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NEWS

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June 2014



TREL BROCK

FCC R&O Puts Squeeze On Pro Audio RF

BY STEVE HARVEY

Wireless audio equipment operators and coordinators could face an increasingly tougher time finding usable frequency spectrum over the next three years as a result of a vote by the Federal Communications Commission on May 15. The Report and Order (R&O) set-

ting out the rules for the FCC's Broadcast Television Spectrum Incentive Auction essentially forces wireless microphone, IEM and comms operators out of the 600 MHz UHF band and also snatches away the 12 MHz of spectrum—two TV channels—currently set aside for their exclusive use.

The R&O recognizes the
(continued on page 20)

Shure Thing

Shure president and CEO Sandy LaMantia (right) and director of Global Brand Management Mark Brunner reveal how Shure doubled down on innovation during the recession and emerged better equipped to lead the industry.



AUDIO AVENGERS—Marvel's *Avengers S.T.A.T.I.O.N.*, a 10,000-square-foot "immersive experience" featuring Iron Man, Captain America and other superheroes opens this month in New York City's Times Square. Mark Edward Lewis, audio post/visual effects supervisor (left) and Frank Serafine, senior sound designer, used PreSonus Eris E5, E8 and Sceptre S6 studio monitors and Temblor T10 subs in 50 audio zones throughout the over-the-top installation. For more, see page 42.

AoIP, AES67 and Interoperability

BY STEVE HARVEY

Audio-over-IP networking systems have largely been unable

to play together nicely—until now. In September 2013, the Audio Engineering Society published AES67, a standard for high-performance

streaming over audio-over-IP interoperability, which has already been implemented by Telos Alliance's Axia division and ALC NetworX, the organization behind RAVENNA.

"We had this 10 years ago with VOIP with the telephone guys and the network guys," observed Roger Charlesworth, executive director of the DTV Audio Group, addressing that potential culture clash during his organization's annual NAB meeting. "They both had to realize they served the

organization—but it was a big management problem."

According to Felix Krückels, business development director, Lawo, "I'm pretty sure an audio engineer won't be an IT guy in the future. It's the same for the IT guy; he won't be an audio engineer." Offering Lawo's commentary equipment implementation at the 2014 FIFA World Cup Brazil as an example, Krückels noted that once the network is configured, the audio engineer's

(continued on page 34)

Power To The People

After seeing its flagship PLM20000Q deployed as an installation amplifier, Lab.gruppen has used the core technologies to develop the installation specific D Series (the 200.4 model shown below). Up to 5000 W x 4 channel versions are available, in either a Lake/Dante configuration or in an AVB equipped Tesira variant developed in conjunction with Biamp Systems.



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Shure: Evolving, Expanding, Leading

BY FRANK WELLS

At microphone maker Shure Inc., business in general is “considerably up from last year,” says president and CEO Sandy LaMantia: “Without hesitation, I can tell you we’re financially stable, have no debt and are doing very well.” Additionally, over the past four years, “the amount of sales coming from new products has doubled,” he reports. Director Of Global Brand Management Mark Brunner says that Shure’s growth is also not based on any single region of the world: “This is really a result of concerted investments that we’ve made in infrastruc-

ture, sales and marketing, distribution, and people developing the market.”

While known as a hardware company, a sign of the times is that LaMantia reports that software is a growing area of focus for Shure. “Not only software that’s embedded in product,” he explains, “but software used to control products and to control product networks. That’s the area in product development that’s just exploding right now.” Primarily related to the company’s wireless products, including microphones, conferencing and personal monitor systems, LaMantia says that “We’re introducing more and more products that talk to each other, and we’re hoping this trend grows in the industry.”

Audio networking is a related area of focus as well, says Brunner. “We’ve been working quite hard on the AVB Alliance and incorporating Dante into a lot of products, and we’ve been happy to see that a lot of the other

pro audio companies have adopted the Dante networking standards.”

With digital domain products, software also means DSP, as in digital wireless receivers. “Right now, that’s where we’re focusing most of our DSP work—on the receiver side—although it’s going to be everywhere at some point,” LaMantia elaborates. “I think the trend toward more and more digital products is making it easier for us to implement different algorithms. So talking of trends, certainly the trend towards more digital products and more embedded DSP is on fire right now.” Brunner adds that Shure’s heritage in transducer design gives the company an edge in knowing where to apply DSP algorithms to enhance microphone performance. “We see opportunity in products that are designed for speech reinforcement,” says Brunner, “more so than in professional audio or field operations where skilled operators are in



Shure director of Global Brand Management Mark Brunner (left) and president and CEO Sandy LaMantia.

place.”

Shure is adding new talent, according to LaMantia: “I can tell you we’re not replacing people, that’s for sure, because nobody ever leaves! We’re expanding. We’re expanding almost everywhere in the company, with the emphasis on product development.” That expansion didn’t slow

(continued on page 16)

briefs

Biamp Acquires Dev-Audio

BEAVERTON, OR—Biamp Systems (biamp.com) has acquired Dev-Audio, a developer of advanced microphone processing technologies, including its Microcone Recorder for conferencing. Iain McCowan, founder and Managing Director of Dev-Audio, has extensive experience in microphone array technology and will join Biamp as a DSP engineer.

AFMG Opens U.S. Office

MINNEAPOLIS, MN—AFMG has opened AFMG (afmg.eu) Services North America, LLC., its first U.S. based office, to cover the North American market. Overseen by Bruce C. Olson, the AFMG NA team includes Charlie Hughes and Ana Jaramillo, who will provide software training for AFMG’s acoustic simulation and measurement programs EASE, EASERA, and SysTune. AFMG has already been operating with a professional support team for EASE.

Radial Takes On Jensen Iso-Max

VANCOUVER, CANADA—Radial Engineering Ltd. (radialeng.com) has taken on the global sales, marketing and distribution of Jensen’s Iso-Max isolators, which provide ground isolation and noise abatement for audio and video in broadcast, home theater and commercial AV integration.



Bose Looks Back, Forward

BY CLIVE YOUNG

FRAMINGHAM, MA—Bose Corporation president/CEO Bob Maresca strode into the conference room, shook hands with assembled members of the pro audio press who’d travelled to the company’s headquarters in Framingham, MA, and got down to business. “We’re a privately held company and a little secretive,” he said by way of introduction. “Because we’re privately held, there’s not a lot of information on us.”

But over the next hour, Maresca became decidedly unsecretive, as he candidly discussed development of the company’s consumer and pro audio products; revealed the 20-year, \$90 million R&D project that ultimately bit the dust without going to market; and divulged where he sees the company heading as it faces both the changing audio technology landscape and the passing of its namesake founder, Dr. Amar Bose.

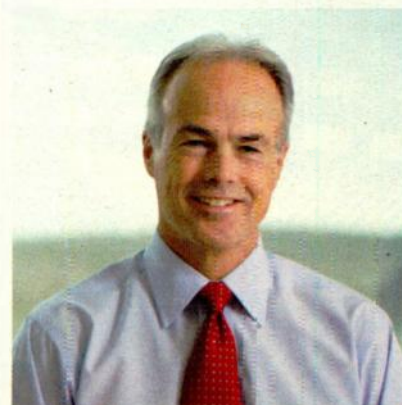
The presence of Dr. Bose, who died in July 2013 at the age of 83, is clearly still felt within the halls of Bose Corp. While the company has had presidents like Maresca since its founding in 1964, Dr. Bose was always its chairman and technical director, building an audio powerhouse across the ensuing decades that now sits comfortably on *Forbes’* list of America’s largest private companies, bringing in revenues of \$3.3 billion

annually and harboring a workforce of approximately 10,500 worldwide.

Being fiercely independent was key to Bose’s corporate growth after disagreements with a lending bank nearly shipwrecked the company in the early 1980s. In the aftermath, Dr. Bose vowed to keep the corporation self-sustaining and funded solely from its profits—and that has its pros and cons.

“There’s a real benefit in that we can invest in long-term research and technology,” said Maresca, who spent the first half of his nearly 30 years at Bose working as a research engineer. To illustrate that investment, he pointed to the company’s pro audio offerings, RoomMatch loudspeakers and PowerMatch amplifiers, introduced in 2011, citing them as “a great example...it took 15 years before we brought that to market, but we kept investing in it because we believed that it would deliver real experiences to people down the road. That’s the benefit that I have as the CEO of a company like this, where I can make those long-term bets and not have the stockholders beating me up to give them dividends instead of giving them R&D.”

While such autonomy may allow the company to think big, it nonetheless draws lines in the sand: “It does limit the pace at which we can grow, because when you’re growing, you’re adding inventory, accounts receiv-



Having spent his first 15 years there as a research engineer, today Bob Maresca is president and CEO of Bose Corporation.

ables, investing in new technologies, and so we are constrained as to how much we can invest. It hasn’t really hurt us; we can grow 15-20 percent per year and self-fund that, but it prevents a [situation where] say we had an idea to double in size; we’d have to spread that out over multiple years.”

Sometimes the long-term bets pay off: While the company’s QuietComfort consumer headphone line was a hit, it was created out of noise-cancellation technology Bose originally developed for the military—an effort that by 2000 had cost \$50 million and was on track to lose another \$6 million that year. Maresca recalled being the bearer of bad news to Dr. Bose: “I’ll never forget his reaction; this was the master professor in him. He said, ‘\$50 million?! If this was a publicly traded company, I would’ve been fired years ago!’”

Ultimately, the consumer version

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SOUNDRECORDING

Michael Marquart Makes His Windmark. 24
Michael Marquart purchased Jimmy Jam and Terry Lewis' Flyte Tyme studio in Los Angeles and redeveloped it into Windmark Recording. A mix of vintage and modern gear dominates the Peter Grueneisen-designed facility, which has been fully booked since opening in January, most notably by Rihanna.

Creating Transparency In A Glass House 24
Producer/mixer Eric Hart recently moved his 20-year-old business, Glas Haus, into a new custom-built private production studio sporting in-depth acoustic treatment by Delta H Design.

Heading Downtown 26
While New York City's fashionable SoHo neighborhood in lower Manhattan is predominantly known for its designer boutiques, the recording industry still plays a strong role there through the recently updated Downtown Music Studios.

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Sony Pictures Upgrades For Immersive Sound. 34
Sony Pictures Post Production has implemented one of the first dub stages anywhere with both Atmos and Auro-3D capabilities, upgrading its Harrison desk and reconfiguring the William Holden Theater just in time to mix *The Amazing Spider-Man*.

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Tim O'Heir, nominated for a Tony Award in the category of Best Sound Design of a Musical, discusses the techniques he used to deliver a solid sound for the extravagant musical, *Hedwig and the Angry Inch*, which follows a fictional rock band fronted by an East German transgender struggling to find both acceptance and fame.

Live Sound Showcase: Morrissey 44
The former lead singer of classic alternative act The Smiths recently kicked off an arena tour to promote his latest album, *World Peace is None of Your Business*. In tow for the trek is a sizable audio system from Eighth Day Sound, including multiple Allen & Heath iLive desks.

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While in increasingly widespread use, Audio over Internet Protocol networking (AoIP) has suffered from the professional audio tradition of conflicting standards. The new Audio Engineering Society AoIP interoperability protocol, AES67, is poised to get disparate networks talking freely.

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The Details We Used To Sweat

While looking back at some archival material on the web, I was struck by a realization of just how little we are now concerned by some of what were Major Issues just a few short years ago. When digital audio was young, discussions raged at length concerning a myriad of details that we just don't dwell on in these more enlightened times. Early digital got its justifiable share of black eyes because the technology and its implementation were not totally fulfilling the promises of the long-known but unrealized theory (forgive me if I get a bit geeky here).

Early analog-to-digital converters were rarely as linear as was theoretically possible, even with only 16-bit digital storage. Converters had "a sound" to them, and conversion artifacts were sufficiently audible that great lengths were gone to in the avoidance of multiple conversion passes within a signal chain. Early anti-aliasing filters were analog, with artifacts that intruded into the digitized audio.

The importance of accurate, stable digital clocking was poorly understood in the beginning. Clocks that varied from rock-solid stability were all too common, which we eventually learned to quantify as jitter. While video engineers understood the concepts of house sync, audio system engineers often did not.

The concept of sample rate conversion was introduced to resolve sources using disparate clocks and sample rates into synchronous data streams, and to allow the use of higher sampling rates during recording and production than would be used for mass distribution. SRC was another much maligned process in its infancy.

Once conversion at longer word lengths became possible, the already hot topic of dither got even hotter as the evils of truncation were evidenced.

Latency became a hot topic in those early years, in regards to mixing monitor and channel paths (no more SuperCue for you!), to artist sensitivity, and far too late, in regards to interchannel time discrepancies (the latter is one of the biggest factors in digital mixing getting a bad rap, in my opinion).

When synchronizing multiple recorders, digital introduced new issues of time code and clock lock. The need for time code that was synchronous to the word clock was simply overlooked by many manufacturers in the early days of digital audio.

Now, 24-bit sampling is the norm and converter linearity at least approaches the realm of residual analog component noise. Oversampling allowed the use of unobtrusive digital anti-aliasing filters. We've learned how to build low-jitter clocks and to clean

up signals with effective, transparent reclocking. We rediscovered transmission line theory, applying techniques that RF engineers already understood to the delivery of audio as high-speed data. Sample rate conversion is sophisticated and largely transparent. High resolution sampling rates can be employed effectively.

