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NEWS

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July 2014



KERRY KOPP

SOS—The call went out to the Nashville community to gather to help “Save Studio A,” and over 200 individuals showed up with the media to hear Ben Folds and others address the potential loss of the facility. For more on the Studio A controversy, see page 8.

Under The Hood

SEMICONDUCTORS IN AUDIO

BY FRANK WELLS

SPECIALREPORT

Semiconductors are essential building blocks of most modern electronics, with the progression from discrete transistors to integrated circuits largely universal, chips dominating usage. Participating in a *Pro Sound News* year’s survey on trends in semiconductor application were Great River

Electronics project engineer Dan Kennedy; senior design engineer at Apogee Digital, Lucas van der Mee; B.J. Buchalter, VP R&D at Metric Halo; Crane Song president Dave Hill, and from Lynx Studio Technology, co-founder and chief hardware engineer Bob Bauman.

(continued on page 20)

Sweet Times

16

Sweetwater’s annual GearFest event keeps growing, attracting industry luminaries like Bruce Swedien (left below) and Sweetwater’s own Mitch Gallagher (right), along with the thousands of attendees that make the pilgrimage to Fort Wayne, IN for the experience (and deals).



Immersed In The Classics

46

A 67-year-old tradition, the Ojai Music Festival is a four-day celebration of classical music. Schubert Systems provided the sound system for the Libbey Bowl, including a 7.1 d&b audiotechnik loudspeaker package and Soundcraft console, manned at FOH by Ben Maas (below), who mixed with a goal of giving the Bowl seats a concert hall experience, and of maintaining localization and spatialization cues that matched musician placement and audience visuals.



From The Desktop To The Cloud

BY STEVE HARVEY

Moore’s Law was invoked several times at the recent

eighth annual Creative Storage Conference in Los Angeles. But as noted by conference participants, storage has lagged behind pro-

cessing power, leaving a performance gap that has really only started to close over the past decade.

As Intel’s Gordon Moore observed in 1965, semiconductor processing power doubles—or the cost is halved—every two years, although some argue that’s now closer to 18 months. Naturally there is an equivalent law for storage, named after Mark Kryder of Seagate, who noted in 2005 that magnetic disk storage density now doubles approx-

imately every 18 months.

One current hot topic in storage is collaborative workflows, with data being moved over dedicated networks or the internet. But for all the talk of the cloud, local hardware still reigns supreme.

“Connected storage is growing fastest because it enables people to work together and get jobs done faster,” according to conference founder and industry consultant Tom Coughlin, of Coughlin Associates, in

(continued on page 60)

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Dog & Pony Studios out of Las Vegas, NV recently upgraded their sound system to feature Yamaha's NUAGE Advanced Production System. As the premier recording studio in the entertainment capital of the world, Dog & Pony's resume features everything from MGM Resorts MLife TV to the recently released Eliot Smith documentary, "Heaven Adores You." With all that goes on in this studio, it's obvious that what happens here definitely doesn't stay here. We sat down with studio Owner/Producer John McClain to get his thoughts on the new system.

"My favorite thing about Nuendo is how you can find multiple ways to solve the same problem. The competition hands you their DAW and says "Work within these predefined parameters." In contrast, Steinberg hands you Nuendo and says, "Work how you want and define the parameters for yourself."

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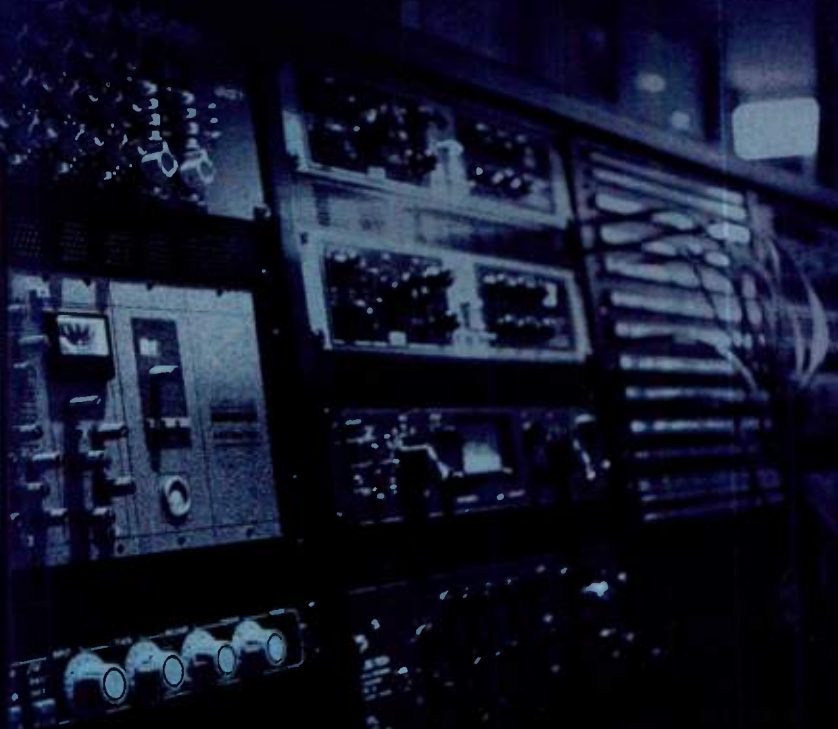
— John McClain

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InfoComm 2014 The Largest To Date

BY NEWBAY STAFF

LAS VEGAS, NV—InfoComm International called its 2014 conclave the largest ever, with some 37,000 AV professionals passing through the Las Vegas Convention Center in mid-June, with exhibits filling the Center Hall and overflowing into the North Hall. As visitors walked the exhibition floor, a few trends have become so prevalent that it's not hard to see where at least the near-future is heading. The first, of course, is IP-enabled products. From loudspeakers to surge protectors, everything is trending towards the network and remote monitoring. This is important because it provides pro-AV integrators with a compelling and useful source of recurring revenue. It also introduces

options for power management and energy efficiency.

Second, aesthetics have come to the forefront in a big way. The days of hiding racks in closets are behind us—or can be if you want them to be. A huge emphasis is being placed on hidden, retractable cables and through-table and floor boxes—integrating with architecture and design is no longer an eyesore.

Third, all-inclusive solutions to conferencing and collaboration were everywhere at InfoComm. With the furniture, displays and cables already integrated into so many solutions, it is now easier than ever to bring these technologies to small businesses for which this technology would have previously been cost-prohibitive.

In a sneak preview during the show, InfoComm teased an upcoming paper called *The 2014 Global AV Market Definition and Strategy Study* (conducted by InfoComm by Acclaro Growth Partners and called the only worldwide study aimed at sizing the Commercial AV industry). The initial summary predicted growth in conferencing, signal management, AV acquisition and delivery equipment and streaming media at 11 percent compounded annually in demand for AV products and services between 2012 and 2016. The study finds that the audiovisual industry currently generates \$92 billion a year.

“The AV industry is strong, thanks

to a rebounding economy and a growing need for collaboration,” said David Labuskes, CTS, RCDD, executive director and CEO, InfoComm International. “However, growth is not universal across the world, and the strength of the burgeoning Asian market will overtake the North American market in size for the first time in 2016.”

AV applications such as displays, AV acquisition and delivery, projectors, signal management and processing and sound reinforcement are expected to drive future growth. The fastest growing product categories are control systems, software, AV acquisition and delivery and displays.

The corporate, venue/events and government/military markets are the three largest consumers of audiovisual products and services. However, hospitality is the fastest growing market for AV goods and services. The study, to be released in July, predicts a market size of \$116 billion by 2016.

For many attendees, it's all about the gear, and plenty of new products were on display in the exhibition halls. In the *Net Gain* category, Audinate announced the intriguing Via software app. With Via, without any Dante-enabled hardware, any computer (Mac or Windows) can be come a networked audio device, affording Dante network access to any



Audio-Technica's ATND971 networked microphone

connected or internal audio hardware, which can also be routed to and from any Dante connected device—for instance, hardware or another computer and devices connected to that computer. Such a hardware device might be the Audio-Technica ATND971 cardioid condenser boundary network microphone—the world's first wired microphone to transmit both audio and control data over a Dante network. Developed with boardroom and meeting applications in mind, the ATND971 uses Ethernet for connectivity (PoE) and features a programmable switch that could be used for networked tasks like lighting or video camera control.

Filed under *Can We Talk Here?*, are devices like the new Bose Con-

(continued on page 12)

briefs

PreSonus Buys WorxAudio

BATON ROUGE, LA—PreSonus (presonus.com) has acquired loudspeaker manufacturer WorxAudio Technologies, Inc., bringing in-house products intended for large facilities in an effort to augment development efforts for drivers, system and mechanical design, system tuning, and rigging system design. CEO and director of Engineering Hugh Sarvis, who founded WorxAudio in 1979, will continue with the company.

Sennheiser Sets Up Streaming Subsidiary

HAMBURG, GERMANY—Sennheiser (sennheiser.com) has founded a new subsidiary aimed at creating streaming solutions: Sennheiser Streaming Technology (SST). Based in Hamburg, the new subsidiary will initially focus on low-latency streaming to cellular devices; Jörn Erkau has been appointed managing director.

SMPTE, HPA To Merge

WHITE PLAINS, NY—The Society of Motion Picture and Television Engineers (smpte.org) and the Hollywood Post Alliance (hpaonline.com) have announced a partnership that is expected to culminate in the merger of the two organizations by May 2015.



AES Readies for Los Angeles Convention

LOS ANGELES, CA—The AES 137th International Convention, which will take place October 9-12, 2014, will return to the Los Angeles Convention Center for the first time in almost 12 years.

Traditionally the world's largest annual gathering of audio professionals, the AES Convention will present top audio industry figures, the latest research and technology, papers, tutorials, workshops and special events.

Covering the entire spectrum of professional audio—recording and production, broadcast and streaming, game audio, live sound, post-production, and more—AES137 will offer an additional focus on Networked Audio and its integration, with particular attention to standards such as AES67, MADI and other networking protocols that the AES has played a large part in shaping.

A recent addition to AES conventions, the popular Project Studio Expo (PSE) presented by *Sound On Sound* magazine, will again serve as a venue for focusing on some of the most timely and relevant areas of interest facing today's personal and project studio users. The fourth edition of the PSE will feature two new and unique presentations: “The Five Most Common Project Studio Recording Mistakes,” presented by Mike Senior of Cambridge Music Technology; and “Project Studio Design,” with studio designer John Storyk of the Walters-Storyk Design Group. Both programs will give personal insight into practical project studio issues, from initial design to avoiding common mistakes in workflow and technology.

AES 137
aes.org/events/137

Caribou Ranch Sold

BY CLIVE YOUNG

BOULDER, CO—Once among the best-known destination recording facilities in the world, Caribou



MOUNTAIN MARKETING ASSOCIATES

Caribou Ranch, one of the top destination recording studios of the 1970s, was sold in June.

Ranch has been sold for \$32.5 million. Closed since a 1985 fire, the facility hosted the likes of U2, Michael Jackson, John Lennon, Billy Joel, Frank Zappa, Stevie Wonder and dozens more over the course of its storied history.

(continued on page 36)



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SOUNDRECORDING

Blurring Boundaries Between Recording and Post 24

A new startup focused on recording dialogue for video games and animation, Rocket Sound is guided by a team of MPSE Golden Reel award-winning pros formerly from Technicolor Creative's Game Sound Services.

The Legacy of Sound Emporium . . . 26

Since 1969, Nashville's Sound Emporium Studios has operated just off of what is known as Music Row—and more than geographically. The studio has always hosted clients creating their best work outside of music industry norms, working quite comfortably in the fringes.

SOUNDPOST/BROADCAST

Networking Initiative Goes Global . . . 37

When the Clinton Global Initiative—the annual meeting of power brokers—is held every year in New York City, it is also broadcast to certain quarters around the world, with audio travelling to production spaces via Dante/Yamaha systems.

Voice Intelligibility 37

NBC's *The Voice* may be all about singing, but broadcast production mixer Michael Abbott and audience FOH mixer Andrew "Fletch" Fletcher focus just as much on maintaining the audio quality of the show's spoken dialogue.

SOUNDTECHNOLOGY

Sound Innovations: Time is Absolute; Phase is Relative 36

Solid State Logic's Jim Motley offers insights into phase relationships between signals and the frequency specific time discrepancies that phase changes can cause. The all-pass filter (conveniently found in SSL's X-Phase plug-in) is offered as an effective tool for phase correction.

SOUNDPRODUCTS

NewBay InfoComm Best Of Show Winners 44

SOUNDREINFORCEMENT

Outkast Has A Ball 46

Legendary Hip Hop duo Outkast has reunited for a world tour consisting solely of 40-plus festival dates, including a recent gig at New York City's Governors Ball. At each stop, the act brings along gear from VER Tour Sound to augment the audio and ensure the set slams.

Live Sound Showcase: The National . 48

Indie stalwarts The National may be adored by critics everywhere, but the pressure was still on to wow the crowd when the band played three sold-out, hometown shows in June at the Celebrate Brooklyn Music festival.

DEPARTMENTS

Sound Business	5
Classifieds	63
Sound People	62
Advertiser Index	65
Company Index	65

CHARTS

Tracks	28
Centerstage	56
Soundcheck	58



SPECIAL REPORT

Semiconductors In Audio 1, 20

We talk to leading audio designers about the trends in semiconductor capabilities, availability and how mobile, battery and buss-powered electronics are driving design goals.

COLUMNS/REVIEWS

softwaretech 30

Craig Anderton evaluates the current state of the plug-in marketplace.

viewfromthetop. 64

As Ashly Audio hits its fortieth anniversary, president CEO Mark Wentling, takes a look back and considers where the company is heading.

music,etc. 66

Jaques Sonyieux talks with Tim Showalter, principal songwriter and musician behind Strand of Oaks, about building demos, recording with indie icon J Mascis and making beauty out of chaos

INTRODUCING eclipse

Eclipse console system for Yamaha CL series digital mixing... New from the ground up, this stunningly beautiful centerpiece provides iconic styling and creature comforts for your mind and body as well as your control room. Available in multiple, expandable configurations for every application.

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Hanging On To Our Heritage

BY FRANK WELLS

Over the past few weeks, a brouhaha rose up on Nashville's Music Row, spilling over into the worldwide audio community. At issue is the fate of the former RCA Studio A, until recently also known as Ben's Studio and currently branded as Grand Victor Studios in homage to the facility's rich history. The "Ben" in question is, of course, musician Ben Folds, who has rented the studio for 10 years, opening it for commercial use in more recent times. Property on Music Row is selling at a premium, and RCA A has been for sale for 20-plus years, according to the legendary Harold Bradley, the guitar player and producer who built the room with his brother and Chet Atkins, the families still sharing ownership to this day.

After receiving a letter that informed him the building was in the process of being purchased, Folds wrote an impassioned open letter calling for the facility to be spared. "Historic RCA Studio A is too much a part of why such incredible business opportunities exist in 2014 in Nashville to simply disappear," he wrote. "Music City was built on the foundation of ideas, and of music. What will the Nashville of tomorrow look like if we continue to tear out the heart of the Music Row that made us who we are as a city?" The

developer responded, saying that if protecting the studio could not be worked into the plans for the site, the purchase process would end. The Bradley and Atkins families responded to Folds' letter and the social media uproar with their own letter, saying in part: "What makes a place historic? The architecture of the Nashville sound was never of brick and mortar. Certainly, there are old studio spaces that, in our imaginations, ring with sonic magic; but in truth, it's not the room; it's the music."

At issue for the family is their financial investment—with the sale reportedly valued at \$4.5 million. The rights of property holders cannot be swept aside.

Folds and the building owners do agree that Music City was built on, well, music. But while the Bradley and Atkins families see the building itself as what a builder friend refers to as "just bricks and sticks," others see hallowed ground where legends have walked and history was made. There is significant history in the building, including the design by Bill Putnam—it's the last standing of four RCA studios built on his concepts. The late Phil Ramone cut strings in the studio a few years back, and elicited a promise that the managers would try and preserve the room. Folds has pondered how to keep the facility a working studio

while also opening it up to increased public exposure.

After his open letter, the music community rallied behind Folds, with over 200 attending a Save Studio A rally that became a Save Music Row rally (see our cover photo). Much of Music Row's historic infrastructure has fallen to the wrecking ball, with condos springing up all over. Curb Records owner Mike Curb has personally saved many of these facilities, including a leaseback of the 34 Music Square East property to Belmont University (where the original Quonset Hut studio built by the Bradleys has been restored), the Masterfonics building (leased to Masterfonics Mastering and Loud Recording) and Oceanway Nashville, where his donation allowed Belmont to purchase the facility. But one man can't do it all.

The city of Nashville is typically hesitant to impose historical protection overlays without property owners' consent. And while substantial rent has been paid and leasehold improvements made, the tenants of the building have few rights, and the owners' rights are not to be trivialized. Without a magic bag of cash, it's hard to see where these facilities will be preserved in the long run, except through benevolence on the part of any new owners.

All that said, it would be a crying shame to see Studio A and more of Music Row fall.

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Tonys Eliminate Sound Design Awards

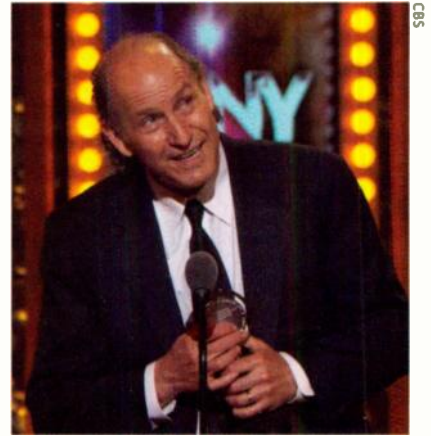
BY CLIVE YOUNG

NEW YORK, NY—On June 11, The Tony Awards Administration Committee, which oversees the annual awards celebrating the best of Broadway Theater, voted to eliminate the awards for Best Sound Design of a Musical and

of a Play. No reason was offered for the elimination of the awards, which were first given in the 2007-2008 theatrical season. The committee decided that in their place, a special sound design Tony may be awarded in the future if a production features particularly notable sound.

At the same meeting, the Com-

mittee also named its 2014-2015 Tony Awards Nominating Committee on Wednesday. Filled with theater, production, lighting, projection, scenic, lighting and costume designers, among others, the 50-person nominating committee does not include any sound designers or members primarily working in audio-related roles.



The Tony Awards Administration Committee voted in June to eliminate the two Sound Design categories. The announcement came just three days after Steve Canyon Kennedy won Best Sound Design of a Play for *Lady Day at Emerson's Bar & Grill* at the 2014 Tony Awards ceremony.

The elimination of the Awards quickly spurred outcry online, as theater professionals around the globe expressed anger and frustration on social media, posting to the Tony Awards' Facebook wall and venting on Twitter, often with the hashtag #TonyCanYouHearMe? Since then, numerous theatrical organizations, including the Dramatists Guild and the League of Resident Theatres, have sent letters to the Tony Committee supporting the reinstatement of the Sound Design awards.

One of the most high-profile responses has been an online petition demanding the reinstatement of the Sound Design award. Started by sound designer John Gromada, who was nominated for a Best Sound Design of a Play Tony Award in 2013 for *The Trip to Bountiful*, the petition had garnered more than 32,000 signatures at press time. According to Gromada, the Committee is expected to revisit the issue and vote again at its next meeting in September, this time with input from various entities speaking on behalf of the sound design community.

The awards' elimination came just three days after the annual Tony Awards took place in New York City, when Steve Canyon Kennedy won Best Sound Design of a Play for *Lady Day at Emerson's Bar & Grill*, and Brian Ronan took home the Tony for Best Sound Design of a Musical for *Beautiful—The Carole King Musical*.

The award marked Ronan's second Tony win and fifth nomination, and he used part of his acceptance speech to dedicate his win to Jack Mann, who died January 28 at the age of 89. Mann was the first person to get a sound designer credit on a Broadway show, when he tackled audio for *Show Girl*, a 1961 musical comedy revue. Kennedy's award marked his first Tony win and second nomination.

Tony Awards
Tonyawards.com

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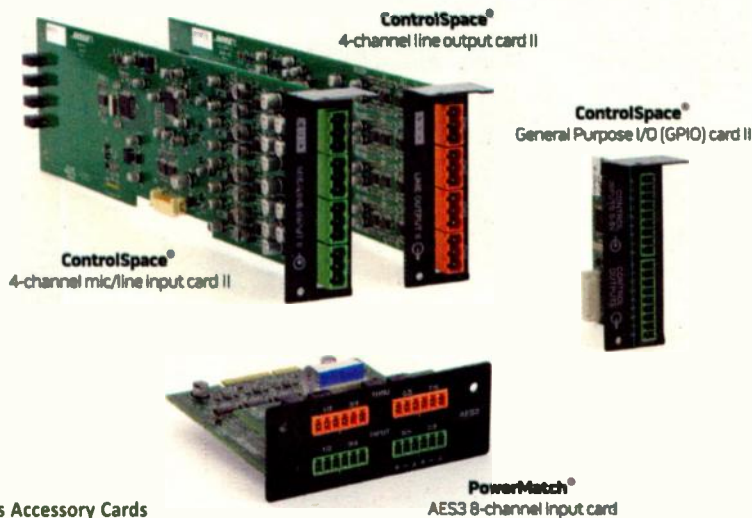
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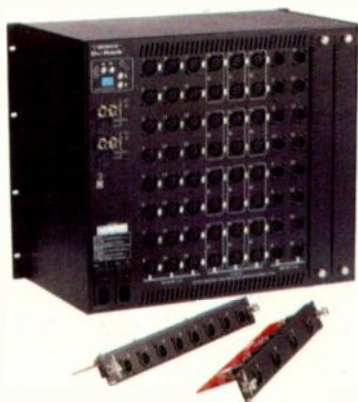
Bose's Accessory Cards

InfoComm

(continued from page 5)

ControlSpace accessory cards, giving the ESP-00 II engineered sound process new mic/line input, line output and GPIO control capabilities. For its PowerMatch configurable power amplifiers, as a companion to network I/O options, Bose introduced the AES3 8-Channel Input Card to accommodate direct inputs from consoles—a response to user requests. At InfoComm for the first time under the banner of its new USA and Canadian subsidiary (run by Paul Morini), console maker CADAC debuted new networked interface components—the CDC MC Router, CDC MC MADI Network Bridge and CDC MC Dante Network Bridge. The MC stands for MegaCOMMS, CADAC's system network, which allows for up to 3,072 channels of 96 kHz/24-bit audio with latency management for time-aligned signal distribution at less than .4 ms from stage inputs to stage outputs. Multiple consoles and stage boxes can be connected with MegaCOMMS, and now with the new interfaces, MADI and Dante networks can be incorporated.

While talking interfaces, DiGiCo repeated a demo from ProLight + Sound in conjunction with ClearCom, showing direct console support via an Optocore audio I/O and



DiGiCo's D2-Rack

Broaman video interface (remote Webby, live from across the hall!). DiGiCo also officially launched the D2-Rack that was previewed earlier this year. Connected via either BNC- or Cat 5-transmitted MADI, the D2-Rack allows users to take advantage of the full 96 kHz operating potential of the SD8, SD9 and SD11 consoles (with no loss of channel count) and with the latest converters employed, system latency is just over 1 ms. Two D2-Rack versions are available: 48-mic ins by 16 line outs with 16 optional outputs in analog, AES or Aviom formats, or 24-mic ins plus 24-AES ins with the same output complement.

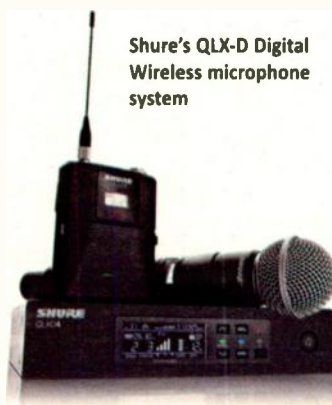
From the *I Know You Can Hear Me Now* department, Electro-Voice previewed its next generation X-Line loudspeakers—the compact X1 and higher performance X2, both featuring EV Hydra wave-shaping devices (for improved HF performance and box-to-box coupling optimization), integrated rigging and EV's proprietary FIR-Drive DSP control of coverage and frequency performance. Also in the loudspeaker arena, JBL extended its updated EON series with the EON610 and EON612 models, both two-way with 10- and 12-inch woofers, respectively. Both feature 1000 W of power and benefit from JBL's ongoing HF waveguide research.

On the *Down Low*, loudspeaker introductions included multiple subwoofer innovations. Adamson Systems debuted the E219, an Energia family extension featuring two "lightweight, long-excursion, 19-inch SD19 Kevlar/Neodymium drivers with dual 5-inch voice coils." Can you say, "Woof?" The al family from Vue Audiotechnik also has a new LF sibling—the al-4 Flyable Isobaric Subwoofer, which features dual 15-inch subs with four-inch voice coils. The al-4-sb can be suspended above or behind al-4 line arrays, and includes a flyable end-fire grid for directional control. It can also be quickly rigged in a flexible range of groundstack applications. Per Vue, the "isobaric" cabinet design reduces both size and distortion. For the great

outdoors, the all-weather specialists at One Systems have introduced the small footprint 118IM-Sub featuring an 18-inch transducer with One Systems' patented Inside/Only (I/O) voice coil design. IEC and Mil Spec standards for severe and prolonged weather exposure are met by the sub, and it can be hung with internal rigging or be pole-mounted.

Also designed to handle the weather is the 18iD extended low frequency driver shown by 18 Sound. The subwoofer component was reportedly engineered for optimal performance with Class D and similar amplifier topologies, with high power handling and low distortion. As it was the company's first appearance at a U.S. trade show, Jeffrey Cox, head of business development, marketing and sales for the Italian loudspeaker component manufacturer introduced key staff, including CEO Antonia Fiaccadori and industry veteran Steve Hutt as the new manager of R&D. Earlier this year, 18 Sound announced the shipping of its NCX neodymium magnet coaxial speakers in 12-inch and 15-inch models for reflex enclosures and stage monitor use, and also on display at InfoComm were other components from 18 Sound's catalog.

