlike the era's Neve desks. I've mixed on 32 Series consoles; to my ears, they're punchy, clean, versatile and full of character.

The 32cs Channel Strip harnesses the same mic preamp, filters (now with a resonant boost) and EQ, but also adds Lundahl transformers, two-track monitor input, headphone amp and blending facilities so one can utilize the 32cs as a "mic pre/monitor controller" for recordists on the go.

IN USE

Right out of the box, the 32cs revealed its intent with a firm build quality and heavy weight; no doubt, this is pro gear. All switches, pots and jacks feel tight and right (even if a few switches were noisy, though Harrison has since remedied this problem).

I started out with a passive electric bass via the front panel instrument input and received a sound that was more full than bright, quite "transformery" (especially when pushed) and rather classic. Although the "Instrument" switch crackles and the signal strength LEDs are a little too crowded for precise illumination, the tone was quite flexible once I kicked in HPF and engaged Bump. I cannot overstate the importance of tuning the HPF; users can actually re-shape the relationship between fundamentals and harmonics: that's a lot of power that can get way out of hand if used heavily. Counter-intuitively, I found Bump to be "hit or miss" per application; on bassy

(continued on page 33)

A close-up of the comprehensive 32cs Channel Strip in the racks at Catalyst Recording.

Harrison

(continued from page 32)

sources, like bass guitar and drums, an additional EQ notch was typically needed, but it was always ideal for thickening up thin sources.

The 32cs's semi-parametric EQ section proves to be powerful, even lacking bandwidth (Q) controls. To be exact, Q is proportional: wide with minor attenuation/boost, very narrow at high values, so broad changes and surgical slices are both achievable. The bands widely overlap and the top and bottom bells can be switched for shelving. Combined with those HP and LP filters, there's a world of tonal options.

The headphone amp is just loud enough and blending input with the two-track input makes for an easy headphone mix for the talent; it's an ideal hotel-room production solution. Rear-panel XLR "mixed outputs" provide convenience for powered monitors or signal splitting to multiple destinations.

I auditioned a wide palette of sources via the 32cs and heard some familiar sounds from my days mixing on a 32 Series. Guitars were classic; percussion, especially tambourine, was notably crisp; kick, snare and drum room mics were quite nice; Hammond organ and particularly rock vocals take on a slightly euphonic, warm and pleasant texture that is quite desirable and useful for anyone desiring refinement and smoothness. It's a sound ideal for many genres—just not anything aiming to be cold and/or sterile. (Check out my audio webclip of this example at soundcloud.com/pro-audio-review-magazine).

Compared to my benchmark Millennia Music & Media STT-1, the 32cs had a little more mid definition, the STT-1 had a little more bottom and euphonic roundness (especially on bass guitar DI) and the two sounded nearly identical on drum room and djembe.

The only thing missing for a complete input channel is a compressor, but that's an easy patch via the provided insert points. Not only in/out switchable but pre- or post-filter, this singular feature ensures that I have the flexibility to achieve the signal path I require. In fact, insert sends are always active, so I can use the 32cs as a simple mic pre if desired.

SUMMARY

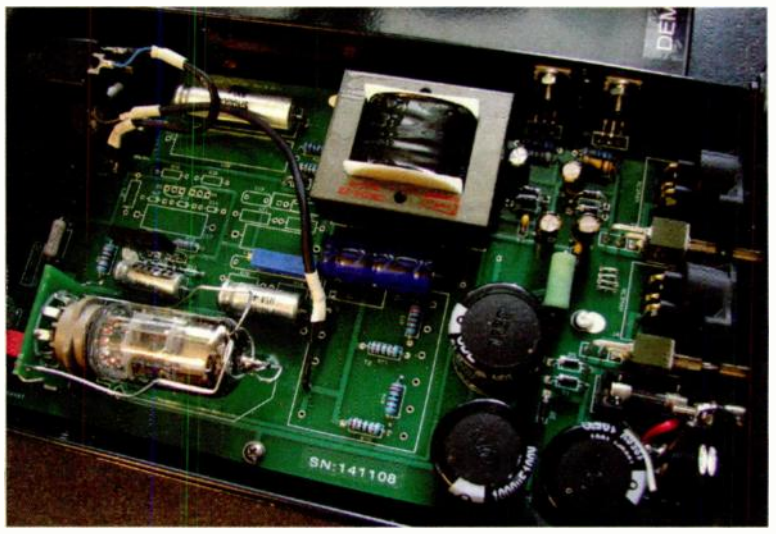
If you're craving the classic Harrison flavor of '70s tonality, transformer goodness and a trip down memory lane, it's all ideally packed into the 32cs's modern, overbuilt chassis. The price is not budget by any means (at $2,850 list), but is indeed on par for channel strips at this level of available features, durability and prestige.

Harrison Consoles
harrisonconsoles.com/site/32cs.html

TEEGARDEN AUDIO FATBOY TUBE DI DIRECT BOX

The Fatboy ($695 direct)—about the size of a thick paperback book—employs an Electro-Harmonix 12AY7 tube (comparably, with a little less gain than a 12AX7 and a warmer "bluesier" tone, which Teegarden notes was chosen for its almost non-existent microphonic characteristics, allowing placement next to loud instruments, like drums, in live applications); a Cinemag CMOB-2S transformer; a large in-line 24 VAC power supply (Food); typical quarter-inch in (Push) and thru; a large, unstepped attenuation knob (Beef); and ground lifts and dual outputs (labeled Pull—one at mic level, one at line level +18 dBu max.). Apparently company founder and accomplished Nashville-based recording engineer Bret Teegarden has a sense of humor.

The Teegarden Audio Fatboy Tube DI features an Electo-Harmonix 12AY7 tube.



A peek inside the Fatboy Tube DI.

IN USE

The frivolity ends once you plug-in and crank up—and yes, this box sounds "tube!" Plugging my vintage '60s passive bass into the Fatboy, I received back a thickness, smoothness and lack of high-end harshness that's clearly old school: that classic round tone that discriminating bassists seek to fill the pocket and never poke out of it. Its highs were clean, airy and pleasant, with a touch of compression that helped keep all notes even. (Check out my audio webclip of this example at soundcloud.com/pro-audio-review-magazine). Considering Teegarden's beginnings as a session bassist, it makes sense that the Fatboy excels when applied to bass tone.

The line-level out provided enough level to either hit my DAW's converters or drive a compressor. I also used the mic-level outs; I must say that the tone seemed a little more "pure" when I skipped a mic pre and patched into a compressor. Watch out, though: Hot, active instruments will likely cause that tube to bark rather than growl—not a particularly useful distortion sound. Electric guitar DI proved this out, as the Fatboy is no substitute for an amp; I did achieve some "chicken pickin'" clean sounds that were nice, yet roll back that Beef attenuator and you will gain some nice texture and musical harmonics for better virtual amping in your DAW.

Acoustic guitar DI was rather similar. Full disclosure: I absolutely hate DI'd acoustics. Though Fatboy is no substitute for a nice mic or two, it definitely helps achieve some smoothness and remove some stark boxiness—performance was way better than a typical DI, particularly appealing to me for some basic tracking and on scratch tracks.

> "The frivolity ends once you plug-in and crank up—and yes, this box sounds 'tube!'"

Synths and keyboards were quite interesting when "Fatboy'd," affording some pretty tasty crunch out of drum (machine) sounds, buzzy synths and general electronica mangling with line inputs; to my ears, it's a sound similar to Thermionic Culture's Culture Vulture, a standard amongst Mr. Reznor (Nine Inch Nails) and other discriminating sound smashers. That's dramatically nice and all, but the Fatboy does a fine job of gently warming up synths, too; dial back that Beef attenuator and finetune just how much plumpness or beard you desire.

SUMMARY

At $695 direct, the Fatboy isn't a DI for cheapskates. It's also a completely different flavor than a Countryman Type 10, my current standard bearer. Potential buyers should consider that the Fatboy allows variable tube saturation on basses that is hard to replicate (especially with such musical subtlety), some marginally useful warming of guitars, a nice harmonic beauty to synths and the ability to artfully mangle line inputs to taste. These applications, its worthy components and an overall elegant design lead me to give the Fatboy a "thumb's up" rating. The Fatboy also comes in two rackmounted versions—arguably even more compelling than the "box" version—in mono and stereo models, the latter of which is ideal for synths.

Teegarden Audio
teegardenaudio.com

GIBSON PRO AUDIO LES PAUL LP6 ■ MONOPRICE 600850 ■ ELITE ACOUSTICS DESIGNS SUNBURST GEAR MM SERIES M3BR8/M3R8

GIBSON LES PAUL LP6 REFERENCE MONITORS

The unveiling of Gibson's Les Paul Reference Monitor Series at last year's 137th AES Convention allowed us a first look at the Les Paul guitar's aesthetics overlaid on a studio monitor. Based on initial buzz, the LP Series was just a bit shocking to those averse to "style forward" pro audio products, though absolutely logical with a marketer's eye. After all, studio dwellers often stare into speakers while working and listening intently; why shouldn't our "instruments" resemble one of the most attractive ones we regularly record? But for our purposes, the real question is this: Has Gibson Brands' Pro Audio division—a group including top studio monitor brand KRK Systems and portable PA purveyors Cerwin-Vega—built another accomplished reference monitor?

For this review, I received the middle-sized model, the LP6 with six-inch woofer, for a month-long evaluation. Other models include the LP4 and LP8 with 4- and 8-inch woofers, respectively.

Due to their striking appearance, let's start with LP Series aesthetics. There's nothing subtle about these monitors; odds are you will like the way they look, or you won't. In a room of black and gray audio gear, they definitely "pop," and I believe they would look ideal in a visually warm, wood-accented room—residential, studio or somewhere in between.

L to R, Gibson Pro Audio LP6 (reviewed here), LP8 and LP4 powered reference monitors.

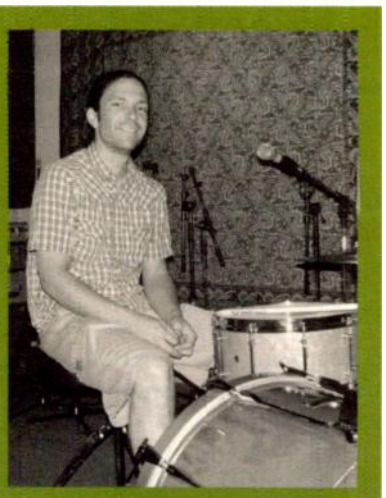
As you can see from the adjacent photo, the LP Series' sunburst coloring and bookmatched wood veneer really does resemble a Les Paul guitar; further, Les Paul's signature is on the woofer and "Gibson" prominently glows a bright honey color set in chromed accenting. Dual F-hole style bass ports, tweeter waveguide surrounds and the LP6's front fascia edge mimics the guitar's creamy trim. As such, the LP Series earns the "unique" description, at least visually, and is available in three colors: cherry, cherry burst and tobacco burst. Build quality is notably high, with thick and rigid cabinetry materials—mainly comprised of high-grade MDF.

Each two-way LP Series active speaker features a 1-inch carbon-coated titanium tweeter (sporting the "density of a diamond" for detailed transient response, offers Gibson marketing materials) and the woofer is made of a multi-layered, non-woven carbon material. The 18.5 lb LP6 offers a frequency range of 37 Hz to 47 kHz with a 2.7 kHz crossover point and a 117 dB maximum peak SPL. Its newly designed proprietary amplifier provides 247 W of bi-amped power; inputs include RCA, balanced TRS and balanced XLR. Manual rear-panel controls include volume and dual stepped EQ adjustments: bass and treble, respectively, at -4, -2, -1, 0, +1, +2 and +4 dB settings. An idle/standby setting kicks on after 30 minutes of downtime.

Whether listening for pleasure, production or both, the LP6 is detailed and accurate to my ears, full yet controlled and punchy on the bottom end and exceptionally silky smooth up top. They are notably powerful for the size, too. To me, the LP6 really doesn't sound like any KRK sibling that I've heard, and I've had the opportunity to use most Rokit, VXT and Expose series models available today. Gibson states that the LP Series is a ground-up new design, and I believe it.

At $799 each, the LP6 is priced alongside some stiff competition in a relatively packed marketplace, though I believe it would hold its own in side-by-side comparisons. The LP Series is a refreshing blast of color and style and, like the Les Paul guitar, it has the look, feel and sound of a classic yet stylistically flexible instrument.

Gibson Pro Audio
www2.gibson.com/Products/Pro-Audio/2015.aspx



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

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ELITE ACOUSTICS DESIGNS SUNBURST GEAR MM SERIES M3BR8/ M3R8 ALL-IN-ONE RECHARGEABLE BLUETOOTH MONITOR

Elite Acoustics Designs' Sunburst Gear M3BR8 could be the most useful multipurpose monitoring tool I've ever used. Is it a studio monitor, instrument monitor, sound reinforcement speaker, Bluetooth-ready portable DJ/KJ rig, remote-location battery powered portable PA, or a three-channel mixer with limited EQ? Actually, it's all of those and more.

Designed, built and tested in the US, the M3BR8 is notably well-built and ideal for mobile artists/recordists, such as those who frequently find themselves performing and producing on the go. As a matter of fact, *PSN* software contributor Rich Tozzoli is evaluating the M3BR8 during his annual St. John Recording Retreat; be sure to read the May 2015 issue of *PSN* for his experiences in some ideal applications.

The magnetically shielded, front-ported M3BR8 features a 5 1/4-inch woofer and one-inch tweeter; three input channels featuring XLR and TRS inputs plus eighth-inch auxiliary jack with volume knob; three-band master EQ; long-lasting 15-plus hour rechargeable battery; AC/DC operation; Bluetooth playback-ready; separate USB input and charge ports; and 35 mm bottom pole mount with a very sturdy overall build quality and road-ready design. Dimensions are 9 x 9 x 14.5 inches (L x W x H); per cabinet weight is 23 lbs.