Good engineering practice still mandates that unnecessary ADDA conversions and sample rate conversions are to be avoided, but converters are now good enough that few individuals are overly concerned with an extra stage of analog in the middle of their signal flow. Converter chips are monolithic, requiring very few external components to operate at performance levels unheard of 20 years ago, and they are relatively inexpensive. The analog componentry in front of and behind the converters is now the largest factor determining sonic performance.

Latency is still discussed, but as a parameter for consideration rather than as a major issue. DAWs now auto-resolve interchannel time alignment discrepancies.

The youngsters among you, if you even read this far, are probably saying, "What's the big deal?" But we've arrived where we have with digital audio through by way of some hard lessons learned. I, for one, am happy to have other things to talk about.

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Harman To Acquire AMX

STAMFORD, CT—Harman International will acquire enterprise control and automation systems manufacturer AMX LLC for \$365 million from The Duchossois Group, Inc. AMX will be integrated into Harman's Professional division and its acquisition marks the second major purchase in as many years outside of the Har-

man's traditional arena of pro audio companies, following the 2013 acquisition of lighting manufacturer Martin.

Robert L. Fealy, president and COO, the Duchossois Group, and chairman of AMX, characterized the sale in a statement as fulfilling "one of our fundamental objectives, which

was to position this business with a leading entity that will take AMX to an even higher level of performance and success." Founded in 1982 and headquartered in Richardson, TX, AMX's hardware and proprietary software solutions are used for a variety of enterprises and venues such as conference rooms, hotels, classrooms, network operation/command centers, entertainment venues and broadcast facilities. AMX employs

more than 600 people across its operations in 19 locations worldwide.

"Starting with the acquisition of Martin lighting last year, Harman has set forth a clear strategy to add visual solutions to our legacy of audio offerings" said Blake Augsburger, president, Harman Professional division. "AMX's strong portfolio of video distribution hardware and software is a significant step into the video domain, reinforcing Harman's commitment to expand our professional portfolio with industry-leading technologies and brands in adjacent and complementary markets."

Dinesh C. Paliwal, chairman, president and CEO of Harman, noted in a statement, "AMX is the global technology leader in enterprise control and automation as well as audio and video switching and distribution. With the addition of AMX, Harman will be uniquely positioned to provide complete audio, video, lighting and automation solutions to our customers globally."

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Todd-Soundelux Goes Chapter 11

HOLLYWOOD, CA—Award-winning audio post company Todd-Soundelux has filed for Chapter 11 reorganization bankruptcy.

Deadline | Hollywood broke the story, quoting a company statement that Todd-Soundelux will streamline its cost structure and prepare the company for sale while under Chapter 11 protection: "This action has been necessitated by a significant decline in revenues, primarily in the feature film segment, which has impacted the independent post production sound business in the Los Angeles area."

Todd-Soundelux encompasses two brands dating back to 1953 and 1982 respectively.

According to the statement, the company plans to continue operating while restructuring.
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Lab.gruppen Bows D Series

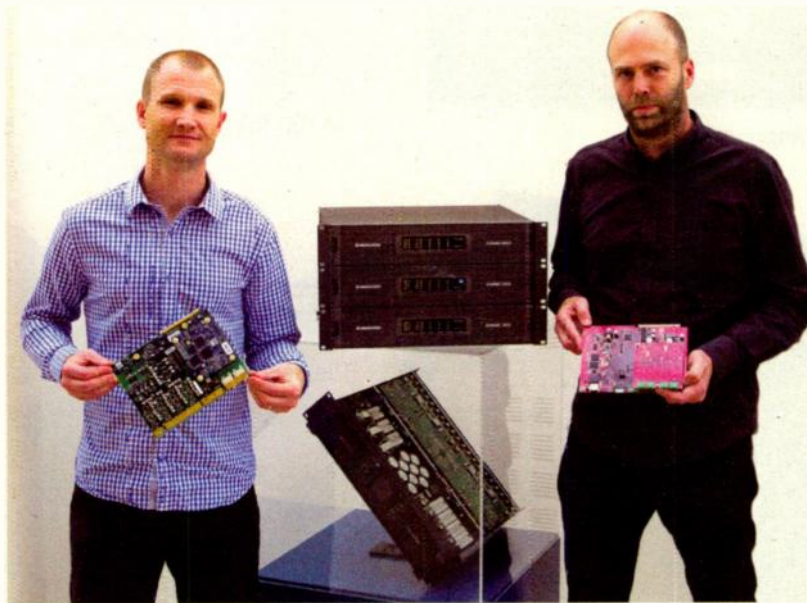
BY DAVE ROBINSON

Amplifier manufacturer Lab.gruppen aims to establish another technology benchmark at InfoComm 2014 with the launch of the D Series, representing “the most advanced and capable install-dedicated platform ever conceived” by the 35-year-old Swedish company.

Effectively Lab.gruppen’s experience of seeing the flagship PLM20000Q used as an installation amplifier, particularly in sports arenas in the US, and reacting accordingly, the D Series demonstrates advances in three key areas: system interoperability; smart power handling; and superlative green credentials.

“We have taken much of the technology that made PLM so appealing to this market, and evolved it to meet what are really quite application-specific demands in large-scale venue audio, fully integrating new technologies and features that have been developed over the past four or five years, now thoroughly proven ‘in the field,’” says Hakan Gustafsson, product manager. “The result is an entirely new and highly innovative 4-channel platform, one that offers unprecedented levels of efficiency, flexibility and power dynamics.”

The D Series design seeks “genuinely open interoperability,” as the engineers have created a product that



Hakan Gustafsson, product manager, (left) and Klas Dalbjorn, product research manager for Lab.gruppen, with Tesira and Lake Processing models from the company’s new D Series.

can “integrate seamlessly with a wide range of digital audio and control protocols.” Thus the InfoComm debut showcases two variants of the device, at three power configurations (8,000 W, 12,000 W and 20,000 W). The Lake variant offers a well-established package of Lake Processing DSP with analogue, AES and a dual-redundant Dante network solution, supported by the development of new custom software to provide extensive integration potential with most key systems manufacturers. The Tesira model introduces a new collaboration between Lab.gruppen and installation specialist Biamp Systems, again,

ensuring “seamless interoperability” between respective systems.

(At InfoComm time, the Tesira variant will carry a proprietary AVB – Audio Video Bridging–implementation, but this has not yet been AVnu-certified. It is understood that Biamp actively supports the AVB standard and will be seeking AVnu ratification at a future date.)

D Series also heralds the debut of Lab.gruppen’s Rational Power Management (RPM) technology.

With a nod to QSC’s FAST technology, but taking the concept further, RPM allows “truly flexible power allocation across all channels to

ensure the most efficient and rational use of total amplifier inventory.”

At the heart of RPM lies the ability for each model to deliver up to 5,000 W output on any one channel, even on the 8,000 W model, leaving the remaining available power to be allocated freely to the other channels. Therefore, a more optimized system design is the outcome. (Lab.gruppen confirms that, yes, the 20,000 W variant will deliver 4 x 5,000 W per channel.)

The third key product factor is “green” technology. Lab.gruppen has taken proven PLM implementation (such as low peak mains current draw to power output ratio) and augmented it with a software suite called CAFE (Configuring Amplifiers For the Environment). CAFE features a design tool that provides an optimized recommendation for specifying D Series into an installation project, including model and number of amps, heat generated, channel distribution and current draw. This, in effect, reduces other infrastructure costs by enabling more accurate mains management, avoiding over-specification of UPS, installed cooling systems and so on.

“D Series is about offering freedom—freedom to use any network, any loudspeaker, any third-party control system and in any configuration,” says Klas Dalbjorn, product research manager for Lab.gruppen. “We believe D Series is now the most compelling choice of amplifier on the market when it comes to large scale performance installations.”

Lab.gruppen
labgruppen.com



Bob Tudor Passes

NEW YORK, NY—Bob Tudor, a journeyman pro audio product engineer who developed dozens of products for companies as varied as Mackie, Tascam, Lexicon and Electro-Voice, passed away in mid-May. In recent years, he was the Chief Technology Officer at PreSonus.

Following studies in electrical engineering at Rensselaer Polytechnic Institute and film scoring, jazz and music production at Berklee College of Music, Tudor co-founded Boston’s Metropolis recording studio and recorded such acts as Peter Wolf/J. Geils Band, Extreme, Aimee Mann, New Kids on the Block and Bobby Brown. He also played keyboards and acoustic piano on numerous records as a studio musician and remixed “Cradle of Love” for Billy Idol.

Eventually, Tudor honed in on audio engineering; as one of the pioneers at Mackie Designs, he created

the company’s line of digital mixers, hard-disk recorders and control surfaces.

“Bob Tudor’s design work and personal influence at Mackie was big, to say the least,” Mackie senior vice president John Boudreau told *PSN*. “Bob’s vision for bringing digital technology and intuitive tools for recording led to the innovative Mackie d8b and HDR products, among many others. A talented musician and recording enthusiast himself, he combined this with his skills as a digital engineer to design with true passion. It’s safe to say Bob helped reshape Mackie recording, which created a huge community of dedicated enthusiasts for these products and the brand. Bob’s big, fun personality was part of Mackie’s culture and he may have invented ‘Engineering Social Thursdays,’ where many napkin sketches became the impetus



Bob Tudor

for these insanely killer products. He will be missed by the Mackie community.”

After leaving Mackie, Tudor founded SaneWave, where he developed more than 100 products for numerous pro audio manufacturers; some of the creations of this period included the Tascam US-2400 Con-

trol Surface and X-48 Hard Disk Multitrack Audio Recorder; Electro-Voice DC-1 Speaker Processor; M-Audio ProjectMix; and the Lexicon MX-500 FX Processor. He did additional projects for QSC, Samson, Shure, Alesis, Gibson, Fender and others, but eventually joined PreSonus in 2008, having designed the company’s FaderPort and the StudioLive digital-mixer line.

“Anyone who has ever had the pleasure of working with Bob, or even interacting with him at events or trade shows, was likely touched by his energy, enthusiasm, and passion for technology—and specifically, technology that allowed people to make better music. He was always fascinated with what could be done and was never really deterred by challenges or technical hurdles. He not only made things that no one else could see or do possible, he made them look easy. We have not only lost a truly amazing engineer but a very dear friend to so many people in this industry,” said PreSonus CEO Jim Mack.



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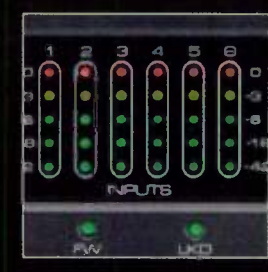
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Hosa: Aggressively Pursuing Growth At 30

BY FRANK WELLS

Celebrating 30 years of business and growth, Hosa Technology has come a long way from its initial offering of 16 interconnects, says Mayumi Martinez, CEO. Martinez' father, Sho Sato, began the company with the suite of stereo and multichannel RCA and 1/4-inch TS cable assemblies, five of which are still in Hosa's top 200 sellers and one of those remains in the top 20. "Today, our product line covers over 2,000 products and sev-

eral different line extensions," says Martinez. "We have simplified our microphone, guitar and speaker cable lines to a good/better/best selection, which provides an option for every budget. Other new items include High Speed HDMI with Ethernet and USB 3.0."

In Hosa's initial 10 years of business, the catalog "grew quickly to encompass most of what dealers think of when they think of Hosa: analog audio snakes, interconnects, Y cables and adaptors," reports Martinez. "By 1994, when modular digital multi-

track recorders such as the Alesis ADAT and TASCAM DA-88 were all the rage, we addressed this market segment with offerings such as custom snakes, sync cables, and TosLink optical cabling." In the next 10 years, Hosa diversified into non-audio connectivity—video cables, data cables, and power cords, including VGA extension cables, USB 2.0 cables and power Y cables.

"Fast forward another 10 years, and our good/better/best selection of mic, guitar and speaker cables continue to play an integral role in our product offerings," she elaborates. "We've also expanded our offerings to include the latest products in the audiovisual and data products market segments, because hard disk-based, workstation-centered recording is a huge part of the business these days, as is the market for presentation spaces, distance learning and so on."

From its beginnings with Sato as the sole employee, "we've grown to a multi-department organization with 40 people at present," Martinez informs, including admin, product development, sales and marketing,

customer service and shipping and receiving departments, still headquartered in Buena Park, CA, but augmented by a second warehouse located in Taiwan, developed to support Hosa's international customer base. "Perhaps most indicative of our growth," says Martinez, "is the fact that we now have an extensive network of sales representatives and distributors to support our sales efforts worldwide."

Martinez credits Hosa's success to the company's stated mission: "Hosa's team is passionate about providing solutions that fulfill our customers' needs through service and value. It's important to have more than a good product at an affordable price. The customer is of the upmost importance to us, and we do our best to take care of each and every one of them. Our core values are Fun, Family, Flair, Pride, Responsibility and Drive. We believe in hard work and developing products we can be proud of, but we also believe we should have fun doing it."