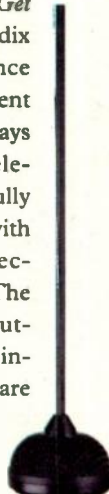
To facilitate *Cutting The Cord*, Shure is now offering a cost-effective digital wireless package: the QLX-D system. Shure promises "exception-



al" wireless performance with 24-bit audio resolution and a wide, flat frequency response alongside advanced features such as network control, compatibility with the company's "intelligent" rechargeable battery technology, and automatic channel scan in IR sync between receiver and transmitter. CAD Audio, too, has a new wireless package—the 1600 Series. The series includes the TX1600 handheld transmitter and the WX1619 bodypack system with a TX 1610 body pack transmitter. The WX1619 also includes CAD's Equitek E19 earworn condenser mic, a cardioid lavalier mic and a guitar cable. The transmitters and the WX1600 receiver are all 100-channel frequency agile across the UHF band, with automatic channel scanning and

selection and true diversity operation.

For those who prefer to *Get Wired*, mic manufacturer Audix has released a new conference room mic, the M3 Tri-Element Ceiling Microphone. Audix says the M3 is the only multi-element mic available that is fully balanced below the ceiling, with a UL rated plenum connection box above the ceiling. The low-impedance, balanced output reduces cross talk and interference if long cable runs are required (and RF shielding is integral). The gold-sputtered capsules and housing are tailored for voice clarity. Audix says the mic was developed in response to requests from users of its other ceiling mics for a multiple capsule version



Audix' M3 Tri-Element Ceiling Microphone.

Mixing It Up was Allen & Heath, extending its Qu series with the Qu-32, a 32-fader, 38-in/28-out digital mixer. The Qu-32 shares Qu family traits such as total recall of settings (including faders and digitally controlled preamps), the Qu-Drive integrated multi-track recorder, the dSNAKE for remote I/O and personal monitoring, multi-channel USB streaming, the Qu-Pad control app, and the iLive FX Library. Its 7-inch touchscreen is larger than its forebears and the Qu-32 houses 33 motorized faders. Intended primarily for stage use, a 16-mic in x 8-line out portable audio rack compatible with A&H's Qu and GLD range consoles was also introduced—the AB168. Taking the digital console more virtual, the Waves Audio and Crest Audio collaboration continues on the Tactus Digital Mixing System. The system includes a customizable touch-screen control paradigm to manipulate the Waves eMotion Mixer for SoundGrid. Crest's new contributions are the Tactus FOH audio processing core (which employs the Waves SoundGrid DSP and networking platform), the Tactus Stage (a 32-in by 16-out stage box) and the Tactus Control (hardware control unit).

Finally, *Amping Up* was Harman's Crown Audio, which introduced its XLC2800 and XLC2500 power amplifiers, designed for installed sound use. The Crown DriveCore technology-equipped Class D amps offer a cost-effective, application-specific feature set, sans network I/O and other features not necessary for the intended application. Into a four ohm load, the amps offer 775 W and 500 W per channel (respectively) and 2400 W and 1550 W bridged.

InfoComm
infocommshow.org

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SAE, one of the world's most respected audio engineering and creative media educators, chose the **Slate RAVEN MTi** for all of their US campuses. The reason? The RAVEN MTi Multitouch Production Console represents the future of recording and mixing by putting your DAW at your fingertips. Its lightning-fast virtual control surface, running user-customizable RAVEN software, lets you follow your instincts with nothing in the way.

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- Bill Smith, National Academic Director, SAE



Contact your GC Pro representative for more information on the Slate RAVEN MTi!

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Miking The Royal Exchange

LONDON, UK—Portsmouth-based MLS Audio recently teamed up with DPA Microphones for a tricky sound reinforcement project concerning Bentley's private corporate event at the Royal Exchange in London.

"We were approached by event organizer, Beyond Certainty, to handle the audio. The original brief was for 'a few singers and a band'. This became 'a few singers placed around the room on podiums with a band at one end' to the final translation of 'six opera and West End show artists and a 10-piece orchestra,'" explained sound engineer and MLS Audio founder Guy Morris.

Given the architecture of the Royal Exchange, this wasn't as easy as it might seem. The roof is 50 meters high, while the interior has 95 percent reflective surfaces thanks to ample use of glass, marble, stone and tiles.

"The artists had already specified that their preference was to use headset microphones and immediately chose single ear versions of DPA's d:fine Headset Microphones," Morris said. "The orchestra, however, was

another issue because we had 10 instruments to amplify in a space that was acoustically very challenging."

"The artists required total clarity from different parts of the orchestra from their performances and spot mics in that acoustic environment just weren't going to deliver that," Morris said. "We spoke to James Lawford at LMC Audio Systems, our preferred equipment supplier, and he suggested DPA d:vote 4099 Instrument Microphones."

MLS Audio bought DPA's recently introduced d:vote Classic 10 Touring Kit, which incorporates 10 d:vote microphones, adapters and cables, as well as a selection of 25 clips for a variety of instruments.

"The selection of instrument mounts was marvelous," Morris says. "There were even two magnetic mounts for placing inside a piano with the lid open or shut. This was very useful as our orchestra was using



DPA microphones were used recently for an event in London's Royal Exchange.

a Baby Grand piano (shut), three violins, a viola, a cello, an upright bass, a flute and an oboe."

DPA Microphones
dpamicrophones.com

PBS Malta Installs Clear-Com

MALTA—Public Broadcasting Services Ltd. (PBS), Malta's public broadcasting company, has installed the Eclipse HX-Median Digital Matrix platform to provide a communication channel throughout its new Creativity Hub.

The installation is part of a major facility overhaul for the national broadcaster, which is responsible for the TVM and TVM2 television channels and the Radio Malta (93.7FM), Radju Maita 2 (106.6FM) and Magic (91.7FM) radio stations. Forestals FGL Information Technology Ltd. sold and installed the Eclipse HX-Median system.

PBS required an intercom system to provide talkback communications throughout its Creativity Hub, which houses three HD studios, 10 edit suites, two control rooms and several other technical rooms. The system needed to be able to work on the facility's existing CAT6 wiring without the need for further cabling, and had to be configurable through software. PBS also wanted a system that was scalable and able to integrate with third-party systems, and could facilitate the use of VoIP technology as well as analogue.

A total of 21 V-Series keypanels were installed at PBS, some connected over 4-wire and some over the IP network depending on their location.

Clear-Com
clearcom.com

A&H Broadcasts Brazil's Carnivale

BRAZIL—Allen & Heath's iLive-112 digital systems helped manage the live performances at this year's carnivale celebration in Brazil. Mixes from performances by Claudia Leite, Jota Quest, Pericles, and Michel Telo were fed to four GLD-80s to broadcast worldwide as well.

Allen & Heath's distributor, Teleponto, supplied the consoles, designed the systems, and managed the live performances and global transmission of the carnival. Six teams and a total of 70 staff were required to ensure the successful operation of six straight days



Singer Claudia Leite with iLive at her live performance.

of transmission and 72 hours of live broadcasts.

The GLD-80 consoles were used

to handle audio feeds sent from several remote locations spanning over 2 km. In addition, four AR2412 and eight AR84 audio racks and over 7 km of optical fibre cable were used.

"With more than 2 million people in attendance and simultaneous live feeds to more than a dozen international broadcast and online networks, reliability was of the utmost importance, and as expected Allen & Heath delivered," explains Antonio Pereira Neto, President of Teleponto.

Allen & Heath
allen-heath.com

JoeCo Captures Monty Python

LONDON, UK—British comedy troupe Monty Python's 10 farewell shows at London's O2 Arena are being recorded for posterity by a trio of JoeCo BlackBox BBR64-MADI Recorders. The 64-channel MADI systems form part of recording engineer Matt Bainbridge's arsenal of equipment that is being used to record 168 channels of audio split over three MADI streams.

Bainbridge, of BlueCat Professional Audio Consultancy Ltd., who is responsible for the multi-track recording of each of the 10 performances during the run commented: "We needed units that would be reliable, easy to set-up and leave unattended at times. The JoeCo's fitted the bill perfectly. In addition to their audio quality, the ability to use just one unit as a master device has also proved very

useful."

Audio captured by the BBR64MADI systems at the O2 shows will be used for archive material, or supplementary audio on any future "live" releases. The BBR64-MADI Recorders have been supplied for the shows by Richmond Film Services, London.

A countercultural comedy hit in the 1960s and '70s, Monty Python's surviving members announced ear-

lier this year that they would reunite for one last show on July 1; when the O2 Arena sold out in a record 43.5 seconds, nine more dates were added and sold out as well. The Pythons are stating that these will be their final performances, and while some will be broadcast to cinemas around the world later this month, the comedy troupe will not tour with the production, making the preservation of the event all the more important.

JoeCo
joeco.co.uk



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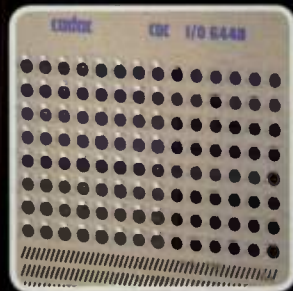
Intuitive, high agility touch screen graphical user interface with multilingual labelling for effortless operation.

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I/O Options



Configurable on-board I/O plus stage boxes allows for up to 192 inputs and 192 outputs.

Surface Expansion



Connect up to two optional 16 fader, single screen extenders for surface expansion.

Integration



MADi and Dante Network Bridges allow easy integration into Cadac's MegaCOMMS audio network.

CDC eight introduction

CDC eight is Cadac's flagship digital live audio console with 128 input channels and 48 bus outputs coupled with an exceptionally tactile and intuitive user interface.

It boasts a unique 'high agility' control surface, accessed via 24" hi-definition touch screens with a further 6" touch screen accessing the system control and automation. The CDC eight is available in two formats: dual screen with 32 faders or single screen with 16 faders.

CDC eight's signature sound is a result of Cadac's legendary mic pre circuitry combined with a proprietary DSP platform featuring a time-aligned, phase-coherent mix bus architecture.

With a far less menu dependent operating system than other digital consoles, the CDC eight offers an unparalleled user experience with exceptional audio quality.

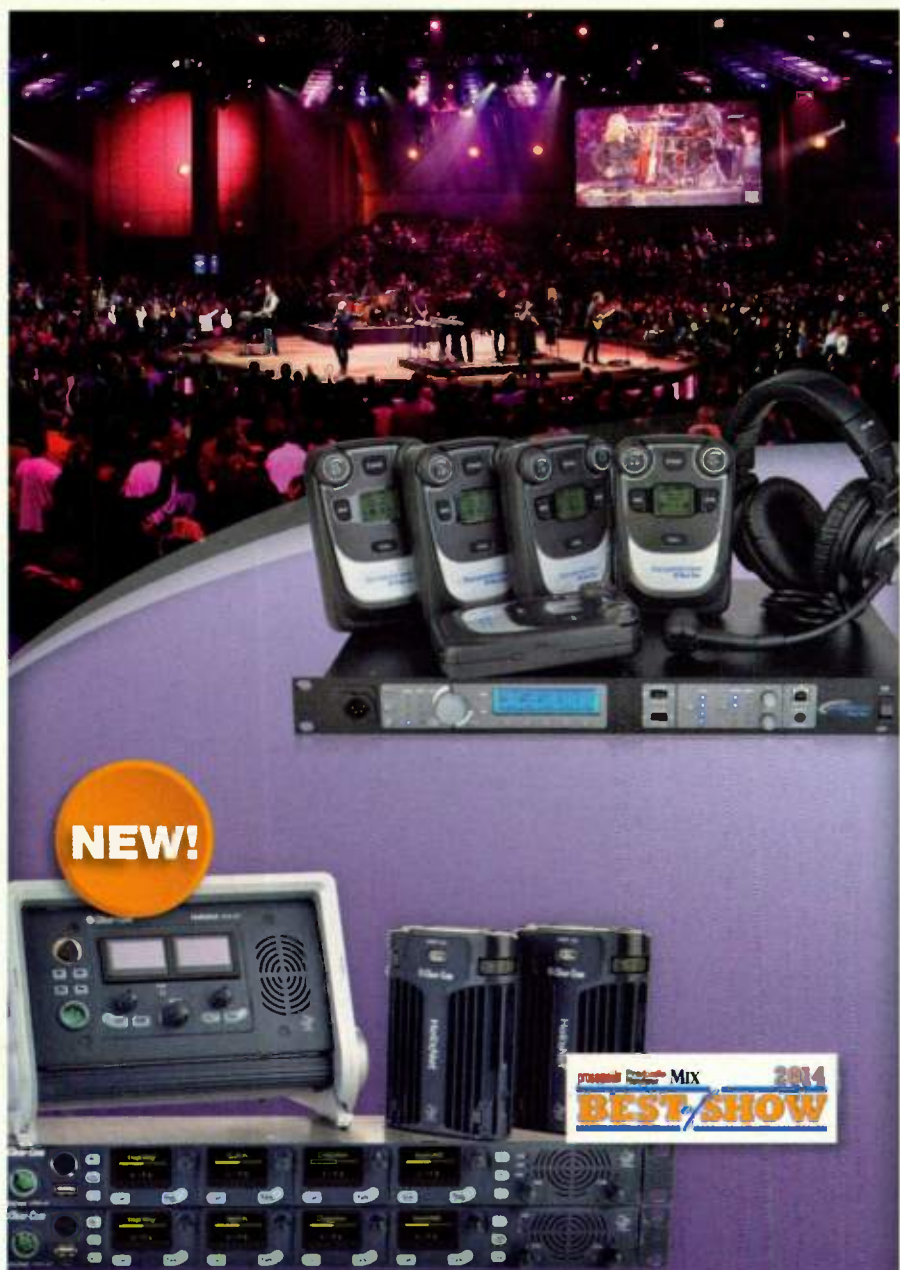
CDC eight features

- > Highly acclaimed Cadac mic-preamps
- > Less than 400µs from stage through the console to outputs on stage
- > 32/40-bit floating point SHARC processors
- > 128 input channels
- > 48 output busses
- > 16 VCA groups
- > 8 Mute groups
- > Optional MegaCOMMS Router gives up to 3072 channels in one audio network
- > WAVES integration
- > Library of languages for console labelling including Chinese, English, French, German, Portuguese, Russian and Spanish with more to be added



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soundBUSINESS

Sweetwater's Heartland Homecoming



The Producers' Panel at GearFest featured (l-r): Bob Clearmountain, Fab Dupont, Ross Hogarth, Mick Guzauski, Bil VornDick, Ed Cherney, Richard Chycki and Bruce Swedien.

BY FRANK WELLS

Sweetwater Sound launched its GearFest in Fort Wayne, Indiana 12 years ago, and aside from a break while the company's new headquarters was being built several years back, the event has been held annually since, each year setting new records for attendance. The 2014 event was held June 6 and 7 on Sweetwater's expansive (and expanding) campus.

The cost of attending GearFest, aside from travel expenses, is zero. That's true for the representatives of the 200-plus exhibiting brands and for attendees. Attendees are welcomed with an amazing variety of opportunities, from the 185 workshops and seminar sessions to sale prices on everything in inventory, killer deals in the "open box" area and an attendee-stocked and -manned flea market. The Deal Zone, made possible with the cooperation of Sweetwater manufacturer partners, offers onsite-only heavy discounts, ranging from amps to mics to cables to mic stands to instruments. The exhibitors also provided over \$72,000 of gear for hourly giveaways. Outside, 20 huge tents (four for pro audio) housed table-top displays and demo systems from the exhibiting manufacturers. Always nearby were Sweetwater sales engineers to process purchases by attendees.

From the music production side, the June 7 Producer's Panel roster gives an overview of the industry stars attending GearFest—Bruce Swedien, Bob Clearmountain, Ed Cherney, Mick Guzauski, Ross Hogarth, Richard Chycki, Bil VornDick, and Fab Dupont. The panel was moderated by Sweetwater's own (and former EQ Magazine

editor) Mitch Gallagher. Many of the producers' and engineers' attendance was sponsored by manufacturers with individual sessions also presented, like Bil VornDick's acoustic miking tutorial, Ed Cherney's recounting the secrets to his success, miking techniques by Ross Hogarth (with Kenny Aronoff), live performance recording and mixing with Bob Clearmountain, an Anatomy of a Mix session with Richard Chycki, and mixing with Mick Guzauski.

Musician presenters included the previously mentioned drummer, Kenny Aronoff, drummer Jason Bonham (whose Led Zeppelin Experience performed to cap the event), bass player Billy Sheehan, guitarists Jason Hook, Shaun Hopper, Don Carr, Devin Townsend, Emil Werstler, Carl Verheyen, and Brad Davis and keyboard player Larry Dunn.

Presentations during GearFest occupied a number of meeting spaces, such as the technologically impressive main theater and new spaces included in Sweetwater's latest expansion (that expansion also creating a near doubling of warehouse space—where better than \$20 million in inventory lands and departs every 20 to 30 days—and also near doubling the space for the beehive of activity that is the hang for Sweetwater's sales engineering team, complete with a spiral slide to bring them down from the second floor).

Sweetwater Sound
Sweetwater.com

THERE'S MORE ▶ For extended GearFest coverage, including links to Sweetwater's social media efforts, photos and videos plus comments from exhibitors, visit prosoundnetwork.com/july2014.



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Find out more at integrationsuperpower.com



MFB Sneak Peek: Clearwater Festival

The Clearwater Festival—officially known as Clearwater’s Great Hudson River Revival—will be featured in an upcoming issue of our new magazine, *Music Festival Business*, but the PSN blog is offering a visual preview of what we saw at the long-running event on June 22, 2014.



Held annually in Croton-On-Hudson, NY, the annual festival was originally founded in 1966 by Toshi Seeger and folk music legend Pete Seeger, her husband—both of whom passed within the last year. As a result, performances were packed with tributes to the pair and their life-long dedication to environmental education.

While its roots are in folk music, the festival offers a range of musical styles, from Americana to blues to jazz and various indigenous genres from around the world. Lake Street Dive (seen here) brought its eclectic mix of jazz, 1960s pop and blues to the Rainbow Stage, the main venue onsite, via an audio system supplied by Klondike Sound, the longtime sound vendor for the festival.

For the full post and plenty of photos, visit prosoundnetwork.com/july2014.



sweet tweet links

Pro Sound News shares links to interesting audio articles every month via @prosoundnews on Twitter; here’s just a sampling. Get the links at prosoundnetwork.com/july2014

- ▶ Newly found stash of 149 Bob Dylan acetates reveals his 1969-70 mixing process.
- ▶ Engineer Susan Rogers looks back on mixing Prince’s *Purple Rain* era in the studio and live.
- ▶ The Library of Congress explores CDs’ inconsistent lifespans and what they mean for archiving and preservation.
- ▶ This lusciously shot travelogue/wrap-up video of the recent AES Europe Convention will make you want to visit Berlin!
- ▶ Studio engineer talks working on the posthumous Queen album, *Made In Heaven*.



BLOGGINGS

BROADWAY BACKS SOUND DESIGNERS

In the wake of the Tony Awards Administration Committee’s controversial decision to eliminate the Best Sound Design categories (see page 10), members of the theater community have been coming to the aid of Sound Designers, adding their voices to the outcry. One of the more surprising developments has been the creation of the #Tony-CanYouHearMe hashtag on social media, used by numerous Broadway notables—including castmembers from both shows that won 2014 Tony Awards for Best Sound Design, and (l-r) Joshua Henry, Sutton Foster and Colin Donnell of *Violet*—to both bring attention to the situation and show their support.



REMEMBERING PAUL HORN

PSN Bloggers have been sharing their knowledge and memories recently, like Mr. Bonazi, who recalled interviewing Grammy-winning alto-saxophonist and flutist Paul Horn, who died June 29 at his home in Vancouver, Canada. Horn’s career spanned mainstream pop jazz to the New Age genre he pioneered, and his 1968 million-selling album, *Inside The Taj Mahal*, is considered by many to be the quintessential New Age recording.



DAVID GOGGIN

Find these blog articles at prosoundnetwork.com/july2014.

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Meyer Making Metallica’s Monitors

In recent times, Metallica has increasingly opted to headline festivals around the world rather than tour, so using smaller, lighter wedges became a priority in order to aid with the portability of the band’s system. With that in mind, monitor engineer Bob Cowan began working with Meyer Sound on what became the MJF-210—of which the band now owns 76 units. How does a collaboration between a major rock act and a major pro audio manufacturer happen? Catch the clip at prosoundnetwork.com/july2014.

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StudioLive 315AI
15" 3-way CoActual design
24-bit 96kHz DSP
SL Room Control



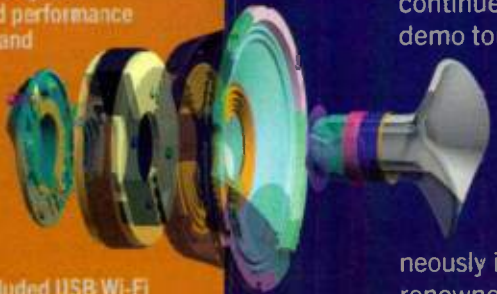
StudioLive 328AI
2 x 8" 3-way CoActual design
24-bit 96kHz DSP
SL Room Control



StudioLive 312AI
12" 3-way CoActual design
24-bit 96kHz DSP
SL Room Control



StudioLive 185FI
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Both StudioLive AI CoActual loudspeakers and our Sceptre™ high-end studio monitors were developed simultaneously in collaboration with renowned speaker designer Dave Gunness of Fulcrum Acoustic.

Both designs take advantage of

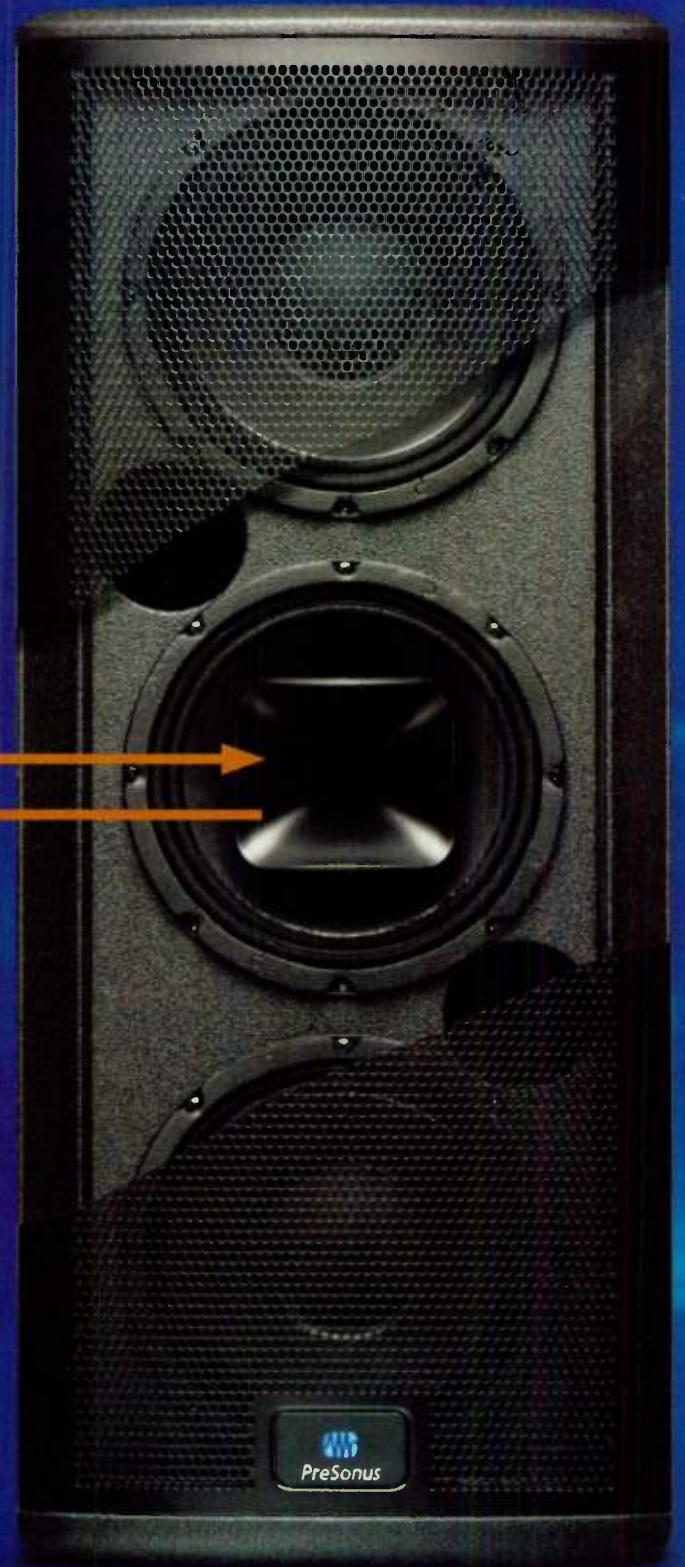


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StudioLive™ AI CoActual™ from

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roadshow.presonus.com



Free SL Room Control software for Windows and Mac laptops, and iPad

Semiconductors

(continued from page 1)

Four of our virtual panelists agree that ICs they have traditionally used are harder to source, with van der Mee calling it “a common problem nowadays...some of our older products, we cannot repair,” he shares, “simply because parts are not available anymore.” Only Bauman says his company was not having such problems, adding “I hope it continues this way!”

Great River has addressed the problem in advance with lifetime buys of critical chips, says Kennedy, while Buchalter says Metric Halo primarily redesigns circuits as needed. It’s a mix of the two approaches for Hill. “With new designs,” says van der Mee, “we always check with manufacturers about the life of a part. It can be even as simple as asking which footprint will have the longest life.”