The M3BR8 surprised me with its studio monitor-level performance, as it's built to handle small sound reinforcement tasks, too. Trust me, this is no typical portable PA; I'd feel comfortable mixing on MM Series speakers as well as listening for enjoyment because they sound great and are relatively accurate. Providing comprehensive I/O for its channel count, the M3BR8 allowed me to employ the system as singer/songwriter sound reinforcement (just add microphone), a city sidewalk busking PA, a superb-sounding keyboard monitor, and—my personal favorite—no nonsense studio monitors.

Elite Acoustics Designs Sunburst Gear MM Series offers flexible, accurate monitoring anywhere.

Solid as a brick, everything about the speaker feels very high quality, from its knurled aluminum pots, carbon fiber-look covering over thick wood cabinetry to its minimalistic, sleek steel handle. The look is a toss-up between modern-day design and lab coat-era recording products. As such, Sunburst Gear's MM Series is effortlessly hip, perhaps without trying to be.

Based on overall quality and flexibility alone, I predict a growing buzz around the Sunburst Gear brand in 2015 based on the MM Series in particular. A 6-input MM Series speaker, the M6BR8, is due later this year with a few extra features. Don't pass up the chance to audition a pair.

Sunburst Gear
sunburstgear.com

MONOPRICE 600850 MULTIPATTERN CONDENSER MICROPHONE

Monoprice sells direct its own branded products ranging from band/orchestral to rock band gear and associated portable PAs—and pro audio products such as a 2.25 lb multi-pattern studio microphone: the 600850 Lollipop-Style Large Diaphragm Condenser (at $349 direct), reviewed here.

The 600850 is an attractive pressure gradient condenser with a gold-sputtered, 8-micron diaphragm and large 1.26-inch capsule. Three selectable polar patterns—cardioid, omni and figure eight—are available with switchable HPF and pad. Monoprice's provided specs show a maximum SPL of 130 dB and a relatively flat 20 Hz to 20 kHz frequency response with a very slight dip between 500 to 750 Hz. The 600850 ships with a notably nice shockmount and a flight case.

I had the opportunity to evaluate a 600850 pair in a variety of studio applications, most notably piano and drum room/overheads in both spaced omni and cardioid X/Y configurations, and male and female lead vocal of various styles and stringed acoustic ensembles; listen to my stereo parlor-style upright piano audio clips via prosoundnetwork.com/april2015.

To my ears, the 600850 is a completely capable multipattern LDC that provides pro-competitive results. Visually, it's on par with microphones four to five times its price; it can inspire talent just as well as a $2,000 LDC direct.

Notably, the 600850 is heavy and its shockmount, though effective, adds significantly to overall weight; 600850 users will need to sandbag and secure stands accordingly.

Monoprice deserves commendation for its impressive baseline multipattern LDC microphone—one that many users (and listeners) won't sonically distinguish much from pricier competition.

Monoprice
monoprice.com

The Monoprice 600850 Multipattern Condenser Microphone

Russ Long Streams The Choir with StreamVu

"Although it typically comes with a hefty price tag, streaming live music events has played a major role in the music industry over the last several years, and its popularity continues to grow. Live streaming is a fantastic way to instantly bring a live performance into a fan's living room in the same city or on the opposite side of the globe. The downside is the cost, which has typically limited it to higher profile acts with deep pockets. "Marshall Electronics has teamed up with StreamVu to change all of this. At first, I was skeptical that the sound and image quality would be up to par with the quality achieved when spending several times more money, but after using the system to broadcast a live show by Grammy-nominated band The Choir, I'm sold."

—Russ Long

▸ Link to more of Russ' experience using StreamVu at prosoundnetwork.com/april2015

FOCUSRITE CLARETT INTERFACES

The new Clarett audio interface range offers a new preamp design and Thunderbolt technology that Focusrite reports will place latency under 1 ms. The range is comprised of the 2Pre (10 In/4 Out), 4Pre (18 In/8 Out), 8Pre (18 In/20 Out) and flagship 8Pre X (26 In/28 Out, pictured).

This final 2U interface has been designed with the permanent racked studio install in mind, featuring extended ADAT I/O and separate rear panel inputs for mic, line and instrument, as well as dedicated phantom power, polarity reverse and high-pass filters on every channel. All the units feature a dynamic range of 116 dB A/D and 118 dB D/A; 24-bit, 192 kHz sample rate capability; expansion via ADAT; new 64-bit AAX, AU and VST-compatible Red 2 and Red 3 Plug-in Suite; and MIDI I/O.

iZ RADAR STUDIO DIGITAL AUDIO WORKSTATION

The RADAR multitrack digital recorder now runs Pro Tools natively in its latest incarnation, RADAR studio. It ships with Pro Tools and Harrison Mixbus DAWs. iZ reports that RADAR studio offers near-zero jitter and, in running Pro Tools, it enables users to track, mix and automate, using all of the plug-ins and features of the native DAW software. The unit is customizable, offering configurable I/O, drive bays, external media, DSP cards and peripherals. RADAR studio comes with 10 years of free customer support.

UNIVERSAL AUDIO UAD SOFTWARE V8.0

The release of Universal Audio's UAD Software v8.0 for UAD-2 DSP Accelerator hardware and Apollo audio interfaces adds Mac OS X Yosemite compatibility and expands the plug-in categories of the UAD Powered Plug-Ins platform. Available are plug-ins designed for acoustic guitar recording, stompbox distortion emulation, Friedman amplifier emulation and Antares Auto-Tune Live.

With Apollo Expanded, users of Thunderbolt-equipped Apollo Twin, Apollo DUO, Apollo QUAD and Apollo 16 audio interfaces can combine up to four Apollos and six total UAD-2 devices—adding I/O and DSP to accommodate studio or session growth. The included Console 2.0 software upgrade offers new workflow options, including more than 25 new user-requested features.

firstlook

ATC SCM45A PRO COMPACT ACTIVE LOUDSPEAKER

The latest ATC monitor, the SCM45A Pro, is a ground-up design featuring a mid-size stature and three-way configuration for use in near- or midfield positions. Features include the new SH25-76S dual-suspension tweeter, 6.5-inch SB50-164 short-coil bass driver, and proprietary active "tri-amp" pack, a three-channel discrete Class A/B amplifier with 150, 60 and 25 W for the bass, midrange and high-frequency components, respectively.

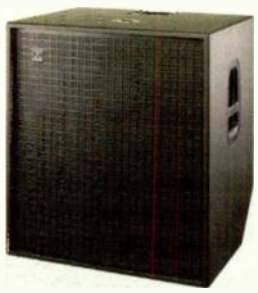
AUDIO-TECHNICA ATH-M70x HEADPHONES

The ATH-M70x is A-T's new flagship model atop its M-Series headphone line—a closed-back dynamic type model featuring 45mm large-aperture drivers with rare earth magnets, copper-clad aluminum wire voice coils and a collapsible, space-saving design. The ATH-M70x provides a impressively wide frequency response of 5 Hz to 40 kHz and its maximum power input is 2,000 mW for reportedly very low distortion at high volumes. Included are three interchangeable cables (with two lengths, coiled and straight versions) and a hard-shell carrying case.

EAR TRUMPET LABS EVELYN STEREO MICROPHONE

A stereo microphone with a Steampunk aesthetic, Ear Trumpet Labs' Evelyn is comprised of dual matched medium-large diaphragm capsules mounted in individually pivoting head baskets spaced at the correct distance for the ORTF sound capture. *PSN* Contributor Rob Tavaglione recently reviewed Evelyn's mic sibling, Mabel, a large-diaphragm condenser. Visit prosoundnetwork.com for Rob's full report.

D.A.S. ACTION SERIES 118A SUBWOOFER



The new compact Action 118A is a 18-inch powered subwoofer and the latest edition to D.A.S.'s Action Series. It is a horn-bass subwoofer system to be paired with Action Series full-range cabinets. Features include a 3200 W amplifier paired with a D.A.S. 18LX long excursion bass loudspeaker incorporating a four-inch voice coil; selectable "Deep" sub-bass or "Loud" bass proprietary EQ curves and 100 Hz to 160 Hz variable crossover plus gain control and polarity reverse adjustments.

GRACE DESIGN FELIX ACOUSTIC INSTRUMENT PREAMP/BLENDER

Grace Design has introduced Felix, a two-channel acoustic instrument preamp/blender housed in a road-ready floor "stompbox"-style chassis. Key features include a Grace m101-borne mic preamp with 48 VDC phantom power and phase reverse; Alps gain pots; and an independent EQ section with high-pass/notch filters, high- and low-shelf and two-range parametric midband parameters. Further routing features makes Felix a multi-tool intended for instrumentalists, especially guitarists.

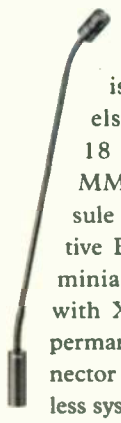
Stay tuned to the pages of *PSN* for an evaluation of Felix by Software Editor and guitar-based TV composer Rich Tozzoli.

STUDER VISTA SOFTWARE UPGRADE

HARMAN's Studer has released new features for the Vista X, Vista V (shown), Vista 1 and Vista 5 M3 digital consoles. This new software update includes the ability to assign Strip Setups as CUE events; support of the Soundcraft Realtime Rack (UAD plug-ins); support of Lexicon PCM96 Surround reverbs with Infinity Core; Input Gain unfold for multi-format channels; Spill Zone for contributing channels; GUI enhancements and new patch groups; A-Line embedded Ethernet; and contribution PAN in stereo channels to mono Aux busses.

For Infinity Core with D23m, the Ethernet control signal can be tunnelled together with the audio stream from the CoreLink card through the A-Link ports to the D23m's HD cards.

DPA D:DICATE PODIUM MICROPHONES



DPA's new d:dicate podium microphone series is comprised of four models with lengths of 12- and 18 inches: two with a DPA MMC4018 supercardioid capsule with MMP-F Modular Active Boom; and two with a DPA miniature supercardioid capsule with XLR connector featuring a permanent HPF or MicroDot connector to fit the range of DPA wireless systems.

Stay tuned to the pages of *PSN* for a full review of a miniature d:dicate podium microphone.

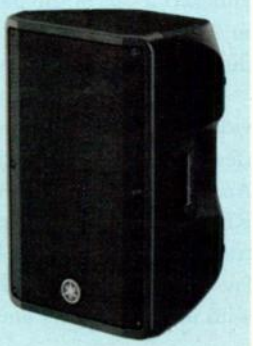
ASPEN PITTMAN DESIGNS CPS SPACESTATION V.3 POWERED MONITOR

TEC Award-winning pro audio designer Aspen Pittman has unveiled his latest product: the Center Point Stereo Spacestation v.3. It is a compact powered stereo live performance monitor said to create a 300-degree stereo soundfield from its single cabinet. According to Pittman, the Spacestation v.3 works by electronically encoding stereo left and right signals to be Mid (L+R) and Side (L-R) signals, then decodes them acoustically via its Front and Side dipole-powered speaker array, reportedly creating a wide sweet spot.

The Spacestation v.3 features custom Eminence USA-built 8-inch coax speaker and 1-inch compression driver plus a super-tweeter, all tri-amped with independent level adjustment for mids and high frequencies via Speaker Contour controls. Its side speaker is a 6.5-inch full-range positioned 90 degrees off-axis.

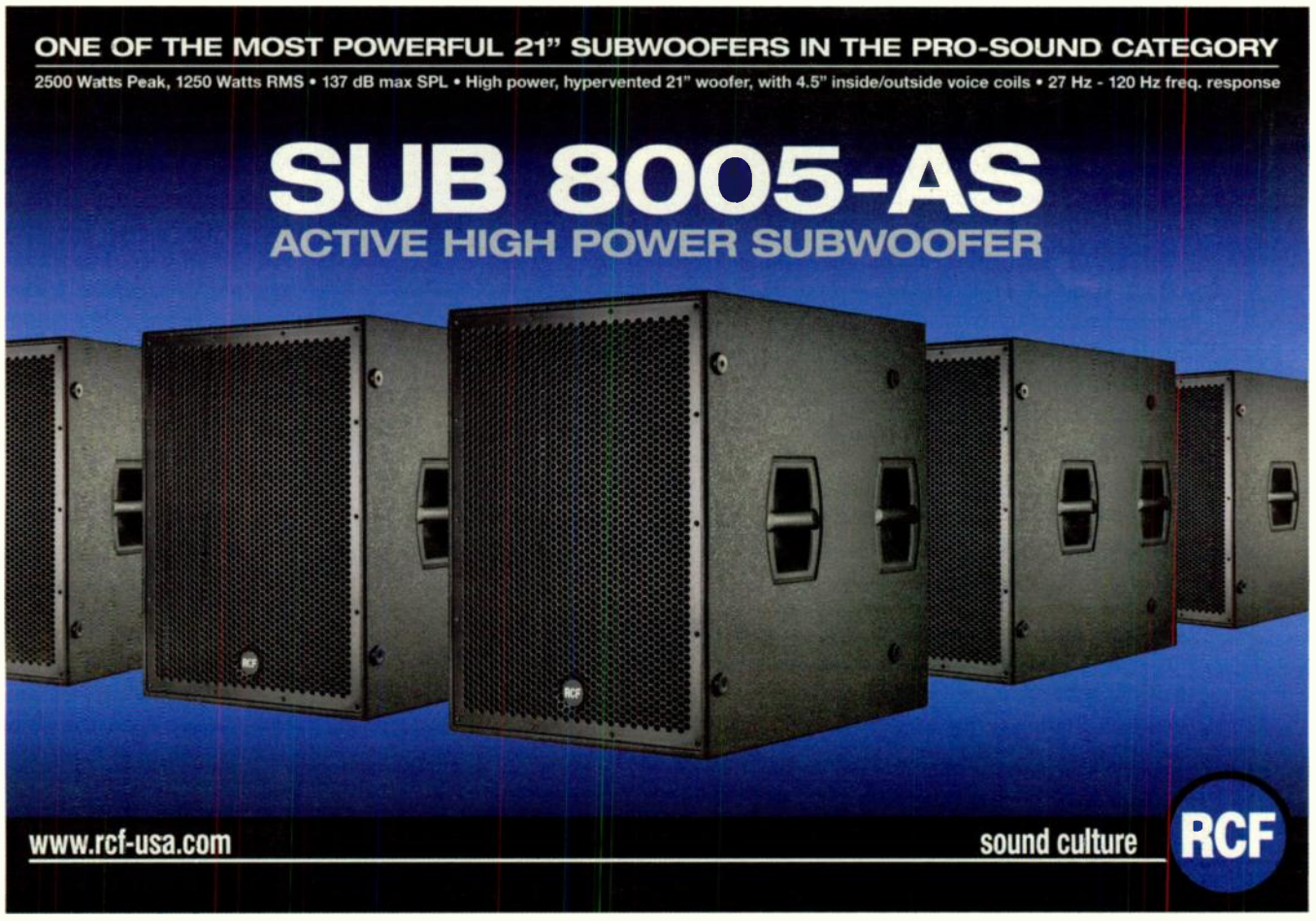
firstlook

YAMAHA CBR SERIES LOUDSPEAKERS



The CBR Series is Yamaha Pro Audio's newly unveiled passive version of its powered DBR Loudspeakers Series. Three models are now available: the CBR10, CBR12 (pictured) and CBR15 offering 10-, 12-, and 15-inch woofers respectively. The CBR10 and CBR12 can handle 700 W peak; the CBR15 handles 1,000 W peak. Featuring the same cabinetry as the DBR Series, these CBR models provide one SpeakON and one quarter-inch TRS input per cabinet.