From its MI origins, Hosa's customer base has evolved with its product line. "Hosa accessorizes the brands its reps sell," explains Martinez. "A full 75 percent of our sales reps serve both the live sound and Pro AV-install markets. The remaining 25 percent primarily serve the MI market, but are eager to expand into the Pro AV-install market. It is well known that the MI/Pro Audio and



Mayumi Martinez, CEO, Hosa Technology

Pro AV-install markets are the two largest market segments. While we're well entrenched in the MI segment, we believe that a large percentage of our future growth—and, very possibly, the best opportunity to expand—lies in Pro AV-install."

For that market, both bulk cable and pre-terminated cable assemblies are deployed. "Presently, we have all the connectivity installers require for those aspects of a project that reside outside the wall," says Martinez. "If an installer needs bulk cable for in-wall installation, we're not there yet, but we will certainly take a good hard look at this area should the opportunity present itself." While keeping confidential how the exact percentages of Hosa's business divide between the various vertical market segments where they are active, Martinez does share that Hosa serves MI, Pro Audio, AV/CE, Broadcast/Video, and Education "roughly in that order in terms of our level of market penetration." Hosa's key clientele "remains little changed from 30 years ago. The large retail chains such as Guitar Center and Sam Ash are a vital part of our business, as are the larger independent operations such as Sweetwater, Amazon and B&H Photo Video," as well as the small, family-operated music supply retailers across the USA. Along with North America, "the Asia-Pacific (APAC) regions—especially Australia and Japan—are all vital to present and future growth," says Martinez. "We also hope to replicate our APAC plan throughout Europe by working with Hyperactive Benelux, our master distributor on that continent. Looking forward still further, we plan on opening an east-cost hub to bet-

(continued on page 16)

"Hosa accessorizes the brands its reps sell."

Mayumi Martinez

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I found when using the IsoAcoustics stands under my NS10s that I had an easier time mixing due to a more stable stereo image and clearer bass frequencies.

Elliot Scheiner, Grammy Award Winning Recording & Mixing Engineer

Pretty remarkable, ingenious, clever device.... and they work.

Frank Filipetti, Grammy Award Winning Producer

I noticed immediately a clarity in the stereo image and the frequency response that had been missing in my NS10's... The IsoAcoustics generally made them more enjoyable to listen to, no small feat as I am sure you know...

Vance Powell, Grammy Award Winning Chief Engineer, Blackbird Studios



FLEXIBLE ISOLATION SYSTEM



SSL Live



Hosa

(continued from page 14)

ter service North America's major population centers east of the Mississippi."

As for the next decade, Martinez has set a goal of doubling Hosa's sales, "which means expanding beyond MI and pro audio, and adding more technology cables. I want to make Hosa the go-to brand for professional connectivity products of all types. Everyone needs HDMI, USB and other technology cables, but pros are often forced to use consumer-grade products. I believe Hosa can excel in that niche, with cables built for the specific job at hand."

The bulk of that growth is expected to come in the AV integration industry, says Martinez, "bridging the gap between audio and video. AV integration is bringing audio and video closer together than ever before, and many dealers that have traditionally focused on video and consumer electronics are bringing pro audio products to a larger share of the market than ever. Since the DSLR camera has become the go-to tool for videographers, even camera stores are carrying an ever-increasing selection of Hosa products. My goal is to make Hosa the leading name in connectivity solutions, regardless of the market."

Hosa Technology
hosatech.com

Shure

(continued from page 5)

even during the worst of the recent economic downturn, adds Brunner. "When we were going through the recession in '08, '09 and '10, a lot of companies pulled back then, pulled back on product development, on their marketing. We actually did the opposite—we pushed the gas even harder and it's paid off, with us now developing more products than we ever did in a year," he explains. "Everybody was hurt by the recession, but in many ways, it was a good thing because it allowed us to leapfrog a lot of the competition in these high-tech areas."

LaMantia points to the Axient and ULX-D systems as evidence of these investments, while Brunner adds that, "The move to digital transmission schemes with wireless microphones has enabled us to create products in the unlicensed spectrum where, with analog designs, we would not have been able to participate." MI and conference customers now have products that allow them to operate in unlicensed spectrum: "These designs have enabled us to pull a large portion of the market out of the fray of the TV spectrum...our digital designs have created a relief valve, if you will, on the number of wireless microphones that are operating in the TV band."

As for vertical markets, much of Shure's growth has been in the

conferencing side of the business, where there's "huge potential" per LaMantia, with Shure's entry into the space jumpstarted by the acquisition of discussion system specialist DIS in 2011. "We're aiming a lot of our technologies, including wireless, at the market," LaMantia explains.

"I can tell you we're not replacing people, that's for sure, because nobody ever leaves! We're expanding. We're expanding almost everywhere in the company, with the emphasis on product development."

Sandy LaMantia, president/CEO, Shure Inc.

"I think that's going to be our growth market in the future, a market where we'll be innovative."

A good deal of Brunner's time, particularly of late, has focused on lobbying the FCC on the issues surrounding spectrum reallocations. [Steve Harvey's cover story in this issue on the implications of the latest FCC actions includes comments from Mark Brunner made after this interview]. A decade ago, says LaMantia, "I'm not sure the FCC had a clear picture of what a wireless microphone was. Today, there's never a spectrum discussion that goes on without wireless microphones being considered. To me, that's wonderful and it really talks to the work that Mark and others at our company have done to educate and get in front of the FCC."

Quick to share credit, Brunner says that the microphone industry is part of the change, but adds that, "it's all the customers that we serve and the high-visibility work they do with these products which has really helped bring the whole issue into focus for the Commission."

The entry of new players into the headphone market is not a worry for Shure. "Our focus is on performance, it's not on color and coolness," explains LaMantia, while Brunner relates a recent *Time* magazine headphone manufacturer round-up "based on their scouring of the universe for reviews by end-users. Shure came out on top."

While the operations at Shure have been R&D and marketing driven, traditionally, the company has still maintained a reputation for quality manufacturing even when systems have been stretched by growth ("That's not going to change," says LaMantia). The addition of new Senior vice president Of Operations, Chester Trocha, is seen as a move towards not just accommodating but anticipating growth. "It also should be mentioned that while maybe not as visible to customers, at least not directly, we have been making considerable investments in all of our infrastructure and systems related to manufacturing," Brunner elaborates. "Our information technology and our processes have been a big source of focus in the past couple of years, and as Chester comes on board here, he'll be able to push those to the next level. That's really about being positioned for growth. Some of the approaches that we had developed toward manufacturing had been in reaction to growth. This is an attempt to be positioned to be able to expand without the stresses that might occur from continued growth." And continued growth is expected.

Shure Inc.
Shure.com

THERE'S MORE ▶ The full Q&A with the Shure team can be found online at prosoundnetwork.com/june2014.

POWER LINEUP



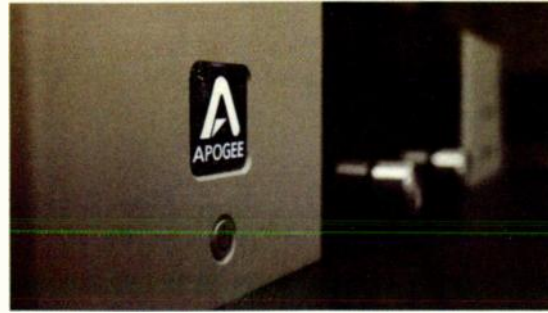
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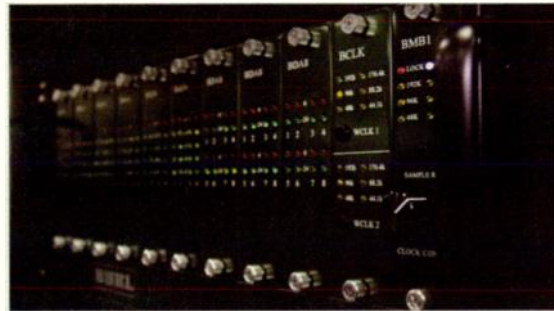
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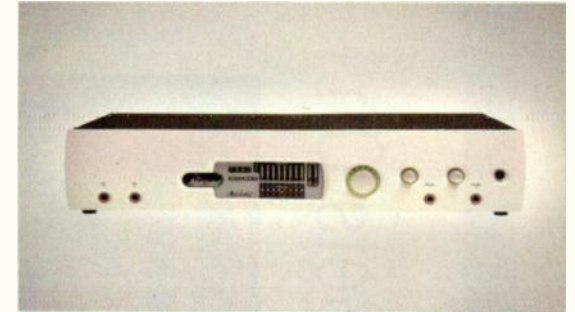
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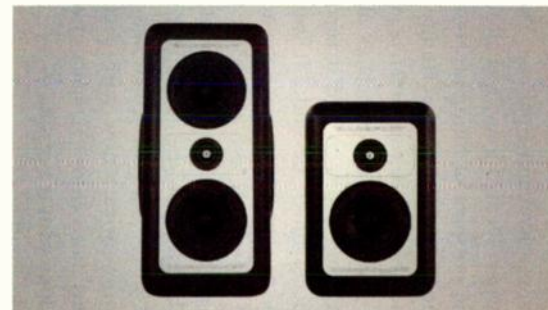
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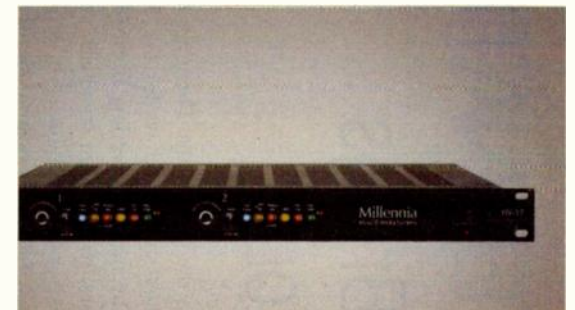
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Primacoustic Brings Peace To Parlour

ST. PETERSBURG, RUSSIA—All eateries are noisy to some extent, but The Ice Cream Parlour—Rubenstein 1, a popular café in St. Petersburg, found its excited clientele (mostly children) and too many reflective surfaces made for a unpleasant racket.

Recognizing the acoustic challenges of the space, the café got in touch with local firm APD Media System. APD's Catherine Provozen noted, "There are a large number of reflective surfaces in the café. One window surface represents an entire wall area and other windows, of all sizes, exist



Primacoustic Paintable acoustic panels became decorative elements within St. Petersburg's The Ice Cream Parlour.

on the other walls. There are also the glass show-windows for the desserts. The noise proceeding from refrigerators, music from speakers, voices of visitors (the majority of which are children) - everything simply mixed up in one sound mass, turning it into incoherent hubbub."

Ultimately, ADP suggested trying Primacoustic Paintables—acoustic panels that can be painted. The café's owner, Denis Firsov, was all for it, as the prospect of hiring artists to paint them provided an opportunity to augment the space with creative artwork.

"We used the panels as elements of interior design and it turned out successfully," he said. "It was possible to not only improve the acoustics of space, but also to update the design, having added in new elements. The effect on the sound was noticed at once by parents who can quietly communicate now with each other and more enjoy the space. I am very happy with the result."

Primacoustic
primacoustic.com

The Bodyguard Gets On The Mic



LONDON, UK—Currently playing at London's Adelphi Theatre, the stage musical of *The Bodyguard*, based on the 1992 film starring Whitney Houston and Kevin Costner, uses DPA d:screet 4060 omnidirectional miniature microphones to capture the vocals of the cast members with spoken lines.

Ania Klimowicz, deputy head of Sound for *The Bodyguard*, says the mics, supplied by UK theatrical audio vendor Autograph, were chosen because sound designer Richard Brooker and director Thea Sharrock didn't want any microphones to be visible to the audience.

"We use paint, tape and make-up on the mics to make them look as invisible in the actors' hair or wig as possible," Klimowicz explains. "We mainly use 'mic clips' and occasionally elastic to fix the mics to the performer's head. Male

DPA d:screet 4060 microphones capture the cast of London's musical production of *The Bodyguard*.

actors with shaved heads are probably our biggest challenge; in those cases, we abandon the usual center top of forehead fitting and fit the mic over the ear."

Klimowicz adds that most of the show jumps in dynamics, except for a couple of numbers such as "Run to You," which is mixed more like a musical theatre number. "We use the head-mics here as the song moves as part of the story and a hand-held would somewhat break with the audiences' suspension of disbelief," she explains.