The use of surface mount components either completely dominates modern circuit design, or is on the rise, for Hill and Kennedy. These tiny, robotically placed parts don’t have the ‘legs’ of chips of old and are closer to the size needed by the circuitry internal to the chip rather than the size being dictated by the traditional packaging and the need for leads that can extend through printed circuit



Apogee's Symphony I/O is an example of a product package made possible by the use of surface mount components.

board holes. SMD parts, allowing for far greater circuit board densities and thus, smaller size, have all but replaced through-hole design chips. Our respondents largely do not fall back on favored legacy ICs. “[Obsolescence] is way too risky and new parts are simply too good to ignore,” offers van der Mee. Integrated circuits do not operate in isolation. Discrete semiconductors—transistors and diodes—and components like capacitors and resistors are necessary in electronic designs. Kennedy reports that film caps and FETs “are tougher to find.” Hill adds conventional transistors to the “big problem” list, saying that “some thru-hole transistors are no longer made and there are no SMD versions.” van der Mee also laments the rapidly declining availability of transistors and jFETs, “I guess as a result of the shrinking market. It is a shame, as I still like to do some discrete design here and there.” Our respondents have migrated to new opamps (operational ampli-

fiers, standard building blocks in audio circuits) over the years, with TI/National components getting all the specific kudos. New demands for portable and battery/USB powered devices puts new demands on components. Buchalter speaks for most of the interviewees when he says he has found “newer opamps that provide exceptional performance with very low power requirements.” Analog component improvements have come primarily “in performance vs. price and power,” says Buchalter, which “allows for denser designs.” van der Mee offers fully differential opamps and

generally, dual opamps and CMOS switches make up the bulk of the ICs in our audio products.” Bauman says that Lynx uses “a mix of balanced receivers and discrete designs for analog inputs.” The receivers are used “in cases where space is an issue.” Digital semiconductor devices include converters and DSP components. The launch of new professional quality components has slowed, with research no longer focusing on improving the quality of digital conversion devices as much as on low power operation. Despite that, van der Mee notes that “there are still interesting developments. It is nice to see AKM work very hard to get true high-end chips in the market. ESS is of course another powerhouse for high-end conversion. We were the first to use their DACs in the pro audio market.” Hill is seeing some interesting components being introduced; Bauman agrees, noting that “AKM apparently has some new devices coming to market that look promising on paper.”

Hill calls out AKM’s AK4490 specifically as a DAC chip with “better filters and linearity.” Cirrus Logic parts had “been my choice for a decade,” says van der Mee, but adds that Cirrus “seemed to have lost interest in our side of the market.” He says he’s employed an AKM chip into an ADC for the first time—the AKM AK5388, a “good, affordable, solid performer.” He adds that chip maker ESS “pulled it off again” with its ES-9018K2M Reference DAC, describing the DSD/PCM, 2-channel DAC with integral volume control as “even smaller and even more efficient, giving unrivaled performance. The chips are great-sounding.”

For getting digital audio in and out of devices ranging from DAWs to loudspeakers, a broad array of interface standards are deployed. Crane Song is sticking with AES3 and ADAT optical for now, while Lynx has added a Thunderbolt card to its

converter options.

At Metric Halo, a FireWire pioneer, Buchalter says that USB, Thunderbolt, MADI and Ethernet are in use. On Ethernet, he says, “we have implemented MHLINK—which is an exceptionally low-latency (1 sample), high-bandwidth (128 channels/direction/port @ 192 kHz) point-to-point link over GigE. Our use of GigE is soft, however, so we have left open the possibility of implementing one or more of the more generic networking protocols (Ethernet AVB, AES67, Dante).”

For Apogee, Thunderbolt and USB are the interfaces of choice, being “universal and standardized,” says van der Mee. “Ethernet has our attention,” he continues, “but we haven’t included it yet for the lack of a true universal standard for audio (and video) application.” While these manufacturers are largely satisfied with the current crop of interface devices, Buchalter says Metric Halo transitioned to digital I/O implemented in FPGA logic (Field Programmable Gate Arrays, flexible devices that can be programmed to perform a broad swath of audio applications), noting, “We have found that the current interface devices are either too expensive, too limited or have obsolescence problems, and have decided to decouple ourselves from those issues.”

Our panel is keeping tabs on movement towards interoperability between Ethernet audio standards (OCA and AES67), save for Hill who explains that “all the new formats are a large task for a one-person operation and that is before you need to deal with drivers for PC and Mac that change each time they change the OS.”

Given a chance to comment on topics covered or questions not asked, Bauman notes that at Lynx, “Most of our products are based on FPGAs. We can do lots of stuff in one chip and can continue to add features in the field via firmware updates.”

The final word goes to van der Mee: “The even further miniaturization of parts is great, but also a challenging development...It is wonderful as you can put so much circuitry on small footprint, but for debugging, it is a nightmare.”

“The number of new power management parts is astounding...As a result, our units have very elaborate power designs—which is very important. As I like to say: Ask an athlete about their secret? The food they eat will always be part of their answer.”

“Some of our older products we cannot repair simply because parts are not available anymore.”

Lucas van der Mee

THERE'S MORE ▶ A longer version of this article including all the comments from our respondents can be found at prosoundnetwork.com/july2014.

SSL Live



Master Mix Live Moves In

LAS VEGAS, NV—Master Mix Live has moved into a new, 2,000 square-foot soundstage/studio. A flexible, multi-use facility that will alternate use as a recording studio, rehearsal facility and live sound instructional school, Master Mix Live is located in a private, secluded area five minutes from the Las Vegas strip.

The recording studio, opening September 1, will boast a control room built around a Neve Genesys console and Genelec studio monitoring system. Avid Pro Tools 10/11 systems will be used, making the most of various plug-ins and outboard gear on-hand from Sony, Sonnox, Avalon, Aviom, Drawmer, Focusrite, Neve,

Waves, API and SSL.

As a rehearsal facility, Master Mix Live is equipped to handle of the rehearsal needs of a variety of productions, as the 2,000 square-foot soundstage/studio features Avid Venue, Midas, SSL and DiGiCo consoles; Electro-Voice and ISP Technologies monitor and FOH speaker systems; microphones from Shure, Sony, Lewitt and AKG; band gear and the option to multitrack-record rehearsals

to Pro Tools 10 systems. Additionally, the site offers a production office and kitchen facilities.

Master Mix Live's next live audio class will start on September 22 and run through February 2015; the curriculum is designed with express focus for students to have maximum hands-on console time to learn, and master the skills needed to become a proficient Live Audio Engineer.

Master Mix Live owner and head instructor, Rick Camp, has been a touring FOH engineer for more than three decades, having worked with acts such as Jennifer Lopez, Beyonce, Chris Brown, Mary J. Blige, Burt Bacharach, Natalie Cole, The Temptations, Anita Baker, Babyface and many others.

Master Mix Live
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DEG Defines High Res Audio

ARLINGTON, VA—DEG: The Digital Entertainment Group, the Consumer Electronics Association (CEA) and The Recording Academy announced agreement on a formal definition for "High Resolution Audio" in partnership with Sony Music Entertainment, Universal Music Group and Warner Music Group.

High Resolution Audio is defined as "lossless audio that is capable of reproducing the full range of sound from recordings that have been mastered from better-than-CD-quality music sources." In addition, four different Master Quality Recording categories have been designated, each of which describes the master source for the distributed recording.

The four descriptors are:

- MQ-P: From a PCM master source 48 kHz/20 bit or higher (typically 96/24 or 192/24 content)
- MQ-A: From an analog master source
- MQ-C: From a CD master source (44.1 kHz/16 bit content)
- MQ-D: From a DSD/DSF master source (typically 2.8 or 5.6 MHz content)

The descriptors can be used on a voluntary basis to provide the latest and most accurate information to consumers.

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Blurring Boundaries Between Recording and Post

BY STEVE HARVEY

N. HOLLYWOOD, CA—On the face of it, a traditional music recording studio might not seem to be the ideal location for an audio post facility, since the two applications have differing needs. But as Tom Hays, founder and general manager of recent start-up Rocket Sound, observes, good acoustic design is fundamental in either environment; the rest is largely cosmetics.

Hays previously built Technicolor Creative's Game Sound Services in Burbank, CA into a preeminent video game and animation audio facility. Over the years, the sound design team garnered MPSE Golden Reel awards and nominations for titles such as *Uncharted 2*, *Drawn Together*, *Halo 4*, *Wolfenstein* and *Uncharted: Drake's Fortune*. But as Technicolor began to reorganize its global sound services late last year, Hays, along with two of his team members, saw the writing on the wall and left to launch Rocket Sound.

Happily, Hays, production manager Daniel Khim and Ayumi Logan, localization and business development manager, immediately jumped straight into a massive, ongoing project for IO-Interactive. Looking for a permanent base after subletting various facilities, Hays discovered the two-room Entourage Studios complex in the NoHo Arts District. Inter-



Piloting Rocket Sound are (l-r): Tom Hays, founder and general manager; production manager Daniel Khim; and localization and business development manager, Ayumi Logan.

estingly, "There were no post places on the market; they were all music studios," he reports.

"The needs of post and games sound and animation are very different, but I really appreciate the bones of this place," continues Hays, noting that legendary acoustician Jack Edwards—who had a hand in build-

ing Capitol Studios and many other prime L.A. facilities—designed the rooms. It only took a few cosmetic changes to get Studio B ready for game voice recording work, he says: "Things like a good client table and making sure the sight lines are where they need to be."

Entourage is a classic music facil-

ity: Studio A boasts a Harrison 3232 console, two-inch tape machine and racks of analog outboard, while Studio B, where Rocket initially set up shop, features a Trident Series 80 desk and more vintage processing. But it's the live rooms, which have seen clients from Little Richard to

(continued on page 34)

Full Sail Enrolls API Vision Analog Console

WINTER PARK, FL—A year into Full Sail University's ownership of its 64-channel API Vision analog console in Studio B, the desk has become a key tool in the school's recording arts degree program, being used for everything from recording sessions to classroom examples of signal flow and more.

Long-established in Winter Park, Full Sail has become known for its recording program, and with the steady influx of students passing through its facilities, the school has its studios open 24 hours a day. As a result, it was no exaggeration when Dana Roun, education director of audio arts, noted that "The Vision has been used nonstop since it went in."

"The Vision is a great match," agreed Darren Schneider, session recording course director at Full Sail University. When teaching students about signal flow, Schneider uses the Vision's signal path to il-



Students at Full Sail University have kept the school's API Vision console busy ever since it was installed in Studio B last year.

lustrate his lessons. "Signal flow is easy to 'see' on the Vision," he said. "We run it in-line, and every section falls in order—from the preamp, to the compressor, to the EQ, to the

assignments. API also built us a custom switch which allows the compressor to insert pre- or post-EQ, which is also instructive."

Most new students at the school,

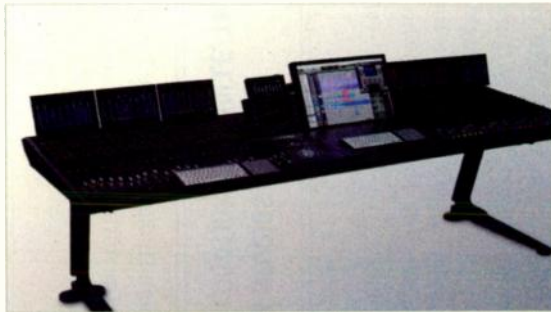
if they have recording experience, are likely used to the modern paradigm of small, digital recording setups used in personal recording spaces. As a result, being exposed to a traditional, large-format console, said Roun, can be an event for them: "Just walking into the room is an experience for first-timers. As more and more students come in with exclusively digital experiences, the sight of the console inspires them. The sound is something most of them have never experienced before."

Schneider concurred, adding, "Exposure to API gives our students real-life experience with the analog sound that everyone in the industry talks about; it enriches and often changes their perspectives."

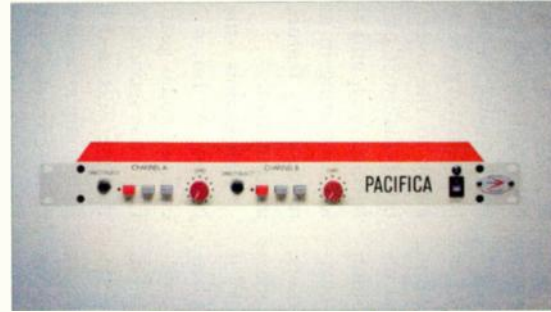
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Full Sail University
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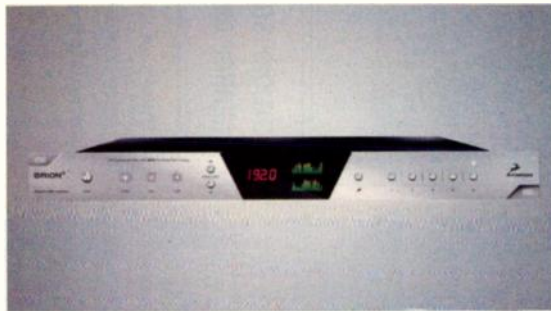
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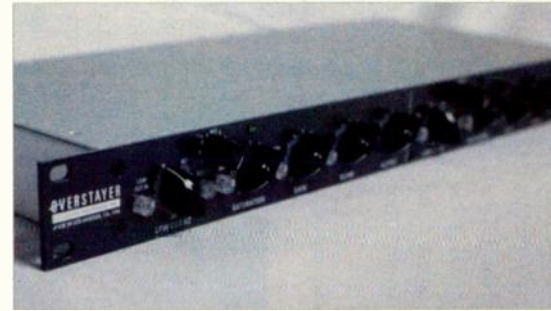
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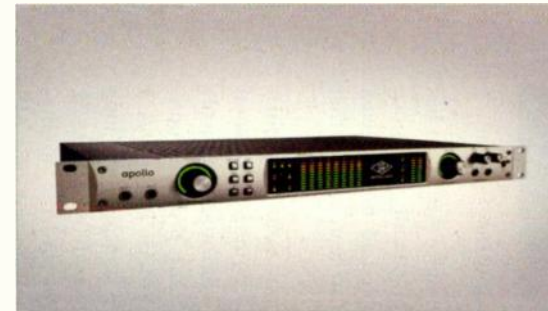
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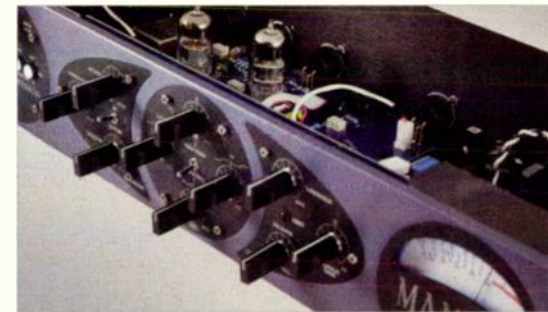
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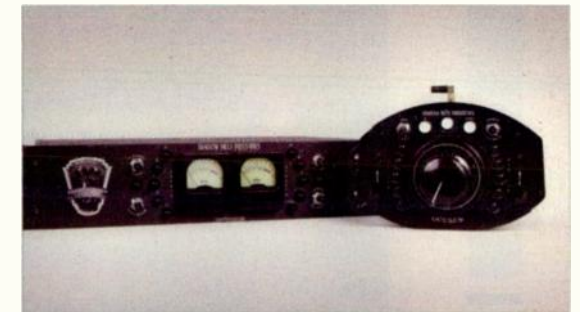
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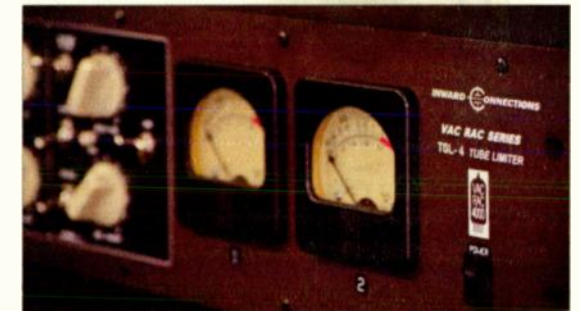
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The Legacy of Sound Emporium

BY STROTHER BULLINS

NASHVILLE, TN—Since 1969, Nashville's Sound Emporium Studios has operated just off of what is known as Music Row—and more than geographically. A comfortable five minutes or so from the Row on Belmont Blvd., Sound Emporium has, from its beginning, hosted clients creating their best work outside of music industry norms, working quite comfortably in the fringes.

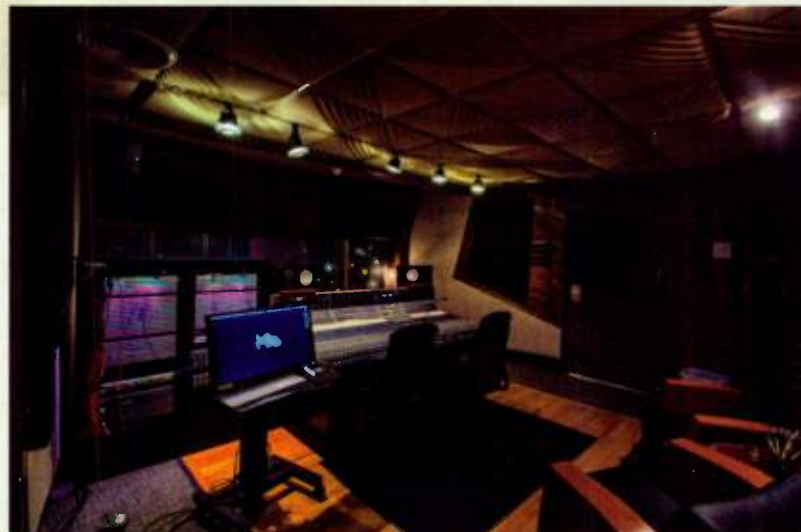
For example, as Music Row chased and defined the zeitgeist of Today's Country Music, Sound Emporium was hosting Todd Rundgren in 1969 at the very beginning of his solo career; R.E.M. in 1987 for the recording of the band's breakthrough album, *Document*; and, 20 years later, unusual masterpiece sessions for the oddly genius pairing of Robert Plant and Alison Krauss on *Raising Sand*.

Today, Sound Emporium remains such a unique Nashville studio. Its rooms are truly vibey, so they're very conducive to live tracking, and are now anchored by two classic analog consoles ideal for their respective environments: in Studio A, a 48-channel Neve VRP, and, newly installed in Studio B, a 48-channel API Legacy Plus.

The more you learn about leg-

endary recording studios, the more you'll understand that the best are launched by at least one unique character—and Jack “Cowboy” Clement was Sound Emporium's original character and founder. A songwriter/musician turned record producer, Clement produced Jerry Lee Lewis in Memphis and ultimately worked with the likes of Johnny Cash, Elvis Presley, B.B. King, U2 and many others.

“Cowboy was the Rebel of Music Row back in the day,” explains Sound Emporium studio manager Juanita Copeland, who has been at the studio since her original employer, producer Garth Fundis, purchased it in the mid-'90s. “Cowboy flipped his finger to everything [the Row] said was a rule and did it his way. He did everything against the grain, yet built amazing rooms that



Newly installed in Sound Emporium's Studio B is a 48-channel API Legacy Plus.

have sounds and vibes that are second to none. You can feel it; it's palpable. So, yes—our funky vibe all started with Cowboy. People called him the Pied Piper of Nashville, and that's exactly what he was—people followed him here. It helped forge this unique area of town, too; as we weren't on the Row, we've always had a certain allure.”

Copeland attests that passionate ownership remains at the heart of Sound Emporium's success. “Thankfully, when Garth sold the studio, it was to someone who appreciated the history and wanted to preserve it. In today's Nashville—most recently brought to light with Ben Folds' public movement to preserve RCA Studio A—we're lucky. Garth could've sold to anybody. But he sold to George and Chad Shinn, who have given me the financial resources to keep thriving. [The Shinn family is best known as former owners of the NBA's Charlotte Hornets, etc.—Ed.] The fact is, most studios don't make money; you're lucky if you break even. But we're doing better than that: We're making improvements, employ a really talented, dedicated staff, and love what we do. Further, from a business standpoint, we do things differently from the other studios in town. We don't have interns; we hire people and grow engineers.”

Over the past few years, explains Copeland, requests for a new console in the sonically 'live' sounding Studio B trickled in from clients. “Having a broader range of musical genres already—more alt-country and alt-rock—a lot of those produc-

ers and engineers love API. That has been a noticeably steady shift since 2006-2007. We've had more clients that really tend to lean toward that API sound.”

Sean Shannon, Sound Emporium's technical engineer, was soon looking for an appropriate console replacement. “Our previous console in B—a Trident 80B—was a good, workhorse console for a long time, yet it only had five auxes, 32 sends, 24 returns and no automation capabilities. With our new API Legacy Plus, we have 12 auxes, 48 sends and 48 returns, 48 inputs, and Uptown 2 automation. The Legacy Plus is a flexible console and a big step forward in functionality. Its sonic quality is unbelievable—from the transformers to the 2520 op-amps to the overall super-strong build quality. It's laid out in a user-friendly way, and the patch bay allows patching in and out of pretty much every feature of the console independently.”

Rob Dennis—the owner of Rack-N-Roll Audio, a Nashville high-end pro audio gear sales and rental firm—has serviced Music Row since the late '90s and brokered Sound Emporium's Legacy Plus purchase. “The console was newly sold to Eminem,” tells Dennis. “Apparently, Dr. Dre soon showed up and barely used it, saying something to the effect of, ‘you don't mix hip-hop records on an API; you need an SSL 9000.’ So they immediately put it in storage and bought an SSL 9000. Later, it came to Big Kenny [of Big & Rich fame], who was building a

(continued on page 65)



STUDIO: SOUND EMPORIUM STUDIOS OWNER: GEORGE AND CHAD SHINN LOCATION: NASHVILLE, TN

There's more ▶ Sound Emporium Studios has launched an online media series, featuring videos such as The Aristocrats, captured live in Studio B while recording their new album, *Culture Clash*. prosoundnetwork.com/july2014.

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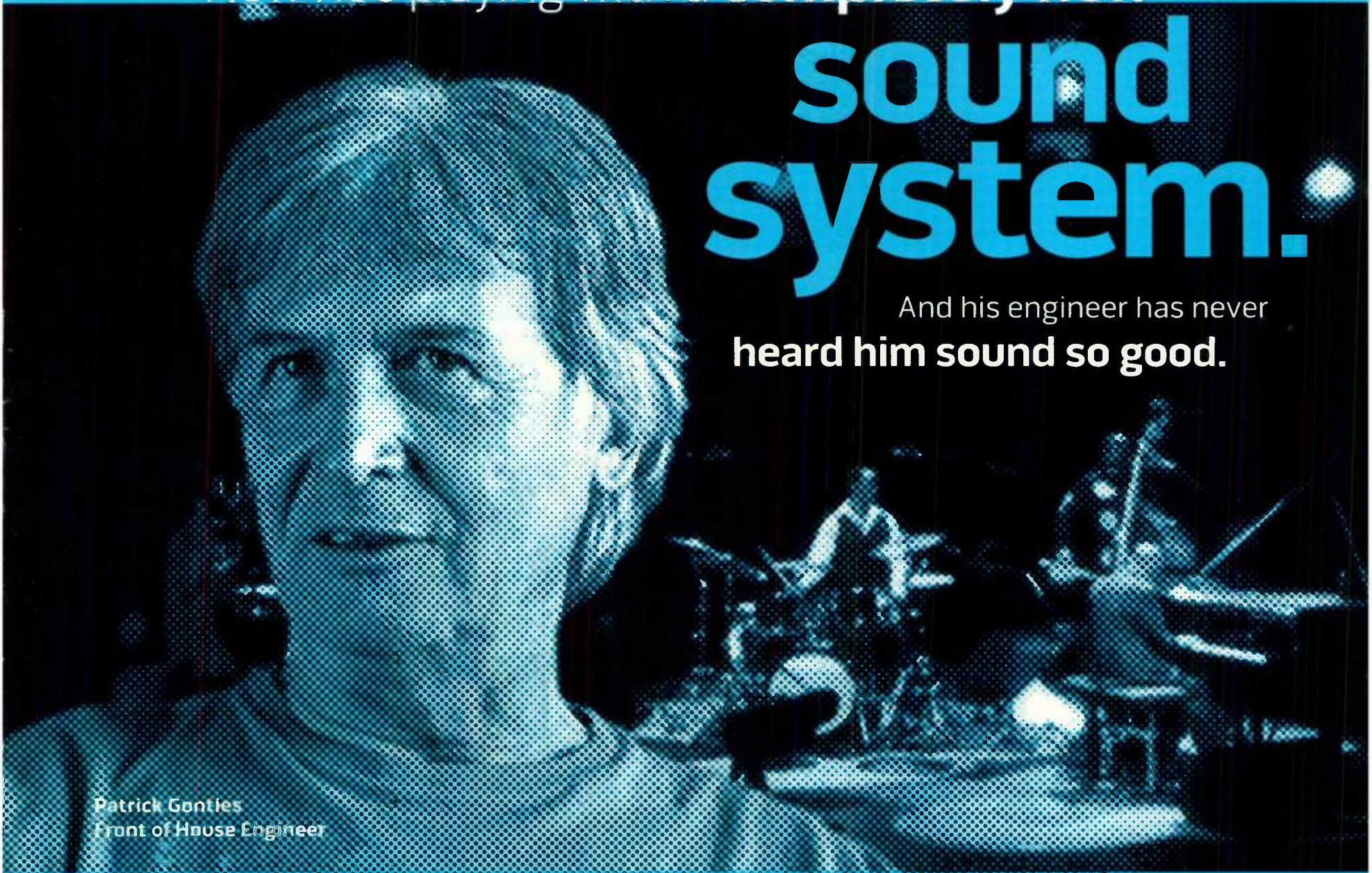
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What will you say
when you hear it?