There's more information on all the products featured at prosoundnetwork.com/april2015.



KM Deploys Wirelessly For CBGB Fest

BY STEVE HARVEY

NEW YORK CITY—Open-air events in inner city areas can present numerous challenges, not the least of which is keeping the sound contained in order to keep the local residents happy. At the free one-day CBGB Music and Film Festival in New York City's Times Square last year, the main challenge was not simply to control the coverage pattern, but additionally the use of RF links to the delay speaker towers—enabling a very quick PA system set-up—in an intensely dense wireless environment.

PHOTO COURTESY OF CBGB MUSIC AND FILM FESTIVAL

When outfitting the outdoor stage in NYC's Times Square for the CBGB Festival, producers faced the challenge of providing enough wireless for the stage, and avoid interference from the numerous other channels in the city.

Because of the large number of Broadway theaters, television studios and other heavy RF users in the vicinity of Times Square, the area is notoriously challenging for temporary wireless system use. "But our team knocked it out of the park," says Kevin Mignone, president of KM Productions, based in Hicksville, NY.

Mignone's company, which provided sound production for the show (featuring Jane's Addiction, Devo, We Are Scientists and others), utilized RF communications equipment to transport signals to the PA system delay towers. "We had 12 delay towers with in-ear receivers and transmitters, as well as our wireless network, and 18 channels of wireless on each stage, completely bulletproof throughout the entire performance."

The two stages constructed for the festival, designated North (the B stage, at 52nd Street) and South (main stage, at 46th Street), were equipped with d&b audiotechnik systems. "Every single component on the stages was d&b," reports Mignone. "The mains were J Series systems with J-Subs. The monitors on both stages were M6s, we had M2s for drum fills and side fills, plus a couple of Q-Subs, and there was a P7 rig on the main stage for the main side fills."

All the delay systems comprised four d&b V8/V12 combinations. "We partnered up with a company that we're very close with out here on Long Island—Wireless Sound, and company president Aaron Gennett—to help develop this system of wireless com-

(continued on page 44)

Brewery Hops Up Sound Control

BY DON LANIER, PEARL PRO AUDIO

ALTON, IL—Lots of people talk about following a dream while having a beer; last year, James and Loren Rogalsky followed their dream by *making* beer, when they founded The Old Bakery Beer Company, a sustainable craft brewery in downtown Alton, IL. The name comes from the building that their brewpub calls home, which started out as a bakery in the 1800s. Despite having various owners who remodeled it and a fire that tore through the facility in 1929, it continued to operate as Colonial Bakery until shutting down in the early 1980s. When the Rogalskys decided to create their brewery in the aging edifice, they wanted to honor the building's history while creating a modern brewpub experience; their work cut was out for them—and that included dealing with numerous sound issues.

Pearl Pro Audio installed dozens of Tectum Finale sound absorption panels inside the Old Bakery Beer Brewery in Alton, IL

A state-of-the-art brewery was constructed and installed, along with two public areas—a Pub and an Event Space. Throughout the building, renovations were made with an eye towards highlighting the industrial design, updating things while keeping the charm of the building intact. Much of the structure was blasted with walnut shells and steam to enhance the textures inherent of the old factory bakery, and in keeping with the Rogalskys' intent to remain as "green" as possible, repurposed woods, reclaimed lumber and lighting materials were used whenever possible. When new materials had to be used, the Rogalskys made a point of using environmentally appropriate products, too.

While it all made for a welcoming place to have a drink, the renovation also created a serious problem: The building's acoustics were great for a bakery, but for a room full of people poring over some fresh-brewed IPA, speech intelligibility would now be a

(continued on page 45)

briefs

DiGiCo Desks Debut at Disney

HOLLYWOOD, CA—The 2,252-seat Walt Disney Concert Hall recently upgraded its audio systems—a process that included a move to a fiber-networked DiGiCo (digico.biz) digital audio system. ATK AudioTek installed an SD5 at FOH, SD10 at the monitor position, and shared SD Rack at the Walt Disney Concert Hall, one of four venues that comprise The Music Center campus.

Mixing With Mo-FI

TOKYO, JAPAN—FOH engineer Terry "TJ" Jackson recently used Blue Microphone (bluemic.com) Mo-Fi headphones to help tune the PA when he mixed Earth Wind & Fire's Philip Bailey inside the 55,000-seat Tokyo Dome. He reportedly has also been using them for mixing tracks while on the road.

Arts Theater Goes Bose

LAKE MARY, FL—The Fine Arts Theater at Seminole State College recently underwent an audio overhaul, installing a Bose (pro.bose.com) RoomMatch loudspeaker system with a single center cluster consisting of three RoomMatch modules—RM12020, RM9020 and RM7020—topped by an RMS215 subwoofer. The system is powered by a Bose PowerMatch PM8500 amplifier and utilizes a Bose ControlSpace DSP control processor for speaker management.

Bocelli Brings It On

HOLLYWOOD, FL—Hard Rock Live served up opera recently when Italian tenor Andrea Bocelli played three sold-out concerts at the Hollywood, FL venue. Audio vendor PRG utilized a main LCR setup of three arrays of 12 L-Acoustics (l-acoustics.com) K2 enclosures each, flanked by 12 Kivas each. A dozen coaxial 8XT enclosures served as front-fills, with two 12XT as in-fills and two more as out-fills. A total of 14 SB28 subs were used while a center Kara array of 12 enclosures served as a delay.

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Touring On A Need To Know Basis

BY CLIVE YOUNG

While Marc Anthony's biggest U.S. chart hit might be 1999's English-language "I Need To Know," it's his Spanish-language Salsa smashes that have provided him with such longevity in the music world, powering album sales of more than 12 million worldwide, not to mention two Grammys, five Latin Grammys and an endless string of tours. "We're averaging about 50-60 concerts a year; in 2014, we did about 70 if I'm not mistaken," said Jose Rivera, Anthony's FOH engineer for the last five years. "We only do about 15 shows a year in the States; the majority of it is in Central and South America, and the Caribbean."

Keeping the audio pristine for Marc Anthony at every stop are (l-r): Jimmy Ibañez, artist system engineer; Eric "Pyle" Ramey, monitor engineer; and Jose Rivera, FOH engineer.

Playing a handful of Northeast dates early this year—it'd be more accurate to call it a series of one-offs than a mini-tour—the artist and his production staff hit the road with audio provider VER Tour Sound (Nashville, TN) for the first time. "They've done a hell of a job on these shows," said Rivera. "They've been very responsive to what we need and quick, professional; can't complain. I wouldn't be surprised if this venture will continue with them."

The upbeat assessment included that complicated day, as the production landed at Nassau Coliseum in Uniondale, NY for an in-the-round performance, placing the singer and his 15-piece band at the center of the arena. "This is our sixth in-the-round concert in the last year," said Rivera. "Marc seems to like the format. We used to use a turntable, but we got rid of it and he runs everywhere. The band is spread around, and they're completely live; his words are, the day he sings with a track is the day he'll retire."

Whether in-the-round or using traditional staging, the production team aims for consistency, bringing its own audio infrastructure everywhere, including Central and South America. "The only thing we don't travel with is the lighting rig and the PA, but we try to keep it consistent," said Rivera. "Most times, we'll pick up a Meyer Sound LEO system down there, or L-Acoustics or a d&b—and we keep it to those. We have our own system engineer, Jimmy Ibañez, and he makes sure the rigs sound good no matter where we go."

Accomplishing that is no simple task, as Ibañez noted: "The hang is always important, whether you have the best PA in the world or a not-so-best PA in the world," he said. "When you do a 360 show like today, it's always difficult because of all the reflections and the coupling—but it is easier when you have a better box." Aiming to make that happen, VER Tour Sound provided Meyer line array elements, marking the first time the singer's audio team had worked with LYON boxes. "Today we have 10 LEOs and three LYONs per hang, and there's eight hangs around the stage," said Ibañez. "It's amazing how LYON stays consistent to LEO; there's some differences in SPL, but they match the LEOs pretty well."

Beneath all those boxes, Anthony covered the stage, his vocals captured via a Shure Axient wireless microphone system with a KSM9HS capsule. "We've been using it for almost two years with no issues," said monitor engineer Eric "Pyle" Ramey. "As a matter of fact, we have a total of four receivers and four transmitters, just to make sure that we're covered wherever we go because of different frequency ranges or bands—and we've never had to use the spare." Meanwhile, background singers were heard via a Mytek mic and three Beyerdynamic M88s. Rivera recalled, "With our end-stage set-up, the background vocals are in front of the percussion section, so I said, 'Why don't we get something a little darker up there?' Those vocals are mostly high in pitch, so it worked out great." The rest of the stage was captured with a variety of Shure and Sennheiser microphones, along with A-Designs Audio's RED-DI and Radial J48 direct boxes.

At stageside, Pyle mixes on a DiGiCo SD7 console, tackling 14 stereo mixes and 21 mono mixes sent to a variety of wired and wireless Shure in-ear systems with Ultimate Ears UE7 ear buds, Anthony sporting a PSM 1000 system which he wears in only one ear. Meyer Sound wedges also adorn the stage with four MJF-210s used as back-up measures for the singer, and an MJF-212 for the bassist.

Out at the FOH position, Rivera also uses a DiGiCo SD7 console, overseeing 73 inputs from the stage. Nearly 50 of them are open mics, so he has a variety of macros for quick muting—a necessity as Anthony perpetually mixes the setlist around, often calling audibles mid-show. Rivera also keeps various Waves plug-ins on-hand, too. "I'm a big fan of the CLAs—the 3A, the 2A and the 76—and the C6 compressor," he said.

(continued on page 42)

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-Jim Fitzpatrick, Emmy Award-Winning Post Production Sound Mixer
(Family Guy, American Dad)

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

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

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Marc Anthony

(continued from page 40)

"Another favorite is the S1 Stereo Imager—one of the keyboard players plays strings in the ballads and I just love the way I can open them up and get them out of the way with the Imager."

Not that there's a lot of ballads, however; Anthony likes to keep the audience on its feet. "Marc's crowds are loud—very loud," Rivera laughed. "This is a crowd where if you're the type of person that likes to go to a show and sit down, you're going to have very unhappy time." Pyle agreed, adding, "He doesn't have dancers; there's no video gimmicks—it's just singing from beginning to end. He goes up there and lives the songs. When he sings, he doesn't know how to not give 150 percent."

Hanging above the in-the-round stage at Nassau Coliseum were eight hangs of 10 Meyer Sound LEO and three LYON line array elements.

VER Tour Sound
verrents.com

Meyer Sound Laboratories
Meyersound.com

THERE'S MORE ▲ Catch fan shot video of Marc Anthony belting "Y Hubo Alguien" inside Nassau Coliseum at prosoundnetwork.com/april15