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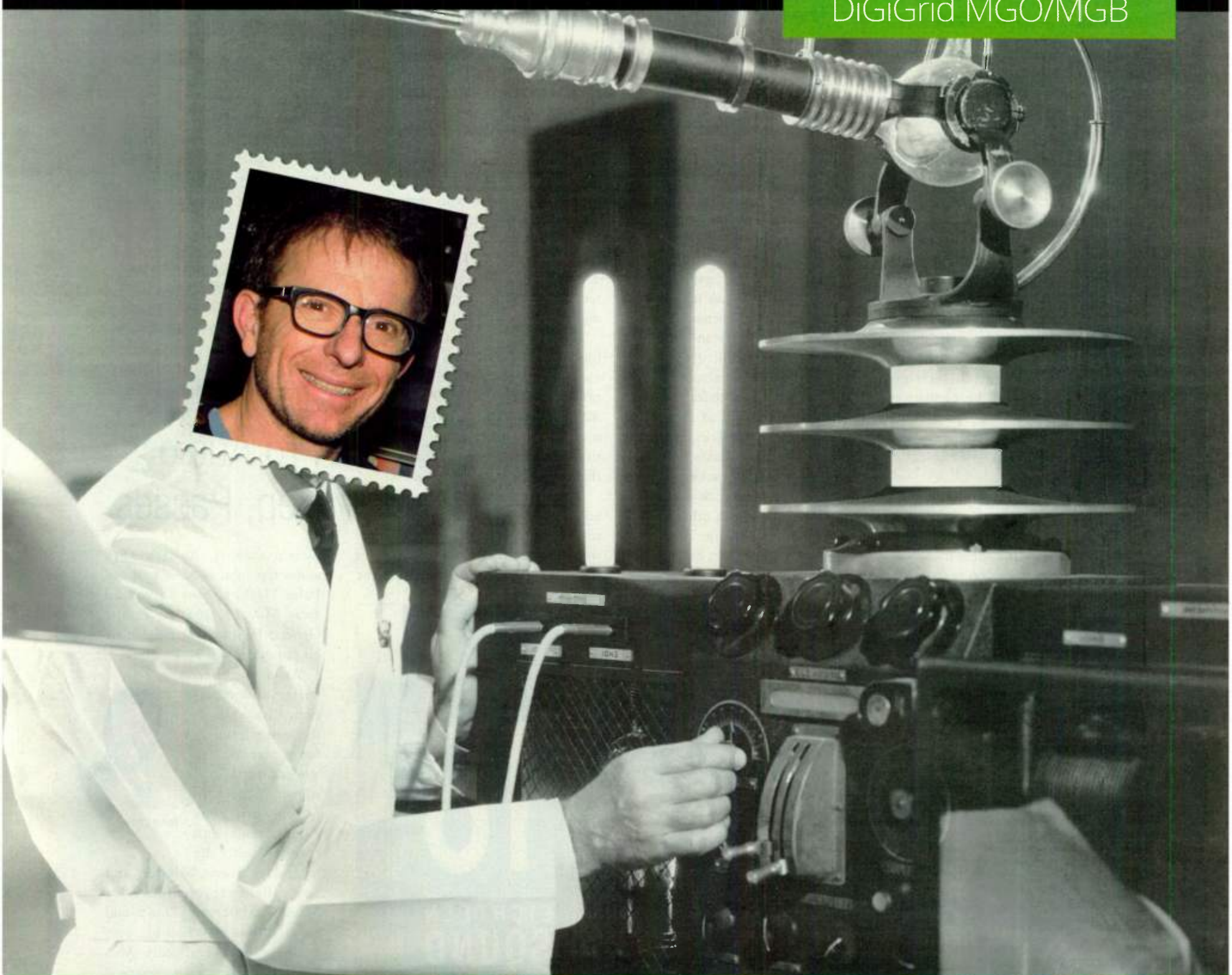




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Dave Bracey (FOH PINK & CHER)

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FCC R&O

(continued from page 1)

“many important benefits” provided by wireless mics but notes that proceedings to identify alternative spectrum “outside of the television bands” will not begin for several more months. The rules only permit exclusive licensed operation by broadcast and cable entities—ENG crews—and in only 4 MHz of the 11 MHz-wide duplex gap separating the proposed uplink and downlink spectrum.

The R&O does permit operation in the guard bands between frequency blocks and in what the rules describe as “one naturally occurring white space channel in the remaining TV band in each area.” Operation is also permitted on channel 37, currently reserved for radio astronomy and medical telemetry, “at locations where it is not in use by channel 37 incumbents, subject to the development of technical rules to prevent harmful interference to the incumbents.”

But operation in the guard bands and channel 37 is open to all unlicensed users. That means that pro audio operators will be competing for bandwidth, with no protections in place, against consumer television band devices (TVBDs) or so-called whitespace devices.

Television stations relinquishing spectrum for auction to the telecommunications companies will have three years after the three-month filing deadline to transition to their new

channels in the repacked spectrum, which means that RF mic users could potentially continue to operate in the 600 MHz band for the next 39 months. But stations could also move as soon as practicable and the new telecom services could come online before the deadline, too.

“What’s clear is that it’s a matter of physics,” says Karl Winkler, director of business development at Lectrosonics. “The reason everybody

that even the current exclusive two-channel chunk is insufficient for large-scale sports and entertainment events, which routinely use 100 to 150 wireless frequencies, or about 10 TV channels. “Theoretically, there will be one ‘naturally occurring channel’ available after the channel repack, but I think that’s a fantasy,” he says.

If there is a silver lining, it is that eligibility for Part 74 licensing has been expanded to include profession-

technology challenges at higher frequencies and there are unlicensed incumbents in many swaths of the usable spectrum.

“The trouble is that what we’re going to have to do is employ every possible solution, because it’s hundreds and hundreds of channels every day, everywhere,” says Green. “And there is no one band that’s going to field all that spectrum.”

“We’ve tried to encourage the commission to identify any spectrum that exists below 2 GHz,” says Brunner. “The reason is pretty obvious—the technologies that we’ve developed in the UHF band can more easily be adapted to the next step up, which would be 1 to 2 GHz.”

Although the industry moved from VHF to UHF many years ago, he adds, “We also asked them to look at harmonizing some of the rules that exist in VHF for higher power operation there.”

“The commission will really need to seriously be looking at other spectrum that we may be able to use on a shared basis with other services to meet the needs of large events.”

Mark Brunner, Shure

wants the spectrum is that it’s a perfect combination of good propagation with practical antenna size.”

According to Mark Brunner, senior director of global brand management at Shure, who has long been at the forefront of interactions between the pro audio industry and the FCC, “The outcome of all of this really has been the stark admission that the UHF band doesn’t contain enough spectrum to hold all of the professional wireless applications going forward. The commission will really need to seriously be looking at other spectrum that we may be able to use on a shared basis with other services to meet the needs of large events.”

Roger Charlesworth, executive director, DTV Audio Group, observes

al sound companies and venues that routinely use at least 50 wireless mics. License holders will enjoy protection from unlicensed TVBDs through the TV bands database registration system set up following the transition to digital television in 2010.

The expansion of Part 74 eligibility is good news for professional content creators, such as film and TV producers, says Jackie Green, VP of R&D/engineering with Audio-Technica. “That content is one of the nation’s largest exports. I don’t think that anyone wants to shut that off.”

Mic manufacturers will undoubtedly now be redoubling their efforts to develop products for professional use in other frequency bands. But there are tradeoffs in terms of the

THERE’S MORE ▶ Read more about what the R&O vote means to the pro audio industry at prosoundnetwork.com/june2014.

John Chase, Pro Audio Rep, Passes

PALM HARBOR, FL—Longtime pro audio rep John R. Chase, Jr., of Palm Harbor, Florida passed away May 15, 2014 at Tampa General Hospital surrounded by his family; he was 56.

An avid golfer, writer and musician, Chase was in the music industry for 40 years. He worked for Washington Music in Maryland, was a technician and traveled with the legendary Stevie Wonder, and was a field representative for Mainline Marketing, Line 6 and Korg. Chase also had his own business for several years, Music Lines, where he represented some of the top companies in the music industry.

He was known for his great sense of humor, and loved his family. Survivors include his wife Cheri, sons Nicholas and Andrew, mother Marie (Francis) Machen, brother Gary, father John, and the Mogil family.



John Chase

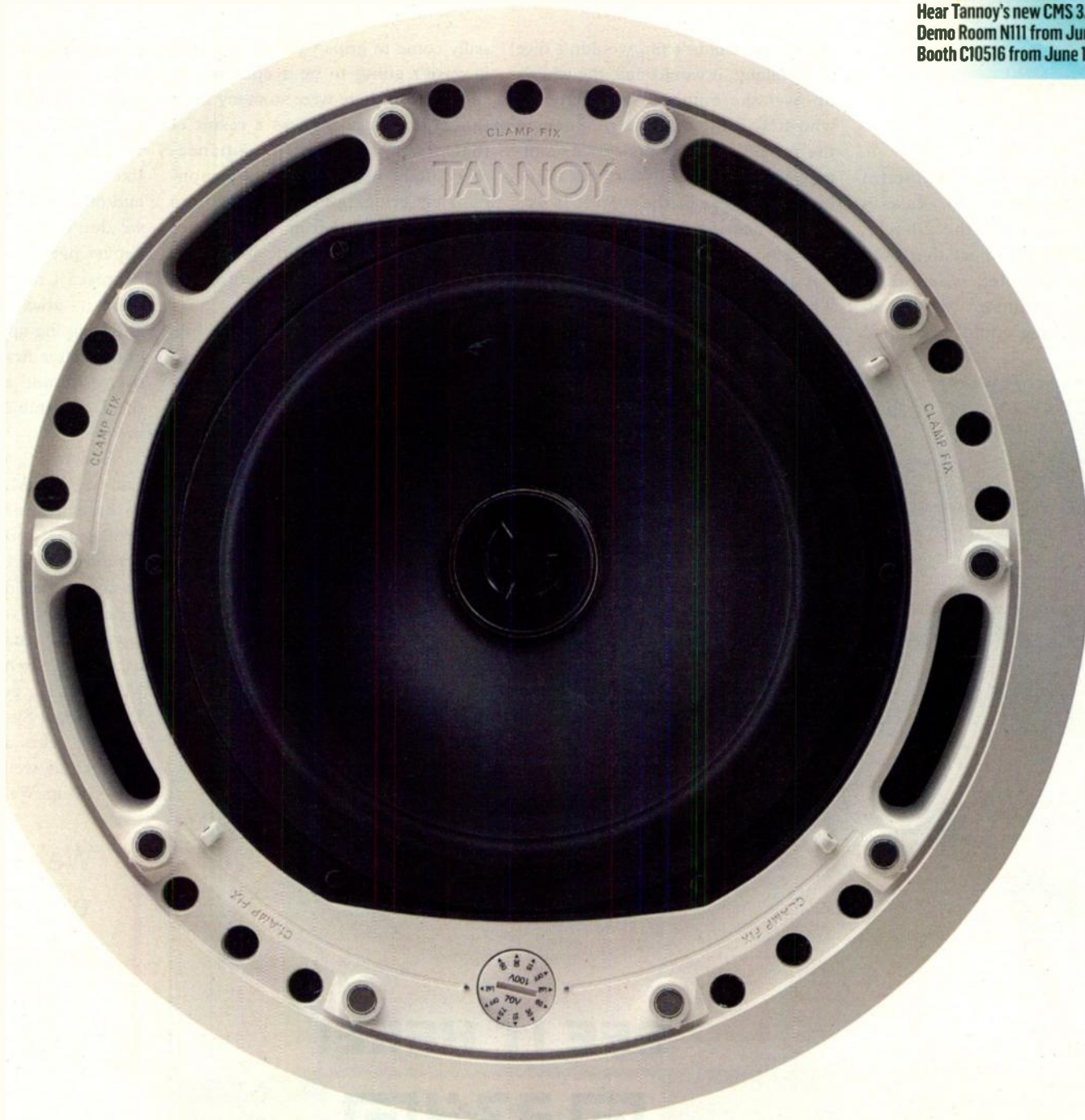
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Bose

(continued from page 5)

became a hit, but some long-term bets came up empty, too—case in point: Project Sound, the 20-year, \$90-million R&D project that both succeeded and failed when Bose Corp. set out to reinvent car suspensions. “This thing could go around

on turns, wouldn’t tilt, wouldn’t dive on breaking, it would pick the wheels up over the bumps,” said Maresca, who first came to Bose to work on the project. “Every major car company drove in it and said this is the best-riding car in the world. It was also the heaviest and the most expensive car in the world—and it turned out it wasn’t commercially viable. That’s a bitter pill to swallow.... it was heartbreaking that we had to fi-

nally come to grips with the fact that it wasn’t going to be a commercial success. But there were so many good things that happened as a result of that...from a technology enhancement point of view, from a personnel view bringing in top people into the company, and from the offshoot product of the Bose Ride [a seat for truck drivers], I’m very proud of that failure.”

Still, companies need more hits

than misses and as Bose Corp. charts a new course in the wake of its founder’s passing, it is making changes, both on its consumer audio side—working with with content providers like Pandora, iHeartRadio, Deezer and others (“There are certain things we don’t do very well and we need expert partners to work with,” said Maresca), marking a distinct shift from its always-autonomous past—and stepping up its professional audio efforts after first entering that arena over a decade ago with the debut of the L1 portable loudspeaker system in 2003.

Addressing the industry’s adoption of RoomMatch and PowerMatch to date, Maresca admitted, “With professional sound systems, we don’t get a free pass, because there are other companies that have storied histories and we’ve had some missteps. I would say that our strategy wasn’t as clear as it has been since Akira [Mochimaru, general manager, Bose Professional Systems Division] joined us nine years ago. He came out of research as well and he focused our Pro Group. We’ve made some great

“We’ve got to earn every single sale and we don’t take that lightly.”

*Bob Maresca, president/
CEO, Bose Corp.*

strides [like a recent installation in the] Boston Opera House, but we’ve got to earn every single sale and we don’t take that lightly. We’ve got a lot of work to do to get the message out there that these breakthroughs, like the L1, RoomMatch and PowerMatch, are delivering experiences that are just unparalleled.