ARTIST: SARAH JAFFE
ALBUM: DON'T DISCONNECT
LABEL: KIRTLAND RECORDS
PERSONNEL:

Produced by: McKenzie Smith, Sarah Jaffe
Engineered by: Jordan Martin
Assistant Engineer: McKenzie Smith
Studios: Redwood Studios (Denton, TX)
Mastered by: Kim Rosen at Knack Mastering (Ringwood, NJ)
EQUIPMENT NOTES: Trident 8T console; Logic Pro; Avid Pro Tools; Rode, Shure SM7B, Royer 122, Beyerdynamic microphones; Event 20/20 BAS studio monitors



ARTIST: FADED PAPER FIGURES
ALBUM: RELICS
LABEL: SHORTHAND RECORDS LLC
PERSONNEL:
Produced by: Kael Alden
Engineered by: Kael Alden
Studios: Robot Repair (Santa Monica, CA)
Mastered by: Gene Grimaldi at Oasis Mastering (Burbank, CA)
EQUIPMENT NOTES: Avid Pro Tools; Blue Microphones



ARTIST: BEND SINISTER
ALBUM: ANIMALS
LABEL: FILE UNDER: MUSIC
PERSONNEL:
Produced by: Joe Marlett
Engineered by: Chris Lewis
Assistant Engineer: Raw Power
Studios: Signature Sound (San Diego, CA)

Mastered by: CPS Mastering (Vancouver, Canada)
EQUIPMENT NOTES: API 1608 console; Avid Pro Tools 10; Waves, Soundtoys, Massey, Kramer MPX, TL Space plug-ins; API, Neve, Manley mic pres; KRK 9000B studio monitors



ARTIST: MATT TURK
ALBUM: COLD REVIVAL
LABEL: BIG KID RECORDS
PERSONNEL:
Produced by: David Dobkin
Engineered by: Chris 'Wag' Wagner
Assistant Engineer: Gabe Saltman
Studios: Matter Music (Burbank, CA)
EQUIPMENT NOTES: Avid Pro Tools; Yamaha NS-10 studio monitors



ARTIST: CHARMING LIARS
ALBUM: WE WON'T GIVE UP
LABEL: CAROLINE/CHARTMAKER
PERSONNEL:
Produced by: Bob Rock, John Fields
Engineered by: Eric Helmkamp, Todd Neilsen
Studios: The Warehouse Studio (Vancouver, BC), Studio Wishbone (North Hollywood, CA)
Mastered by: Howie Weinberg (Los Angeles, CA)
EQUIPMENT NOTES: Neve Air console; Avid Pro Tools HD3; Yamaha NS-10M, Genelec 1031A, KRK E8, Aura Tone C-5 Cube studio monitors



ARTIST: WEATHERBOX
ALBUM: FLIES IN ALL DIRECTIONS
LABEL: TRIPLE CROWN/FAVORITE GENTLEMEN
PERSONNEL:
Produced by: Brian Warren
Engineered by: Ben Moore
Studios: Singing Serpent (San Diego, CA), Big Fish (Santa Fe, NM)
Mastered by: Michael Fossenkemper at Turtle Tone (New York, NY)
EQUIPMENT NOTES: Custom API console; Avid Pro Tools; Neve 1081 pre amp; Apogee AD interface; Neumann U67 mic



ARTIST: WILLIE WATSON
ALBUM: FOLK SINGER VOL. 1
LABEL: ACONY RECORDS
PERSONNEL:
Produced by: David Rawlings, Gillian Welch
Engineered by: David Rawlings, Matt Andrews
Assistant Engineer: Shani Gandhi
Studios: Woodland Sound Studios (Nashville, TN)
Mastered by: Stephen Marcussen at Marcussen Mastering (Los Angeles, CA)
EQUIPMENT NOTES: Custom Altec console; Studer A800, ATR 102 recorders; Neumann U47, Sony C37A, RCA BK5B mics; Yamaha NS-10, Altec 604E studio monitors



ARTIST: STEPHEN CLAIR
ALBUM: LOVE MAKES US WEIRD
LABEL: STEPHENCLAIR.COM
PERSONNEL:
Produced by: Al Hemberger

Engineered by: Al Hemberger
Studios: The Loft (Bronxville, NY)
Mastered by: Scott Hull at Masterdisk (New York, NY)
EQUIPMENT NOTES: Avid Pro Tools; Genelec studio monitors



ARTIST: LP
ALBUM: FOREVER FOR NOW
LABEL: WARNER BROS RECORDS
PERSONNEL:
Produced by: Rob Cavallo, Mike Del Rio
Engineered by: Doug McKean
Studios: Lightning Sound Studios (Hidden Hills, CA), East West Studios (Hollywood, CA)
Mastered by: Bob Ludwig at Gateway Mastering (Portland, ME)
EQUIPMENT NOTES: Neve Melbourne Series console; Avid Pro Tools; Genelec 1032A studio monitors



ARTIST: RACHEL SAGE
ALBUM: NEW DESTINATION
LABEL: MPRESS
PERSONNEL:
Produced by: Rachael Sage, Barb Morrison
Engineered by: John Shyloski, Jonathan Jetter, Andy Zulla
Assistant Engineer: Johnny Montagnese
Studios: The Carriage House (Stamford, CT); Mishugas Studio (New York, NY); Superposition Studios (Long Island City, NY)
Mastered by: John Shyloski
EQUIPMENT NOTES: Avid Pro Tools HD; SSL E Series channel strip; Telefunken 251 mic; Universal Audio 1176 limiter; Focal Twin 6 studio monitors

notes

VK Upgrades GCC

GLENDALE, AZ—Vintage King (vintageking.com) recently worked with Glendale Community College in Arizona to upgrade its Audio Production Technology program recording studios, supplying an API 1608 analog mixing console, plus Bricasti, Prism Sound, Shadow Hills, Tube-Tech and Universal Audio outboard gear, and Neumann and Schoeps microphones.

Ocean Way Records Cup Music

HOLLYWOOD, CA—ESPN recorded new theme music, opens, bumpers, bumps and closers for its FIFA World Cup Brazil coverage at Ocean Way Studios (oceanwayrecording.com). The theme was produced by Warner/Chappell Production Music (warnerchappellpm.com), which recorded a package of more than 150 tracks composed by Lisle Moore for ESPN's World Cup coverage.

DPA Disappears in Jersey

LOS ANGELES, CA—In order to maintain period authenticity, the audio team on the filming of Tony Award-winning musical *Jersey Boys* concealed captured live on-set recordings by concealing DPA Microphones (dpamicrophones.com) d:vote 4099 Instrument and d:secret 4061 omnidirectional miniature mics, including as many as a dozen on the drum kit.

BGM Masters CSNY

HOLLYWOOD, CA—Stanley Johnston, longtime recording engineer for Crosby, Stills, Nash & Young, mastered recordings made to 16-track, 2-inch tape by Elliot Mazer of the band's historic 1974 reunion tour at Bernie Grundman Mastering (berniegrundmanmastering.com) for a box set release by Warner Bros. on a variety of formats, including CD, BD, 24-bit/192 kHz and vinyl.

dbx
by HARMAN

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Terrific Tele Tone

Rich Tozzoli journeys through his Continuing Adventures In Audio with an axe on his back.

Although it's a software column here, much of what we do is recording, and one of the hardest guitars to capture properly is a Telecaster. Teles can be incredibly bright and thin if not approached in the right way, but when recorded properly, there are few sweeter instruments. Recently, I was tracking my Tele through a Colby Dual Tone Booster DTB 50 at Clubhouse Studios in Rhinebeck, NY. The amp happened to be designed by Mitch Colby and the great Tele master Jim Wieder. So later that day, Wieder, who's played with everyone from the Band and Dylan to Taj Mahal and Keith Richards, was able to stop in, talk about recording the Telecaster, and wax poetic about some of his current gear and projects.

WHERE DO YOU START WHEN RECORDING A TELE?

Begin with a good, clean sound. I always start there, setting the amp right so that it's balanced with all pickup settings. Make sure the clean

have to keep the pick-ups too low, because they have that magnetism pull on the bass strings. I don't notice that. With the Big T pickups, it works great.

TELL ME ABOUT THE BIG T PICKUPS IN YOUR TELE.

Big T pickups are something I designed over a period of time with Lindy Fralin. They're like my original 1952 Tele pickup, but the rhythm pickup goes to 11. It's louder, still clear on top and very open sounding. And the back pickup is loud, yet it still gets that sticky '52 tone with the right amount of mids without it being cloudy. They really sound great in a Tele and you can get them through analogman.com.

TELL ME ABOUT YOUR PRIMARY TELE AND AMP SETUP.

It's a '52 Telecaster, original back pickup with Big T rhythm pickup in it. Currently playing through a Colby DTB 50 amp. Over two years, Mitch and I designed together and were in production working on it. We took the best amps we could find and got the best Fender-ish clean sound and the best overdriven Dumble-ish type

"The hardest part of recording to me—what takes the most time—is getting the right tone."

Jim Wieder

sound is rich, open and chimey on top. Maybe taking some of the presence down on the amp so it sounds right yet has body with each note. You have to get those pickups sounding good.

HOW DO YOU AVOID THE BRIGHT 'ICE PICK' TELE SOUND?

Well, that's why they make a tone control. I use the tone control on the Tele all the time—so if you turn your tone down a little bit when you hit that back pickup, you can avoid it being really thin. Also, set your pickups to the right height. Don't be afraid to put them up really close to strings in the back. That's what I do with the lead pickup.

YOU DO? WHY?

I just like to get a lot of attack out of it. Some guys like it lower, and you get more air, so it depends. If you're playing more country, some of the country guys turn the pickups down more. I don't have the problem I do with a Strat with Teles, where you

lead sound. There are two channels, so you can switch from rhythm to lead. It has two separate EQs, though, which most Dumble amps didn't have...or any that I know of. I wanted to be able to switch, have all my lead sounds in my amp and amazingly rich rhythm sounds. It took years of listening, tweaking and hard work.

TALK TO ME ABOUT MIKING YOUR CAB WHEN TRACKING A TELE.

I usually always go back to the good old [Shure] SM57. If you can, stick that on the side of the speaker—not directly on the cone. I also use a Royer ribbon mic, set back a little bit. The Royer, or any good ribbon, really helps deliver a nice, rich tone. The hardest part of recording to me—what takes the most time—is getting the right tone. I spend all my time getting the right sound for the song. Once I decide, "That sounds right," then the playing part usually comes, hopefully, pretty quick, because you got the right sound. You're inspired to play.

softwaretech

CRAIG ANDERTON



The State of the Plug-In

Change can be difficult, but ultimately worth it. I don't think anyone running OS X is nostalgic for System 9, nor do users of 64-bit Windows want to abandon access to virtually unlimited RAM. Yet both changes obsoleted some software and hardware, required driver updates and users were often left in an awkward position when some companies made the transition faster than others.

We're seeing something similar happen with plug-ins as 64-bit computing becomes firmly established. Microsoft and Apple took different paths; Redmond went for the option to use both 32- and 64-bit programs during the transition to full 64-bit operation, while Cupertino took a more stealth approach that transitioned over time—but the end result has affected how we use plug-ins.

At a PreSonusSphere conference, one Windows user mentioned going from the 32-bit version of Studio One Pro to the 64-bit version, and wanted to know the best solution for using 32-bit plug-ins. The answer from one of the program's developers was straightforward: Ask the plug-ins' manufacturers to develop 64-bit versions.

Fortunately, many have. But the reality is some 32-bit plug-ins will never transition to 64 bits. Bridging technology can help 64-bit Windows hosts; BitBridge and jBridge give most (but not all) 32-bit plug-ins a new lease on life. There are also "wrappers" for different formats. For the Mac, FXpansion's VST-to-AU wrapper is still available for owners of older Macs, but it's now considered a legacy product. Their VST-to-RTAS wrapper remains a current product for Pro Tools 7 to 10 (Windows or Mac), but Pro Tools 11 runs 64-bit AAX plug-ins only.

Speaking of AAX, when it was first announced, there were concerns about updates, pricing and so on that have largely turned out to be unfounded. Manufacturers have gotten on board in terms of availability, and many have been generous with their upgrade policies. I believed at the time AAX was a necessary move for Pro Tools to transition into the 64-bit world, and in retrospect, Avid

made the right decision to create a foundation with a future.

On the other hand, we also have zombie formats. Microsoft apparently lost interest in DirectX a long time ago, and the format has been all but abandoned for new products or even further development (apart from some companies updating DirectX plug-ins for 64-bit opera-

It looks like the plug-in world is stabilizing to accommodate new realities in computing.

tion). Steinberg Cubase dropped support for DirectX back in version 4, although Sony's pro audio and video products, as well as Magix Samplitude, Cakewalk Sonar, Acoustica Mixcraft, Cockos Reaper and others continue to support it. Why? Despite their age, there are still useful DirectX plug-ins and legacy support is needed for older projects. Although DirectX is among the undead, it's probably not going away anytime soon for programs that support it because the longer it stays supported, the longer people will use DirectX plug-ins and therefore continue to require support.

Then there's VST3, which was slow to gain traction—in part because it was a victim of the success of VST 2.4 (which worked very well) and partly because the spec bears little resemblance to VST2. So, there was a chicken-and-egg situation: Hosts didn't want to support VST3 until there were more VST3 plug-ins, and plug-in manufacturers didn't want to make VST3 plug-ins until more hosts supported it. It was also controversial because some developers felt most of these changes could have been integrated into VST2, but the motive for starting with a new code base for VST3 was similar to how Pro Tools handled AAX—a foundation for future development.

(continued on page 60)

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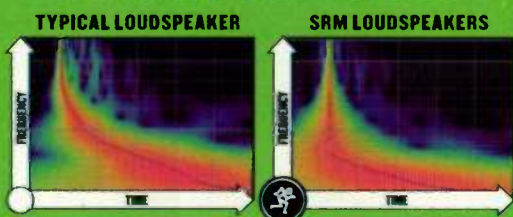
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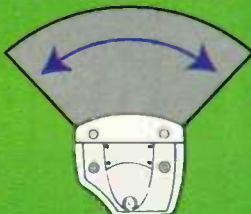
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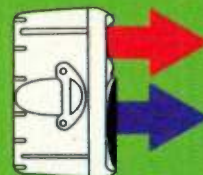
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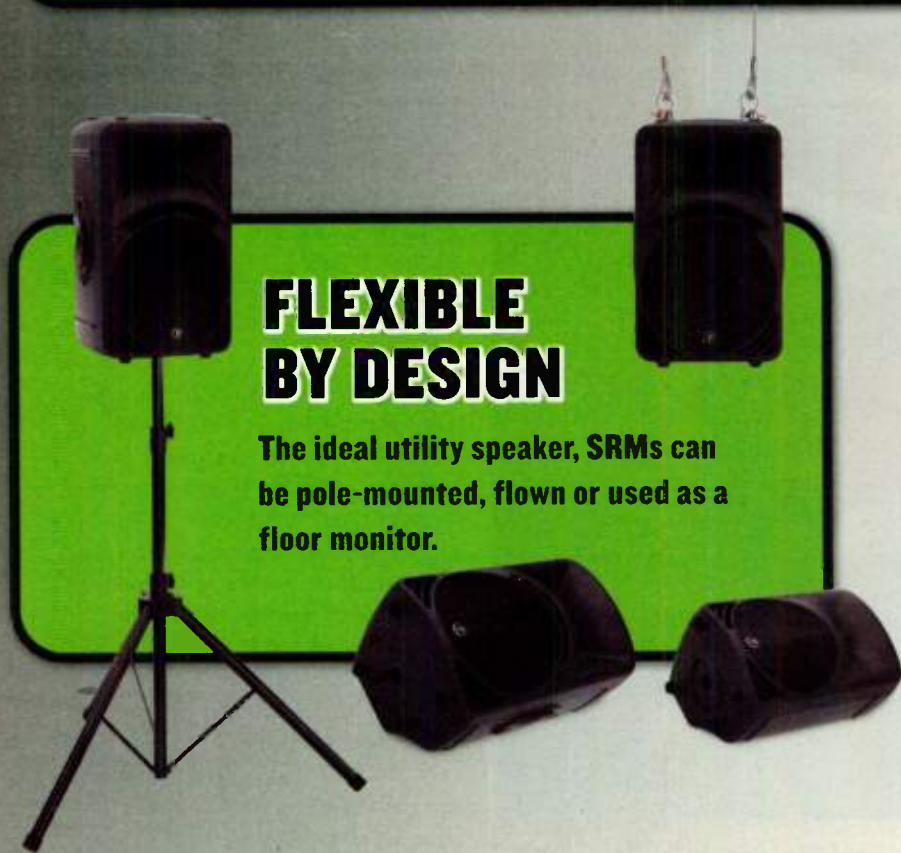
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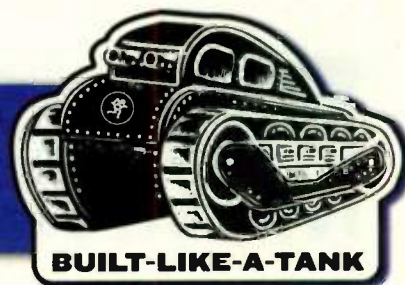
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WRH



Rocket Sound

(continued from page 24)

Linkin Park to TV and film scoring dates pass through, that were the big attraction for Rocket Sound.

Studio A, measuring 37-by-25-feet with a high ceiling, has a lot of potential, says Hays. "We can use this as a second single-mic VO room, or

we can do ensembles. We can use the booth in B as an iso booth for A, in addition to the two booths in A, so it's very flexible."

The larger space also offers potential for recording during motion capture, a process Hays first tried in 2004 while working at game de-

"We've built everything from the ground up to be completely reliable, in terms of assurance of quality. That's the fun part."

Tom Hays

veloper Treyarch, and in which his team has become very adept. "People speak differently when they're moving. If we let these guys perform during motion capture and record the voices, they create these really natural-feeling performances." Background noise may necessitate line replacement, but, he points out, "They're skilled actors, and they're ADR'ing themselves."

He also notes, "One other unique thing we brought from Technicolor is incorporating localization with original productions." A game audio house might more typically arrange for translation and foreign language recording after the initial production.

Hays is remodeling the acoustics in B for voice recording; at 23-feet-long, it also provides a decent air volume. "We're going for neutrality. Not like in a booth, where it sounds super close-up, but in the sense that you can place the sound in different spaces, which in games is really important, because you don't always know what the environment is going to be. If you have someone out on a grassy field yelling and it sounds like they're in a room, it takes you out of the game."

Top-tier games now often outperform movies' box office, yet the smaller game audio teams can have a bigger workload than film post crews. "A typical triple-A video game has at least 20,000 lines of dialog. That's 16- or 18-times the amount of dialog in a typical feature. There are thousands of files, and they all need to be right. Someone is going to buy that game and have a long experience with it—20, 40 hours. We're very cognizant of the fact that someone is going to listen to every line," says Hays.

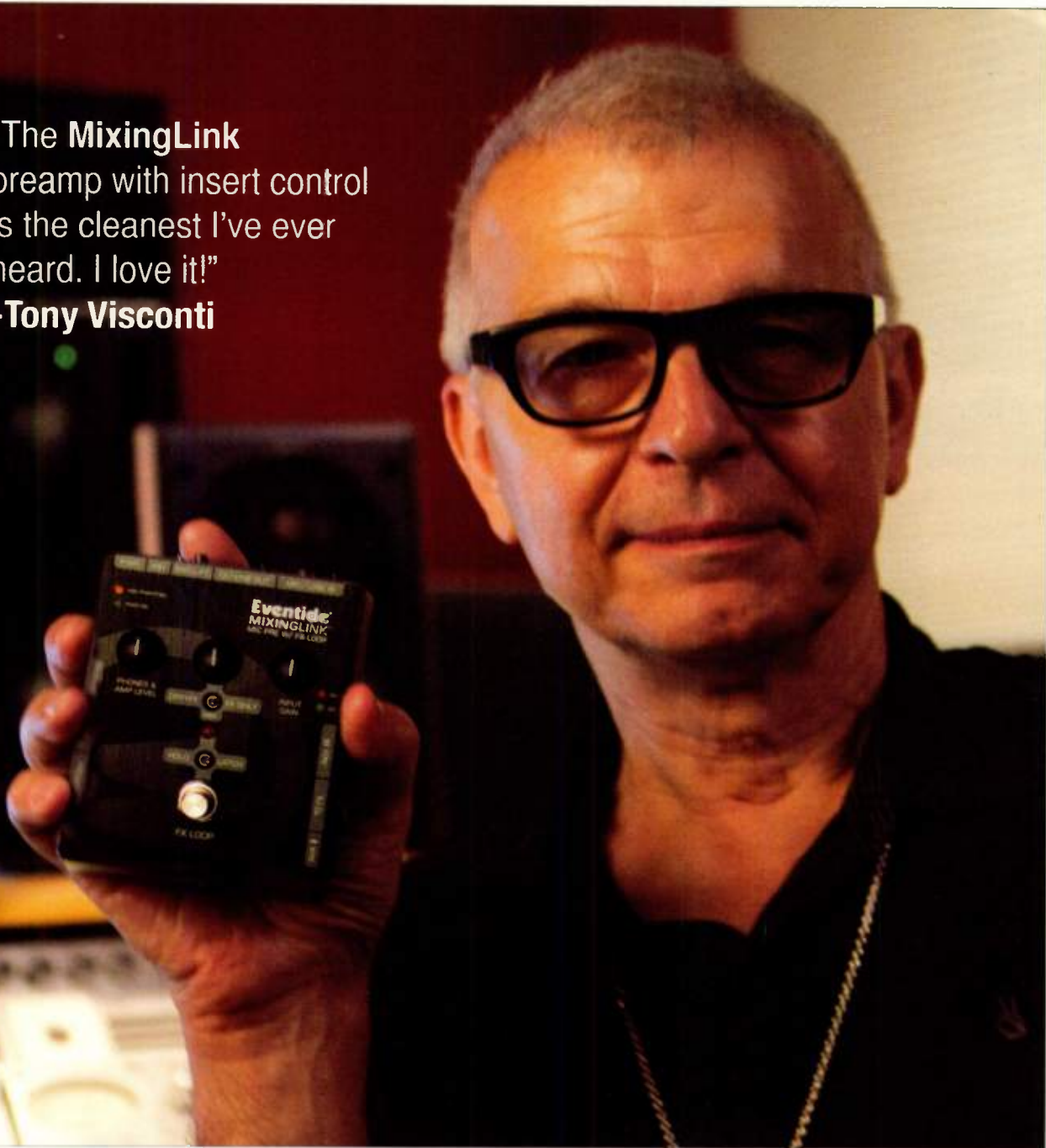
"We're quality geeks; we're really focused. Not that we're focused on the high end because that's where all the money is; we're focused on the high end because we come from a high end background. It really drives me crazy when people try to cut corners. So we've built everything from the ground up to be completely reliable, in terms of assurance of quality. That's the fun part—making sure we're doing everything right, having all the right mics, using them correctly, tuning the rooms." The rest is process, he says.

Hays, who has worked in interactive media for almost 25 years, says, "It's not a business for the faint of heart right now; it never really has been. The fact that you have to be light on your feet and adapt to change—which a big multinational corporation is not so good at—for me has kept it fascinating."

Rocket Sound
rocketsound.net

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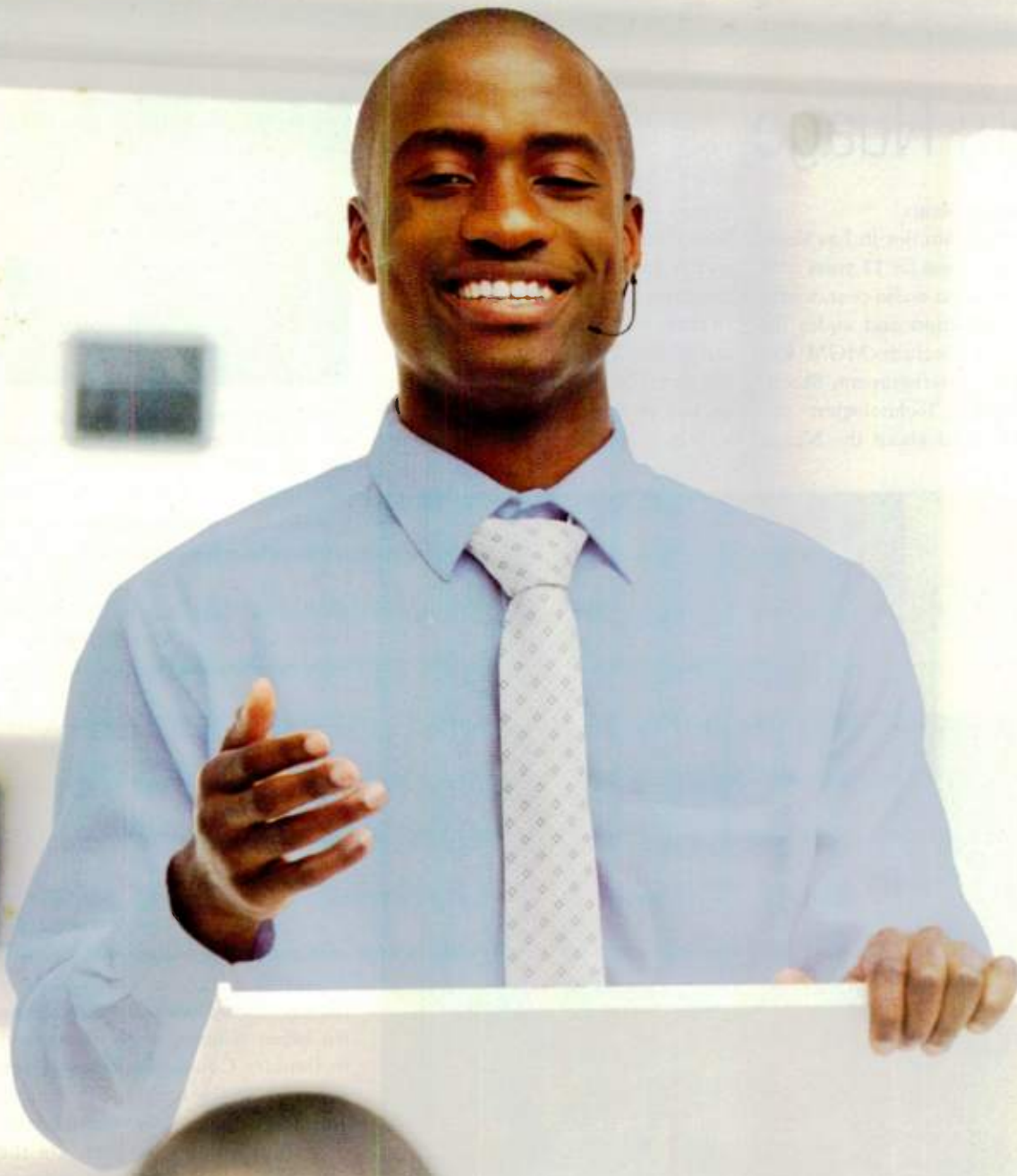
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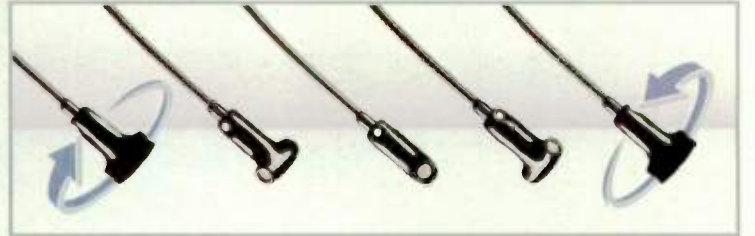
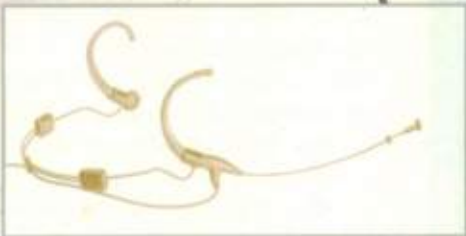
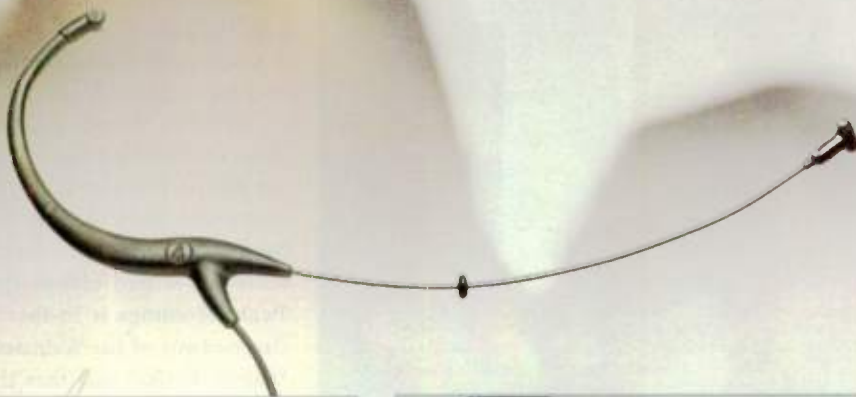
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Dog & Pony Enters Nuage

LAS VEGAS, NV—Dog & Pony Studios in Las Vegas recently installed one of the first Yamaha Steinberg Nuage DAW systems in the U.S. Now that RSPE Audio Solutions in Toluca Lake, CA has installed the system, all three production studios at Dog & Pony are running Steinberg Nuendo 6.07 and house a Yamaha MSP7 5.1

speaker monitor setup.