VITALstats

Marc Anthony

VER Tour Sound *(Nashville, TN)*

FOH Engineer:
Jose Rivera

Monitor Engineer:
Eric "Pyle" Ramey

Artist Systems Engineer:
Jimmy Ibañez

FOH Console:
DiGiCo SD7

Monitor Console:
DiGiCo SD7

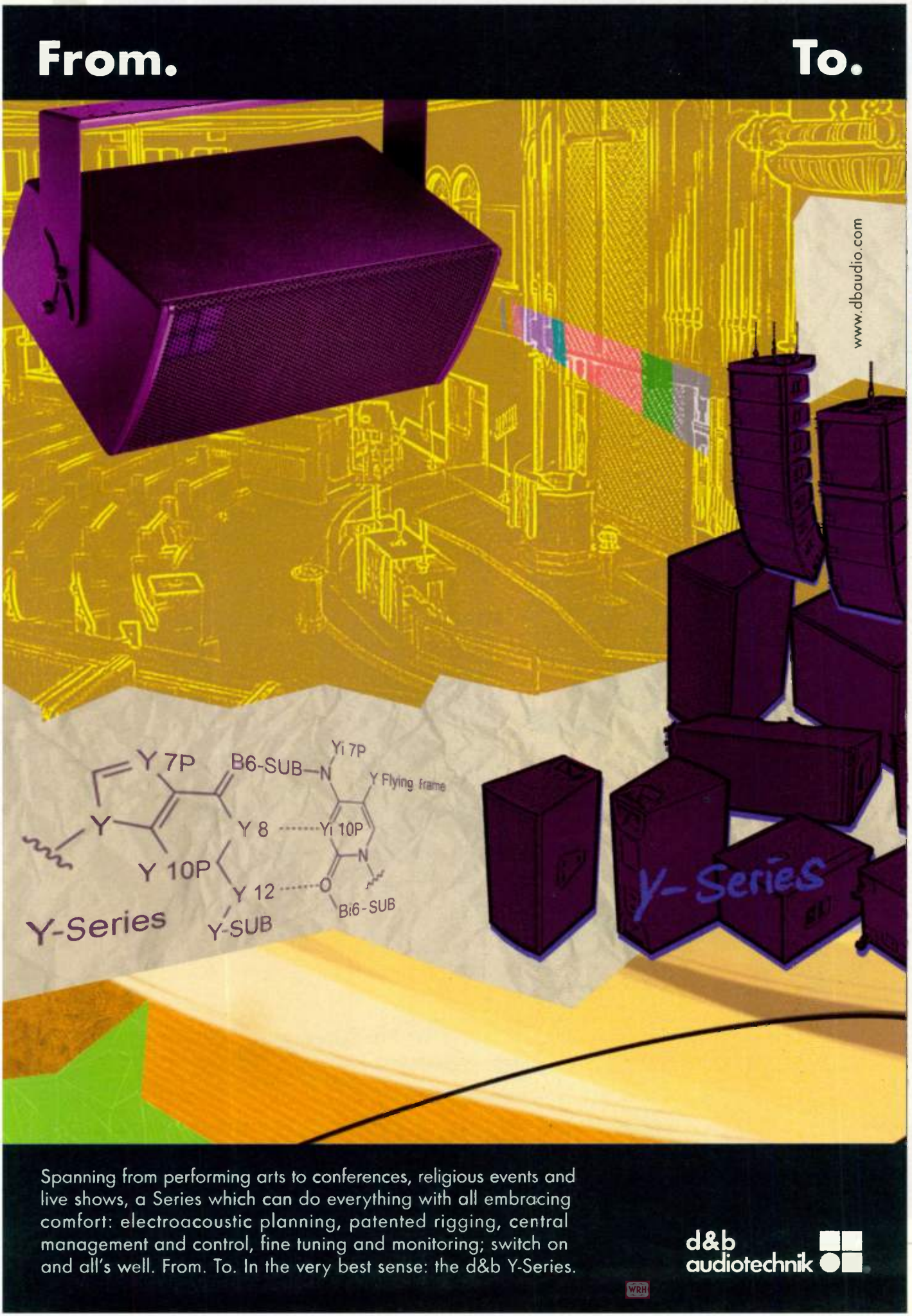
House Speakers:
Meyer Sound LEO, LYON

Monitor Speakers:
Meyer Sound MJF-210, MJF-212

Personal Monitors:
Shure PSM 1000; Ultimate Ears UE7

FOH Equipment/Plug-Ins:
Waves CLA bundle, C6, S1 Stereo Imager

Microphones:
Shure Axient Wireless with KSM9HS capsule, SM57, SM27, KSM32; Sennheiser e914, MD421; Beyerdynamic M88; Mytek; A-Designs Audio REDDI; Radial J48 DI



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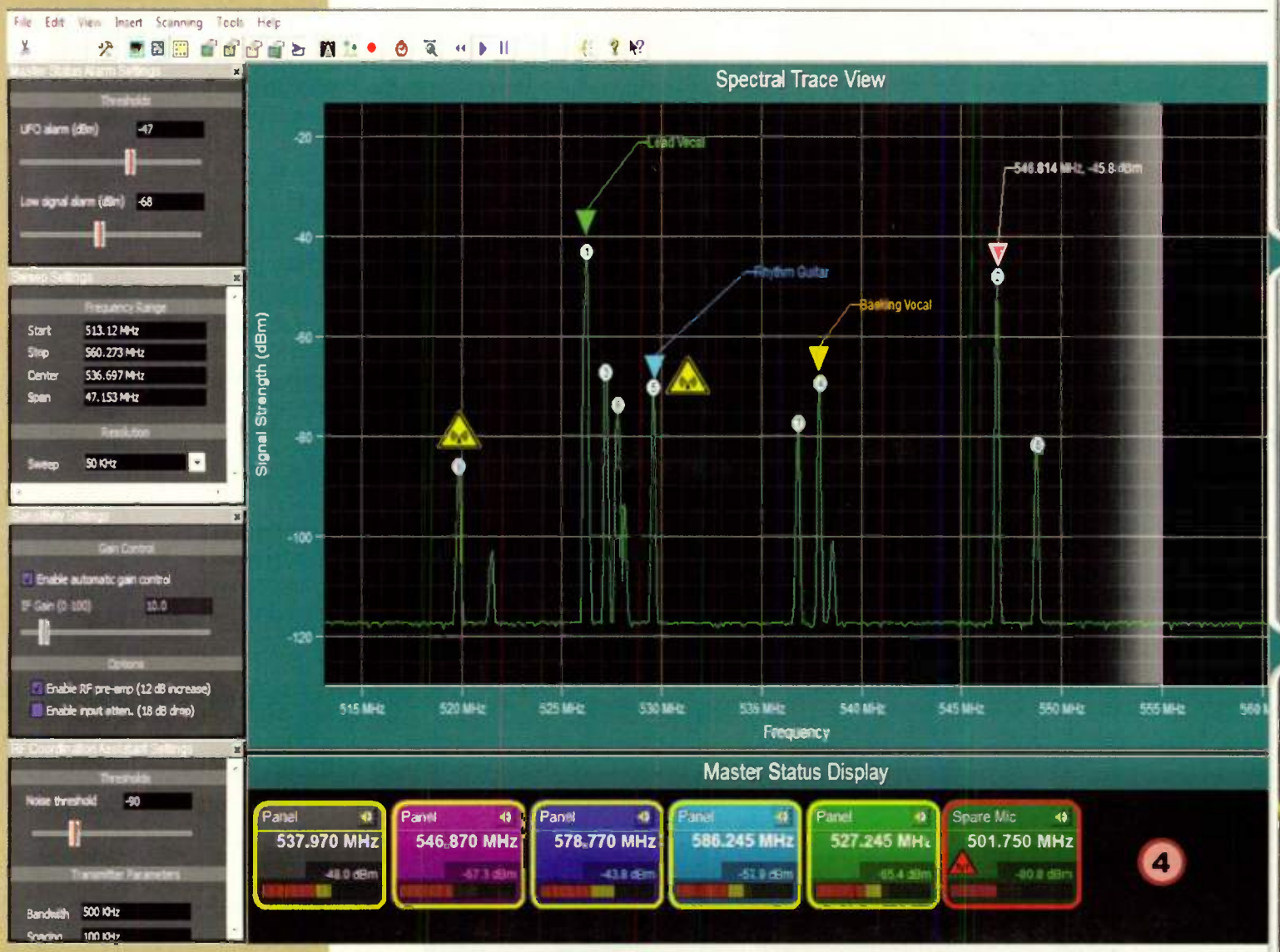

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CBGB

(continued from page 38)

> "We had 12 delay towers with in-ear receivers and transmitters, as well as our wireless network, and 18 channels of wireless on each stage, completely bulletproof throughout the entire performance."
>
> *Kevin Mignone, KM Productions*

munication, both signal and network, throughout the wireless delay towers that were spread out through Times Square," he explains. "It was definitely an intensive R&D process. We closed down our entire warehouse complex and tested it up to 300 feet. Times Square is a little less friendly RF environment than Hicksville, but at least it gave us the ability to troubleshoot some things so that we were able to avoid them onsite."

Wireless Sound's solution involved RF Venue CP Beam helical antenna systems firing down the left and right sides of the main stage to the delay towers across 12 frequencies, with full redundancy. Each tower housed Shure PSM 1000 and UR4 IEM receivers with an RF Venue Diversity Fin antenna refiring to the next tower.

"We were able to monitor all the d&b D80 amplifiers that were at each tower and assign the inputs that they were seeing," says Mignone. "Because the PSM is a stereo pack, we were able to give it two channels of input, giving us the ability to monitor the PSM and the UR 4 via [Shure] Wireless Workbench [system management software]. So if any frequency started to get inter-modulated or started to drop out, we could change the frequencies via the computer at front of house on the main stage, and then alert the amplifier to change the input to the other channel we were reserving so that we would have minimal to no dropout time."

Since the event was taking place on one of the busiest thoroughfares in Manhattan, time was very much an issue for the production crews. "We began loading in at 11:00 p.m. the night before the show, but were not permitted to make any noise until 9:00 a.m.—and the first band went on at 11:00 a.m. So we tuned eight city blocks of PA in 45 minutes with six system techs on Clear-Comms, and got the whole rig time-aligned, frequency analyzed, and done, for three soundchecks, and then started the show at 11:30 a.m."

As for sound coverage, says Mignone, "We did our best to keep the reflections off of the buildings, just so there weren't other wave patterns to be concerned with, and there weren't many sources other than the ones we were pointing for people to hear it from. So we were dealing with essentially one arrival time from one side of the street all the way down to the next.

"And the other benefit was that the light weight of the V Series made us able to use these custom line array towers that were engineered by the event producer to essentially self-contain all of this into a three-foot by three-foot platform. It's something that the Times Square Alliance has never seen before. It certainly turned a lot of heads when 12 towers went up in two and a half hours."

KM Productions
km-productions.com

d&b audiotechnik
www.dbaudio.com

Shure
www.shure.com

Brewery

(continued from page 38)

major issue. RTA times were horrid, mainly due to the glazed brick that covered the walls, floor and ceiling. The presence of just a few voices was enough to create a sound not unlike a shouting match; add some cars driving past the front of the building, and there was a near constant cacophony of noise that radiated to the back of the room. The reverberation in the space was like a cathedral, and this had to be improved.

I was contacted by the owners during the renovation to see what Pearl Pro Audio (Godfrey, IL) could do about the problem, so we tested the Pub and Event Space, using computer analysis to evaluate the sound and decide on the best materials to apply and in what quantities. After comparing several brands and manufacturers, we settled on Tectum Finale acoustical panels.

While noise control was our top priority, Tectum was also chosen for its Forest Stewardship Council-certified green and sustainable products, which met the concerns of the new owners. The panels are made of excelsior (wood fibers) derived from Wisconsin Aspen trees, because it turns out the Aspens are self-propagating; when cut, a new tree begins to grow back from the remaining roots. Other components of the 2-inch-thick Finale panels include Magnesium Oxide mixed with Magnesium Sulfate (Epsom salts) to create the binder. After manufacturing, water used during the process is recycled and captured, so overall, the panels answered the environmental requirements of the project nicely.

The two spaces required a large amount of treatment; we applied more than 125 4-by-4 foot squares of Tectum Finale to walls and ceilings, and then applied and hung another 35 4-by-8-foot Finale panels and clouds from the Event Space ceiling. Attached by drilling and using Tapcon screws, the project was labor-intensive, yet day by day, as we installed the panels, the sound quality improved. The owners noticed that a small radio kept in a corner during construction now sounded very good; previously, it had almost been drowned out by traffic noise. Similarly, conversation that was impossible to hear a week before was now very warm and easy to understand. Even other workers noticed as they talked across the room; before, if you shouted, the words were gobbled up in noise, reflection and reverb. The building's owners were very pleased with the outcome.

With the noise issues under control, we then installed a small, two-zone music system for the public spaces, which we based around Peavey Architectural Acoustics' PZS 140RA multi-zone mixer/amplifier and a pair of Crown XLS1000 Drivecore amps, along with eight Peavey Impulse 652S loudspeakers. The system can handle room-combining or splitting, allowing the Pub and the Event Space to have separate sound systems when needed—useful if there's a business meeting in one room and pub customers in the other. Music for the systems is provided by an iPod or XM Radio.

Between the environmentally conscious noise control and the new music system, the final result made for some very happy owners. Going forward, Pearl Pro Audio expects to provide Allen & Heath's new QU32 digital mixer, widescreen video projection, LED lighting, Heil mics and more from our inventory as needed for high-tech meetings and live music shows in the Event Space. We'll help keep this house of hops hopping!

Pearl Pro Audio
facebook.com/Pearlproaudio

Old Bakery Beer
oldbakerybeer.com

Setting Sound for Red Bull Crashed Ice

ST. PAUL, MN—Red Bull has sponsored high-speed, high-danger sports events around the globe for years, and one of the most popular, Red Bull Crashed Ice, a cross downhill race event on ice skates, recently made its fourth visit to Saint Paul. Drawing more than 140,000 people to the Cathedral of Saint Paul where the races were held, the event had sound provided by EDGE ShowTek of Northbrook, IL, which deployed an all-Nexo/Yamaha system.

EDGE ShowTek's system included hundreds of boxes of Geo D, Geo S12, GEO S8, RS18 Ray Subs, and a CL5 digital audio console. The company used a Dante network with fiber distribution, all connected to several Yamaha Rio input/output boxes and NXAmps with Dante cards, dotted throughout the area. "This show has an insatiable demand for outputs and used up almost the entire capacity of the Yamaha CL5 console," states Al Zara, EDGE ShowTek.

By having the ability to drop Rio boxes anywhere in the network, Zara said the system allowed them to put inputs and outputs right where they were needed. "From the singer of the National Anthem at the start line 1,200 feet away from audio control, to the broadcast announcers and show DJ located in different areas of the course, we were able to drop Rio boxes to accommodate inputs and outputs. Given that all the Nexo lines are very closely voiced, the system enabled us to provide seamless coverage of the show grounds."

Above: A view from the top of the temporary Red Bull Crashed Ice track in St. Paul reveals the hair-raising turns skaters had to navigate, as well as the Nexo PA provided by EDGE ShowTek.
Below: The Nexo PA had to cover more than 140,000 people who were drawn to the event held outside the Cathedral of St. Paul.

Zara, who functioned as A1 front of house engineer, said the event is a major challenge from a design and technological standpoint. "There are many demands for speaker zone outputs and alignment, multiple broadcast trucks' needs, and complicated show cues. We handle a good deal of broadcast events, and to be successful, you need to have a systematic approach to all of your AV systems. It's a major plus to have the capabilities of our Yamaha and Nexo systems."

"The Dante network lends itself to the Red Bull Crashed Ice type of event by allowing us to use off-the-shelf product to convert from fiber to copper and integrating very easily," said system technician, Jon Carrico.