“On the pro-sound side, it’s much more about relationships and you’re not selling to the end user. I know there’s a lot of people we have to convince, and they have to feel confident in us that not only do we have products that are better and different, but that we’re in it for the long run and we’re going to be there to support them once we do an installation. With a pro sale, it’s one relationship after another; one bad link in that chain and it doesn’t get out to the customer [so] we do it a brick at a time. We have to build our credibility, build our relationships with consultants, front-of-house engineers, and we said we’d play for the long run, so we’re at it. We’re starting to get some good traction, so I’m optimistic.”

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Michael Marquart Makes His Windmark

BY STEVE HARVEY

SANTA MONICA, CA—Michael Marquart, a multi-hyphenate on both sides of the studio glass, acquired the Flyte Tyme Productions building in Santa Monica late last year, renaming it Windmark Recording and re-launching the five studios built by former owners Jimmy Jam and Terry Lewis in January. In late March, Windmark unveiled Studio F, a newly constructed, analog-focused space designed by Peter Grueneisen of non-zero\architecture with studio technical design and integration by Paul J. Cox Studio Systems.

Studio F, on the ground floor, features a very rare Neve analog console and Les Paul's former Ampex MM1000 16-track tape machine, plus a credenza filled with vintage and modern outboard processors. Many of those processors, as well as the Neve desk, were sourced and re-conditioned by Vintage King Audio.

"I built this room for myself; it's what I want for me to make my music," explains Marquart, erstwhile drummer for A Flock of Seagulls, former member of Canadian band Alias and a songwriter and multi-instrumentalist—guitarist, keyboard player and singer, as well as drum-



Michael Marquart recently opened Windmark Recording, which includes Studio F, featuring a rare vintage Neve desk.

mer and producer—who records as A Bad Think. The indie-rock project releases its fourth album in June. As a mixer, Marquart has worked with No Doubt, The Meat Puppets, Frente and others.

"I love the process," he says. "I do it all: I sing, play all the parts,

engineer most of it, then I send it out to mix. I can afford to do my own albums, so there's nobody telling me what to do—so I do it strictly for the art."

He continues, "My music is getting better all the time. Every album is better than the previous one. I'm

in the studio every day, seven days a week; I don't understand where it's all coming from, at 57 years old!"

Although designed for Marquart, the new room is available for hire and was included in the multi-month, facility-wide lockout booked by Ri-

(continued on page 27)

Creating Transparency In A Glass House

BY STEVE HARVEY

LOS ANGELES, CA—After spending more than three years looking for a new house into which he could relocate his private production studio, Eric Hart was able to move out of his stereotypical black-box room and into a space flooded with natural light. Faced with turning a room with a cement floor, a sloping ceiling and a lot of glass into an acceptable work environment, Hart called on Hanson Hsu at Delta H Design, Inc. (DHDI) to acoustically treat the space.

"It's the best money I've spent—and I've spent lots and lots of money on acoustics before," says Hart, who has operated Glaus Haus Studios for about 20 years. Acoustic treatment can often be hit or miss, he continues. "You hope it's going to sound better, but it's always a letdown. You put in a cloud and new material and think that it's going to be the thing that fixes it, then you have a problem somewhere else. But this is great."



Eric Hart recently outfitted his private production studio, Glas Haus, with extensive acoustic treatments from Delta H Design.

The treated room has even made a noticeable difference to the efficacy of some of the audio tools Hart uses. "I have the iZotope mastering plug-in. It was useless in the other studio; I never really liked it. But now I like it, because I can actually hear it and use it properly."

DHDI treated less than half of the surface area of the walls and

ceiling, installing a custom-designed layout of ZR Micro and ZR Sample Rate 8 Bit panels, which incorporate wave splitting technology developed by the company that produces results that belie the profile of the products. "This is version two of the ZR Micro, which is only an inch-and-a-quarter thick," reports Hsu. The original design was an inch-

and-a-half deep.

DHDI's solutions can eliminate any need to consider the effects of glass in a room, it seems. The Glaus Haus control room, not a huge space, has three full-size glass doors, but Hsu observes, "As evidenced by this room, glass isn't an issue any more. We just make it so that you don't hear it. Leave the glass alone, treat the rest of the room."

Hart, a producer, composer, musician, remixer and engineer who leans more toward electronica and ambient music, comments, "When I send things out to get mastered, mastering engineers are coming back and saying, 'What did you do?' The resolution is at mastering resolution. And you have that translation, so you're not second-guessing. Projects need very few tweaks."

The live room, adjacent to the pool and also treated with ZR Micro and ZR Sample Rate 8 Bit panels, is extremely conducive to recording despite its wall of glass. "I had a tracking session with [guitarist] War-

(continued on page 27)

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MADE IN USA 

Heading Downtown

BY KELLEIGH WELCH

NEW YORK, NY—While New York City's fashionable SoHo neighborhood in lower Manhattan is predominantly known for its designer boutiques, the recording industry still plays a strong role there through the recently-updated Downtown Music Studios.

With two control rooms and two iso booths flanking a 400-square-foot live room, Downtown Music Studios (linked to the music publishing company Downtown Music Publishing) offers an accommodating space for its clients, which in recent years has included Adele, Sting, Vampire Weekend, Maroon 5 and others.

Downtown Studios is part of the same company as Downtown Music Publishing, an independent music publisher with a catalogue of more

than 60,000 copyrights including John Lennon & Yoko Ono, Hans Zimmer, Ellie Goulding, Mos Def and more. The publishing company was established in 2007, and built a recording studio within the company's SoHo office space a year later. "Our CEO at the time came from an audio production background as a record producer. At a certain point, it made sense to build a studio with everything we were doing with the company," Downtown engineer Zach Hancock explained.



Studio A at Downtown Music Studios houses a vintage 48-channel API console with a pair of custom HPX Main monitors.

At the heart of Downtown's Studio A is a vintage 48-channel API console, which Hancock said he picked up a year ago when they decided to expand the studio space.

To help control I/O, Downtown Studio's app developers Ed Diaz and Joe Rosso created an iPad app that can control the console and save settings electronically, despite the API's analog design.

"The app functions as a user interface, which connects to a microchip; the chip then translates the digital signal from the iPad to the electric voltage that controls the console," Hancock explained. "This allows you to save routing settings digitally and call them back."

"People get really psyched about it," explained Hancock. "There wasn't a solution like this on the market, so we just built the app and customized it to our console."

The customized HPX Monitors in Studio A were designed by Martin Pilchner of the Toronto-based studio design firm Pilchner Schoustal International Inc. A set of Genelec 1031As and Yamaha NS-10s are also included in Studio A for extra monitoring options.

Studio A also boasts a combination of analog and digital outboard gear, including two Urei LA-2As, Neve 1084s, a Manley Massive Passive, two Pultec EQs, and a variety of plug-ins by Avid, Universal Audio, Waves and others. Most standard DAWs, including Avid Pro Tools, along with a UAD Quad Om-

ni and Euphonix MC controllers are also available.

"We try to offer a high level of both analog and digital, as most of our clients are excited about analog, but deeply reliant on digital," said Hancock.

Studio A provides enough gear to record a full band or small orchestra in the adjacent live room. Studio B, on the opposite end of the live room, is used mainly for vocal tracking, writing and mixing.

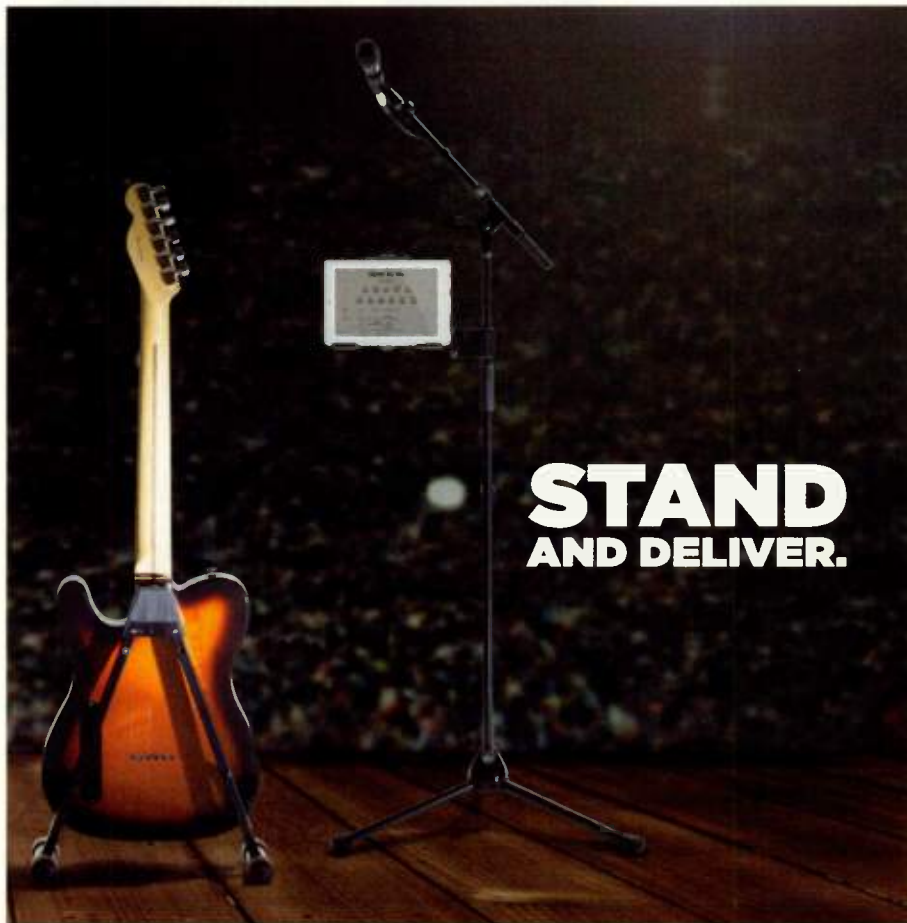
"Studio B is built for people who want to come in and write a song and cut it in a field of top 40, hip hop, R&B, etc. That room was built for specific things," Hancock said. Studio B offers clients a Neve 8014 desk with 16 channel inputs and 16 monitor returns. A pair of Genelec 1038s are installed into the walls, with sets of Genelec 1031As, Yamaha NS-10s and Crane Song Avocets available for additional monitoring.

In recent months, Hancock said the facility had hosted some great sessions, including The Roots recording their new album, *And Then Shoot Your Cousin*, and Miguel was just in the studio to record.

Per month, Hancock said Downtown Studios accommodates between 45 to 70 sessions, depending on the time of year. In between working with clients, Hancock said he and his staff are constantly working to keep up with advancing technologies.

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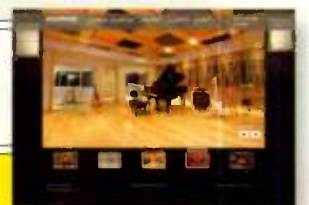
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Windmark

(continued from page 24)

hanna that helped get Windmark off to a flying start. “All six studios have been hitting on all cylinders almost 24 hours a day,” he reports. “That’s a 10-year business plan. Once you get to the point where you’re running 24 hours a day, where do you go?”

Former Neve design engineer Geoff Tanner of Aurora Audio in Hollywood commented in an online forum in 2006 about the desk now in Studio F, “Those early 8078 predecessors were second only to the EMI-Neves in being the best consoles Neve ever made.” Rediscovered by Mike Nehra of Vintage King after several years in a London studio frequented by Bjork, Noel Gallagher and Mark Ronson, the console was a custom order (one of several; the location of the others is unknown) built for CBS in Japan in 1977, according to Tanner’s records.

Vintage King refurbished the modules while Paul Cox reconditioned and rewired the frame using

era-appropriate methods, replacing the onboard patchbay—retained intact for future console restoration—with panel work color-matched to the desk’s current patina. The console, configured with 24 buses and 32 monitor channels, includes 40 31105 mic pre/EQ modules, Neve 2254 and Shep S2151 compressors and, unusually, a record turntable below the producer’s table. Cox also added console-wide phantom power and a remote patch system.

Studio F, which includes a tracking room and a separate large vocal booth, offers an eclectic range of outboard gear, including classics such as the UA 1176, Teletronix LA-2A, dbx 160, AMS DMX and RMX units and a rack of API 500 modules, plus newer SSL and Tube-Tech devices. The soffit-mounted main monitors are by George Augspurger and feature TAD components and Bryston amplification.

The five studios on the second floor of the building remain largely unchanged since Jam and Lewis operated the complex as their private production facility. Each of the rooms houses an SSL AWS900 console with

well-stocked outboard racks and a variety of monitoring choices, including Augspurger, Genelec, JBL and PMC, and Bryston power.

After the 20-year run of his commercial studio in Virginia, “I thought I was done,” Marquart says ruefully. But with only a project studio now available at his east coast residence, he still needed somewhere to work at his California home. Plus, his daughter, Samantha Marq, a singer, and his son, Mikey, also a drummer, wanted to get into the studio business. “Don’t ask me why; I’ve done everything I can to try and steer them away from it!” he laughs.