Dog & Pony Studios in Las Vegas has been in business for 11 years with a primary focus on audio post, sound design, composition and audio for games. Clients include MGM Resorts, Caesars Entertainment, Skechers, and Aristocrat Technologies.

"I first learned about the Nuage

system on social media, and that followed with a demo by RSPE," states owner John McClain. "It took just the three or four hours of the demo to know that Nuage was a great fit for our facility. The first thing that strikes me about Nuage is the ability to forgo use of the mouse and keyboard which, to me, is a huge advantage



John McClain, owner of Dog & Pony, with one of the facility's new Yamaha Steinberg Nuage DAW systems.

and the 'holy grail' of how a controller should work. The build quality of the system is quite obviously very good."

Yamaha Commercial Audio Systems, Inc.
www.yamahaca.com

Caribou

(continued from page 5)

Originally a lot of 4,000 acres, the studio was founded in 1971 by owner and musician Jim Guercio. After the fire damaged the facility, Guercio began selling parcels of the land to Boulder County Parks and Open Space, as it sits roughly 30 minutes outside of Boulder, CO and 10 minutes from Eldora Ski Area. On the market since summer 2013, when it debuted with an asking price of \$45 million, the remaining 1,600-acre plot includes a main house, cabins, a lodge, riding area, stable, barn and various other buildings.

Caribou Ranch was sold to Indian Peaks Holdings, LLC., which the *Denver Post* noted only filed as an entity with the Colorado Secretary of State's office in June. Some reports state unverified claims that Indian Peaks Holdings is in fact owned by descendants of the Walmart-founding Walton family, and that the current plan will be to preserve the property rather than develop on it.

During its run from 1971-1985, Caribou Ranch drew artists like Chicago, The Beach Boys, Joni Mitchell, Joe Walsh, Stevie Wonder, Stephen Stills, Earth Wind and Fire, Rod Stewart, Waylon Jennings, Dan Fogelberg, Amy Grant, John Denver, Willie Nelson, Badfinger, Charlie Daniels, War, Michael Martin Murphy, America, Kris Kristofferson, Supertramp, Michael W. Smith, Jeff Beck, Al Green and others to its studio to record, write and mix. At the facility, Elton John recorded his aptly titled 1974 album, *Caribou*, which included his staple hits "The Bitch Is Back" and "Don't Let The Sun Go Down On Me." In all, the studio resulted in sales of more than 100 million albums.

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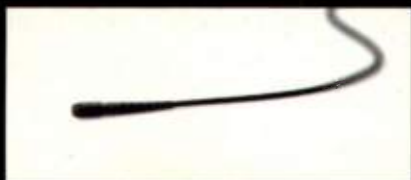
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briefs

Bexel Builds for Univision

RIO DE JANEIRO, BRAZIL—Vitec Group's Services Division's Bexel (bexel.com) unit supplied a production environment for Univision's broadcast of the 2014 FIFA World Cup Brazil, comprising two large control rooms with Calrec audio consoles, sending over a dozen engineers to commission the system and providing a technical team for the competition's duration.

Clear-Com Connects Cup

RIO DE JANEIRO, BRAZIL—Clear-Com (clearcom.com) communications equipment was in place at all of the stadiums used during the 2014 FIFA World Cup Brazil finals, including a Tempest at the Opening Ceremonies in Sao Paulo, TV Globo's HD1 truck, four Eclipse Omega systems at TV Globo Rio, and an Eclipse Median at the IBC, interconnected to TV Globo through an E-QUE E1 trunk line.

Sennheiser in Play at World Cup

RIO DE JANEIRO, BRAZIL—Host Broadcast Services used Sennheiser (sennheiserusa.com) wireless and wired microphones for coverage of the 2014 FIFA World Cup Brazil, including 36 Esfera surround microphone system (SPM 8000), which captured the atmosphere in all 12 stadiums, as well as MKH 8070 long, MKH 8060 short and MKH 418-S stereo shotgun mics.

Lawo Airs World Cup

RIO DE JANEIRO, BRAZIL—GloboSat's 4K TV OB truck, fitted with a 48-fader Lawo (lawo.com) mc256 console, Dallis I/O system and stageboxes, linked with a Ravenna IP network, produced the live broadcasts from World Cup matches played at Rio's Maracanã stadium, while Lawo Vlink4 units enabled audio and video contribution over IP for German national public broadcasters ARD and ZDF between Copacabana and the IBC.

Networking Initiative Goes Global

BY STEVE HARVEY

NEW YORK, NY—As surely as summer follows spring, every autumn—since 2005, anyway—the Clinton Foundation's Clinton Global Initiative (CGI) has brought together heads of state, captains of industry, academics, philanthropists and other leaders to address the world's most pressing challenges. Last year, addressing challenges of his own, audio mixer Mac Kerr brought together Yamaha CL series consoles and a Dante network to handle the three-day CGI event's complex audio routing and distribution requirements.

The main event—the plenary session in the second-floor ballroom of the Sheraton New York Times Square Hotel, where CGI is held annually—also includes a night of awards and entertainment that have included Sting, James Taylor and, in 2013, Elvis Costello. Additionally, there are four workshop sessions on the second and



A string of Yamaha CL series consoles and a Dante network handle audio routing and distribution requirements for the annual Clinton Global Initiative.

third floors. Kerr also wrangles signals to and from a basement press room and another facility on the fifth floor.

"I manage what we call 'central video village,' but might be called master control" in a broadcast facility, says Kerr, who operates from a temporary control room in the basement of the hotel. "We get multiple video feeds and audio stems from each of the five venues. I remix them for distribution and recording. We do iso camera records and switched camera records from each of the five

venues; we record multitrack audio for each of those venues; we distribute five continuous web streams; we do pool feeds to Reuters for broadcast; and we do five different feeds to a press workroom."

Kerr returns mixed program feeds to the five venues and also interfaces three channels of communications, for audio, video and stage management. Under the direction of system designer consultant Lee Kalish, routing and distribution was managed

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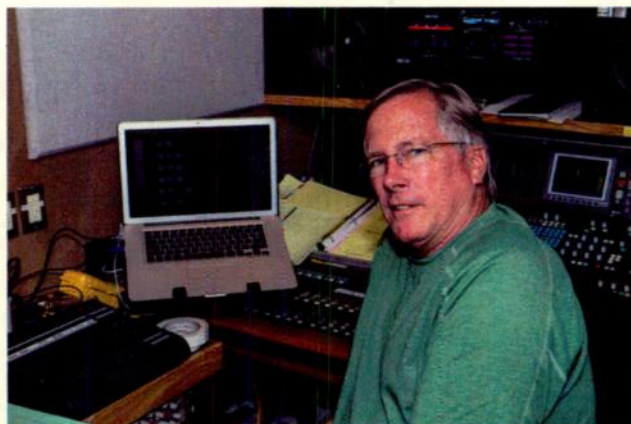
Voice Intelligibility

BY STEVE HARVEY

LOS ANGELES, CA—The center of attention on NBC's popular reality show *The Voice* is right there in the title, of course. But while broadcast production mixer Michael Abbott and audience FOH mixer Andrew "Fletch" Fletcher focus their attention on the contestants' singing, they work equally as hard to maintain the audio quality of the spoken dialog on the show.

The in-studio audience can get very vocal with its support, cheering on fan favorites so loudly that the four judges—Adam Levine, Shakira, Usher and Blake Shelton—plus host Carson Daly and the contestants can have difficulty hearing each other. That crowd noise affects the broadcast and house audio mixes, too, so this season Abbott and Fletcher implemented new audio technology to bring enhanced clarity to all the voices on the show.

For Abbott, the goal is to match the quality of the season's earlier episodes, mixed by Brian Riordan, owner of Levels Audio Post in Hollywood. "For the five live weeks, we try to create the same kind of soundfield as the posted shows, which is the ma-



Michael Abbott, broadcast production mixer for *The Voice*, uses Waves SoundGrid processing platform and Waves MultiRack plug-in host to ensure the live broadcasts sound the same as pre-taped episodes.

majority of the season," says Abbott.

Key to achieving that quality this season was the introduction of the Waves SoundGrid processing platform and Waves MultiRack plug-in

host, which Abbott and Hugh Healy, NEP Denali broadcast systems engineer, integrated into the NEP Denali Silver remote truck used to produce the live shows. According to Abbott, "What SoundGrid has allowed me to do is emulate the intelligibility and crisp sound Brian has in his post-production mix and transfer it to a live broadcast environment."

Abbott is able to significantly reduce the crowd sound and noise from on-set equipment—HVAC, lighting, and so on—through the judicious use of plug-ins, including the dialog-activated Waves Dugan Auto-mixer and the Waves Noise Suppressor. "I don't need all the spurious high end; there's some severe high-end hisses and transients on this stage," he explains. On Shakira's mic, for example, he cascades two instances of WNS, one handling 100 to 1,200 Hz, the other 1,200 Hz to 9 KHz, to control background noise.

It's not just about controlling the sound, however; Abbott also adds character to the preamps of the truck's Calrec Alpha mixing console

(continued on page 40)

Clinton Global

(continued from page 37)

on twin Dante-enabled Yamaha CL desks.

As Kerr relates, he has used a variety of mixing consoles—supplied by PRG in Secaucus, NJ—since he started working on CGI five years ago. Busing was limited on the initial con-

sole choice; a switch to a Studer Vista 5 made Kerr's job much easier, but the console rental was too much for subsequent budgets. "Yamaha came out with the CL5s and suddenly getting a console that interfaced with a network was much easier," he says.

An early adopter of networked audio, Kerr first used Telos Axia, a broadcast-oriented system, a decade ago. "At first I was resistant; it was new and something I didn't under-

stand. But after one month of using it I was sold," he says. "The ability with a networked audio system to have every source available at every destination is just amazing. You plug all the wires into the switches, sit down at the computer and do all the routing and patching. I love that."

Kerr would have made the change to the CL5 in 2012, but was unable to design a system that could generate sufficient feeds. In 2013, he re-

thought the design. "It occurred to me that of the 64 mixes, many of them are derivatives of other mixes I'm doing, so I could run all the stems into the first console, then run mono mixes of those stems into the second console. By making mix changes on the first console, they're being affected on the second."

Dante provides the audio signal distribution backbone, Kerr reports. "I had been looking at doing networked audio for a few years at CGI—in particular Dante, because it was getting a lot of press."

The plenary session is an exception. "I had to find a way to get 64 channels of audio from that venue into the CL5s without using up all the Dante channels," he says. Since the plenary session has traditionally used Rocknet fiber distribution, Kerr had the CL desks outfitted with Rocknet MY cards. "I have a 16x16-channel interface of stems on the production side and 48 channels of splits from the entertainment. I do a music mix of the entertainment for recording and local distribution. So I'm able to get more than 120 channels into the system, all

"I manage what we call 'central video village,' but might be called master control."
Mac Kerr

over fiber." As a consequence, Kerr needs just five fiber links to run alongside the video team's 20, he says.

Dante also carries three channels of Riedel Artist intercom. "We have converters in each remote location and take the 2-wire channels and turn them into 4-wire audio, so it becomes a send and return. We plumb that into the [Yamaha] Rio I/O boxes and via Dante into the control room, where it pops out of another Rio and into the Riedel system."

Such a streamlined network is a far cry from previous distribution methods, says Kerr. "We were running 19-pair analog multi-cable all over the building and getting power in each of these systems locally. While ultimately we could get it working, it was always a little bit noisy. We spent the first couple of days troubleshooting and fixing problems."

But this latest time around, he says, "The experience of using the console and Dante was fantastic." Plus, he says, "After doing CGI on a CL5, it's my new favorite console."

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The Voice

(continued from page 37)

through the application of the Waves C6 Multiband Compressor as well as API 550 EQ and CLA-76 compressor/limiter emulations. "The exciting thing about MultiRack is that it's given me the ability to use plug-ins to warm things up," he reports.

In addition to installing the redundant Waves SoundGrid server and an eight-fader MIDI controller for the system, Healy also integrated a Sonnet Technologies xMac mini server with Echo Express Thunderbolt-to-PCIe card expansion. Healy reports, "The recordist records on Pro Tools with a backup onto Nuendo, all MA-DI."

The system is outfitted with an RME HDSPe MADI FX audio I/O

card. "It records 192 tracks; the Mac Mini can do that all day long," says Healy, who worked with Sonnet to increase airflow around the racked Macs: "We were able to get a 12-degree Centigrade reduction in peak usage."

Sonnet also made other improvements, including reducing the fan noise, Healy reports. "They did a bunch of stuff to make it more audio-friendly; we love the product."

At the FOH position on the stage at Universal Studios where the live episodes are produced, Fletcher feeds the music performances and the dialog microphones to two separate PA systems. A flown, multi-zoned PA system (ATK Audiotek of Valencia, CA supplies all of the production audio equipment) carries the music, while a second, distributed setup handles only speech. The arrangement enables Fletcher to carefully control the sound of the dialog mics, which are fed to speakers variously positioned under the audience seats, at locations around the stage and flown above the set, in order to minimize coloration from the PA leaking into Abbott's broadcast mix.

The DiGiCo SD7 console is uniquely suited the application, Fletcher believes: "This is the only console I can do this show on if I want to use one console, as I have 153 inputs and 53 outputs."

Fletcher's SD7 is also integrated with a Waves/DiGiCo MultiRack SoundGrid and SoundGrid Server One. The four judges each have a dedicated MultiRack channel, he says, with WNS plug-ins instantiated. "I can hear the room coming back and I just adjust it until it's clean," he says. "Carson's also got a C6 multi-band compressor; it's de-essing and de-thumping him when he really gets on the mic."

With the four judges sitting in their iconic chairs so close to the audience, Fletcher also utilizes the Waves Dugan Automixer plug-in to reduce unwanted noise in the dialog channels. "It's all done through the SD7's buses, so I can send anything to the Dugan; it's very flexible," he says, noting that Daly, the contestants and guests are also accommodated in the Dugan system.

"The judges can't hear each other because they're so far apart, so I got these little K-array speakers from Sennheiser," he adds. Fletcher sends mix-minus feeds to two headrest speakers on each judge's chair: "They can look either way and always have a speaker next to their ear."

But while Fletcher also makes use of some of the DiGiCo's on-board effects, including compression and reverb, he tends to keep processing to a minimum. "The SD7 sounds amazing," he says. "I challenge myself now on how little EQ I can use, as most things sound great with just a high-pass filter."

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innovations: the manufacturer's view

Time is Absolute; Phase is Relative

AN INTRODUCTION TO THE THORNY SUBJECT OF PHASE (WITHOUT USING MATHS).

BY JIM MOTLEY

In 1710, philosopher George Berkeley asked, "If a tree falls in a forest and no-one is around to hear it, does it make a sound?" This was a thought experiment about perception, observation and reality; if nobody perceives the sound, is it really there? We can comfort ourselves that if a tree does indeed fall in the forest, it only has to worry about being in phase with itself. To awkwardly amend the beauty of the question, I'd like to ask, "If two trees fall in a forest and no-one is around to hear them, are they in phase?" It may seem glib, but it highlights the importance that the phase of a signal should be considered relative to the phase of another, unlike timing where two things can happen at the same time but not be at the same point of the wave cycle (phase). Phase differences are also not fully solved by our perennial fall back of "flipping the phase" at the top of the channel

strip either; this simply makes a signal more or less out of phase with another as it is a simple 180° polarity invert and not a tool to line them up fully. Phase is also relative to frequency.

Why should this be important to you?

It has always been important to us. SSL is known for producing audio equipment with exceptionally good phase response. By minimizing the amount of timing differences that the components add to signal passing through them, we bring all frequencies of every signal closer together in time (or more accurately, I should say, "less out of time with each oth-

er") and minimize any changes in phase due to processing. This leads to clearer stereo imaging, better separation and a fat deep low end. Our SuperAnalogue circuitry is designed to minimize micro-shifts in phase that you find in electronic designs that have electrolytic capacitors in the au-

dio path. These lead to time smearing across different frequencies, and our Mix Buses are renowned for their phase cohesivity.

I'd always thought that the most important things to remember about phase were measuring distances from source to microphone, and lining up the timing in my workstation after recording. As audio engineers, we probably already have an idea of how phase difference between multi-miked sources can play merry hell with the final result. It is not a difficult concept to understand that two microphones picking up the same sound source but positioned different distances away

from it may not line up right, and mixing them together can lead to comb filtering of the signal. Quite why I never took the leap to think that it is also important to consider any phase changes introduced because of the equipment you run the signal through, I'm not sure....

Pretty much anything you run a signal through is likely to change the phase of different frequencies within it to some degree. For example, a high-pass filter will introduce a phase shift of 90 degrees for each order (a 4th order high-pass filter will therefore introduce a 360-degree phase shift) on the frequencies below the filter frequency. If you strap a high-pass filter on a bass track to make space for the kick drum in a mix, then any remaining frequencies below it in the bass part will be 360 degrees out of phase with those frequencies in the kick drum. Hello again, my old friend notch filtering! When I started

digging into it a little deeper, it astounded me to discover that simply running signals through certain equipment that is widely considered to be 'high end' (no names mentioned) can introduce a -70° phase shift in the bass frequencies and a +70° shift in the high frequencies of the signal at the same time. How would I handle how this might affect a parallel of the same track once you try and combine them?

I think we all get a little daunted by the maths involved with phase and often settle for "lining up the audio tracks in my DAW" thinking that this will get the job done. Recently I've taken a different approach and have started using an All-Pass filter (specifically SSL's X-Phase plug-in) on many of my tracks in a mix. Unlike an EQ, which changes the amplitude of selected frequencies in a signal, X-Phase keeps all frequencies of a signal at equal amplitude but changes the phase across all frequencies. A phase flip is performed around a selected frequency with a variable slope around that frequency. Keeping things simple and practical (not getting an Audio Precision out and measuring the phase of things), I just started to sweep the All-Pass filter across a particularly tricky bass that had been miked and DI'd and was astounded

to hear how it focused the sound and made it sit better in the mix. I started to do the same on the drums, and before long, there was an "unveiling" of the individual tracks inside the mix. Granted, it was not the kind of difference that some who cannot differentiate between a .wav and an .mp3 would hear straight away, but it was certainly audible to me. Perhaps it is time that we started to take phase a little more seriously....

Jim Motley is Head Of Business (Workstation Partner Products) at Solid State Logic.

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SSL's X-Phase plug-in.

Pretty much anything you run a signal through is likely to change the phase of different frequencies within it to some degree.

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NewBay Media InfoComm Best of Show Awards

BY NEWBAY STAFF

LAS VEGAS, NV—The Pro Audio Group team of NewBay Media's AV and Pro Audio Group announced its Best of Show Award winners at InfoComm 2014. NewBay Media's Best of Show Awards are judged by a panel of engineers and industry experts from submitted nominations. Criteria include ease of installation and use/maintenance, performance, relevance, value/ROI, network friendliness, versatility and reliability.

PRO AUDIO GROUP WINNERS

Lab.gruppen D Series

Lab.gruppen has issued its D Series, a new, install-dedicated, 4-channel DSP amplifier platform. Drawing upon technologies developed when the company's PLM 20000Q—built primarily for the high-end touring market—started to be used for stadia and arena installations, D Series represents a new install-dedicated platform for the manufacturer. D Series is intended to integrate seamlessly with a range of digital audio and control protocols and the platform is available in two variants—one featuring Lake, the other featuring Tesira by Biamp Systems, each offering unique capabilities. The Lake variant offers a package of Lake Processing DSP with analog, AES and a Dual-redundant Dante network solution; supported by the development of new custom software to provide integration with most key systems manufacturers. With the Tesira variant of D Series, comes a collaboration between Lab.gruppen and Biamp Systems; this has resulted in dedicated models equipped with Tesira DSP with AVB audio and control, to offer amplifier and DSP platform integration.



Eastern Acoustic Works Otto

Eastern Acoustic Works (EAW) debuted Otto, a new subwoofer supporting the company's Anya 3-way full-range loudspeaker system. Sporting two 18-inch woofers, with acoustic energy exiting from four spaced apertures in the corners of the enclosure, each Otto module provides output of 131 dB SPL (1 meter, continuous, full-space) bolstered by response that reportedly extends down to 22 Hz (-10 dB). Each Otto transducer is separately powered and processed, allowing multiple directivity patterns to be created from a single module, and the modules can be combined in arrays. EAW reports that each module is engineered to generate any three-dimensional wavefront surface and determine the processing needed to achieve optimum coverage and tonal balance for the specific application. EAW Resolution software generates DSP parameters to simultaneously adapt the 3D wavefront surface and optimize frequency response to match the requirements of a venue.



K-array Systems Anakonda KAN 200

The K-array Anakonda KAN200 is a speaker module designed for situations where a traditional speaker box can't be used. Its dedicated presets allow KAN200s to serve as a flexible PA system—either standalone or combined with K-array subwoofers. Each KAN200 module is 2 m (6.6 feet) long. Up to 32 modules can be interconnected, creating a continuous sound line, 64 m (209,97 feet) in length. Integrated male and female speakon NL4 connectors hide all connections inside the "body" of the speaker, which creates a seamless line. Wall brackets are included in the package. All the components of the Anakonda KAN200 are designed by the K-array R&D department and made in Italy under the K-array quality control system.



Meyer Sound LYON Linear Sound Reinforcement System

The self-powered LYON linear line array loudspeaker utilizes the same technology as Meyer Sound's LEO-M, but housed in a lighter and more compact cabinet. LYON is intended for medium- to large-scale array applications that do not require the extreme long-throw capability of LEO-M. It is available in two models: LYON-M for primary array coverage and LYON-W for wide coverage. The former can be used wherever wide coverage is needed in LYON arrays, at the bottom or in the middle of primary arrays, or at the top of outfill arrays. LYON arrays are best paired with Meyer Sound's 1100-LFC low-frequency control element for bass repro-



duction. Systems are driven by Meyer Sound's Galileo Callisto loudspeaker management system, which provides matrix routing, alignment, and processing for array components.

Listen Technologies iDSP RF receiver

The iDSP 72 MHz receiver from Listen Technologies reportedly offers 20 dB less hiss than other RF receivers, while its new integrated neck loop aims to improve the experience for people who have hearing aids and cochlear implants with telecoils. Smaller than an iPhone, the iDSP receiver has a field-replaceable, non-proprietary rechargeable lithium-ion battery, eliminating the use of alkaline and NiMH batteries. Battery life is eight hours, with a 2.5-hour charge time. Two versions of the receiver are available: LR-4200-072 Intelligent DSP RF Receiver (72 MHz) and LR-5200-072 Advanced Intelligent DSP RF Receiver (72 MHz). The LR-5200 Advanced Receiver features the ability for end users to select multiple channels for applications such as language interpretation. System components include the charging tray, which can be mounted in several ways; charging case; optional cable management system; foamless earphones; log book; setup/inventory software; and signage.



Clear-Com HKB-2X Speaker Station with S-Mount

Clear-Com has introduced the new HKB-2X Speaker Station with S-Mount enclosure, allowing users to expand its HelixNet system and extend intercom access to cover more production ground. The four-channel HKB-2X HelixNet Speaker Station can monitor all four and communicate on any two available intercom channels at any given time. The adjustable OLED display can be repositioned for the best viewing experience. The display shows the name and relative level of each selected channel. The menu is accessed via a front-panel push button, with parameter selection and scrolling controlled by the left and right Call buttons and rotary channel level controls. The HKB-2X Speaker Station is powered through a single, screened twisted-pair PL cable, Power over Ethernet or external wall AC adapter. Two XLR-3 connectors are provided, allowing the Speaker Station to be daisy-chained on the intercom line.