EDGE ShowTek
www.edgeshowtek.com

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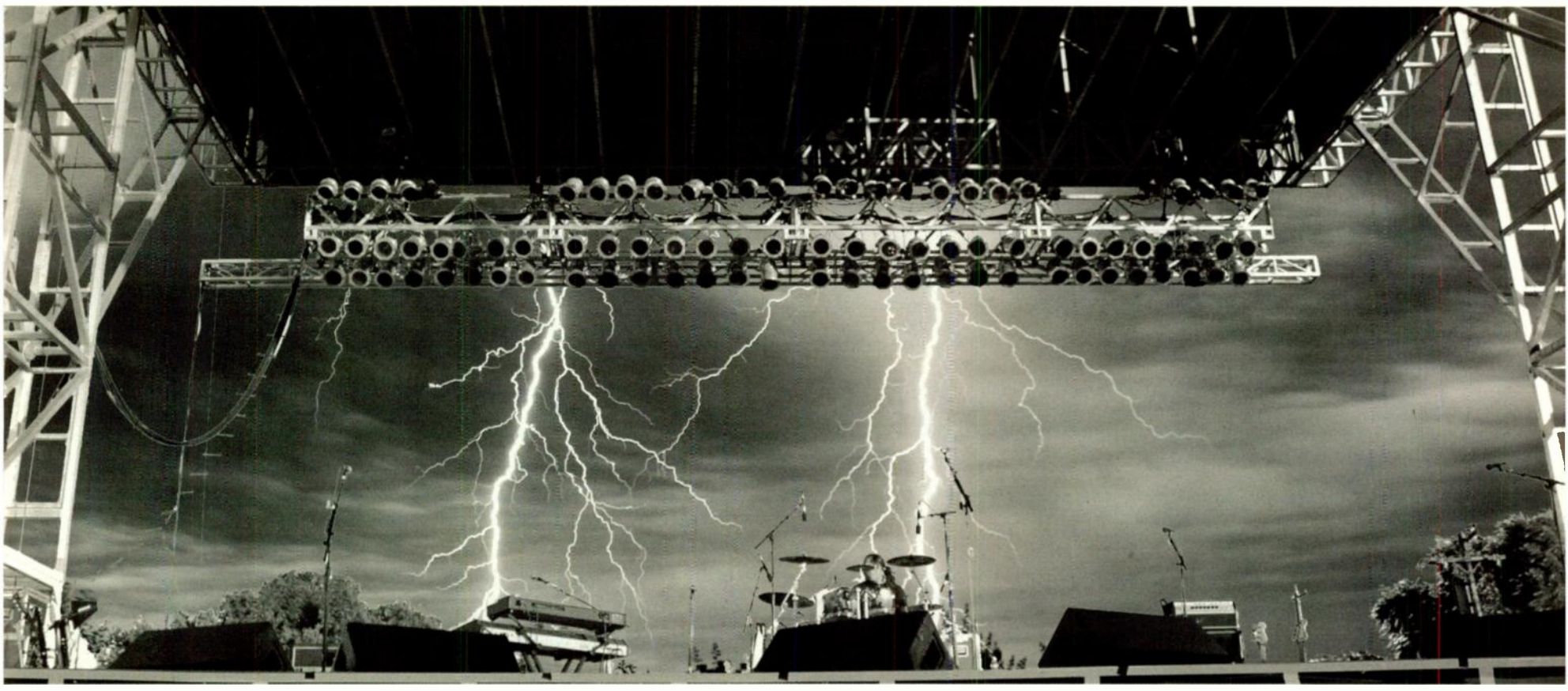

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centerSTAGE TOP 10 TOURS OF THE MONTH

ACT / STATISTICS	CREW	EQUIPMENT
1 ENRIQUE IGLESIAS/ PITBULL | SOUND IMAGE	**Jim Miller** (cc); **Brooks Jackson, Bryan Naumes, Shane Darrington** (tech); ***Iglesias:*** **Brad Divens** (be); **Eddie Caipo** (me); **Chris Sharp** (mtech); ***Pitbull:*** **Wil Madera** (be); **Rico Domirti** (me); **Chris Demonbreun** (mtech)	**HC:** (2) Avid Venue Profile (96ch.); **MC:** Avid Venue Profile (Iglesias); DiGiCo SD-5 with SD racks (Pitbull); **HS:** L-Acoustics (28) K1, (12) K1SB, (48) Kudo, (14) Kara, (24) SB-28; **MS:** Sound Image MA 1x15 (Iglesias); d&b audiotechnik M2, J8, J-Sub (Pitbull); **IEM:** Sennheiser; Shure; **HA:** L-Acoustics LA-8; **MA:** Crown I-Tech12000HD; d&b audiotechnik D12; **HARDWIRED MICS:** Sennheiser; Shure; Telefunken; Neumann; Beyer; Radial DI; **WIRELESS MICS:** Sennheiser; Shure
2 FLEETWOOD MAC | CLAIR	**David Kob** (be); **Ed Dracoules, David Coyle** (me); **Donovan Friedman** (cc/se); **Steve Hupkowicz, Meg Tempio, Ricky Avilia, Dave Wiseman** (techs)	**HC:** (2) Avid Venue Profile; Yamaha PM5000; **MC:** Avid Venue D-Show with sidecar; DiGiCo SD10; **HS:** Clair i-5D, i-5, CO-8, CP-118 subs, FF2; **MS:** Clair 12am, R-4III, ML-18; Avid PQ System; **IEM:** Shure PSM 1000, PSM 600; **HA:** Crown; **MA:** Crown; **HARDWIRED MICS:** AKG C414 B, C 451EB; Audio-Technica AT4054, AE6100; Shure SM 57, Beta 98, Beta 56, Beta 91a, KSM313/NE, Beta 181, KSM137; Beyer M 201 TG; Milab DC-96B, BDM-01; Sennheisser MD 421-II, MKH-416, ME 2, e 935; Audix D4; Countryman DI; **WIRELESS MICS:** Shure UR Series; **FOH EQUIPMENT:** Summit TLA100; Yamaha SPX2000; Lexicon 480L; Eventide Eclipse; Bricasti M7; Aphex 612; TC Electronic D-Two; Lake LM 44, LM 26; Empirical Labs EL-8; Avalon AD2044; **MONITOR EQUIPMENT:** Crane Song Phoenix; TC Electronic VSS3; Rational Acoustics Smaart
3 JASON ALDEAN | SPECTRUM SOUND	**Chris Stephens** (he); **Evan Richner** (me); **Joseph Lloyd** (pm); **Jeremy Seawell** (se); **Ryan Stotts** (mtech); **Bob Campbell** (tech)	**HC:** SSL Live; **MC:** SSL Live; **HS:** d&b audiotechnik (64) J8, (8) J12, (16) J Sub, (24) B2, (8) Q10; **IEM:** Shure PSM 1000; Ultimate Ears UE-7, UE-11; **HA:** d&b audiotechnik D12; **HARDWIRED MICS:** Audio-Technica AE6100, AE2500, ATM350, ATM450, AT4050, AT4081, AE3000, AT4047/SV; Shure SM57; **WIRELESS MICS:** Audio-Technica Artist Elite 5000 series wireless with T6100, T1000 transmitters; **FOH EQUIPMENT:** Lake LM44; ATI DDA 212XLR; Waves Platinum Bundle; Crane Song Phoenix; SPL Transient Designer; Massey De:Esser, vt3; **MONITOR EQUIPMENT:** Massey L2007, vt3, De:Esser
4 ERIC CHURCH | CLAIR	**Billy Moore** (be); **Marc Earp** (me); **Jared Lawrie** (se); **Rachael Aull** (m tech); **Bryce Beauregard, Matthew Patterson** (tech)	**HC:** (2) Midas Heritage 3000; **MC:** Avid Venue Profile, Venue SC48; **HS:** Clair i-5, i-3, CO-8, CP-218; **IEM:** Sennheiser G3; **HA:** Lab.gruppen PLM 20000Q; **MA:** Lab.gruppen PLM 20000Q; **HARDWIRED MICS:** Shure; Sennheiser; Royer; **WIRELESS MICS:** Shure; **FOH EQUIPMENT:** Manley VoxBox; Avalon VT-747SP, VT-737SP; Summit DCL-200; Tube Tech LCA 2B; Drawmer DS201; dbx 903; Yamaha SPX990; TC Electronic D-Two; Eventide H3500; **MONITOR PLUG-INS:** Waves Live Bundle; Crane Song Phoenix
5 FLORIDA-GEORGIA LINE | CLAIR	**Jared Blumenburg** (be); **Juan Gomez-Marin** (me); **Phil Kriz** (se); **Elliott Wiley** (ae); **Brandon Allison** (tech)	**HC:** Avid Venue Profile; **MC:** DiGiCo SD10; **HS:** Clair i5, Clair i-5B, i-3, CP-218, FF-2; **IEM:** Shure PSM 1000; Clair Fractal antennas; **HA:** Lab.gruppen PLM 20000; **MA:** Crown; **HARDWIRED MICS:** Shure; Sennheiser; Radial; **WIRELESS MICS:** Shure; **FOH EQUIPMENT:** Waves; Antares
6 MAROON 5 | SOUND IMAGE	**Jim Ebdon** (be); **Kevin Glendinning** (bme); **Marcus Douglas** (cc); **Andrew Dowling** (se); **Chris Houston, Nathan Payne** (techs)	**HC:** DiGiCo SD7; **MC:** DiGiCo SD7; **HS:** (54) EAW Anya, (24) SB2001, (8) KF364NT; **MS:** Sound Image MA 1x12, MA 1x18; **IEM:** Shure PSM 1000; JH Audio Roxanne ear pieces; **HA:** Powersoft; **MA:** Crown I-Tech 12000HD; **HARDWIRED MICS:** AKG; Audio-Technica; Mojave; Neumann; Radial; Sennheiser; Shure; **WIRELESS MICS:** Shure; **FOH EQUIPMENT:** Crane Song HEDD-192; GML 8200; SSL Stereo Buss Compressor; Antelope Audio 10M/Trinity Master Clock; Waves plug-ins.; **MONITOR EQUIPMENT:** TC Electronic 2290; Yamaha SPX1000; Rohde & Schwarz FSH3 Spectrum Analyzer
7 JOHN MELLENCAMP | EIGHTH DAY SOUND	**Mark Brnich** (he); **Bill Sheppel** (be); **Mark Vanderwall** (me); **Carl Popek** (se)	**HC:** DiGiCo SD10; **MC:** DiGiCo SD10; **HS:** d&b Audiotechnik J8, J12, Q10, B2, V8; **MS:** d&b Audiotechnik M2, M4, V8, V Sub; **IEM:** Sennheiser; **HA:** d&b Audiotechnik; **MA:** d&b Audiotechnik; **HARDWIRED MICS:** Neumann; Sennheiser; Shure
8 CHARLIE WILSON / KEM / JOE | CLAIR	**Paul Hollis, John "Buggs" Parkinson** (be); **Joshua "Fez" Delport, "Big Ed" Learned** (me); **Frank Principato** (se); **Mike Gamble** (ae); **Kenneth Fielder, Andrew Bongrardt** (techs)	**HC:** Avid Venue Profile; **MC:** Avid Venue Profile; **HS:** Clair i5, i-5B, i-3, BT-218, FF-2; **MS:** Clair 12AM II, CO-8, BT-218; **IEM:** Sennheiser 2000; Clair Fractal antennas; **HA:** Lab.gruppen PLM 20000; **MA:** Lab.gruppen PLM 20000; **HARDWIRED MICS:** Shure; Sennheiser; **WIRELESS MICS:** Shure; **FOH EQUIPMENT:** Avalon 737-SP
9 BILLY JOEL | CLAIR	**Brian Ruggles** (he); **Josh Weibel** (me); **Rich Schoenadel** (cc/se); **Jon Yochem** (m tech); **Tom Ford, Bryan Darling** (tech)	**HC:** DiGiCo SD5; **MC:** DiGiCo SD10; **HS:** Clair i-5, i-5b, i-3, P-2, BT-218; **MS:** Clair CM-22, SRM, ML-18; **IEM:** Sennheiser 2050; **HA:** Clair StakRak (Lab.gruppen); **MA:** Lab.gruppen; **HARDWIRED MICS:** Shure, AKG, Sennheiser, Audio-Technica, Radial DI; **WIRELESS MICS:** Shure UR Series; **FOH EQUIPMENT:** Waves
10 SAM SMITH | CLAIR	**Simon Thomas** (be); **Brian Evans** (me); **Simon Bauer** (cc/se); **Chris Holland** (stage e); **Robert Taylor III, Jordan Turner** (tech)	**HC:** DiGiCo SD10; **MC:** DiGiCo SD5; **HS:** Clair i-5/i-5b, Cohesion CP-218 sublows, FF-2H front-fill; **MS:** Clair Cohesion CM-22; **IEM:** Shure PSM 1000; **HA:** Lab.gruppen PLM; **MA:** Lab.gruppen PLM; **HARDWIRED MICS:** Shure SM57, KSM137, Beta 91a, SM 89, PG 58; Sennheiser e609, e965; AKG C451EB, 460, 414N; Audix D-6; Radial DI; **WIRELESS MICS:** Sennheiser 2000 Series; **FOH EQUIPMENT:** Crane Song STC-8; Empirical Labs EL-8; BSS DPR-901II; TC Electronic M6000

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

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

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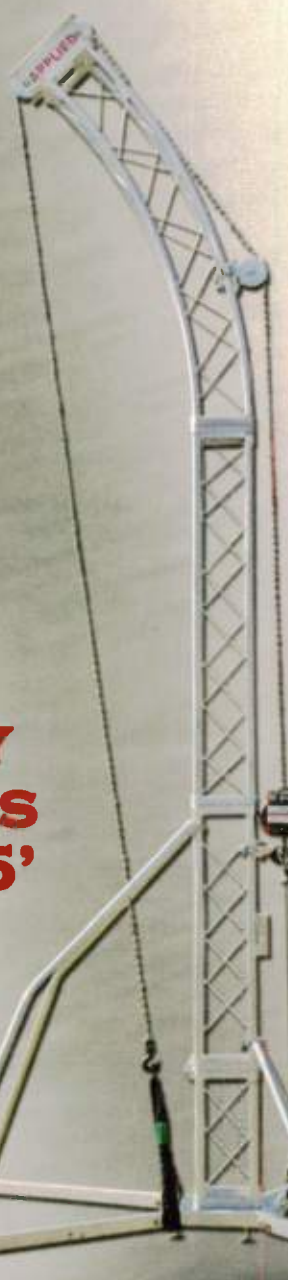

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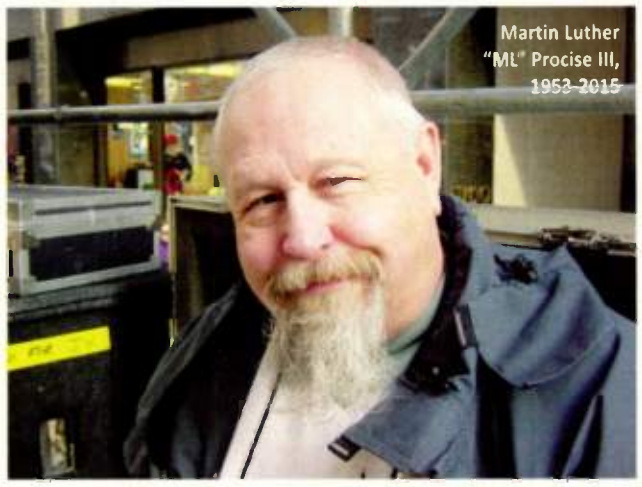
Martin Luther "ML" Procise III, 1953-2015

BY CLIVE YOUNG

NEW YORK, NY—Legendary live sound pro Martin Luther "ML" Procise III died in his sleep on March 4 in Dallas at the age of 62. A mainstay of the touring sound industry for over 40 years and 4,500 shows, Procise became an in-demand FOH engineer for the biggest acts in the world in the 1970s and 80s, before segueing into life as an executive for Clair Global and Showco.