Faced with having to spend money to construct a home facility anyway, Marquart made an offer on Flyte Tyme and handed the keys over to Samantha and Mikey. “I said, ‘You’re going to have to do all the work. I’ll finance it and give you my expertise, but you’ll have to cut your own teeth.’ There’s a lot of traffic coming through here. I’m so proud of them;

they’ve done such a good job.”

Offering underground parking, the facility is an attractive proposition for artists who value their privacy. Windmark’s concierge-like services are also getting a good rap from its clients, reports Marquart. “We take care of our clients and give them everything they want. There’s fresh fruit and flowers; we have a cook; we make fresh-baked cookies all night long. Those details are important.”

Hopefully, he says, Windmark will eventually become known as one of the great studios: “I really want this place to be here 40 years from now.”

Paul J. Cox Studio Systems

pauljcox.com

Vintage King Audio

vintageking.com

THERE’S MORE ▶ Watch the latest video from A Bad Think, featuring Mariel Hemingway, at prosoundnetwork.com/june2014.

Glas Haus

(continued from page 24)

ren Cuccurullo,” Hart recalls. “We threw it together—two ribbon mics, SM57, Marshall stack. He plugs in and records; they were great takes. There was a whole wall of glass out there in the tracking room, with just one curtain closed, and the whole house was open to the live room. Someone who used to work at Ocean Way was over and said, ‘That sounds like Ocean Way!’ The ZR Acoustics technology has such high resolution it allowed us to record in a Mid-Century Modern on a hill overlooking the San Fernando Valley with phenomenal results.”

It probably also helps that Hart has amassed a collection of equipment capable of supporting the highest audio quality. Monitoring is via a pair of ADAM Audio 3A near fields and a pair of Sub12s. A console housing a Mackie control surface also includes racks of A-Designs, API, Empirical Labs, Focusrite, Kush Audio and other signal processors.

In one outboard rack sits an EQP-1A, LA-2P and a blue-faced 1176, all looking remarkably well preserved. As it turns out, Hart, a Ph.D., built all three from scratch.

“You want a certain sound. The new stuff doesn’t sound good. The

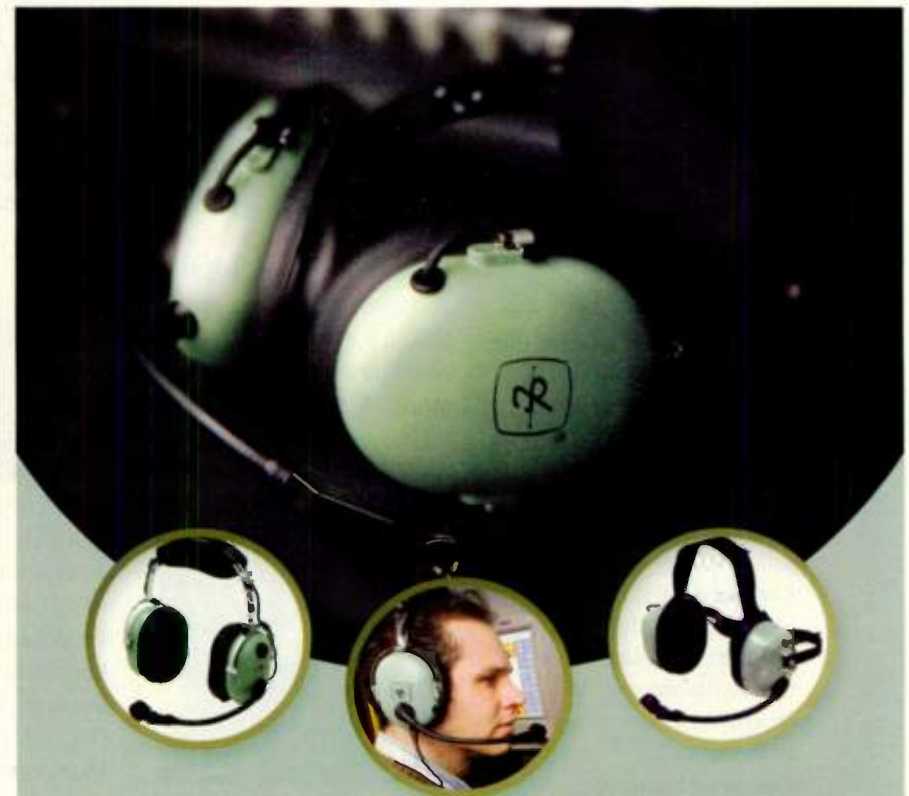
old stuff, some of it sounds good and some of it doesn’t. You know you’re going to go through and fix it anyway, so why not just build it?” he says, modestly.

But perhaps key to the sounds coming out of Glas Haus is the Burl Audio B80 Mothership converter system. “Everything goes out to analog and back in. It’s an interesting idea for electronica.”

In May, Krister Linder, a Swedish electronica artist based in New York, completed his latest album at Glas Haus. “All the Krister Linder tracks were done on a laptop, and it doesn’t sound like it; they were all sent out and summed in the Burl,” says Hart.

A recent project featuring tracks recorded in 1992 by Cuccurullo and Sultan Khan, the late Indian master musician, tested Hart’s engineering chops: “Everything was played in free time, and the second half of this project is a remix, so I spent a year thinking about how I was going to bring a 15-minute orchestrated Indian piece into time. I put it on the grid, looked at the relative time of each bar, then used markers and brought the tempo in on every bar. And in that particular song, it changes time signature every bar. But it was really important to preserve the way it felt.” The album is scheduled for release in July.

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ARTIST: THE TROUBLE WITH TEMPLETON
ALBUM: ROOKIE
LABEL: BELLA UNION
PERSONNEL:
Produced by: Matt Redlich
Engineered by: Matt Redlich
Studios: Grandma's Place (Brisbane, Australia)
Mastered by: William Bowden at King Willy Sound
EQUIPMENT NOTES: Yamaha PM2000 console; MCI JH-16 2" tape machine; Lynx Aurora 16; Cranesong HEDD 192; JLM Audio 99V, TG, Valve Opto, CBS Audimax II, Universal Audio 1176, AWA BIG-1, ADR Vocal Stressor, API 7600 compressors; Benchmark DAC-1 D-A converter; JLM Audio studio monitors

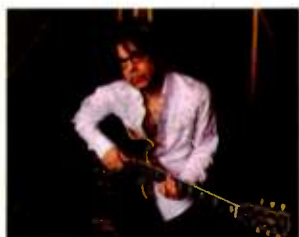


ARTIST: CHARMING LIARS
ALBUM: WE WON'T GIVE UP
LABEL: CAROLINE/CHARTMAKER
PERSONNEL:
Produced by: Bob Rock, John Fields
Engineered by: Eric Helmkamp, Todd Neilsen
Studios: The Warehouse Studio (Vancouver, BC); Studio Wishbone (North Hollywood, CA)
Mastered by: Howie Weinberg (Los Angeles, CA)
EQUIPMENT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



ARTIST: MONEY
ALBUM: THE SHADOW OF HEAVEN

LABEL: BELLA UNION
PERSONNEL:
Produced by: MONEY
Engineered by: Iggy B
Studios: Hackney Road Studios, Bella Union Studios (London, UK)
Mastered by: Noel Summerville
EQUIPMENT NOTES: SSL 4000 E, Neve 66 consoles; Avid ProTools HD; Fairchild 660 compressor; Garage Band Reverb; ATC 100 studio monitors



ARTIST: JOHNNY A.
ALBUM: DRIVEN
LABEL: AGLAOPHONE RECORDS
PERSONNEL:
Produced by: Johnny A.
Engineered by: Johnny A.
Studios: Home Studio (Salem, NH)
Mastered by: Bob Ludwig (Gateway Mastering)
EQUIPMENT NOTES: SSL AWS 948, Neve 1058 consoles; Apple Logic Pro Studio 9; Neve 1081 EQ; Mercury Brüder channel strip; UA, SSL, Lexicon plugins; Genelec 8260A, 8020B, KRK Systems E8B studio monitors



ARTIST: JACKIEM JOYNER
ALBUM: EVOLVE
LABEL: ARTISTRY MUSIC
PERSONNEL:
Produced by: Jackiem Joyner
Engineered by: Tom McCauley, Jackiem Joyner, Tom Malkiewicz
Assistant Engineer: Kevin Clayton
Studios: Dream Center Studios, B2 Studios, I Am Music Group (Los Angeles, CA); Babysoul Music Studios (Palmdale, CA)
Mastered by: Steve Hall (Future Disc)

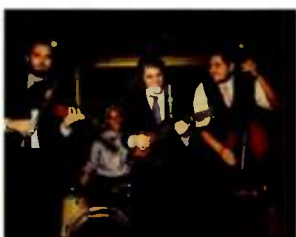
EQUIPMENT NOTES: Sonar X2, Trident consoles; Avid ProTools; Yamaha HS80 M studio monitors



ARTIST: CRASH
ALBUM: HARDLY CRIMINAL
LABEL: COMMUNITY MUSIC
PERSONNEL:
Produced by: Mark Noseworthy
Engineered by: Mark Noseworthy
Studios: Tipton Terrace
Mastered by: Rueben Cohen (Lurssen Mastering)
EQUIPMENT NOTES: Yamaha M916 console; Otari 5050x 8 track tape machine; Avid ProTools; Akai Tube preamp; Space Echo 201 synth; Coles 4038 microphone; Yamaha NS-10, Akai 12-inch passive studio monitors



ARTIST: MAUDLIN STRANGERS
ALBUM: OVERDOSE
PERSONNEL:
Produced by: Jake Hays
Engineered by: Jake Hays
Studios: Home Studio (Agoura Hills, CA)
Mastered by: Steve Corrao
EQUIPMENT NOTES: DiGi002 console; Avid ProTools 9; Yamaha HS-5 studio monitors



ARTIST: THE BOSTON BOYS
ALBUM: IDEA OF LOVE
LABEL: INDEPENDENT
PERSONNEL:
Produced by: The Boston

Boys
Engineered by: Damien Lewis
Studios: Zoo Labs (Oakland, CA)
Mastered by: Brian Lucey (Magic Garden Mastering)
EQUIPMENT NOTES: SSL Duality console; Yamaha NS-10 studio monitors



ARTIST: WAKEY! WAKEY!
ALBUM: SALVATION
LABEL: THIRTY TIGERS
PERSONNEL:
Produced by: Michael Grubbs, Fab Dupont
Engineered by: Fab Dupont
Assistant Engineer: Quentin Morieux, Asher Zeitschik, Ira Senak, Brandon Braam, Mike Latona and Alban Ancel-Pirouelle
Studios: FluxStudios (New York City)
Mastered by: Diego Calvino (332 Studios, Buenos Aires, Argentina)
EQUIPMENT NOTES: Neve 53 series console; Avid ProTools 10 HD; Avid converters; Focal studio monitors



ARTIST: YANN TIERSEN
ALBUM: INFINITY
LABEL: MUTE ARTIST LLC
PERSONNEL:
Produced by: Yann Tiersen
Engineered by: Gareth Jones, Yann Tiersen, Daniel Miller
Studios: Sundlaugin Mosfellsbaer (Alafoss, Iceland)
EQUIPMENT NOTES: AMS Neve 5116 console; Avid ProTools 8; Apogee Rosetta AD, Aviom AN-16 converters; Dynaudio BM 15A, BM 6A, Yamaha NS-10M studio monitors

House Sums in The Box

NASHVILLE, TN—Singer, songwriter and producer James House rented API's (api.audio.com) The Box from Blackbird Rentals to apply summing to his latest album's final mixes at his home-based Dream On Studios, where he recorded vocal and guitar overdubs after tracking Broken Glass/Twisted Steel at Grand Victor Sound (formerly Ben's Studio) in Nashville to two-inch tape through a classic API 3232 console.

Celldweller Adds SSL AWS

DETROIT, MI—Since installing his SSL (solidstategic.com) AWS hybrid console/controller, independent artist, producer, songwriter, performer and programmer Klayton, aka Celldweller, has used it on all of his projects. The Celldweller Studios B room, where Klayton works with artists signed to his label, FIXT, also features an SSL modular analog X-Rack system alongside his DAW.

H-Bird Hits Ocean Way

NASHVILLE, TN—Hummingbird Productions (hummingbird-productions.com) recently produced orchestral recordings at Nashville's Ocean Way Studios for three special projects for its diverse clientele, including a new rendition of Uganda's national anthem for that country's 52nd anniversary celebrations and promotional campaigns for Saint Thomas Health and Alabama Power.

AKG Powers Anderson's Sax

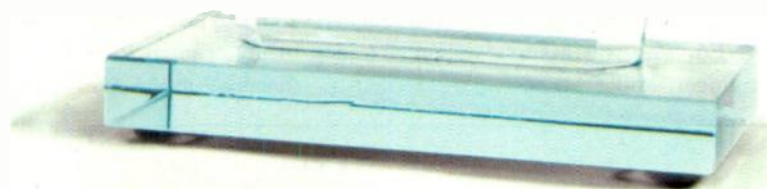
LONDON, UK—Marcus Anderson, a multi-talented artist who has been playing saxophone with Prince's New Power Generation band for almost two years, has been using Harman's (harman.com) AKG C519 miniature condenser microphone on stage as well as in the studio to record his fifth solo album, *Style Meets Substance*, which draws from rock, Bollywood, jazz and old-school hip-hop.