Shure ShurePlus Channels

Shure has launched its first iOS app, ShurePlus Channels, which lets users remotely monitor and control Shure wireless products. Supported on Apple mobile devices running iOS7, the app is compatible with Shure Axient, ULX-D Digital Wireless, the newly-launched QLX-D Digital Wireless System and the PSM1000 Personal Monitor System. Able to automatically discover nearby Shure hardware via Wi-Fi, the app gives users remote visibility into the status of parameters such as RF signal strength and interference alerts, audio levels, transmitter battery life and alerts and other key attributes. Through an in-app purchase, users can further unlock the ability to remotely control their Shure gear and make changes to channel parameters, gaining control of receiver and transmitter settings such as frequency assignment, audio input/output levels, channel and device naming and menu locking.



Martin Audio Limited DD12

The DD12 is a compact, multi-purpose, bi-amplified, powered two-way system intended for stand-alone and distributed applications, like concert touring, theatre sound reinforcement, fixed installations in concert halls and houses of worship; corporate AV events; high-power stage monitoring; and frontfill/infill for large-scale systems. Combining a fully-integrated system of onboard networking, DSP and two channels of Class D amplification (1400 W LF, 700 W HF) with its Differential



Dispersion technology—a user-rotatable Differential Dispersion horn optimizing the coverage footprint across the audience plane—the DD12 features a 12-inch (300 mm) LF drive unit and a 1-inch (25 mm) exit compression driver housed in a compact, multi-angle, polyurethane-coated plywood enclosure with screw-free perforated steel grille. Whether configured as an element in a stand-alone DD12 system or part of a larger system, individual DD12s can be controlled and monitored via VU-NET proprietary software—but the DD12 also sports internal memory, allowing factory ‘plug-and-play’ or user-generated DSP preset ‘snapshots’ to be recalled by means of a preset selector button on the rear panel, instead of using computer control. In this use-case, only mains and signal is required.

Other magazines in NewBay Media’s AV and Pro Audio Group announced Best of Show Award winners as well:

SOUND & VIDEO CONTRACTOR WINNERS

- Audio-Technica ATND971 Network Microphone with Direct Dante Protocol
- Aurora Multimedia QXT-700
- Black Box MediaCento IPX Controller
- Clear-Com HelixNet HKB-2X Speaker Station with S-Mount
- Core Brands BlueBOLT BB-RS232
- Crestron Electronics Digital Media
- D-Tools, Inc. SIX 2013 R2 featuring Mobile Quote
- Epson America, Inc. Epson PowerLite Pro Z10005UNL
- ESP/StrikeX ESP enVision PCS with Remote Portal
- Kramer Electronics VIA Collage
- Lab.gruppen D Series
- LG Electronics LG’s 55LV77A Full HD Video Wall Display
- Listen Technologies iDSP RF receiver
- Martin Audio DD12
- Middle Atlantic Products TechPed Series Technology Pedestal
- Peerless-AV Peerless-AV PeerSound Wireless Audio System (ADS100-B)
- Rane Corporation EXP 2X
- Shure Inc. QLX-D Digital Wireless System
- SiliconCore Technology Magnolia 1.5mm LED

- Sony Electronics VPL-GTZ1 4K ultra short throw laser projector
- SVSi N-Touch N8300-series Wall Controller
- Symetrix, Inc. SymNet Composer 2.0
- Tekvox, Inc. TEK 2
- Vaddio AV Bridge Matrix PRO
- Vaddio RoboSHOT Broadcast and Conference
- Video Devices (at Sound Devices booth) PIX 270i
- Video Furniture International (VFI) Electric Lift Collaboration and Video Table
- Visix, Inc. MeetingMinder Room Sign Line
- Yamaha QL Series Digital Audio Console
- WOW Vision Collab8 Eco-System

AV TECHNOLOGY WINNERS

- AMX Enzo Content Sharing Platform
- Arthur Holm Dynamic 3 Talk
- Audio-Technica ATND971 Network Microphone with Direct Dante
- Barco F50 Panorama Projector
- BenQ America Corp. MW853UST Ultra Short Throw Projector I 56
- Biamp Systems TesiraFORTÉ
- Black Box MediaCento IPX Controller
- Blackmagic Design Blackmagic Studio Camera
- Casio America Casio LampFree Ultra Short Throw XJ-UT310WN I 59
- Crestron DM (DigitalMedia)
- Dataton AB Dataton Watchnet
- Draper Profile
- Epson America Epson BrightLink Pro 1430Wi
- FreeAxez 40 and FreeAxez-70 M
- FSR HuddleVU Dugout
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GREAT RIVER PWM-501
Versatility reigns with this new forward-thinking compressor

Outkast Has A Ball

BY KELLEIGH WELCH

NEW YORK, NY—Hailed as the East Coast's response to Coachella, this year's Governors Ball lived up to its reputation, bringing in some of the festival season's top acts to the stage, with headliners Jack White, Vampire Weekend and the recently reunited

Island couldn't hold us, so we moved to Randall's Island," explained Tom Russell, partner at Founders Entertainment, the production company behind Governor's Ball. "Now we view Randall's Island as our long-term home."

Russell, who started his career in the festival business with New Orleans' Superfly Productions (the or-

"With touring, it's easy to spend a lot of time focusing on every little thing, but with festivals, it is more important to work with the other companies every day and focus on the large important aspects such as quick line checks."

Chance Stahlhut

Outkast, to individually close out each of the three nights that weekend.

Established in 2011, Governors Ball has grown from a small, one-day, two-stage festival at New York City's Governors Island, to an extravagant three-day event with four stages and plenty of local food vendors gracing the festival's new location on Randall's Island, right between NYC's Harlem and Astoria neighborhoods.

"Our first year was a smaller event, but as we grew, Governor's

organization behind Bonnaroo), wanted to bring a major music festival to New York City, and formed Founders Entertainment with partners Jordan Wolowitz and Yoni Reisman to make the idea happen. This year, Governors Ball boasted a lineup consisting of artists in the rock, hip hop, EDM, and indie genres, including English folk/rock artist Frank Turner, the rising electronic duo Disclosure, and the French alt rockers Phoenix. With such a packed lineup over the

three days, careful planning has to go into manning the stages, as once one band ends a set on one stage, another band is already starting on a second stage. Eighth Day Sound (Highland Heights, OH) provided the sound system for the main stage this year, while Thunder Audio (Livonia, MI) and M&L Sound (Knoxville, TN) provided systems for the other three stages.

While many of the performers relied on the services of these companies, some of the bigger artists provided their own control gear through other companies—as was the case with Outkast, who tapped the services of VER Tour Sound (Nashville, TN), supplying a plethora of gear, including a DiGiCo SD10 console at FOH and an Avid Venue Profile on monitors, and only Heil microphones across the entire act.

A decade after the duo of Andre "Andre 3000" Benjamin and Antwan "Big Boi" Patton decided to go their separate ways, Outkast announced earlier in 2014 that it would embark on a reunion tour of sorts, hitting dozens of festivals in the United States, Europe and Asia. "We've got about 40 shows up to mid-November," said Chance Stahlhut of VER Tour Sound.

For the Governors Ball show, VER supplemented Eighth Day Sound's d&b audiotechnik J Series PA system

(continued on page 47)



Ojai Gets Immersive

BY STEVE HARVEY

OJAI, CA—Established in 1947, the Ojai Music Festival presents an eclectic and challenging program curated each year by a guest music director, who this year was classical pianist Jeremy Denk. Held over four days in June, this year's festival featured an immersive PA configuration supplied by Schubert Systems at the centerpiece Libbey Bowl, where head engineer Ben Maas mixed performances ranging from classic works by Beethoven, Mozart and Schubert to modern pieces by Ives, Ligeti and Stockhausen.

Libbey Bowl, completely remodeled in 2011, seats 970; an upper lawn area expands capacity to around 1,300. Maas, of Fifth Circle Audio, in his seventh year as festival FOH mixer, has adapted the sound design over the years to focus on two issues.

"The first is for the people in the bowl seats, providing them with an



Ben Maas programmed the Soundcraft Vi4 at the Ojai Music Festival's FOH position to generate more sends than in the past.

experience that's a little closer to a concert hall," he says. "I've got a Lexicon 960; I can give them a little more intimacy, but also open up the sound and make it not feel like it's quite so outdoors."

The second issue is one of spatialization and localization of performers. For example, he says, "We have a piece where there are going to be some chimes off to the left; I can localize that sound. People are not going to have the disconnect of seeing

somebody off to the left but hearing it from in front of them."

Schubert Systems, based 75 miles away in Los Angeles, supplied a mix of d&b audiotechnik models for the company's first year as festival production provider. The rig was configured as a 7.1 system for the bowl seating, with stereo or mono delays for the lawn.

For the bowl, small left and right hangs of V8 and V12 arrays with V

(continued on page 52)

briefs

Eighth Day Opens in Australia

CANBERRA, AUSTRALIA—Eighth Day Sound has teamed with regional SR provider Elite Sound & Lighting for tour coverage down under, the deal precipitated by Elite's purchase of a d&b audiotechnik (dbaudio.com) J-Series system.

K2s Visit The Capitol

WASHINGTON, D.C.—PRG provided audio for the 25th annual National Memorial Day Concert, held on the West Lawn of the U.S. Capitol, marking the first use of the company's new L-Acoustics (l-acoustics.com) K2 system.

Cerwin-Vega Supports NMS

NEW YORK CITY, NY—A Cerwin-Vega (cerwin-vega.com) P-Series Professional PA system was recently used as the audio system for all presentations and performances at the New Music Seminar in NYC.

QSC Augments Arcade Bar

LOS ANGELES, CA—Downtown L.A.'s newest bar, EightyTwo, chose QSC (qsc.com) K Series and AcousticDesign Series loudspeakers for its classic arcade game-themed establishment, complete with a DJ and dance floor. The sound system is controlled by a Q-Sys Core 250i integrated platform.

Ashly Added To Funeral Home

HOMER, MI—The Craig K. Kepf Funeral Home, recently added a chapel and remodeled rooms; A/V firm Crookston Audio chose an Ashly (ashly.com) Pema 4125.70 integrated processor/amplifier and RD-8C and WR-2 user controls for the installation.

M1D Or Not M1D...

CHICAGO, IL—A Meyer (meyersound.com) M1D line array has been supporting performances at the Chicago Shakespeare Theater's 500-seat Jentes Family Courtyard Theater. Supplied by Lake Forest, IL-based dealer TC Furlong, Inc., it replaced an aging, point-source center cluster.

Outkast

(continued from page 46)

by providing another J Series system for sidefills and d&b B2s for subs. "Obviously with hip hop, the bottom end is really important," Stahlhut said. "Our job is to make sure the sound system has enough power and control, while also trying to not push the system into the limiters."

Because VER is accompanying Outkast on the festival tour, it faces the extra challenge of adapting to different sound systems, depending on the festival. "We see a lot of d&b audiotechnik, Meyer Sound and L-Acoustics, as well as running into JBL VerTec every now and again," said Stahlhut. "But our engineers have been exposed to enough systems that as long as the local companies deploy them properly, you can get what you need out of them."

Having a knowledgeable crew is another key factor to putting on a successful performance, Stahlhut added. Not only do they need a knowledge of various sound systems, from consoles to loudspeakers, but they also need to be able to work alongside the other audio vendors to assure that everything runs smoothly.

"With touring, it's easy to spend a lot of time focusing on every little thing. But with festivals, it is more important to work with the other companies every day and focus on the large important aspects such as quick line-checks. It's very important to maintain a schedule at a festival," explained Stahlhut.

Comparing Outkast's festival tour to a more traditional tour, Stahlhut noted there's a lot more air travel involved for the artists, since they usually only perform one night a week. "There's different sides to touring versus festivals," he said. "With tours, the upside is you get to sleep on the tour bus, whereas with festivals, you fly out Friday for a Saturday show, load-in at 1 a.m. and do soundcheck and line-check, then go back to the hotel to sleep for a bit. With touring, you kind of make a home out of your bunk on the bus, but with festivals, on your off days you're going home. It just takes a little longer to get a rhythm."

Attention to the weather is always a big consideration when playing festivals, since the majority of them are outdoors. For VER Tour Sound, Stahlhut said before the show, all of their gear is stored under tarps, so they don't have to worry too much about the sound system withstanding the weather all day, but they still keep a careful safety plan in practice, especially when dealing with the weather.

"We have a full emergency man-

agement plan," added Russell, who as a producer of the festival will most likely be the one making a call in the case of an emergency. "In that plan we address situations like weather, and in the case of 30 mph winds or higher, extreme thunder and lightning, hurricane, etc., then we'll cancel the show. We'll do whatever it takes to keep the patrons and crews safe."

For Russell, he said Governors Ball runs, rain or shine, unless it becomes a safety issue. In 2013, Tropical

Storm Andrea hit New York City during the festival, and while most of the performances still happened, it left organizers with mud all over Randall's Island that would need to be restored.

"Immediately following the event, we worked with the parks department and did a full restoration of the field," Russell said. As part of the restoration, Russell said they put in a mix of sand and hay into areas of the field that were prone to flooding, as a way to prevent future wear and tear on

the site.

"When you're dealing with 40,000 people a day, obviously you will have wear and tear on the park. But we really take care of the park as much as we can to minimize damage and repair it."

Luckily, for 2014, the three-day festival was met with dry, sunny weather, perfect for an outdoor music festival.

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National Pastime

BY JONATHAN BRUDNER

After years of hard work and dedication, The National is seemingly universally adored for its brand of unsettling indie rock, but more than a year into supporting 2013's *Trouble Will Find Me* album, the group hasn't slacked off. Case in point: In mid-June, the band played three consecutive, sold-out shows for hometown crowds at the Celebrate Brooklyn Music Festival.

A few hours before the second concert, held outdoors in Brooklyn's Prospect Park, FOH engineer Brandon Reid and monitor man Stu Tenold reflected on what it's like to work for such a hard-working group whose songs can sometimes leave fans pulling out their Joy Division records for a pick-me-up. "The National are great dudes," said Reid. "They're unbelievably professional, but also understanding that we live in a real world with challenges."

The top challenge that day was the local noise ordinance in place for concerts in the park. "This place has an extremely strict dB limitation: 95 A-weighted over a 15-second average, which is pretty tough for a rock gig when we had audience applause hitting 101 yesterday," said Reid. Ensuring compliance, he said, was achieved by "using Waves' API 2500 compressor plug-in and an Avalon VT-747SP to compress my mix more than I would usually like to, and also riding the master fader a lot."

The plug-in was just one of a few Reid had on his Avid Venue Profile (both the FOH and monitor mix positions sported the desk), but he kept the plug-ins to a minimum, preferring to work off the band's sonic output: "I just use the DigiRack plug-ins. I use Impact a lot, and I use the 7-band EQ constantly, but I'm more focused on mix moves and master EQ than actually staring at plug-ins. If you're staring at a plug-in and even for a second your lead vocal gets below where it needs to be in the mix, you've undermined what you were probably trying to do with that plug-in—so I'm more into having my hands on faders and mixing the show.

That being said, this is what works for the National; other things work for other bands. From a mix engineer perspective, the National definitely are going for an organic rock performance and are not looking for heavy-handed audio interference."

In keeping with that organic philosophy, Reid's deep familiarity with The National's catalogue enables him to mix on the fly without snapshots: "I've done over 1,000 shows with these guys since 2005; I know their music really well and it's more comfortable for me to have an organic mix. Also, the National varies the setlist every night, but it has trends where there are usually two or three songs that are always played in conjunction. Even though I don't have snapshots, I'm memorizing my mix changes, so between songs, it's almost like muscle memory for me to change settings for the next song."

Every song has its own challenges—and making sure singer Matt Berninger's baritone delivery can



When The National played three sold-out shows in its hometown of Brooklyn, NY at Prospect Park Bandshell, FOH engineer Brandon Reid's mix was heard via a SLS RLA/2 line array bolstered by with d&b audiotechnik JSubs and Q7s.

be heard in the mix is usually one of them. "Matt's tough," said Reid. "His mic control is horrible, his physical output is mediocre. He does his thing and he sounds amazing, but he requires a lot of support. On a scale of one to 10, for the amount of lead vocalist attention he needs, he's probably a solid eight. Because he sings in a baritone, he doesn't have a lot of physical output—so because that's the reality of what we live in, it plays a major role in the gain structure of the front of house mix. He will limit the overall potential of the volume every show. I route Matt's vocals through a subgroup, there's a 31-band EQ inserted on it, and the ballad-y songs give me an opportunity to go in and make minor corrections."

On stage, the band uses around 30 mics, all but six of them Shure microphones, according to Reid. Accordingly, the drums are picked up with a Beta 52A on the kick, Beta 57A on the snare, Beta

56As on the toms, a Neumann KM 184 on the hi-hat and AKG C414s on overheads. An AKG D11 captures the bass cabinet, while a mix of Sennheiser e604s and e609s and Shure KSM 44s and KSM313/NEs take everything the guitar amps dish out. All vocals are entrusted to Shure Beta 58As, because not only do they capture Berninger's voice faithfully, but they're also hardy enough to survive getting banged around by the singer.

Over in monitorworld, Tenold used his Profile desk to send mixes to the band via Shure PSM 1000 receivers connected to Ultimate Ears UE 11 and UE 7 earpieces. As backup, two wedges were on hand for what Tenold described as "complete 'oh crap, everything went wrong—the lead singer lost his pack, lost his ears' moments."

Tenold used snapshots for every song in order to keep up with the bands' dynamic style. "I have snapshots of every song because the way that they play varies so much from song to song, and they'll change positions on stage," said Tenold. "Every single member except for the bass player changes position at some point in the set, so it's something

(continued on page 50)



At The National's monitor mix position, engineer Stu Tenold keeps a tally—seen here taped to the Avid Venue Profile console's monitor—of how many Beta 58A vocal mics singer Matt Berninger has destroyed on the year-plus-long tour.

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The National

(continued from page 48)

where you can't just change those mixes on the fly for seven guys." He also tries to bring each venue's ambiance into the mix as well. "The stage vibe of having the reverberation of the room—all that stuff ends up coming down the band's mics.

When they hear it, it's comforting for them. It kind of muddies the mix up in some ways, but it makes it feel like a show for them," said Tenold. "There's something about hearing what you're putting out coming back to you. There is a pair of Shure SM89 shotgun mics that I use to capture the ambiance of the space on the far stage left and stage right, and the guys have different amounts of those in their mix depending on

what they want to hear."

While the engineers prefer to use d&b audiotechnik systems whenever possible, playing three nights in Prospect Park required using the venue's dual hangs of 12 SLS RLA/2 ribbon line array speakers each—the house system since 2004. Nonetheless, a compromise was achieved: "The venue wouldn't allow us to bring in our own PA, but we could bring in subs," said Reid. "We've

got 12 d&b JSubs out there and all of the front fills are d&b Q7s, so in conjunction with them, the SLS is doing enough to give me the feeling that I'm winning."

Making the most of the situation was indicative of the engineers' flexibility, but it also reflected their bond with the band, too. As the line to get into the show started to wrap around the park, Reid explained, "Luckily, both Stu and I have a very trusting relationship with the band, so when we present them with a challenge, they know we've done everything we could to make it right."



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The National

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(Brooklyn, NY)

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Brandon Reid

Monitor Engineer:

Stu Tenold

FOH Console:

Avid Venue Profile

Monitor Console:

Avid Venue Profile

House Speakers:

SLS RLA/2 ribbon line array speakers; d&b audiotechnik Q7, JSubs

Personal Monitors:

Shure PSM 1000 receivers; Ultimate Ears UE 11, UE 7 earpieces

FOH Equipment/Plug-Ins:

Avalon VT-747SP; Waves API 2500 plug-in

Microphones:

Shure Beta 52A, Beta 57A, Beta 56A, KSM44, KSM313/NE, Beta 58A, SM89; Neumann KM 184; AKG C414, D11; Sennheiser e604s, e609



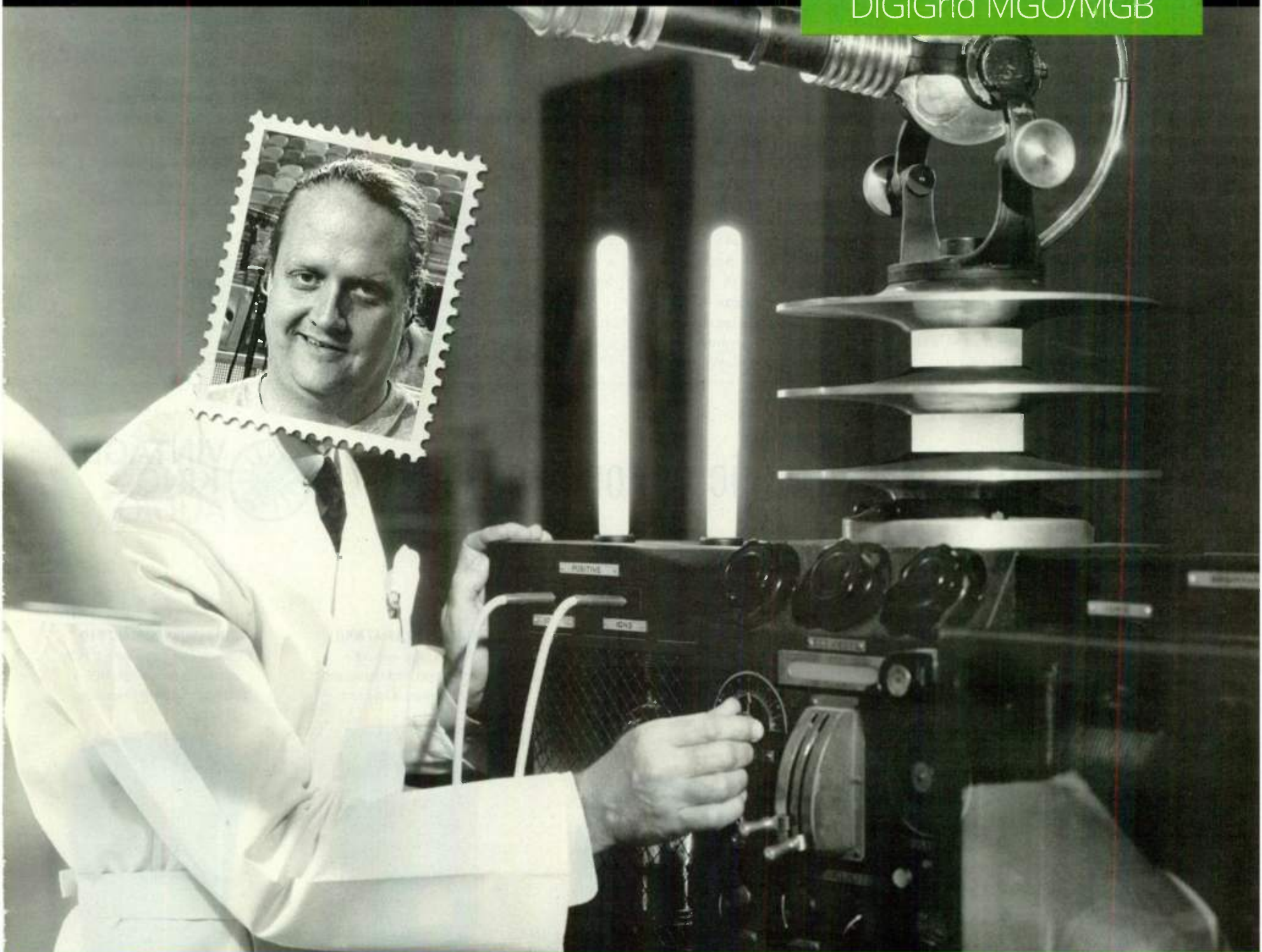
THERE'S MORE ▲ Catch a video interview of The National's Matt Berninger and Aaron Dessner talking touring, beating up Shure Beta58s on stage and more at prosoundnetwork.com



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Ojai Music Fest

(continued from page 46)

Subs on the ground, plus a center T series hang, were supplemented by main left/right Q series and Q-Sub delays, says Michael Mordente, A1/system designer for Schubert Systems. “For lip fill, I used four T series. The rest of the speakers—two more series of delays—were M4s. They’re wedges, but they come with a pole stand,” says Mordente. The system was powered by D12 amplifiers controlled by R1 software.

“I basically maxed out four [Lab. gruppen] LM44 processors,” he adds. “There were multiple speakers on some of the zones. It took me almost a full day just to time-align it.”

“These d&b speakers are just amazing,” continues Maas. “In the past, I’ve never wanted to use line arrays; either left to right or vertically, you can have coloration issues, and they tend to flatten out the sound. The front-to-back image for classical stuff is just as important as left to right. The d&bs are the first line array I’ve ever heard that preserves that front-to-back depth of sound.” The coverage was even and natural

sounding, he says: “You can’t tell that the sound is coming out of an amplification system. It sounds like it’s just coming from the stage.”

Maas was able to program the Soundcraft Vi4 at front of house to generate many more sends than previously possible due to the additional input (up to 96 from 72) and busing (34 stereo rather than mono) capabilities unlocked by the latest software and DSP updates. “I’m up to 40 bus-

Sennheiser and Sony mics, from his personal collection. The configuration of the eight stereo stems feeding the recording workstation are program-dependent, so they might include Decca tree, strings, winds and percussion, various solos and reverb returns, he says. “Those same stems are brought into the matrix for all of our delays,” he notes, allowing him to translate the bowl’s surround mix for the stereo lawn delays. “We have

with all the close mics and knock them back a few dB so we’re leaning towards the overhead mics to give us the sense of ensemble,” explains Maas, who also mixes the recordings for broadcast by American Public Media and other outlets.