ML was recognized by his peers with numerous awards. He was also known to be proud of his involvement in Don and Carolyn Davis's yearly Sound Reinforcement workshops, and in his membership in the Audio Engineering Society.


Martin Luther "ML" Procise III, 1953-2015

> "Every industry has its legends, and ML was truly one of our own. He will certainly be missed by the numerous sound engineers, techs, production and artist managers who were privileged to have known and worked with him."
> *Troy Clair, president and CEO of Clair Global*

"Every industry has its legends, and ML was truly one of our own," said Troy Clair, president and CEO of Clair Global. "He will certainly be missed by the numerous sound engineers, techs, production and artist managers who were privileged to have known and worked with him, be it on the road or in the studio. On a personal level, our relationship evolved over the years from competitors to colleagues to friends. On behalf of all of us at Clair Global, our thoughts are with ML's family."

An engaging man with a relentlessly positive attitude, Procise broke into the touring sound business with a bang, as he recalled a few years ago during an interview for *Pro Sound News*. "Sound reinforcement was a hobby of mine, as it was for most people who got into it when I did. I was in my hometown of Fort Wayne, IN, in late 1975 and a friend of mine who was mixing Genesis called me up and said, 'Hey, they're gonna hire a monitor guy right off the street to do monitors—do you want the gig?' Well, Genesis was my favorite band! I was literally in a town barhopping one day, and a week later, in a rehearsal room in Dallas, TX doing their monitors. How lucky can you get? It's no exaggeration that they were, by far, my favorite band—I loved all the progressive rock music in the early Seventies. That's not like winning the lottery, but for me, it was."

Quickly, Procise built his reputation mixing English, Irish and Scottish rock bands, but looking back, he felt "the thing that really launched my career was mixing the Bee Gees *Saturday Night Fever* tour with Jack Maxon, one of the owners and founders of Showco. That got me a gig mixing Michael Jackson and the Jacksons for the next six or seven years. Everything just was good for me."

In addition to mixing the Jacksons' landmark *Victory* tour in 1984, the Eighties found him mixing arena rock acts like Boston and Guns N' Roses, as well as kicking off a 13-year stint with ZZ Top that ended in the mid-Nineties as his focus switched over to sales and managing at Showco. "I got in the sales part in the late Eighties with Showco, but kept my mixing career," he said. "At that point though, I had four kids starting to get towards high school and I had to find an avenue to get off the road. I continued to have mixing projects, but it was more as something to keep me in the loop so I could relate to the other engineers." Filling in on one-offs and tour overlaps during that time found Procise mixing the likes of Green Day, Limp Bizkit, Rage Against The Machine, The Wallflowers, Alice In Chains, Puddle of Mudd and others.

While his time behind the mixing desk lessened, Procise poured the same level of energy and enthusiasm into his work as senior director of Touring at Showco and later as executive director of Touring for Clair Global when it purchased Showco in late 2000. "Every day, I can't wait to get into work," he enthused. "I love what I do and I love who I work with. I have a flock of guys I work with who are the most talented live sound engineers in the business. They're loyal to me and I'm fiercely loyal to them—same goes for the production managers and the tour managers as well—because I know we're always going to deliver the goods."

That mix of drive, attitude and professionalism helped Procise prosper throughout his career in a difficult business that had changed drastically since he entered it decades earlier: "I've got to tell you, I spent my whole career being nice to people. Even when they kicked me when I was down, I'd get right back up and try to do them a favor. That's the vibe I've always had: Try to help other people out the best I can. I am very lucky—I've prospered from surrounding myself with prodigious people, exemplary people, whether at Showco or with my Clair comrades. I try to help everybody as much as possible, and I think that has helped me advance myself, by having good people around me."

There are many around the industry who would count ML himself as one of those "good people"—he will be sorely missed.

ML was preceded in death by his wife of 33 years, Debby, and is survived by children Raleigh, Luke, Parker and Evan. The memorial service for ML Procise, III and Debby Procise was streamed live by Bent Tree Bible Fellowship.

THERE'S MORE ▸ To watch an edited version of the service, visit prosoundnetwork.com/april2015

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Finger Lakes

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format console. With luck, that usually happens after college, spanning over a couple of years after getting a foot in the door at such a studio. By having the API Vision and the SSL Duality, we are giving our students a real leg up, with experience on large-console standards most often found in major studios. Our program is very hands-on. We assign projects, due per semester, in a way that forces the students to get very familiar with a particular console, studio and its gear. In doing so, they are prepared to hit the ground running upon graduation. Because we're only a two-year program, our Audio 3 and Audio 4 students are recording on the API and mixing in stereo, or on the Duality, which is set up 5.1, too."

Providing matching nearfield monitors throughout the facility allows students to move easily from room to room, learning the differences of different consoles and components yet not suffering through the adjustment of having to hop from monitor type to monitor type. Further, Pro Tools HDX is the DAW platform of choice at Finger Lakes for much the same reason. "We chose the Dynaudio BM15A nearfield monitor for every nearfield we use," explains Potter. "Every room has a pair, and there are five plus subwoofer in the Duality room. We wanted that consistency; it just makes sense. Sure—the rooms are going to sound different from each other, but the monitors help keep things similar and our DAW is [consistent] everywhere."

Potter approached extra microphone purchases in much the same way as the monitors. "Our five studios share three live rooms, and the microphone selection is the same for each live room," says Potter. "It's comfortable to hand students a SM57 or SM58, but we wanted them to use and know the best mics from Neumann, AKG, Sennheiser, Telefunken, Schoeps, Earthworks and so on. This way, a graduate can walk into any world-class studio and know the mics, instantly being more valuable to the session. We don't want any timidity among our students because they aren't sure about the most standard pieces of gear out there. And those same microphones are in all our mic cabinets."

Despite striking the motherlode of gear, Potter is grounded and realistic about what success in the recording industry is really like, and what it truly requires. This, he insists, is what he teaches his students.

> "We don't want any timidity among our students because they aren't sure about the most standard pieces of gear out there."
> *Bob Potter, Finger Lakes*

"It might be obvious to us, but it's worth saying to students: The technical aspect of recording can be learned by almost anybody," offers Potter. "Clearly, common sense and the right attitude will get and keep people working. We're not teaching Pro Tools, API or SSL here. We're teaching recording engineering so that—regardless of where a graduate may work or what they're working on—they know which mic to pick up and where to place it. We want our students to be employable, but most importantly, we want them to stay employed."

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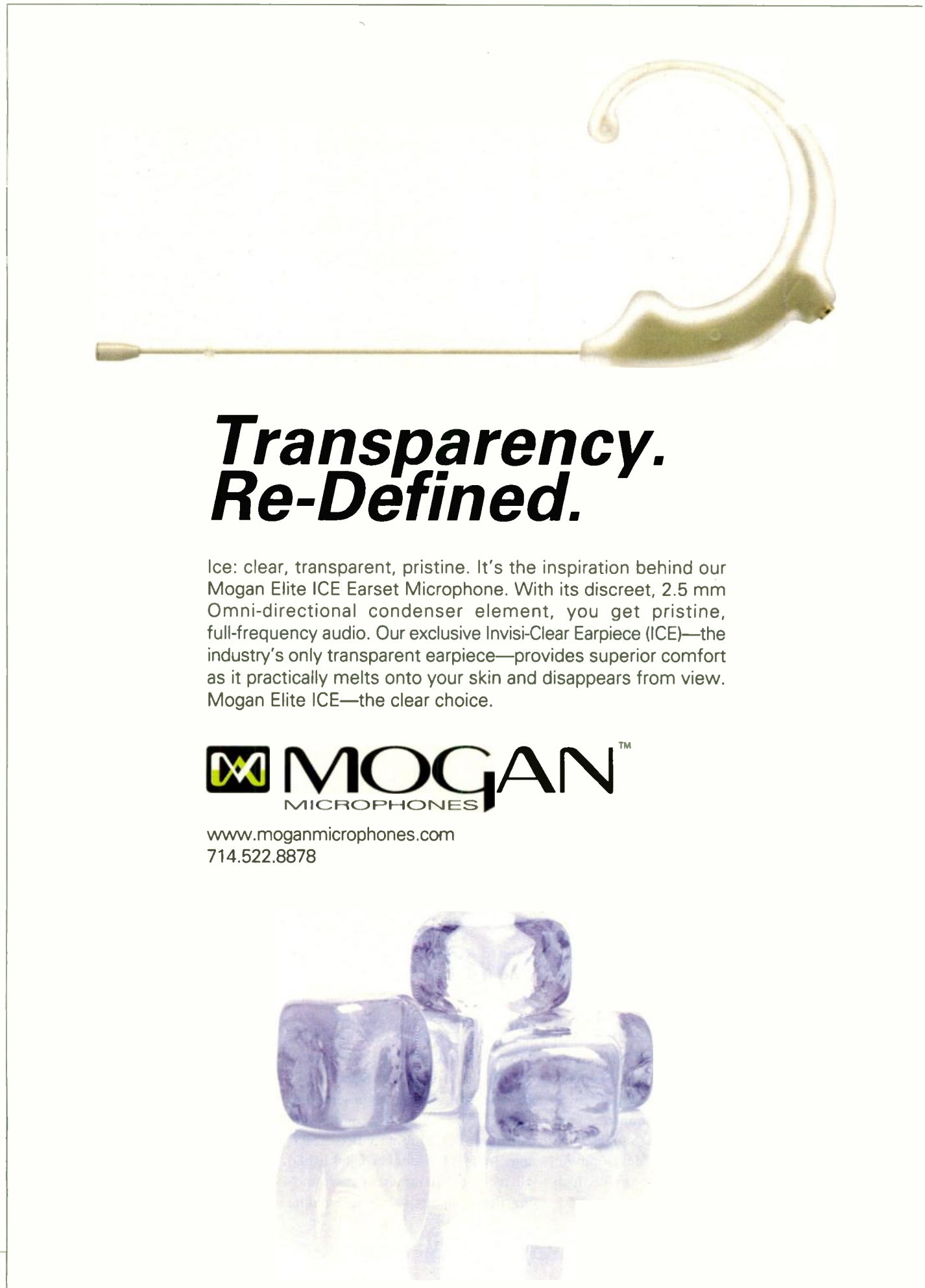


Immersive

(continued from page 1)

market with software and hardware readily available.

But exactly what tools and workflow modifications does it take to produce these new formats? The key to working in many of them—not surprisingly, given its ubiquity—is Avid's Pro Tools | HDX DAW.

"In order to mix a Dolby Atmos project, a mixing facility needs a Pro Tools | HDX system with the Dolby Atmos Panner plug-in, and 128-channels of MADI I/O in order to connect the Pro Tools rig to Dolby's Rendering and Mastering Unit [RMU]," says Brett Crockett, senior director of sound technology research, Dolby. "The Pro Tools computer also needs the standalone Dolby Atmos Monitor application, which displays and interprets the object automation data from the Pro Tools session."

RMU firmware comes in two flavors, respectively optimized for cinema and home presentation. "The home Atmos RMU writes the Dolby Atmos Master File based on the mixed audio and automation data it receives via MADI from the Pro Tools system and the Dolby Atmos Monitor," says Crockett. "The RMU is also capable of emulating the performance of a variety of consumer AV receivers so that the mixer can audition channel-based downmixes in addition to the full consumer Atmos presentation."

The tools are already migrating into smaller facilities, according to Crockett. "We've seen several consumer Dolby Atmos mixes, especially re-mixes from channel-based theatrical mixes, prepped in traditional 7.1 rooms, with object tracks edited and automation roughed in, and then final mixes performed on a proper consumer Dolby Atmos dub stage."

"As MDACreator is an AAX32/64 plugin, any Pro Tools 11 system is capable of mixing an MDA project," according to Brian Slack, manager, Advanced Cinema and Professional Audio Solutions at DTS. "The primary requirement would be hardware outputs from the Pro Tools system. The advantage of mixing in MDA is the ability to create content in any speaker configuration, and playing that content back with optimal results on the same, or any other, speaker configuration. If the mix room has 7.1, 11.1 or higher speaker count, the Pro Tools system would have to have that many outputs. However, MDACreator is capable of playing back content on as small as a stereo configuration."

> Groups developing the next-generation broadcast standards are already eyeing immersive formats.