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Working With A Technically Savvy Artist

On his Continuing Adventures In Software, Rich Tozzoli takes a few minutes to talk shop with a new friend and client.

Recently, I finished up a recording and mixing project with drummer/producer/composer Omar Hakim. Well-known for his work with such greats as Sting, Weather Report, Miles Davis and the

ter the Harlem River Drive thing fell apart, I would call him after school, head down to the The Hit Factory and watch him work. For some reason, he liked me and he would answer all of my questions. It was remarkable to just hang out; that sort of kick-started my interest in recording. Another thing that happened was, a very dear friend of mine who I grew up with in

“I find my best acoustic drum set recordings have always been a collaboration between a knowledgeable engineer and myself.”

Omar Hakim

recent Grammy-winning Daft Punk release, he’s also highly knowledgeable about home recording and studio production. Working in his comfortable, well-equipped studio, he crafted a great new release called *We Are One*, where aside from world-class guests, he also played guitar, bass, keys, vocals and percussion. We sat down to talk about how he got bit by the studio bug and where it’s taken him.

How did you get to this depth of understanding about how to use a home studio?

Well, the story actually starts when I was 15 years old. I was in a one-hit-wonder band as a kid that was on Arista Records. We went into the studio and cut a song called “I Need You” under the name Harlem River Drive that was a number one R&B hit for Arista in 1976. The studio was The Hit Factory in NYC; the chief engineer was a guy named Ed Sprigg. I would sit under Ed, who was a super-talented engineer, and even af-

ter the Harlem River Drive thing fell apart, I would call him after school, head down to the The Hit Factory and watch him work. For some reason, he liked me and he would answer all of my questions. It was remarkable to just hang out; that sort of kick-started my interest in recording. Another thing that happened was, a very dear friend of mine who I grew up with in Queens, NY named Fountain Jones, (now an Emmy-winning technical director for CBS) was a friend to the local bands. When we were getting instruments from our parents, his parents were getting him microphones and tape decks. He would come to our gigs and record all of our shows. I really have him to thank and blame for getting into this home studio thing.

I went through all of the iterations of what was available from reel-to-reel, to 4- to 8-tracks, to Tascams, then ADAT. I sold off my ADAT system in like ’96 or ’97 when I met David Charles, who was at the time working for Digidesign. He would come by my studio and hear my stuff, and he would say, “Omar, you are a prime candidate for ProTools.” So I invested in my first ProTools 24 system when that came out.

Fast-forward to 2012, I upgraded my ProTools HD to a ProTools HDX system. I traded in my original Pro-

(continued on page 57)



USB, FireWire, and Thunderbolt...Oh My!

In our computer-based world, every now and then, there’s a wrenching transition. Remember System 9 to OS X? 32- to 64-bit operation on Windows? Those NuBus and ISA cards that became doorstops when PCI appeared?

We’re on the cusp of two transitions, both of which involve interfaces and bandwidth. We covered the extreme range of interfaces last January (as well as issues with USB 3.0), but that discussion takes on new meaning with the push for a hi-res audio format—the topic of last month’s column. And all of this relates back to ports.

care of its own housekeeping—unlike USB, which had to piggyback on the host CPU. Yet eventually, computers became sufficiently powerful that USB’s needs became essentially negligible, and the low cost of implementing it became an advantage.

And of course, there are arguments about speed—which are mostly theoretical. For example, the stats say USB 2.0 can do 480 mbps transfers, while FireWire 400 can do only 400. So USB 2.0 is faster, right? It is indeed for data bursts, but for sustained transfers, FireWire is faster—and streaming data is at the heart of both video and audio. What’s

“There’s been chatter about the need to upgrade audio interfaces to handle the extra bandwidth—but what port protocol is the best, and most future-proof, choice?”

When computers were young, ports were simple: There was a video port for your monitor, and a port for utilitarian but slow items like keyboards, printers, modems, etc. When MIDI appeared, it took Opcode to figure out how to make Mac serial ports work to accommodate MIDI; over in Windows-land, MIDI worked well, but getting multiple MIDI devices to work was problematic due to short-sighted port limitations.

Finally, ports became fast enough to accommodate video cameras, fast hard drives, and yes, audio interfaces capable of streaming lots of data. And as more pros see higher sample rates on the horizon, there’s been chatter about the need to upgrade audio interfaces to handle the extra bandwidth. But what port protocol is the best, and most future-proof, choice?

This is a subject of endless (and often meaningless) debate, much like Mac vs. Windows. What’s more, the goal posts are constantly moving. Back when CPUs had less power, FireWire’s separate hardware chip set meant it could take

more, FireWire is full-duplex while USB is half-duplex. This is basically a two-lane vs. one-lane road situation: one car won’t have speed issues traveling on either road, but if there’s two-way traffic, the two-lane road comes out ahead.

However before deciding that FireWire is a better choice, first you have to find a computer with a FireWire port—an increasingly difficult quest, particularly with laptops. You can always add a FireWire card, but then you need to find a computer with enough card slots. And with USB 3.0 gaining traction—which is way faster than FireWire 800 (sometimes) or at least equivalent (sometimes)—there’s always the concern USB 3.0 is on the ascendency while FireWire is in its twilight years.

Try to glean info from the web about speeds in the real world, and you’ll find little that’s definitive because of those darn moving goal posts. One site said USB 3.0 and Thunderbolt were equally fast when transferring files—but that was to a hard drive. With an SSD

(continued on page 57)



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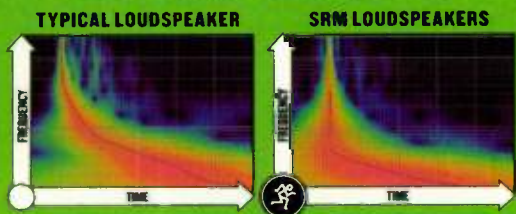


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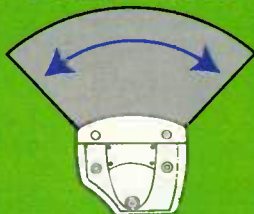
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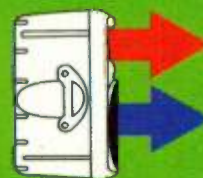
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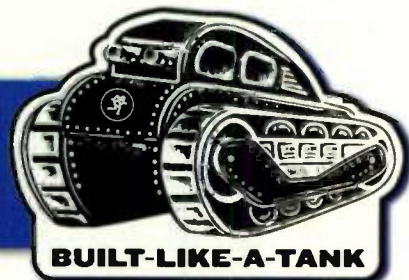
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Sony Pictures Upgrades For Immersive Sound

BY STEVE HARVEY

CULVER CITY, CA—A major overhaul of the William Holden Theatre at Sony Pictures Studios in Culver City, CA has introduced efficiencies in the facility's film sound re-recording workflow and across its entire post production process. Audio upgrades included support for both the Dolby Atmos and Auro-3D immersive sound formats, and were performed in time for re-recording mixers Paul Massey and David Giammarco to work on the first big hit of the summer, Columbia Pictures' *The Amazing Spider-Man 2*.

The film is the first production to be mixed in Atmos on the lot and demonstrates the tight integration of the sound, visual effects and post production teams at Sony Pictures Studios. "What we have is a creative campus, a collaborative environment and a solid workflow where things can happen simultaneously, as opposed to waiting for one thing to finish and another service to start," explains Tom McCarthy, executive vice president, Sony Pictures Post Pro-



Bill Baggelaar, senior vice president of technology, Sony Pictures Entertainment, (left) and Tom McCarthy, executive vice president, Sony Pictures Post Production Services, pause in the recently upgraded William Holden Theatre at Sony Pictures Studios in Culver City, CA.

duction Services. "When you're on the mix stage at the Holden, you're 100 feet away from Colorworks, where you can check your color correction. Having the Holden built with the new formats just makes us more powerful in our operation."

The lot's Colorworks digital intermediate facility was responsible for film scanning, conforming and color grading, plus 2D and 3D mastering—all at 4K resolution. Sony Pictures Imageworks created the film's visual effects. Production elements were

available to all picture and sound departments, as well as to third-party vendors via secure connections, on the lot's shared storage system. "We look at our facility as a one-stop shop," says McCarthy. Beyond its integrated post services, Sony offers everything from pre-production office space to the creation of the DCP and all the after-market materials, he says.

The Holden Theatre's audio upgrades included an expansion of the JBL speaker systems, QSC Audio amplifiers and Lake EQs to support the new immersive formats. "We installed 63 speakers in the room. We use 48 of them for the Atmos platform and 43 for Auro. A mixture of those speakers are used on both," says McCarthy.

The stage's Harrison console was upgraded to a new MPC5/Xrange system with MC²-64 wide monitoring, Object++ 3D panning software and 1,230 channels of DSP processing. "The Harrison facilitates and helps automate the object panning conversion from Atmos to Auro 3D," explains Bill Baggelaar, senior vice

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AoIP & AES67

(continued from page 1)

job will be the same as pre-AoIP days. But instead of physical patching, software now handles routing management.

Patrick Warrington, technical director for Calrec Audio, which recently announced its adoption of AES67-compliant RAVENNA, is not concerned about large enterprises. "It's the smaller organizations where maybe they don't have full-time IT departments. Are they going to be able to install an infrastructure and know enough to be able to make it cope with perhaps unpredictable demands?"

But as Greg Shay, chief science officer for Telos Alliance, pointed out, there is already an experienced, established AoIP user base. "Even though AES67 is relatively new, just coming out this year, it's important to realize that it's based on the same audio-over-IP techniques that, for instance, we've been using in the radio industry with Livewire [Axia's network system] for over 10 years. We're up over 6,000 studios, live on the air. So don't think for a minute that AES67 is somehow new or inherently not proven."

"One of the requirements was

that this works through standard Ethernet switches that you can buy," commented Kevin Gross, X192 (the AES task group that developed AES67) committee chairman, independent engineering consultant and inventor of CobraNet. "We could have invented something new that worked through standard switches, but we also wanted to use the standard protocols."

As noted by Lee Ellison, CEO of Audinate, by incorporating existing standards into AES67, the X192 working group instinctively fell into

on a lot of the same things. It was an advantage of being part of [X192] that we were able to participate and not have it end up being too radically divergent."

AES67 certainly appears to have plenty of momentum. "We've seen this standard become ratified in pretty much lightning speed by AES standards. It took two years—unheard of!" said Warrington.

In February, Audinate announced plans to offer AES67 support in Dante "within 12 months." Then, in March, QSC Audio an-

"I'm pretty sure an audio engineer won't be an IT guy in the future. It's the same for the IT guy; he won't be an audio engineer. You can't deal with both."

Felix Krückels

line with MIT professor John Sowa's Law of Standards. "It says whenever an organization develops a new standard from scratch, the end result is that they have to go back and simplify using existing standards," said Ellison.

Axia also took a standards-based path, said Shay. "It really goes back to the choices we made with Livewire over 10 years ago to pick standards, just like we did for AES67; we landed

announced that the latest Q-Sys network audio platform software release meets AES67 network clock and audio packet delivery standards and that all future Q-Sys software releases will be fully compliant with AES67.

"I don't think the challenges of interoperability are that great," said Ellison. "For us to do firmware updates of FPGAs is pretty straightforward."

For audio equipment manufactur-

ers, the ability to easily interconnect and communicate with other manufacturers' products, versus existing within a silo, makes sound business sense. Said Shay, "We had to decide what is more valuable to us in the long term—to be a part of the greater whole or to have this carved-out niche. We knew that the greater value was to be interoperable."

Audinate, by signing up over 140 Dante licensees, has helped lead the audio industry's adoption of AoIP.