Maas additionally delivered feeds to Jody Elff of Little Dog Live, who was webcasting the festival using five cameras plus a sixth at a pre-/post-show interview position. “Little Dog Live comes in with a small package that I’ve developed and pushes out a stream that looks and sounds really good,” says Elff, working the festival for the first time. “That’s a real step up from a single wide-angle shot from the back of the hall,” which is the more common approach.

“Pro Tools | HD handles all my audio and outputs digitally into a second computer that creates a layer in my Telestream Wirecast production switching software,” Elff continues. “That compiles and is pushed out as a single feed.”

Schubert also supplied Shure RF gear for the stage, including in-ears and bodypacks, reports Mordente. A DiGiCo SD9 console provided on-stage monitor speaker and IEM feeds. Schubert Systems schubertsystems.com

“We have a piece where there are going to be some chimes off to the left; I can localize that sound. People are not going to have the disconnect of seeing somebody off to the left but hearing it from in front of them.”

Ben Maas

es to make it work: I’ve got 16 auxes, another 16 of record buses, the left and right, and a bunch of matrixes.”

The main mics pass through Pueblo preamps, says Maas, who also supplied A-Designs, API, Boulder, Forssell Technologies and Inward Connections preamps, as well as DPA, Neumann, Royer, Schoeps,

somebody backstage listening to the feed who makes adjustments to make sure that the recording has more of a classical rather than a sound reinforcement feel.

“Classical recordings tend to be miked a little more distantly to try to capture more of an ensemble sound. For example, we’ll take the stems

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First Baptist Brings On Bose

LAWTON, OK—The First Baptist Church in Lawton, OK recently upgraded its sound and broadcast video systems with the help of AV integrator and systems designer FBP Systems, which in turn installed Bose Professional Systems RoomMatch loudspeakers into the 1,000-seat sanctuary.

The depth and width of the sanctuary interior, along with its wrap-around balcony, were a challenge. Mark LaBouff, national sales manager, and Robert Coggins, senior engineer, both at FBP Systems, felt that using an L-C-R three-array design, which the situation called for, would find the side walls becoming reflec-

tive surfaces that would splatter the sound and interfere with the intelligibility of the overall system.

Coggins talked with Bose engineers about an idea of reversing the left and right arrays in the design, and they encouraged it.



The installation of a Bose RoomMatch system at Lawton, OK's First Baptist Church marks use of Bose products on a Dante network.

"The system is designed to keep energy off of the side walls yet still project it well into the seating areas on the floor and in the balcony," LaBouff explains. "And the way we've configured the arrays using the RoomMatch asymmetrical array modules, we achieve that with a seamlessness that we couldn't have gotten with any other system or product." The First Baptist Church installation is the first U.S. project to incorporate the new asymmetrical array modules and the first use of Bose products on a Dante network.

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MANILA, PHILIPPINES—Christ's Commission Fellowship (CCF) has become one of the world's largest mega-churches over the last three decades and now has a massive new world headquarters that includes a 10,000-seat chapel covered by a Renkus-Heinz loudspeaker system.

The chapel's main system comprises 36 Renkus-Heinz STLA/9R line array loudspeakers; frontfill is provided by 40 Sygma Series SG81-2R compact 8-inch two-way loudspeakers, with 12 DR18-2R dual 18-inch subwoofers covering low frequency reinforcement. Meanwhile, the 2,000-seat overflow hall is covered by a system of 16 CF101LA-52R compact modular point source line array speakers, with 26 more SG81-2R cabinets covering front fill. A quartet of DR18-2R subs handle the bottom end.

Renkus-Heinz, Inc.
renkus-heinz.com



A Renkus-Heinz STLA/9R line array loudspeaker system covers the 10,000-seat chapel at Christ's Commission Fellowship HQ.



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ACT / STATISTICS	CREW	EQUIPMENT
1 GEORGE STRAIT ONSTAGE SYSTEMS	George Olson (he/cc/se); Josh Kaylor (me); Paul Rogers (pm); Ernie Gonzales, Jason Chamlee (st)	HC: Avid Venue Profile; MC: Avid Venue Profile; HS: L-Acoustics V-Dosc, dV-Dosc, SB-28, Kudo; MS: Clair 12AM; IEM: Sennheiser G2, Shure PSM 1000; HA: L-Acoustics LA8; HARDWIRED MICS: Shure KSM9; Audix; Sennheiser; Beyerdynamic; Radial J48, JDI; Royer Labs; AKG; WIRELESS MICS: Shure UHF-R; FOH EQUIPMENT: Lake LM-44; Controller 6.1 with Rational Acoustics SMAART 7 bridge; L-Acoustics network manager; Black Lion Audio Micro Clock; Plug-Ins: Plugin Alliance Maag EQ; Transient Designer/SPL; Waves Mercury; McDSP; Rane/Serrato; Crane Song Phoenix; MONITOR EQUIPMENT: Black Lion Audio Micro Clock
2 CHER BLACK BOX MUSIC	David Bracey (he); Jon Lewis (cher me); Horst Hartmann (bme); Ben Byford (cc); Ulf Oeckel (se); Simon Farell, Björn Boernecke (techs)	HC: DiGiCo SD7; MC: (2) DiGiCo SD7; HS: L-Acoustics (28) K1, (16) K15B, (66) K2, (16) SB28; MS: L-Acoustics: 2x3 Arcs sidefill, (6) HiQ; IEM: Sennheiser 2000 Series IEM; HA: L-Acoustics LA8; MA: L-Acoustics LA8; HARDWIRED MICS: Sennheiser 901, 902, e904, e905, MKH80, MK4; Audio-Technica ATM450; Shure SM57; Radial SW8, ProD8; WIRELESS MICS: Sennheiser SKM 5200 MKII; FOH EQUIPMENT: DiGiCo SD7 onboard FX/Dynamics; TC Electronic M6000; Yamaha SPX2000; MONITOR EQUIPMENT: DiGiCo SD7 onboard FX/Dynamics; TC Electronic M6000
3 BRUCE SPRINGSTEEN AND THE E STREET BAND SOLOTECH	John Cooper (he); Monty Carlo, Troy Milner (me); John "Boo" Bruey (cc/se); Etienne Lapre (K1se); Klaus Bolender (se), Ray Tittle, Rob Zuchowski (PA/tech); David Brazeau, Mario Leccese (project mgr)	HC: Avid Venue Profile; MC: (2) DiGiCo SD7; HS: L-Acoustics K1, K1-5B, Kara, Kudo, dV-Dosc, SB-28, V-Dosc; MS: Audio Analysts 12 SLP, 15 SLP, 212 SLP; JBL VerTec VT4888; ButtKicker; IEM: Sennheiser SR 2050, EK 2000; HA: L-Acoustics LA-Rak; MA: Crown I-Tech IT12000HD; WIRELESS MICS: Shure UR4D-J5, UR2 with SM58 capsule, UR1; FOH EQUIPMENT: RME MADI bridge; Avid Venue Pack 2.0; Waves plug-ins; Crane Song Phoenix; APB-Dynasonics Mix Switch; Lake LP8D8; Rational Acoustics Smaart; Sound Devices USBPre; PreSonus FireStudio; Lectrosonics TM400 System; Avid Pro Tools HD; MONITOR EQUIPMENT: Waves Sound Grid servers, Plug-Ins; TC Electronic Reverb4000, M2000
4 BILLY JOEL CLAIR	Brian Ruggles (he); Josh Weibel (me); Rich Schoenadel (cc/se); Lan Turner (m tech); Tom Ford, Jon Yochem (tech)	HC: DiGiCo SD5; MC: Avid Venue Profile; HS: Clair i-5, i-5b, i-3, P-2, BT-218, R-4 Series III; MS: Clair CM-22, SRM, ML-18, Cohesion CO8; IEM: Sennheiser 2050; HA: Lab.gruppen; MA: Lab.gruppen; HARDWIRED MICS: Shure Beta 52, SM91, Beta 91, SM57, SM98, KSM32, SMS8, KSM 137; AKG C414; Sennheiser MD-421; Audio-Technica AT4050, AT4054; WIRELESS MICS: Shure UR Series; FOH EQUIPMENT: SSL bundle; MONITOR EQUIPMENT: Avid Venue Pro Pack
5 JOURNEY / STEVE MILLER BAND VER TOUR SOUND / CLEARWING	Jim Yakabuski (he—Journey), Scott Boorey (he—Miller); Josh Swart (me—Journey), Jamie Carter (me—Miller); Greg Mahler (cc/se); Michael "Cochise" Hernandez (M Tech), Colin Harty (tech—Journey); Tom Martinez (tech—Journey); Brett Enzensperger (pm—Miller)	HC: DiGiCo SD5 (Journey); Midas Heritage 3000 (Miller); MC: Avid Venue Profile (Journey); Avid Venue D-Show with sidecar (Miller); HS: (24) Meyer Sound Leo, (28) Lyon, (24) LFC-1100; MS: Meyer Sound JM-1P; IEM: Sennheiser; WIRELESS MICS: Shure UHF-R; FOH EQUIPMENT: Waves Soundgrid Server, MGB with MacBook Pro (Journey); TC Electronic 2290, M4000; Yamaha SPX990; Drawmer; dbx; BSS; Teletronix LA-2A (Miller)
6 MICHAEL JACKSON THE IMMORTAL WORLD TOUR SOLOTECH	Martin Paré (he/cc); Renato Petruzzello (me); Sylvain Lemay (se); Greg Rule (programmer); Marc Depratto (wireless and coms); Alexandre Ginchereau, Hilario Gonzalez (PA tech)	HC: DiGiCo SD7; MC: DiGiCo SD7, SD Rack; HS: Meyer Sound LEO, Mica, UPJ-1P, UPA-2P, UPQ-1P, 700-HP, DF-4P; L-Acoustics SB-28; MS: Meyer Sound MSL-4; IEM: JH Audio JH-16; Sennheiser SR-2050XP IEM; HA: L-Acoustics LA-8; HARDWIRED MICS: AKG C 414; Neumann KM-184; Shure SM57, Beta 98, Beta 91; Sennheiser e-902, 935; WIRELESS MICS: Sennheiser SKM-5200, HSP-4; Shure Beta 98; DPA 4060, 4062, 4099; FOH EQUIPMENT: Waves Sound Grid; TC Electronic System 6000 MKII, 2290, D-Two; AMS RMX16; dbx 120A; Avalon 737-VP; Yamaha SPX990; Eventide H3000SE; Rosendahl Studioteknik Nanosync HD; MONITOR EQUIPMENT: Waves Sound Grid; TC Electronic System 6000 MKII; Rosendahl Studioteknik Nanosync HD
7 BRUNO MARS CLAIR	Derek Brener (be); Lawrence "Filet" Mignogna (bme); Erik Rodstol (me/mtech); Markus Meyer (cc/se); Mike Gamble, Austin Dudley (techs)	HC: DiGiCo SD7 with SD Racks; MC: DiGiCo SD7 with SD and Mini Racks; HS: Clair i-5, BT 218, i-micro; MS: Clair BT 218, BT 118; IEM: Sennheiser SK 2000, AC 3200 combiner; Clair antenna combiner, Helicals; HA: Lab.gruppen PLM 20000Q; MA: Lab.gruppen PLM 20000Q; HARDWIRED MICS: Earthworks KP1, SR30, SR 40, DP30/C; Beyer M88, Opus 88; Shure SM 57, Beta 57a, Beta 91; Sennheiser e 945, e 602, MKH 416; Heil PR 30; Radial JDI; Audio-Technica ATM25; WIRELESS MICS: Sennheiser SK 2000; FOH EQUIPMENT: Waves Mercury; MONITOR EQUIPMENT: Waves Mercury
8 FLORIDA GEORGIA LINE CLAIR	Jared Blumenburg (be); Juan Gomez-Marin (me); Phil Kriz (se); Elliott Wiley (ae); Andrew Puccio (tech)	HC: Avid Venue Profile; MC: DiGiCo SD-10; HS: Clair i5/i-5B, i-3, BT218, P-2; MS: Clair SRM (Nelly); IEM: Shure PSM 1000; Clair Fractal antenna; HA: Lab.gruppen PLM 20000; MA: Crown; HARDWIRED MICS: Shure, Sennheiser, Radial; WIRELESS MICS: Shure; FOH EQUIPMENT: Waves; Antares
9 ROMEO 3GLP	Manny Perez (he/cc/se); Franklin Espinal (be); Javier "Chico" Morales (me); Ken Quinlan (ae); Lance Jessick, Roman Curiel (techs)	HC: Avid Venue; MC: Yamaha PM1D; HS: (18) d&b audiotechnik J series, (16) V series, (8) J Infra, (12) JSub, (6) Q10; MS: L-Acoustic Arcs; IEM: Sennheiser SR2050, G3; Aviom A16; HA: d&b audiotechnik D12, D80; MA: L-Acoustic LA8; HARDWIRED MICS: Shure; Sennheiser; WIRELESS MICS: Shure UHF-R Beta 58; FOH EQUIPMENT: Dolby Lake; d&b audiotechnik R1 System control; Rational Acoustics Smaart 7
10 JAMES TAYLOR CLAIR	David Morgan (be); Rachel Adkins (me); Andy Sottile (se); Chris Fulton (tech)	HC: DiGiCo SD5; MC: Avid Venue Profile; HS: Clair i-3, BT-218 subs, i-5B, FF-2 front fill; MS: Clair 12AM, ML-18; IEM: Shure PSM 1000; HA: Crown; MA: Lab.gruppen; HARDWIRED MICS: Shure SM-98, Beta52, SM57, Beta91a, Beta181, KSM 141SL; Earthworks SR25, DP30/c, SR40, PM40; Radial DI; WIRELESS MICS: Shure R Series; FOH EQUIPMENT: Waves Live; 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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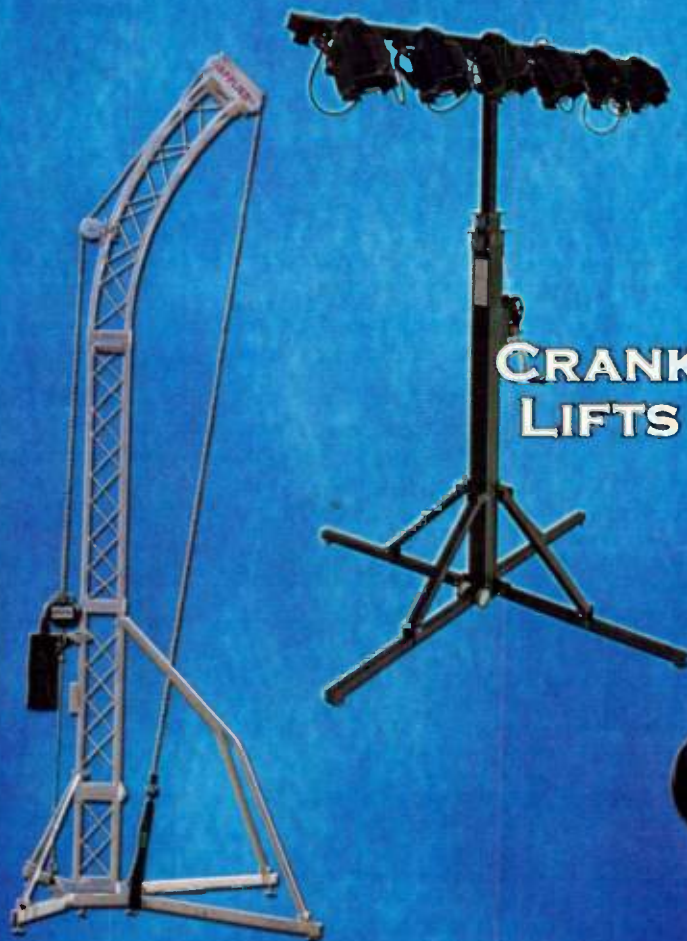
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ACT	SOUND CO	VENUE	CREW	EQUIPMENT
2014 Bonnaroo Music & Arts Festival	CROSSROADS AUDIO Dallas, TX	BONNAROO MANCHESTER FARM Manchester, TN	James Magruder (he), Chris Williams (he), Brandon Bowman (he), Phillip "Ople" Odum (he), Daniel Moore (he), "Moose" Vanlerberghe (me), Billie Larmour (me), Ed Spoto (se), Dave Bell (se), Brian Mace (ae), Logan Hughes (ae), Aubrey Caudill (tech), Casey Orr (tech)	HC: Avid Venue MixRack, Profile, Yamaha LS9-32; MC: Avid Venue MixRack, Profile; HS: Meyer Sound Milo, Mica, M'elodie, Mina, UPQ-1P, UPI-1P, 700-HP, 600-HP; MS: JBL VP7212MDP, VRX915M, SRX712M, Sennheiser G3 IEM; MA: QSC, Crown
Chava Tombosky	TECH WORKS Las Vegas, NV	CHABAD OF SOUTHERN NEVADA AUDITORIUM Las Vegas, NV	Craig Leerman (he), Tom Bourke (me)	HC: Soundcraft Si3; MC: Soundcraft Si3; HS: Renkus-Heinz IC Live rig ICL-R, IC215S-R; MS: PreSonus 328AI
Chuck Wicks/John King at the Firecracker 100	O'NEIL PRO SOUND Pittsburgh, PA	LEARNVILLE SPEEDWAY Sarver, PA	Gary O'Neil (he), Jack Hughes (be), Janis Ferralnolo (se), Jonathan "Strobe" Fleischman (tech)	HC: Allen & Heath GL3300; HS: Grund GA-4041NGS, GT-LPB-36CX; MS: Yamaha SM15HIV; HA: Crown XTI 6002, 4002, 2002; MA: QSC Powerlight 1.6
Flatwater Music Festival	DYNASOUR SOUND AND LIGHT Hastings, NB	PRAIRIE LOFT CENTER Hastings, NB	Doc Ivo (he), Neil Brunkhorst (me), Don Robertson (se), Melanie Hlatt (tech), Heather Wenski (tech), Robby Collins (tech), Tim McNally (tech)	HC: Midas Pro 4; MC: Soundcraft 400B; HS: Wannanosaurus, Triceratops; MS: IVO, FTB-15; HA: Crown Macro-Tech; MA: IVO Quadrolux
Fourplay	DB SOUND OF CHARLOTTE Charlotte, NC	BELK THEATER Charlotte, NC	Kenny Shouse (me), Dave Barker (se), Matt Barker (ae), Jamel Lee (Tech)	HC: Avid Venue SC48; MC: Soundcraft Si Performer 3; HS: VTC EL210, Danley TH115 subs; MS: JBL SRX712m, Sennheiser G3 IEM; HA: QSC; MA: QSC
The Hukilau	GARY BUTLER PRO SOUND SERVICES West Palm Beach, FL	BAHIA MAR HOTEL Fort Lauderdale, FL	Gary Butler (he), Jason Carrier (me), Storm Kreihselhelmer (tech)	HC: Roland VM-C7200; MC: Roland VM-C7100; HS: Electro-Voice T Series; MS: Electro-Voice Eliminator; HA: Mackie; MA: Samson
Jorge Ferreira	ACIR PROFESSIONAL Mays Landing, NJ	RADISSON HOTEL Bensalem, PA	J. Daniel Maggio (he), Mike Neugent (me)	HC: Yamaha M7CL; MC: Yamaha LS9-32; HS: Meyer UPA-1P, ACIR proprietary subs; MS: Sennheiser G2, ACIR proprietary wedges; HA: Yamaha P7000
Little Big Town	RMB AUDIO Raleigh, NC	KOKA BOOTH AMPHITHEATRE Cary, NC	Robert Weddings (me), Roger Dennis (se), Cooper Cannady (tech), Matt Johnson (tech), Wayne Sowder (tech)	HC: Avid Venue Profile; MC: Avid Venue Profile; HS: Martin Audio MLA Compact, DSX, MLA Mini; MS: Martin Audio LE200; HA: Martin Audio; MA: Lab.gruppen
Maceo Parker	LOGIC SYSTEMS St. Louis, MO	RITZ St. Louis, MO	Brian Bird (he), Michael McCuddy (me)	HC: Midas Heritage 2000; MC: Midas Heritage 3000; HS: Nexo Geo S12; MS: Radian Microwedge; HA: Nexo NXAmp 4x4; MA: QSC PL236a
Mountain Jam	AUDIONX Swanton, VT	HUNTER MOUNTAIN RESORT Hunter, NY	Chris LaRocque (he, se), Will Turgeon (me)	HC: Allen & Heath iLive T112, iDR48; MC: Allen & Heath iLive T80, iDR48; HS: RCF HDL20-A, TT052A, dB Technologies DVA S30N; MS: RCF NX-15-SMA, Sub 8004AS, NX M25-A MK II; HA: RCF, dB Technologies
Patriots in the Park	OUTPUT UNLIMITED Alton, IL	COOLIDGE JR HIGH SCHOOL Granite City, IL	Tracy Bodenbach (he), Mike Harper (be), Brian McKinny (me)	HC: Soundcraft GB8; MC: Allen & Heath GL2800; HS: Electro-Voice XLC; MS: Electro-Voice PX1152M, Sennheiser EW300 G3 IEM; HA: Electro-Voice TG7; MA: Crown, QSC, Electro-Voice
Peter Wolf	BOULEVARD PRO Ridgefield Park, NJ	TARRYTOWN MUSIC HALL Tarrytown, NY	Tom O'Shea (he), Tom Dubie (bhe), Larry Sharkey (me), Anthony Cloffi (se)	HC: Yamaha LS9-32; MC: Yamaha CL5; HS: Meyer Sound M2D, 700-HP subs, M1D; MS: L-Acoustics
Riverside Symphonia	SKYLANDS PROFESSIONAL AUDIO LLC Blairstown, NJ	TINICUM PARK POLO FIELD Erwinna, PA	Mark Clifford (he), Marc McCarthy (se), Wayne Rake (ae), James Bellando (ae), Taylor Clifford (tech), Nick Baughman (tech), Tony Bacola (tech), Jamie Amadruto (tech)	HC: Allen & Heath iLive T112, iDR48; MC: Allen & Heath iLive T112, iDR48; HS: EAW KF730, LA400; MS: EAW LA212; HA: QSC PL380; MA: QSC PLX3602
Rockin' Chair	SOUND ON SITE AUDIO, LLC St. Louis, MO	KENT CENTER FOR PERFORMING ARTS St. Louis, MO	Don Kurry (he), Mike Schlosser (me), Jerry Turnbow (se)	HC: Allen & Heath GLD-80; MC: Allen & Heath GLD-80; HS: EAW NT59, NTS22; MS: JBL SRX712M, Audio-Technica IEM, Sennheiser IEM; MA: QSC PLD
Ultra Miami	OFF THE WALL SOUND CO. INC. Miami, FL	WYNWOOD Miami, FL	Daniel Munoz (he), Joe Williams (me), Mike Mastay (ae)	HC: Yamaha PM5D-RH; MC: Yamaha PM5D-RH; HS: JBL VerTec VT-4889, VT-4880; MS: Clair 12AM, Sennheiser G3; HA: Crown I-Tech IT9000HD, IT3500HD; MA: Crown I-Tech IT3500HD

LEGEND: (he) house engineer. (be) band's house engineer. (me) monitor engineer. (bme) band's monitor engineer. (se) systems engineer. (ae) asst. engineer. (tech) technician. HC: house console. MC: monitor console. HS: house speakers. MS: monitor speakers. HA: house amplifiers. MA: monitor amplifiers.

To be included in Soundcheck, fax, mail or email a current, typed list of acts, venues, personnel and equipment each following the above format. E-mail is strongly preferred. E-mail to kwelch@nbmedia.com, fax: (212) 378-0470, or send to: Soundcheck, Pro Sound News, 28 E 28th Street, 12th Floor, New York, NY 10016.

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Crutchfield Plans Further Pro Audio Inroads

BY JOSEPH PALENCHAR, *TWICE*

CHARLOTTESVILLE, VA—Consumer electronics retailer/mail order company Crutchfield plans to further expand its assortment of pro audio products, which it began offering in February, merchandising executive VP Rick Souder told *PSN* sister magazine, *TWICE*.

"We launched the business in February after five months of preparation," he said. "During that time, we lined up a strong assortment of the top brands, created a large amount of content, and trained a

large group of pro audio sales and tech specialists," he said.

Crutchfield is "pleased at the support we have received from a large number of vendors when they hear about our plans," Souder continued.

To start, the retailer has focused on mid to higher-end brands, but "the brands we add in the near future will cover the full range of price points," he said.

"We are in the final stages of adding additional brands and are gaining good traction with our sales," he added.

Crutchfield currently offers pro

audio products from brands such as AKG, Crown, JBL, Cerwin Vega, dbx, Focal, Focusrite, Furman, Gator, K&M Stands, KRK, Lexicon, Mackie, PreSonus, Rapco-Horizon, Sennheiser, Shure, Tascam, Whirlwind, Yamaha and Zoom.

Products include live sound and recording equipment as well as microphones. Live sound equipment include PA and commercial speakers, live sound mixers, amplifiers, and monitors. Recording equipment includes studio monitors and mixers, computer recording equipment, pro audio headphones, and home recording bundles.

The company currently offers almost 600 SKUs available online and through phone advisers. A fraction of those SKUs appear in the company's catalog. The company's two brick-and-mortar stores don't yet offer the products.

Souder called pro audio "a natural extension of the car and home audio and video business we have been doing for 40 years," and he pointed out that many people on the Crutchfield staff are active musicians or are active with live sound in the area. "We want to capitalize on their passion for live sound and home recording to help our customers find the right solutions for their needs," he said.

Cloud Storage

(continued from page 1)

his opening address about storage trends in the media and entertainment (M&E) industry. Coughlin noted that direct-attached storage at individual workstations continues to grow steadily.

One factor driving collaboration is storage interfaces, which are becoming increasingly standardized and offering faster and faster throughput. PCIe interfaces in general are driving the industry, he noted: Thunderbolt, for instance, is at 20 Gb per second.

That said, local physical storage

Kwok noted that there are several cloud-based collaborative workflows being offered, especially for video editing, including Adobe Anywhere, Avid Everywhere, MediaSilo, Aframe and Forbidden Technologies. "Avid's more about breadth," she said. "It includes not only editing but also monetization and distribution, versus Adobe, which is more about depth. [Adobe is] more specialized in video editing specifically rather than encompassing the entire workflow."