MDA's scalability means that the tools can easily move upstream. "MDA is not a prescriptive system, so the exact speaker configuration is up to the client. This being said, both 7.1 and 11.1, or 7.1+4, are both popular configurations for edit bays and smaller mix stages," says Slack.

Auro Technologies, too, currently offers its software tools only in AAX 32- and 64-bit for Mac and Windows. The plug-ins, collectively called the Auro-3D Creative Tool Suite, include the Mixing Engine, Auro-Panner, Auro-Matic Pro upmixer, Auro-Codec Encoder and reference Decoder, and Auro-Headphones. VST and AU versions are expected in Q2 2015.

"When we started with our format two years ago, everything was basically limited to eight-channel-wide bus structures," explains Sven Mevissen, director of content production for Auro Technologies. To overcome that limitation (Pro Tools, for instance, offers eight monitor channels but Auro-3D requires at least 10 for its 9.1 format, or a dozen for its 11.1 configuration), he continues, "We have our own bus and routing structure that happens in the background that takes audio and metadata and does the rendering in the background and brings it back into the host application."

The company's roadmap includes a couple of other plug-ins expected for release later this year, including a beta version of software that will enable Auro's tools to be driven by a hardware controller rather than from the computer screen. "For example, solo, mute and level changes, you have to do in our tools," says Mevissen, so the new software "makes for much better integration of our tools into existing workstations."

Just as digital television broadcast standards worldwide adopted 5.1 surround sound from the cinema, groups developing the next-generation broadcast standards are already eyeing immersive formats. The Advanced Television Systems Committee (ATSC), for example, has begun a technical review of three immersive audio delivery proposals—from Dolby (Dolby Audio, also known as AC-4), DTS (DTS:X) and an alliance of Fraunhofer, Qualcomm and Technicolor (MPEG-H Audio)—for its ATSC 3.0 standard.

As Robert Bleidt, general manager, Audio and Multimedia Division, Fraunhofer USA Digital Media Technologies, has noted during presentations over the past 12 months, his company's real-time encoding and playback solutions offers an upgrade path from current broadcast workflows and a transition to an immersive channel- or object-based delivery format. Fraunhofer's tools include a real-time encoder that enables outside broadcast (OB) contribution; a real-time encoder for emission to consumers, for web streaming or over-the-air trials during the ATSC 3.0 evaluations; and a professional decoder to recover the OB uncompressed audio for further editing and mixing, and to monitor the emission encoder's output.

MPEG-H Audio accommodates formats from stereo to eight-channel surround plus four height channels (described by Fraunhofer as 7.1+4H), as well as objects, which might be alternate languages or sound effects, for example. It also handles HOA, or higher-order ambisonics.

For the future broadcast scheme, says Bleidt, "The system that you will find most of the companies developing new audio systems are proposing for immersive sound production is the 7.1 Blu-ray surround sound configuration and then four speakers in the top layer. That's probably what you will see first trials with. That's not the only configuration—the MPEG-H system is quite flexible; you could use 5.1+4H, or other configurations."

According to Bleidt, facilities can make the transition to full immersive production with object-based elements one step at a time. Initially, current surround sound formats and metadata can be transmitted using MPEG-H, with the advantage that its coding efficiency reportedly offers a 50 percent bit rate reduction compared to the current AC-3 codec. In the next step, interactive elements, such as adjustments to announcer or sound effect levels, might be added. From there, height channels could be added, including the use of HOA and, in a final step, a broadcaster might add dynamic objects.

In terms of production workflow, says Bleidt, interactive elements are easily generated with traditional mixing consoles. "We would like to take as whatever your console has for direct outputs the things that you want to have as interactive objects. We want to send a mix-minus that doesn't have those separate, independent sources in it. You feed those into our monitoring unit, so you can hear what it sounds like at home. You feed them into a contribution encoder in order to get them back to the network, if you need to. That's it."

As for an immersive mix, "You need to have microphones that capture height information for the top layer speakers. There are many ways to do that," he says, from various mic "tree" arrangements to an ambisonic microphone.

THERE'S MORE ▸ This discussion of immersive tools continues online; visit prosoundnetwork.com/april2015

NAB Announces Award Recipients

WASHINGTON, DC—The National Association of Broadcasters has announced the 2015 recipients of the NAB Engineering Achievement Awards (EAA)

The recipient of the 2015 NAB Radio EAA is Thomas F. King, president of Kintronic Labs, a company founded by his father. Still an advocate for AM broadcast improvement, King worked with the Star-H Corporation in the joint development of the Kinstar AM low profile, high efficiency, wideband antenna.

The 2015 NAB Television EAA goes to Richard Friedel, EVP and general manager for Fox Networks Engineering & Operations, who oversees long-term technology strategy and day-to-day operations for the Fox Network Center in Los Angeles.

The 2015 NAB Service to Broadcast EAA will be presented to Ray Conover, a senior engineering consultant at Hubbard Broadcasting. In 1983, Conover established all technical parameters surrounding the company's shift to Satellite News Gathering (SNG) and also coordinated the test phase of the business that would later become CONUS Communications Co. Conover also served as chairman of the Consumer Electronics Association (CEA) antenna standards committee.

The recipients will be honored at the NAB Show Technology Luncheon on Wednesday, April 15 in Las Vegas.

National Association of Broadcasters
nab.org

AoIP

(continued from page 1)

hand with the broad adoption of AoIP networks, as the industry moves toward an increasingly all-digital paradigm, file-based workflows are becoming standard operating procedure.

One significant benefit of AoIP is its channel-carrying capacity compared to other digital transports. MADI, otherwise known as AES10, has enjoyed something of a resurgence since its original publication in 1991, yet taps out at 64 channels. As Phil Owens, head of Eastern U.S. sales for Wheatstone, recently reported in the pages of *PSN* sister publication *TV Technology*, "We did a test recently to see how many audio channels we could cram down a Gigabit pipe using our system. The number turned out to be 428. That's quite an increase in possible functionality."

Responding to the continuing popularity of MADI, Focusrite will show its new RedNet D64R at NAB. The 64-channel interface bridges MADI and Dante. The company is also showing other problem-solvers: RedNet D16R AES is a 16x16 AES/EBU Dante bridge intended to interface between AES3-equipped equipment and any Dante network, while RedNet HD32R connects Pro Tools|HD via standard Mini DigiLink ports to Dante networks.

Launched in the U.S. at the 2014 AES Convention and making its NAB debut, Yamaha's RMio64-D also bridges between Dante and MADI. The interface permits bridging between Yamaha CL and QL or other Dante-enabled mixers and MADI, or enables MADI to be input into Dante-equipped systems.

Yamaha and Focusrite's bridging tools highlight a problem with the many digital audio and data transports, of course: interoperability. Recognizing that various incompatible networking methods were already in existence, in 2011, the AES set up a working group, X-192, to develop a scheme that would allow differing protocols to exchange data. The resulting standard, AES67-2013, published in September 2013, enables interoperable high-performance streaming AoIP via a bridging compliance mode common to all layer 3 IP networks.

Equipment that is AES67-capable is now starting to be introduced. At NAB, for example, Riedel will show its Tango TNG-200, the company's first network-based platform to support both AES67/RAVENNA and AVB standards (Tango was first shown publicly in 2014).

AES67 is essentially a subset of the standards already incorporated into Dante, Livewire, Q-LAN and RAVENNA, developers of which were involved in the standard-setting process. Consequently, other products supporting AES67 do exist, and plenty more will follow. In late 2014, for example, an AES Plug-Fest in Germany demonstrated interoperability between 16 products from 10 companies, all of which are also RAVENNA partner companies. The EBU also participated, represented by IRT, Swedish Radio and the BBC. A North American AES67 plugfest, open to members of the SC-02-12-M task group, is reportedly being discussed for May.

> Hand-in-hand with the broad adoption of AoIP networks, as the industry moves toward an increasingly all-digital paradigm, file-based workflows are becoming standard operating procedure.

Meanwhile, the Telos Alliance companies, which are RAVENNA partners, continue to enjoy a substantial user base for their Livewire network, an "open" technology that was introduced by Axia Audio 12 years ago. More than 70 companies are Livewire partners and, according to best estimates, close to 60,000 Livewire-equipped products are in the field.

For the broadcast community, Livewire, RAVENNA and AES67, as well as WheatNet-IP (Wheatstone's customers include two of the largest TV groups in the U.S.), represent a clear path forward to more widespread AoIP adoption, according to the member manufacturers. To be sure, AES67 is lacking in certain areas, particularly the exchange of control data, but AES working group X-210, established in late 2012, is developing a standardized protocol based on Open Control Architecture, the open standard communications protocol.

Flying the flag for AES67, the Media Networking Alliance (MNA) launched at the 2014 AES Convention in Los Angeles. The association of manufacturers, currently listed as including Bosch Security Systems, Lawo, QSC, the Telos Alliance and Yamaha—from which companies the steering committee has been drawn—plus ALC NetworX, Archwave, Attero Tech, the BBC, Directout, Focusrite, Genelec, Riedel, Shure and Swedish Radio (Sveriges Radio AB)—is a non-profit cheerleader for the adoption of the new standard.

Membership of the RAVENNA consortium, which was founded in 2010, has continued to expand with the more recent addition of manufacturers including Calrec Audio, Orban and, very recently, Riedel. There are 32 partners listed on the RAVENNA web site.

Digigram's first RAVENNA product, the LX-IP RAVENNA PCIe sound card, introduced in 2014, is now shipping. Intended for high-density audio production or automation applications in radio and TV broadcast studios, the desktop computer sound card supports 128 bidirectional RAVENNA channels. At NAB 2015, Digigram, one of the first members of the RAVENNA consortium, will introduce a new MADI option for the card that bridges 64 MADI I/O channels into RAVENNA.

Also at NAB this year, GatesAir, which joined the RAVENNA community in June, 2014, will make its first foray into network interoperability with the debut of VMXpress IP. The new RAVENNA device interfaces the company's VistaMax products with other AES67-compliant audio and data equipment within a facility.

As for AVB, after the first standard was published in 2011, the layer 2 protocol took a little while to build momentum until the first switch was certified by the AVnu Alliance compliance and testing body. AVB now boasts a growing number of certified products from companies mainly outside the broadcast market, including Avid, Biamp, various Harman brands, Meyer Sound and MOTU.

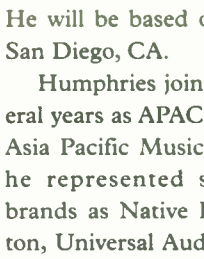
Sean Humphries

Craig Lewis

LOUD Technologies has announced the appointment of **Sean Humphries** to the position of sales director, APAC Region, and **Craig Lewis** to the position of sales director, US National Accounts.

Lewis comes to LOUD after more than a decade with Music Group, where he held a number of sales and support positions. His career has also included positions with IK Multimedia, Steinberg and Yamaha. In his new position, Lewis will oversee national accounts for LOUD's Mackie and Ampeg brands. He will be based out of his office in San Diego, CA.

Humphries joins LOUD after several years as APAC Sales Manager for Asia Pacific Music Marketing, where he represented such well-known brands as Native Instruments, Ableton, Universal Audio, Propellerheads, KRK and Cerwin Vega. His resume also includes stints with Musiclink Australia, where he served as product manager for its Audio and DJ divisions, as well as Moore Music and Derringers Music.



Giles Farley

Sonnox has announced that **Giles Farley** has been appointed to the newly created post of international sales manager, responsible for the company's international reseller channel.

Coming from his most recent post as Managing Director of Pinewood Group's Post Production Department (2010-2014), Farley began his career with Digidesign/Avid in 1993 as international product specialist. His abiding love of film inspired a 1999 move into post-production, where he helped create a multi-room Pro Tools complex for Shepperton Studios. That facility centralized audio editorial and mixing services for many major Hollywood studios. Following Shepperton's 2001 merger with Pinewood Studios, Farley helped expand those services (and the studio's client base) as head of International Post Production Sound.

Roland's Professional A/V Division has named **Jeremy Engel** as national sales manager. Engel previously was territory manager for Northwest & Northern California, Hawaii, and Minnesota. Over the last 10 years, Engel has been involved in developing new business with numerous resellers, consultants, and live production and rental companies. His past experience in retail management, audio and video technology and system integration, as well as with growing Roland Professional A/V products, were cited when announcing the appointment.

Jeremy Engel

John Rechsteiner

Dante network protocol developer Audinate has hired **John Rechsteiner** as vice president of Global Sales and Support. Rechsteiner brings more than two decades of sales, marketing and customer support experience in the pro audio, broadcast and post-production industries. He most recently served as vice president of Sales, Asia Pacific for Avid from a base in Tokyo, Japan. Rechsteiner will lead the worldwide sales and customer support teams as Audinate scales these teams in response to the growing number of manufacturers who have adopted Dante. Earlier in his career, Rechsteiner led the expansion of Digidesign (now Avid) in the Asia Pacific region.

Audinate also announced the expansion of its technical solutions team to further expand its educational and awareness programs. Bernie Farkus has joined Audinate as senior technical sales engineer for North America and Kieran Walsh has moved into a new role as regional manager of Global Support Services for EMEA.

Ryan Mauer

Full Compass Systems has selected **Ryan Mauer** as its new sales manager to head up its National Sales Division. Prior to joining Full Compass, Mauer was director of Marketing and Sales Operations for RenewAire, LLC, where he was responsible for the strategic and tactical execution of the company's go-to-market initiatives. Mauer also served as the director of National Accounts at Conney Safety Products, where he not only oversaw the national sales channel for the company, but brought on and worked with dozens of Business Development Managers to support the most aggressive sales expansion in the company's history.

60SECONDS

SCOTT LESLIE
Ashly Audio

Q: What is your new position, and what does it entail?
A: Executive VP. My primary function at Ashly is design, build and execute a growth strategy. I have R&D, Marketing and US Sales reporting to me, which allows me to have regular touch with all ends of the customer experience.

Q: How has your background prepared you for your new role?
A: From an audio perspective, I have been with Altec Lansing, JBL and Renkus-Heinz as well as having run my own pro audio management consulting company called PD Squared. I also founded and managed an analytics software company for 10 years and was with other software startups. This gives me good perspective on both audio and software technologies—of which the convergence of is the future of our business. I have also built and implemented product development methodologies and processes that will serve Ashly quite well.

Q: What new marketing initiatives are we likely to see from the company?
A: We are now and in the future communicating a message about the solutions we offer to a number of verticals, including hospitality, house of worship, education and corporate. For those that don't know Ashly, we need to gain visibility on the simplicity of our solutions and the quality of our products and support. In addition, we will be getting the message out there about Made in the USA, as more than 90 percent of our products are made in the great state of New York.

Q: What are your short- and long-term goals?
A: Short term, we will step up our reach into customers, consultants and integrators through new support initiatives, digital media, education and increasing executive-level relationships. Long term, we will be delivering specific Ashly solutions that integrate technology and simplicity, directly targeted at customer applications that solve business problems for designers, integrators and end customers.

Q: What is the greatest challenge that you face?
A: Today is an age of great companies in the Pro AV market. So our biggest challenge will be to become great in all five pillars of our business—Product, Support, Sales, Marketing and Operations—in order to grow and convince non-Ashly customers to consider giving us the opportunity to be a new partner in their success. This still requires some great focus on key initiatives over the short and long term.

Timothy Thompson

ARGOSY Console has promoted **Timothy Thompson** to company president. Thompson will focus on overseeing the day-to-day operations of the organization and will be responsible for implementing growth within the music, film and related industries. He will also focus upon developing key alliances and product partners in other growing market segments, such as aerospace, education, finance, government, law enforcement and transportation.

Thompson is a 20-year veteran of business development in manufacturing and relationship building in the music, film, television and technology industries. Since 1995, he has served as vice president of Argosy Console, where he has interfaced with clients ranging from major motion picture film studios and Fortune 500 companies to private installations of recording artists and producers, for both their specialty and custom technical furniture needs.

Kyle Lassegard

Hosa Technology has promoted **Kyle Lassegard** to the position of marketing manager. Lassegard, who has experience in studio recording and information technology, was first hired as a Hosa technical support representative and subsequently served as Hosa's marketing coordinator and web marketing manager. Lassegard now oversees advertising and promotional activities including trade shows and web content creation. He is stationed at Hosa's headquarters in Buena Park, CA.

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Building On A Global Foundation

TARIK SOLANGI, NATIONAL SALES MANAGER, RCF USA

BY MACKENZIE FOX

EDISON, NJ—"I have a passion for audio." Simply stated, that is how Tarik Solangi has evolved to become national sales manager for RCF USA. Solangi is new to the position, put in place the first of the year, but his tenure with RCF goes back years—"an incubation period," as he calls it.

Tarik Solangi, RCF USA

Three years ago, Solangi was hired by RCF USA on a contract service basis to provide technical support and product demonstrations of its touring and line array products. Over that period of time, RCF USA President Roni Nevo came to recognize Solangi's skills beyond just his engineering expertise. "Tarik met the parameters of my philosophy of what a sales manager should be like," says Nevo. "Selling skills are not enough... professionalism, product knowledge, along with engineering and implementation skills, are all required."

The metamorphosis of Solangi to his current position actually dates back decades. His involvement with RCF comes from having been a user, a dealer and both a studio and live sound engineer, the experience from all of which he brings to his role as product specialist. He has owned a production company and recording studio for over 20 years. He's worked with a variety of national acts and regional bands on tour. With his work in the studio, he has more than 500 album credits as a recording engineer.

"My general knowledge of all aspects of audio, my passion for audio to provide the right sound and proper solution, and the people skills I have developed dealing with the personalities of musicians in both the studio and concert arenas have helped shape me," says Solangi. Because of that, "people trust my suggestions and recommendations. It's not a sales pitch; it's a solution." At RCF USA, he continues, "we don't have any dealers; we have partners." That is the overriding, relationship-oriented philosophy of the company.

RCF USA is the wholly owned American distribution arm of the Italian-based RCF Group, a company that comprises RCF S.p.A. and AEB Industriale s.r.l., which owns the dB Technologies brand. RCF was founded in 1949 by a group of Italian electro-acoustic engineers manufacturing ribbon microphones, amplifiers and related products. Over the next few decades, RCF became a worldwide leader in transducer technology. It's often said the live sound market knows RCF "from the inside out," as pros can find RCF transducers used in many of the most prestigious loudspeaker brands in the world.

In parallel with its transducer technology, the company continued to expand its range of public address electronics and audio system solutions. In 1995, it created one of the first composite powered speakers, which became the flagship of the speaker-on-a-stick category. Some ownership transitions took place in the late Nineties that ultimately impacted the company's growth. In 2004, original ownership returned to the helm with a fresh investment in research and development and a renewed commitment to maintain manufacturing in Italy.

> "We don't try to participate in the 'battle to zero' of low-margin products that have become the rule in that arena. We are the exception."
> *Tarik Solangi, RCF USA*

Part of the 21st Century RCF strategy was to increase brand awareness worldwide, to grow beyond transducer technology to building full line, finished cabinets. It was during that period that RCF USA was formed to handle sales and marketing in the U.S. of both the RCF and dB Technologies brands. The U.S. headquarters is in Edison, New Jersey, which handles business management, warehousing, shipping and service from that location.

"Bringing on Tarik is part of the progress of that growth and structure of our company," says Nevo, alluding to growth that has been exponential in the U.S. market across the last four years. That growth comes from the company's strength in the production and mid-size line array market. Between the two brands, RCF and dB Technologies offer 10 different line array products that fit their partners' needs—whether it's a house of worship, performing arts center, or for rental and staging or touring and production.

Solangi beams when sharing his pride at being included in RCF's management, stating his goal to "strike a balance of distribution in the different vertical markets of the audio industry." He cites the company's strength in the live sound market and the need to bring more brand awareness in the retail, corporate and house of worship vertical market segments.

While the U.S. arm of the RCF Group has been in place nearly 10 years and the company is one of the largest loudspeaker manufacturers in the world, it has taken some time to establish brand awareness in the USA. Retail, Solangi says, is the most difficult market. With the Italian-based culture in the pride of quality and craftsmanship of the product, "We don't try to participate in the 'battle to zero' of low-margin products that have become the rule in that arena. We are the exception."

One area of focus for this year will be to bring more recognition to the variety of products RCF and dB Technologies bring to the market. While most recognize the two companies as loudspeaker manufacturers, they also offer a selection of signal processing products. L-Pad mixers, amplifiers, speaker processors, mixer-amps and automixers are offerings that are largely overlooked.

Another emphasis is to bring more brand awareness to dB Technologies. "We re-branded the company RCF USA two years ago," noted Nevo. Previously, partners would look at the RCF website and not find any of the dB Technologies products. By becoming RCF USA, there are now distinctive denotations on the company website and letterhead. Still, it's recognized more needs to be done to differentiate the two brands.

Today, the RCF Group is one of the largest loudspeaker manufacturers in the world, covering all aspects of the audio marketplace from small to large. "Many of our competitors cover selective niches of our product offerings, but there are very few worldwide that offer the vast array of solutions that we do," says Solangi. Line arrays, passive and active integration products, live sound products, steerable columns, commercial audio and ceiling speakers, mixers, power amplifiers and signal processing products are all part of the RCF Group family of products.

Whether at the office, or on the road with the RCF USA field sales representatives or partner dealers, Solangi feels they are all members of his family, and the family is always growing.

RCF USA
rcf-usa.com

Flores Captures Laughs On *Parks and Rec*

LOS ANGELES—As production mixer for season seven of the NBC comedy *Parks and Recreation*, George Flores, CAS, was charged with capturing all of the show's banter. Flores relied on Sound Devices' 664 Field Production Mixer for the final season of the show. Flores also employed a Sound Devices 633 recorder, which he found particularly useful for the "off-the-cart" demands of the show, such as actor-driven car shots. For backup recording, Flores used a Sound Devices 744T (sounddevices.com). In addition, Flores used DPA d:screet 4071 and d:screet 4060 miniature microphones, a combination of Sennheiser and Schoeps mics for his boom, and the Lectrosonics Venue Wireless system.

Sound Devices gear anchors Production Mixer George Flores' sound cart.

Flores says that Sound Devices "empathize and relate to audio professionals working in the field, which translates to how they formulate their products. The 664 is straightforward and user friendly, yet delivers sophistication in its routing and recording capabilities."

Anderton

(continued from page 27)

run Windows 8.1 will run Windows 10, older processors that don't support PAE, NX, and SSE2 are nonstarters (fortunately, if your computer is even relatively modern, you'll be fine). Just don't believe Microsoft's rose-colored system specs. You need more RAM.

One of W10's marquee features—a virtual desktop—isn't new to Apple users. Those with longer memories will remember the Amiga's Workbench, but in any event, it's good Windows has caught up. What's truly novel is Continuum, the technology that scales the OS to different devices. Unlike Windows 8, which tried to adapt the devices to the interface, Windows 10 adapts the interface to the devices. Microsoft is also making a big deal about Cortana, which seems to be like Siri but with a propensity for learning over time.

What remains to be seen is the business model. Windows 7/8 owners can get Windows 10 free during its first year. Will a subscription come after that, or will Microsoft continue the "rent it, own it, your choice" path they've taken with Office?

Looking at either OS, it's clear the emphasis is on mobile integration—with Mac, to create interoperational links and with Windows, to scale a single user interface. You won't see a raft of audio or video enhancements, but what you will see is both companies trying to remain relevant in an ever-changing world.

> Mobile is hard to get right, and is arguably easier to scale to a desktop than the reverse.

Author/musician Craig Anderton has given lectures on technology and the arts in 38 states, 10 countries, and 3 languages. Check out some of his music at youtube.com/thecraiganderton.

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Soul Connection

BY JAQUES SONYIEUX

Six-time Aria-Award nominated San Cisco just released its second full-length album last month, entitled *Gracetown*. The Aussie-based quartet—which has performed at elite international festivals including Lollapalooza, Reading and Leeds and which already completed a sold-out U.S. tour in 2013—refines its unique brand of indie pop/trip hop with 12 new tracks, produced by Australian producer Steven Schram on the new album. *Pro Sound News* spoke to singer Jordi Davieson and guitarist Josh Biondillo about 'avoiding musical wank' as the band was gearing up for its next multi-city U.S. tour.

MATT SAV

Aussie band San Cisco is touring the U.S. behind its new album, *Gracetown*.

ON STORYBOARDING *GRACETOWN*:

Josh: We started working on new material just as we were putting our first record out. I was putting ideas together on my iPad in the back of the tour van, and we started recording it once we finished touring the first album at the end of 2013.

Our first record was really a big bag of stuff that we had carried around for ages, whereas the new songs were written specifically for this record. We were focused on creating exactly the kind of record we wanted to make—the vibe, the sounds and the styles. It was a lot more 'hands on', preconceived and mature, and we were able to really think through what we wanted from the recordings.

The songs on the new record are all very different sounding. The reason for this is that the process we use to write each song is different. Some of the songs were written on an iPad, other songs would be written by Josh or myself on guitar and then we would refine them. There are so many different ways we write songs, and we really strive to change it up every time. This ends up making the collection of songs sound much more exciting. If I am struggling to come up with an idea, I might change instruments and that will make the angle different.

ON KEEPING IT CLOSE TO HOME:

Jordi: In the past, we never recorded in our hometown. But this time, we recorded in a shed in Josh's backyard and at a friend's studio [Rada Studios] in Freemantle, which is about a five-minute drive from where we live. We found this was a much more relaxed way to record because we were able to go to bed at home every night and also found that we had a lot more time to work.

Once we had all the ideas down in the backyard, we moved to the studio in Freemantle and our longtime producer, Steve Schram, came over, listened to the demos and gave us very honest review of the music. He said, 'this is good', 'this is good', 'this is crap, stop doing this.' Originally, we weren't going to work with him on this album, but changed our minds after he gave such an honest review of our work.

ON 'THE BACKYARD TAPES':

Jordi: We ended up using quite a few of the original takes that we recorded from Josh's studio. Quite often, what we found was that when we recorded something later, it just didn't have the same charm and vibe that the original take did.

Josh: The studio is in the backyard of my parents' house, inside a shed that my dad built maybe 10 years ago. The building is beautiful and I treated it as best I could. As far as equipment goes, I got a Universal Audio Apollo recording interface, which I ran into my laptop. For outboard preamps, I've got a 500-series rack with an Elecrodyne 501, a Chandler and an API. We also had a couple of LA2As, LA3As and most of the vocals were recorded using a Shure SM 7. For the drums, we used a combination of mics, including a Neumann U 87, Sennheiser 441 on the snare and a couple of old AKG 414s.

ON 'IMPERFECT' RECORDINGS:

Jordi: I think the key to this recording was how we wanted to capture the vibe and the character of the takes as they came to us. On "Skool" for example, everyone was really tired one day, and I started recording in the toilet with my iPhone. I ended up putting that into Pro Tools and it just worked it up from there—the original track is still in that song. We didn't want to perfect the songs; in fact, we don't want anything to be perfect. We want them to be real.

Josh: We don't pride ourselves as being overly competent musicians, so when it comes to the recordings, there are many imperfections. But this is OK.

ON AVOIDING MUSICAL WANK:

Josh: When it did come time to record the record, I realized very quickly that a lot of this technology could get in the way of ideas. I have so much gear, and I would be spending too much time trying to figure out synth sounds or silly things that actually took away from the actual songs.

Jordi: I call it "musical wank." A lot of people get caught up in the technology and can end up losing the soul of the song. The listener doesn't care if you used a $20,000 microphone or whatever—they want something they can relate to and that hits them right in the heart. It is all about the emotion—and as long as you can capture that emotion, you're doing great. It's hard enough getting a concise idea across, let alone letting all the gear get in the way.

Josh: There are not too many piece of gear I know of that can write great songs! I think the main thing for us at the moment is trying to figure out an interesting way to present the songs live. It's never anything we've really honed in on, because we've only just done the songs as we've made them in the studio. But the songs are a lot more involved and there are many more things going on—so figuring out how to present them in a live show can be challenging.

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.

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