Moderator Philip Hodgetts of Intelligent Assistance asked his panel how a small post house can best connect to the cloud in order to make virtual workflows practical. "You need [a] 10 gig [Ethernet link]

those latency ranges is what really matters."

A panel of Hollywood post house technologists considered the current state of storage. "You try and move data as little as possible," said Brandon Bussinger of Working Order. But productions are going worldwide, chasing tax incentives, he noted, and they typically don't have an IT team. "Every file we create does not create one workflow problem; it creates about 10," he said.

"We need help doing the things that humans are really bad at—remembering and keeping track of details over time," said Josh Rizzo of Hula Post. The greatest challenge is the lack of a metadata standard, he believes. "We are inheriting other people's tech. The future is grim if there are not some standards for the products offered to the entertainment industry specifically."

There is some hope on the horizon. As noted by an audience member, SMPTE is working on developing a Core Metadata Standard currently, based on a subset of the EBUCore data set.

What storage is used in which segment of the workflow, asked another audience member. "We're just getting our feet wet with object storage," said Brian Kenworthy of Deluxe, "to virtualize the workflow." Ingest and capture is still on SAN. "Anything in-between is still done on NAS."

According to John Stevens of MTI, "We've been testing object-based storage, primarily Ceph. It's definitely on the roadmap; it's driven by price. That's the big promise."

"We've actually created a service out of digital archive preservation," Kenworthy reported. "Storage is our third top cost in our entire company. We're always looking for ways to decrease that."

"When you talk about the cloud these days, it's not only about the Internet of Things, but the Internet of Everything."

Elaine Kwok

media is starting to be supplemented or replaced by cloud-based services, which are also enabling collaborative workflows. "Content is moving in the cloud; this potentially has a very significant impact on the media and entertainment space, just as it does in traditional enterprise environments," said Coughlin.

"When you talk about the cloud these days, it's not only about the Internet of Things," said Elaine Kwok of Promise Technology, referring to the phrase coined by Kevin Ashton of MIT's Auto ID Center in 1999, "but the Internet of Everything. Everyone seems to want to be 'cloudy.' They start using words like 'anywhere' or 'everywhere.' The question is, where is it?"

and you need some kind of GPU accelerator, like Nvidia Grid, to properly use a cloud-based workflow. Otherwise you're shipping files back and forth," said Shane Archiquette of Hitachi Data Systems. "You don't want that running voice and other internet traffic; it should be fairly dedicated."

Archiquette cautioned that the efficacy of cloud-based workflows can be geographically dependent, as latencies can vary tremendously depending on proximity to the data centers. "Within metro L.A., it's zero to 7 milliseconds," he reported. "Once you go outside [the downtown area], you start to hit 13 ms. In Phoenix, you hit 26 ms. Understanding where media workflows can work within

Anderton

(continued from page 30)

VST3 is a forward-looking protocol that is even intended to accommodate changes in the MIDI spec, should that happen.

Potentially, VST3 does offer several advantages: easy disconnection from the host when silent; sample-accurate automation; plug-in categorization and hierarchies; support for multiple MIDI output ports and generally more flexible I/O; better parameter organization (helpful with automation menus); and overall more efficient operation. But I said "potentially" because the host has to decide which aspects of the VST3 spec to implement, so not all features are available on all hosts. However, there's a sense that a transition to VST3 is inevitable; while there are some tradeoffs for developers, ultimately most manufacturers are putting their development efforts into VST3.

After a period of change, it looks like the plug-in world is stabilizing to accommodate new realities in computing. Then again, who knows what tomorrow will bring....

Author/musician Craig Anderton has given seminars on technology and the arts in 38 states, 10 countries, and in three languages.

THERE'S MORE ▶ Read Steinberg's overview of the VST3 spec at <http://www.steinberg.net/en/company/technologies/vst3.html>



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Matthew Pennington

Galaxy Audio has appointed **Matthew Pennington** to its Inside Sales and Support team, where he will be involved in sales support, communication and account management with an emphasis on Independent Dealer Growth, as well as provide dealer resources through innovative campaigns and initiatives. He brings more than 20 years of experience in marketing and business, where for the last 13 years he served as an advisor, sales and marketing leader in a financial company and has an extensive background in business services. Pennington holds Master of Business Administration degree from The Wichita State University.



Ralf Schimmel

German audio and video broadcast solutions manufacturer Lawo has named **Ralf Schimmel** director of Global Sales. In this new position, Schimmel will lead strategic orientation and coordination of worldwide sales activities for all products, systems and solutions from the Lawo Group of companies. Prior to joining Lawo, Schimmel was chairman of the board at a system integration and a service company. His appointment coincides with the expansion of Lawo's international activities, as well as an expansion of the company's audio, video, software, and IP networking technology product portfolio.



Dan Moore

Tracktion Software Corporation (TSC) recently tapped **Dan Moore** for a business development role involving its Tracktion Music Production Software brand. Moore spent several years with Microsoft Corporation in strategic business and technology development programs and was involved with the high-performance computing vendor, GreenButton, prior to its acquisition by Microsoft. Before all that, Moore had a long association with Tracktion's former owner, Loud Technologies.

TC Group North America has named **Michael Pearce** regional sales manager, residential for its Tannoy, Lab.gruppen, Lake and ReVox



Michael Pearce

brands in the North American residential market. In his new position, Pearce will work to increase sales, brand awareness and demand for ReVox products in the region. Other duties include providing technical support and training to the sales network, and assisting with system design for HiFi, fully integrated theaters and multi-room systems. Prior to joining TC Group Americas, Pearce was national sales manager for Iogear, and spent time at Cerwin Vega, I/O Magic Corporation and Yamaha Electronics.



Michael Doucot

Bosch Security Systems, Inc., Communications Systems Division has named **Michael Doucot** to product marketing manager, Electro-Voice Portable Sound, North America. Doucot moves into this marketing role after 10 years in customer service and sales with the company, most recently as a regional sales manager for the central U.S. region. He will continue to be based at EV HQ in Burnsville, MN. Doucot's new responsibilities include the development and implementation of marketing strategies for EV retail products, including portable loudspeakers, microphones, and electronics.

Software developer Gobbler has opened an office in San Francisco, bringing along four new hires—**Bobby Lombardi, Bob Brown, Andrew Hall and Brian Chrisman**—specializing in the media software industry and cloud technology, who together are preparing to launch their new product, G2. Lombardi, Gobbler's new senior vice president of Product, comes from director of Product Design and Product Management positions at Avid Technolo-



From top left, clockwise: Brian Christman, Andy Hall, Bob Brown, Bobby Lombardi

60SECONDS



Erik Tarkiainen
Harman Professional

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

A: I'm the VP of Global Marketing for Harman Professional, which means that I oversee worldwide marketing, including product management and marketing communications, for the Harman Professional business units. In the audio world, Harman Professional includes legendary brands such as JBL Professional, AKG, Crown, Soundcraft, Lexicon and dbx. In addition, we've been expanding into lighting, video and controllers, as evident from our acquisition of Martin Lighting in 2013, and just recently, our acquisition of AMX.

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

A: I'm a musician and gearhead at heart, so I'm very comfortable with the products, and can relate to the customer community. On the marketing side, I have experience leading marketing for consumer, professional and online businesses. That combination of digital and traditional marketing expertise allows me to assist customers who are increasingly looking for information online and offline when making a purchase decision.

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

A: Harman has great brands, great products and a great culture, and I'm really looking forward to sharing our stories and content through online and social channels. On the product side, I'm excited about the possibilities for interoperability and integration across our products. And finally, I want to drive education initiatives, to make sure that our users are empowered to fully utilize our products and systems.

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

A: Short term, I want to connect with as many employees, customers and partners as possible to listen and learn what we're doing right, and what we could be doing better. Those discussions will help me set the long term goals.

Q: What is the greatest challenge that you face?

A: Prioritizing the opportunities. We have a great portfolio of products and brands. As such, we have practically limitless opportunities to expand internationally, vertically and even into new segments such as video, lighting and controllers. We have the talent and resources to execute, so it's really all about making the right choices in the right order.

gy. Gobbler's new VP of Engineering, **Bob Brown**, formerly held senior-level software engineering positions at Avid Technology and Yahoo. **Andrew Hall**, now a software architect, was on the engineering team at Avid Technology, as well as Goldman Sachs, and **Brian Chrisman** joins Gobbler as a software architect following experience at Apple, Adobe and Avid.

Eastern Acoustics Works (EAW) has hired **Gino Pellicano, Dave Salmon, Peter Maguire, and Jonas Domkus** for the company's customer support infrastructure. Pellicano and Salmon join the EAW Application Support Group (ASG) as application support specialist and application support coordinator respectively. Maguire has been named customer support manager while Domkus takes on the role of US field application engineer. Prior to joining EAW, Pellicano worked at SIA Acoustics, Technomedia Solutions and Acoustic Dimensions. Salmon comes to EAW from his work at Convergent Technology Design Group, Harris Miller Miller & Hanson Inc., and Polk Audio. Maguire held numerous roles at Bose,



Left to Right: Gino Pellicano, Peter Maguire, Dave Salmon, [inset] Jonas Domkus

including service technical advisor, technical services manager and service operations manager. Domkus is tasked with being the primary technical point of contact between the company, its customers, sales and engineering.



Steve Farmer

Wohler Technologies has announced the appointment of **Steve Farmer** as the company's director of Engineering. Farmer's experience in engineering most recently includes Drake Electronic, Clear-Com and his own companies, Claratech Limited and DSMB Technology.

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40 Years And Counting

MARK WENTLING, PRESIDENT
CEO, ASHLY AUDIO

BY KELLEIGH WELCH

In the past four decades, the Webster, NY-based audio innovator Ashly Audio has introduced an array of customized consoles, signal processors and power amplifiers to the market, keeping the company's focus towards adapting live sound to the digital world. With such an emphasis on innovation, Ashly Audio knew it needed a leader with an extensive research and development background within the company—which led to the promotion of its R&D manager, Mark Wentling, to president CEO in 2011.

While Wentling has only been with the company since 2008, he cites his experiences in the audio industry as an export distributor and engineer to his success since coming on as CEO.

"One of the best things about this industry is that it's relatively small," he explained. "If you stay in it long enough, you get to know most of the players. My export sales distribution experience gave me a broad experience with suppliers, and customers worldwide. My engineering design background helps me to better understand the manufacturing side."

Growing up, Wentling always had interests in sound and lighting, whether he was performing in a rock band or working in A/V, and many times he would build sound equip-

ment for QSC, Rane, ProCo Sound, Galaxy Audio, Symetrix, PreSonus and many others," he said. "E & E was a huge learning experience in that I was able to meet all kinds of industry people and I got to see a lot of different companies on both the supply- and customer sides."

Wentling's career took him all over the US before he decided to move back to his hometown in 2003, taking a job as director of R&D at Yorkville Sound's ART division. "I also knew Ashly Audio from handling their export distribution for many years, and Ashly approached me to manage their R&D team. The company and its factory were about a mile from my home, so I made the move in 2008, and was promoted to President CEO in 2011," Wentling said.

"Pro audio companies tend to be staffed with well-experienced audio people, but they must now learn an entirely new field of technology, that being IT networking technology. This is not only in the design and development phase, but it's a huge demand on the customer support and training side."

Mark Wentling

ment from parts he took from used gear. This interest led him to pursue a career in audio, earning an ASET and BSEE, and joining Rochester, NY's MXR Innovations as a project engineer. From there, he moved around the industry, working for companies such as Music Man, Ernie Ball and Fender.

At the suggestion of his boss, Tom Walker, Wentling earned his MBA from Pepperdine University and became a partner at E & E Exports, an export distribution firm representing pro-audio lines and some MI lines.

"We set up initial export distribu-

tion for QSC, Rane, ProCo Sound, Galaxy Audio, Symetrix, PreSonus and many others," he said. "E & E was a huge learning experience in that I was able to meet all kinds of industry people and I got to see a lot of different companies on both the supply- and customer sides."

Coming into the new position, Wentling found that one of the biggest challenges was adapting to pro-audio's increasing reliance on IT technology to remotely monitor and control sound systems. "Pro audio companies tend to be staffed with well-experienced audio people, but they must now learn an entirely new field of technology—IT networking technology," said Wentling. "This is not only in the design and development phase, but it's a huge demand on the customer support and training side."

Established in 1974, Ashly Audio



After joining Ashly Audio in 2008, Mark Wentling was named president CEO in 2011.

started out designing and manufacturing analog gear before moving into the DSP algorithms used today. While the company still offers some hand-made, US-built analog mixers, the biggest growth the company has seen is with its Class-D amplification.

"Our nX Series amplifiers have received accolades for sonic performance," said Wentling. "These multi-channel amplifiers range in power up to 12,000 Watts and can be set to simultaneously drive both Low-Z and Constant-Voltage systems. There are

home continues to expand. "We're seeing growth in North America, in large part due to our highly dedicated sales team, and our current new product offering," he said.

In terms of competition, Wentling said they try to focus more on the customer instead of competing companies, and provide strong customer services to its patrons.

"Ashly is a great family team," said Wentling. "Many of the people here have been working for the company for 20- to 30-plus years. For me, I've always worked in small companies, even when Fender started over after CBS sold out back in 1985, so I'm very comfortable. I focus on helping others with daily problem solving, getting things done and future planning. We'll continue growing our range of what we call Net-Workable audio processors and power amplifiers, working towards providing our customers with complete systems from input to output."

Ashly Audio marks its fortieth anniversary this year, a moment that celebrates the reputation the company has created, along with its commitment to growing in the future.

"Because Ashly Audio is still relatively small, we have a great opportunity to grow just by doing what's right by our customers. This is our fortieth year, and we maintain a reputation for backing everything we sell. Couple that with a great team of creative engineers, new products in the pipeline...the future looks bright!"

Ashly Audio
ashly.com

Sound Emporium

(continued from page 26)

studio. He's had it since 2002 and it served him really well. Then about a year and a half ago, he reached out to me to see if I wanted to broker it."

Having worked the Nashville studio scene for nearly 20 years, Dennis was passionate about keeping Big Kenny's Legacy Plus in town. "I don't know whether they even remember this, but I reached out to Juanita and Sean, saying, 'You need an API.' And when Big Kenny reached back out to me, the timing finally was right.

"I had some potential out-of-town buyers, but my goal was to keep this desk down the street and in Nashville. And when it landed at my friend's studio, I was so happy. I've seen too many great consoles leave town already; it's great for those that get them, but, in this case, it was a win-win: Kenny got what he wanted, Sound Emporium got what they wanted, and there's another API up-and-running in Nashville."

For Shannon, finding the API he



Gathered around Sound Emporium's new API Legacy Plus are (l-r): Juanita Copeland, General Manager; Derek Parnell, Assistant Engineer; Sean Shannon, Studio Technician; Mike Stankiewicz, Lead Assistant Engineer; Owen Lewis, Assistant Engineer; Amanda Miller, Assistant Engineer; Matt Lombardi, Assistant Engineer; Matt Andrews, Engineer Consultant; Chad Shinn, CEO/Owner.

needed just minutes from the studio was ideal. "It was literally five minutes from the studio, so I could look at it, do some tests, and make sure that the overall footprint in the room worked for us. I did the decommissioning of the console myself, so I knew where everything came from, and when I put it back together at our place, it all made sense to me. I didn't have to decode things, buzz-

out the ends of cables, and so on. Also, the Legacy Plus has an out-board patchbay, so the length of the cabling determined where we were going to position it. That's something to consider when decommissioning and re-installing a console: label and measure everything."

In many ways, the three decade-long analog-to-digital movement in Nashville has come to a conclusion;

it's one where large-format analog consoles have found a comfortable place in the overall landscape, no longer vanishing at such an astonishing, arguably heartbreaking rate. Regardless of mixing techniques and the hard-to-define, aesthetic needs of "vibe," an analog console is still the best solution for ensemble-based live instrument tracking.

"From my vantage point, people have figured it out: They want a world-class cue system and zero latency," explains Dennis. "What's unique about Nashville is that everything is recorded off the floor, often with six or seven musicians, and the quickest way to make that happen, cue-wise, is with an analog console. There really is no substitute. We're still building world-class home studios in Nashville; we actually just built one for Lee Brice. But is he going to track there? No. We're also seeing younger people who have 'grown' their home studios with the addition of analog consoles for these same reasons. They're not necessarily mixing through them, but tracking, yes."

Sound Emporium
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advertiserINDEX

ADVERTISER	PAGE	ADVERTISER	PAGE
Acoustic First	8	Independent Audio	56
API	23	JBL	7
Applied Electronics	1,57	Kalman Creations	55
Argosy Consoles	6	Lectrosonics	10
Audio-Technica	35	Mackie	32-33
Audix	47	Martin Audio	53
B & H	67	Meyer Sound	68
BOSE	27	Neutrik USA	38
Cadac	15	PreSonus	19
Clear-Com	16	Radial Engineering	49
D&B Audiotechnik	54	Riedel Communications	50
DBX	29	Solid State Logic	21
DPA Microphones	36	Sweetwater	11
Ebtech	26	TC Group	17
Eventide	9,34	That Corp.	22
Full Compass	18	Vintage King	16,45,52
Full Compass/Shure	31	Waves	51
Galaxy Audio	40	Yamaha Commercial Audio	2,3
GC Pro	13	Yorkville	59
Genelec	4		

companyINDEX

The following companies are mentioned in this edition of PRO SOUND NEWS. Use this index to reference your copy.

Acoustic Dimensions...62; A-Designs...52; Adamson...12; Adobe...60, 62; Aframe...60; AKG...22, 48, 50, 60, 62; AKM...20; Allen & Heath...12, 14; AMX...45; API...22, 24, 26, 28, 48, 52, 65; Apogee...1, 20; Apple...5, 20, 30, 37, 40, 44, 62, 66; Arthur Holm Dynamic...45; Ashly Audio...46, 64; ATK Audiotech...40; Audinate...5, 12, 37, 38, 44; Audio-Technica...5, 45; Audix...12; Aurora...45; Avalon...22, 48, 50; Aviom...22; Avid...22, 30, 40, 48, 50, 52, 60, 62; Barco...45; BenQ America Corp...45; Bexel...37; Biamp...44, 45; Black Box...45; Blackmagic Design...45; Bosche...62; Bose...5, 12, 54; Boulder...52; Bricasti...28; CAD Audio...12; Cadac...12; Calrec Audio...37; Casio...45; Cerwin-Vega...46, 50, 62; Cirrus Logic...20; Claratech Limited...62; Clear-Com...12, 14, 37, 44, 45, 62; Colby...30; Convergent Technology Design Group...62; Core Brands...45; Crane Song...1, 20; Crest Audio...12; Crestron...45; Crown...12, 60, 62; d&b audiotechnik...1, 46, 47, 50, 52; dbx...60, 62; DiGiCo...12, 22, 40, 52; DPA Microphones...14, 28, 52; Drake Electronic...62; Drawmer...22; DSMB Technology...62; D-Tools...45; EAW...44, 62; Electro-Voice...12, 22, 62; Epsom...45; ESP/ SurgeX...45; Fender...30, 64; Focal...60; Focusrite...22, 60; Forbidden Technologies...60; Forsell Technologies...52; Furman...60; Galaxy Audio...62; Gator...60; Genelec...22; Gobbler...62; Harman Pro Group...62; Harris Miller Miller & Hanson...62; Harrison...24; Hitachi...60; Inward Connections...52; I/O Magic...62; ISP Technologies...22; JBL...12, 47, 50, 62; JoeCo...14; K-Array...44; K&M...60; Kramer...45; KRK...60; L-Acoustics...46, 47; Lab.gruppen...44, 45, 52; Lake...44; Lawo...37, 62; Lewitt...22; Lexicon...46, 60, 62; LG Electronics...45; Listen Technologies...44, 45; Loud Technologies...62; Lynx Studio Technology...1, 20; Mackie...60; Martin Audio...45; Martin Lighting...62; MediaSilo...60; Metric Halo...1, 20; Meyer Sound Labs...18, 44, 46, 47; Microsoft...5, 20, 30, 62; Midas...22; Middle Atlantic Products...45; Music Man...64; Neumann...28, 48, 50, 52; Neve...22, 26; One Systems...12; Peerless-AV...45; Polk Audio...62; PreSonus...5, 30, 60; Prism Sound...28; QSC...46; Rane Corporation...45; Rapco-Horizon...60; Renkus-Heinz...54; Riedel...38; Royer...30, 52; Schoeps...28, 52; Sennheiser...5, 37, 40, 48, 50, 52, 60; Shadow Hills...28; Shure...12, 22, 30, 44, 45, 48, 50, 52, 60; SIA Acoustics...62; SiliconCore Technology...45; SLS...50; Sonnet Technologies...40; Sonnox...22; Sony...22, 45; Soundcraft...52, 62; SSL...22, 26, 42; Steinberg...30, 36, 40, 60; SVSi...45; Sweetwater...1, 16; Symetrix...45; Tascam...60; TC Group...62; Technomedia Solutions...62; Tekvox...45; Telecaster...30; Telos...38; THAT...20; Traktion...62; Trident...24, 26; Tube Tech...28; Ultimate Ears...48, 50; Universal Audio...28; Vaddio...45; Video Devices...45; Video Furniture International...45; Vintage King...28; Visix...45; Vue Audiotechnik...12; Walters-Stork Design Group...5; Waves...12, 22, 37, 40, 48, 50; Whirlwind...60; Wohler Technologies...62; WorkAudio...5; WOW Vision...45; Yamaha...36, 37, 38, 45, 60, 62; Yorkville Sound...64; Zoom...60

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Sweet Emotion

BY JACQUES SONYIEUX

Tim Showalter, the principal songwriter and musician behind Strand of Oaks, puts it all out on the table on his latest album, *Heal*—a treasure trove of cathartic emotion, all expressed through an delicious stew of vintage synthesizers and heavy guitars, with some ingredients courtesy of J Mascis (Dinosaur Jr.). In preparation for the album, Showalter claims he wrote 30 songs in three weeks as part of an all-out catharsis. In our conversation, he reveals how his personal struggles and unregimented approach to recording played an important role in helping him create a more expressive and authentic album.

ON GETTING THE RIGHT RECIPE:

For me, it felt like a coming of age in terms of how to fully realize a record. When I started making records, I didn't really know what I was doing. I knew how to write songs and record them, but this was the first time that I had the confidence to create the music that I always wanted to make. I just wasn't sure how to do it in the past because I had such limited knowledge—it took me three records to get the recipe right. It's like I want to make this awesome chili, but my first tries at it weren't exactly what I wanted. In the same way, I love my first few records, but this one had exactly the sound and style I wanted. There is such a big difference between wanting something and actually achieving it. And when it comes

to a record, this is the first time I've been able to achieve it.

ON MAKING BEAUTY OUT OF CHAOS:

My head was in such a manic state of disarray and the rest of my life was in upheaval, but all this translated into perfect focus when it came to making the record. I really surprised me, because writing these songs was not a labor-intensive process. For example, I think I wrote three of the songs in one day, and not just lyrics and chords. I almost demoed them to completion. The writing process came so easily because I freed myself of any rules, any genre or sound limitations. I refer to it as my own personal mixtape, like the kind I used to make when I



DUSOIN CORREIN

Tim Showalter rebuilt the Strand of Oaks demos he recorded in Apple Logic to create the final tracks on *Heal*.

was a kid—but I wrote all the songs. I put in a super loud guitar with a punk sound, then a synthesizer. There were no rules on this record and it was 'anything goes.'

ON BUILDING DEMOS:

On my previous records, before I started using Logic, I had no way of recording my own songs. I would just remember each of them as I had written them on the guitar. I would have the entire arrangement in my head, but it wouldn't be until I got into the studio before I could realize this further. For this record, I got Logic, a simple MIDI controller, a basic condenser mic and a guitar DI. Once I started demoing, it felt so amazing to be programming drum parts, synthesizer parts and layering all these songs. This made the entire recording process very quick, because my Logic files then formed the skeleton of every song. When I got to the studio, we just removed and replaced tracks where needed, so every song I recorded was built from the original demo.

ON LOSING THE 'SWITCH':

When you switch from doing demos to going into the studio, you lose some of the initial innocence and energy that you had at the moment of creation. We never did that—so there was never that mark of 'now it's studio time.' It was a smooth transition and I would say that about 30 percent of the record is the 'demo' material that we kept. For example, the main guitar solo on "Mirage Year" is what I recorded using a DI into Logic at home. When we got into the studio, we just re-amped the signal through a ton of pedals and through two huge old HiWatt amplifiers. That solo means so much to me because it was the first take in my bedroom—fingers bleeding, just digging into the guitar. I think I am going to make records

like that from now on. It saves so much time, and it is like deconstructing a demo and building it back up.

ON PRODUCING AND MIXING:

Only Ben [Vehorn, of Tangerine Sound Studios in Akron, OH] understands what's in my head. I will tell him I want the synthesizers to sound like two angels talking together in the cosmos, one is pink, and the other is blue. He's like, "OK, I understand. I will just add a bit of compression and maybe turn up the plate reverb." He's able to translate everything that I am doing. When we were finished recording though, Ben and I made the correct decision to not mix it ourselves; we had to step away. John Congleton, who is one of my heroes in the recording world, ended up mixing it and we gave him plenty of leeway. He made the drums sound much better and the guitars sound bigger.

ON RECORDING WITH J MASCIS:

I didn't know that JM was going to be on the record. It was one of those things that just happened. I have always been amazed by JM and his tone—it cuts like a dagger stabbing through the listening wall and stands apart in the mix so well. I have always held his tone in high regard and wondered how I could do that myself. One way I was able to do this in my own playing was by removing my dependency on reverb and delay. These tools are so easy to use and they make you think you sound better—but in reality, you are just hiding things. We ended up removing about 90 percent of the reverb on the record, so it is very dry; I think this is what helped the mixing process so much.

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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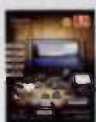
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