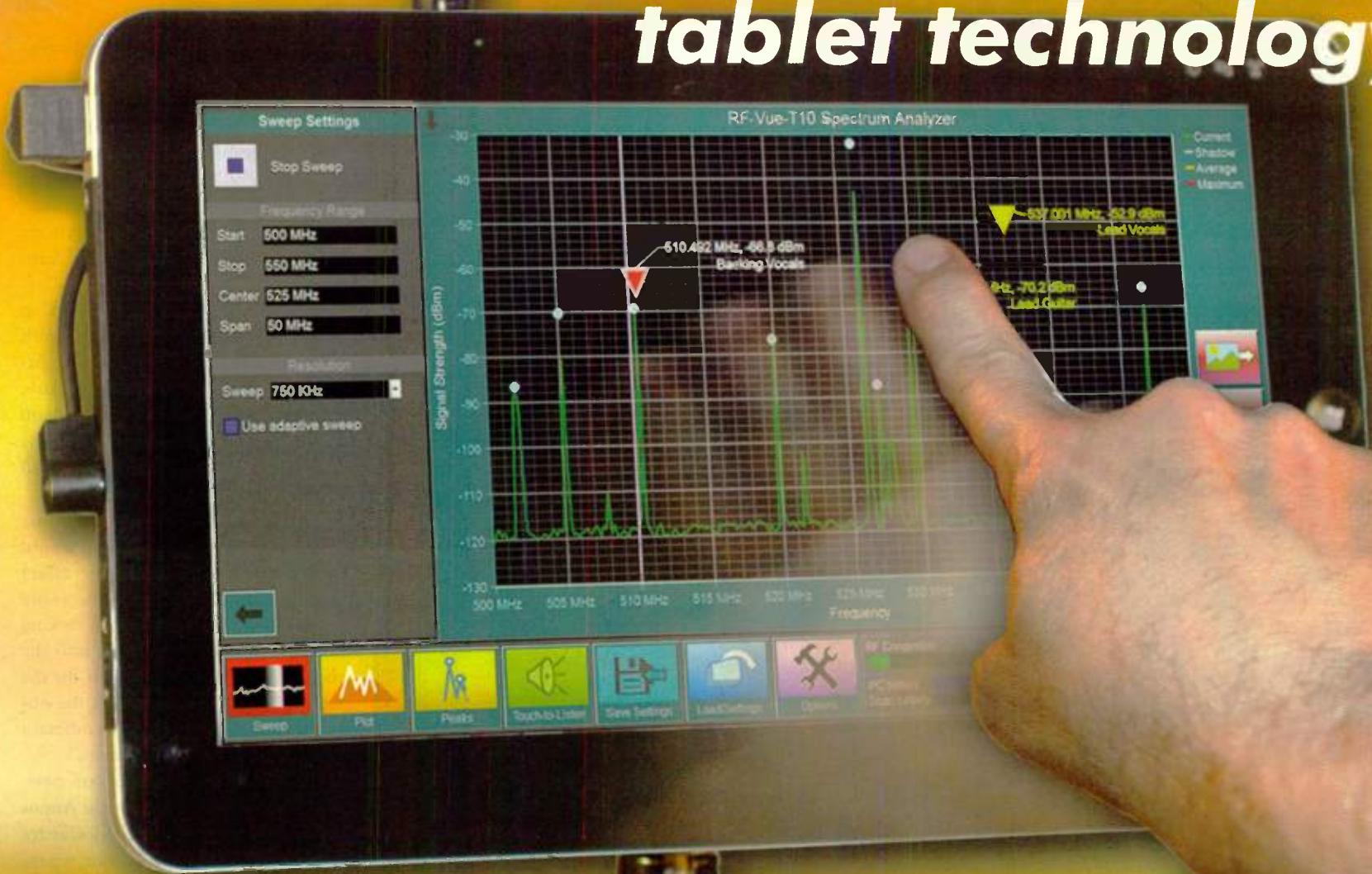
Audinate believes in Metcalfe's Law, said Ellison. Also known as the network effect, it states that a network's value is proportional to the square of the number of nodes on the network; the more users there are, the more valuable the device becomes to each owner. "By adding AES67, we will be able to connect with a larger eco-system. We think that makes the market bigger."

There is still work to be done, observed Krückels. AES67 may enable devices to connect, "But it doesn't give us the usability for the operator in day-to-day work. We now have to have a management software."

But fundamentally, and most importantly, "What use is an interoperability standard if you don't have lots of products to interoperate with?" asked Warrington. "So you need to have a lot of companies signing up for this."

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Sony Pictures

(continued from page 34)

president of technology, Sony Pictures Entertainment. "That was one of the primary reasons we went with the Harrison solution." The console provides Ethernet control of the Dolby Atmos RMU (Rendering and Mastering Unit); motorized joysticks

enable dynamic panning.

The renovations also included a new projection screen, a new projector and brand new décor. "We remodeled the room to ensure that we'd be at the highest quality possible," says McCarthy. "We figured we'd like to have not only the two immersive sound formats in the same room, but also to make it 3D capable and make it our flagship for that environment."

McCarthy relates that his department had to wait to hear whether or not the studio was going to release *Spider-Man 2* in an immersive sound format before pulling the trigger on the upgrades. "The determination to go forward with the installation happened at the beginning of November," he says. Even with time off for the holidays, Baggelaar and his team had everything finished in time for Massey and Giammarco to give the

"Mixing natively is more time consuming"

Tom McCarthy, Sony Pictures Post Production Services

room a two-day shakedown beginning January 2.

"We started pre-mixing on two stages on January 6. We finished the final deliverable for domestic release on March 2," McCarthy reports. "The vendors were really supportive," he adds. "Harrison had somebody here for weeks, Dolby was here, Auro was here."

The mix team elected to work in Atmos natively rather than start with a 5.1 or 7.1 mix. "They did the Atmos mix, then folded that into Auro; it worked seamlessly and gave them a nice starting point for tweaking the Auro mix. From that, they created their 5.1 mix," says McCarthy.

"Mixing natively is more time consuming, but they felt it would have a much more dramatic effect on the mix, that it would be more integral than doing a 5.1 then looking for specific materials to put into the object tracks. Whereas if you do the 5.1 or 7.1 first, then sweeten the object tracks, there would be a different texture than the original intent."

Planning the simultaneous positioning of up to 118 objects in Atmos adds days to the mix, says McCarthy. "Laying it out, figuring out where the movement is going to take place, what speakers it's going to be sent to, takes additional time. There are so many different directions that sound can take in an Atmos or Auro environment."

The Holden stage may not be the first to integrate mixing capabilities for both popular immersive film sound formats, but the efficiencies afforded by the dual install will be a major draw for Sony's clients, McCarthy believes. "Immersive sound formats are becoming more popular, and having them in the same room allows me to keep my crew and the creative talent in the same environment.

"Thirty percent of our work is third-party work," he says. "From a business standpoint, having a room of that size with the capabilities of both immersive formats in it is going to be of benefit to us."

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Yamaha NUAGE Advanced Production System V1.5

Yamaha Commercial Audio Systems, Inc. has debuted Version 1.5 software of the NUAGE Advanced Production System. Available via free download, the new version allows remote control of R Series audio interface head amplifiers from NUAGE Fader/Master control surfaces. In addition to providing a broader selection of I/O options for NUAGE systems, the software also provides for Yamaha CL Series Digital Mixing Console inputs to be shared via a Dante network for system expansion capability.



Although NUAGE already allows switching between up to three different DAWs, with V1.5, the "NUAGE PT Bridge" driver for Avid ProTools control gains OSX 10.9 compatibility so that ProTools running on Mac platforms is fully supported. Also, adding Quick Control to the NUAGE Master unit, specified parameters can be assigned to the multi-function display so the user has more customization control. The NUAGE Master unit now has the ability to access VST instruments from the display and knobs. The multi-function knobs will also provide as much as 512 times finer control than has been available in the Fine Mode.

Brainworx bx_refinement, bx_saturation V2 Plug-Ins

Plugin Alliance has announced the availability of two new native plug-ins from software developer Brainworx: bx_refinement and bx_saturation V2. Primarily intended for mastering applications, they are available in AAX DSP, AAX Native, AudioSuite, Audio Units, RTAS, VST, and VST 3 formats for Mac and PC, as well as editions for Universal Audio's UAD-2 proprietary platform.



The Brainworx bx_refinement Plug-In is intended to help mixing and mastering engineers to remove harsh, hard edges from their tracks, reportedly without altering the character and tone of their source material. Designed by mastering engineer Gebre Waddell of Stonebridge Mastering, the bx_refinement plug-in is based on a combination of time-tested approaches, modern techniques and more. The Brainworx bx_saturation V2 Plug-In is a multi-band

M/S (Mid/Side) processor that allows users to add saturation, drive and distortion as desired. It features Brainworx's "True Split" crossover technology, which ensures that the Mid and Side channels are in phase.

Focusrite Saffire Pro 26

Focusrite has released its Saffire PRO 26, the latest addition to the company's Saffire Pro range of FireWire/Thunderbolt compatible audio interfaces. Designed with both studio recording and live musicians in mind, Saffire Pro 26 features a selection of professional analog and digital I/O options. A total of 18 inputs and eight outputs includes four preamps, two instrument inputs, two headphone outputs, six line outputs and ADAT & S/PDIF connectivity.



Saffire PRO 26 connects to a Thunderbolt port via a FireWire to Thunderbolt adaptor (not included) or directly to a FireWire 800 port with the cable provided. The four Focusrite preamps within the Saffire Pro 26 aim to provide low noise and distortion with plenty of headroom, while 24-bit/96 kHz digital conversion and JetPLL jitter-elimination technology maintain audio quality in both analog and digital domains.

Marshall Micro Studio

Marshall Electronics has bundled its mini HD cameras, microphones and monitors into The Micro Studio, an economical video production studio aimed at pro and prosumer videomakers. The Micro Studio consists of the Marshall CV500-MB 2.2 Megapixel HD-SDI 1080i/59.94 miniature camera and CV340-CSB 2.2 Megapixel HD-SDI 1080i/59.94 compact CS tube camera, MXL CR77 dynamic and FR-355K lavalier microphones, an audio/video switcher, Marshall V-MD173 monitor, and PS-102-HDSDI encoder. The PS-102-HDSDI is powered by StreamVu content distribution network.



Each camera provides full HD 1080i/59.94 video; the CV500-MB is 1.5-inch x 1.5-inch and less than 50 grams. The microphone has a built-in shockmount and a supercardioid pattern to minimize unwanted noise. Meanwhile, the V-MD173-DT 17-inch full resolution monitor allows users to view the video being captured.

Eventide DDL-500 Digital Delay

Eventide has issued its DDL-500, the company's new digital delay for 500 series racks, featuring 10 seconds of delay at a 192 kHz sample rate and a design intended to limit the amount of digital circuitry to the bare minimum. Soft saturation clipping, low pass filter, feedback, insert loop, relay bypass, and +20 dB boost are all analog.



Delay time can be varied either manually or by connecting an LFO to the remote input, allowing short delays to be used for comb filter and flanging effects. The DDL-500 is also capable of extremely long delays (up to 160 seconds at a 16 kHz sample rate), allowing long passages to be captured for looping.

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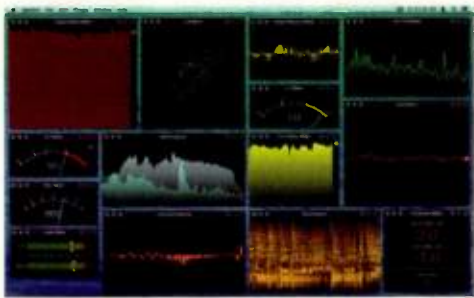
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Audiofile Spectre Audio Analysis Suite

The music technology company, Audiofile, recently announced a major update to Spectre, the real-time audio analysis suite for OS X. Intended for all types of audio professionals from producers to broadcaster engineers, Spectre includes 20 different multi-channel and multi-trace meters including Level, VU, Spectro-



graph, Oscilloscope, Spectrogram, LU, and LU History. With version 1.7, Spectre now supports the latest loudness standards, and is said to offer enhanced performance, making more detailed and responsive in order to provide a clearer picture of the user's audio.

PreSonus Monitor Station V2

PreSonus is now shipping its Monitor Station V2, a redesign of the company's desktop studio monitor control center. The new monitor controller provides a S/PDIF digital input and has a more ergonomic, intuitive layout than the original Monitor Station. Features include four stereo inputs—two pairs of balanced TRS and one pair of unbalanced RCA Aux inputs with gain control—managed with a source-select switch. A 1/8-inch TRS unbalanced input is summed with the RCA Aux inputs. The S/PDIF stereo input supports 44.1, 48, 88.2, and 96 kHz digital audio; a button switches between the Aux and S/PDIF inputs.

Three left/right pairs of balanced TRS speaker outputs and a Speak-



er Select switch enable users to A/B compare audio through up to three sets of reference monitors. A variable, rear-panel control enables fine-tuned calibration of speaker-output levels.

CAD MH320 Headphones

CAD Audio has added the new MH320, closed back, circumaural monitor headphones also have large, soft leather earpads outfitted with high-density memory foam to combine isolation and comfort for the user. Built for use in a variety of pro audio situations, the headphones can be used in studio, live sound and DJ settings. Specifications of the headphones include a frequency response of 10 Hz to 26 kHz; sensitivity of 101 dB; a 45 mm Neodymium driver; and more.



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Alcons LR24 Line Array

Alcons Audio has announced its new LR24 three-way, larger-format, line-source sound system, available to use as a vertical array either stacked or flown for large sound reinforcement.

The LR24 is intended to provide a HiFi-grade sound quality with very high SPL capabilities, and is loaded with Alcons' proprietary pro-ribbon technology for mid and high frequencies. The LR24 reportedly offers up to 90 percent less distortion under lowest power compression. The all-natural (Isophasic) cylindrical wavefront of the pro-ribbon HF transducer is said to provide a precise pattern control without distortion-inducing horn constructions. The LR24 has a linear frequency response from 51 Hz to 20,000 Hz (-3 dB), where the low-end control can be extended by the LB24 double-12-inch bass array-extension with the same cabinet footprint.

The system is to be driven by four channels of the Sentinel, Alcons' proprietary 10 kW amplified loudspeaker controller. Through the integrated (steering) processing and feedback, the ALC offers LR24-specific drive processing.

The rigging system enables angle-setting on the cabinets, without lifting the array, intended to provide faster set-up times with minimal handling. The flying system supports different ways of array assembling, per single cabinet or 4-cabinet pre-rig and is certified for 24 cabinets in a 10:1 safety ratio.

Adamson E219 Subwoofer

Adamson System Engineering will debut the new E219 subwoofer at InfoComm this year, adding to its Energia family of loudspeakers.

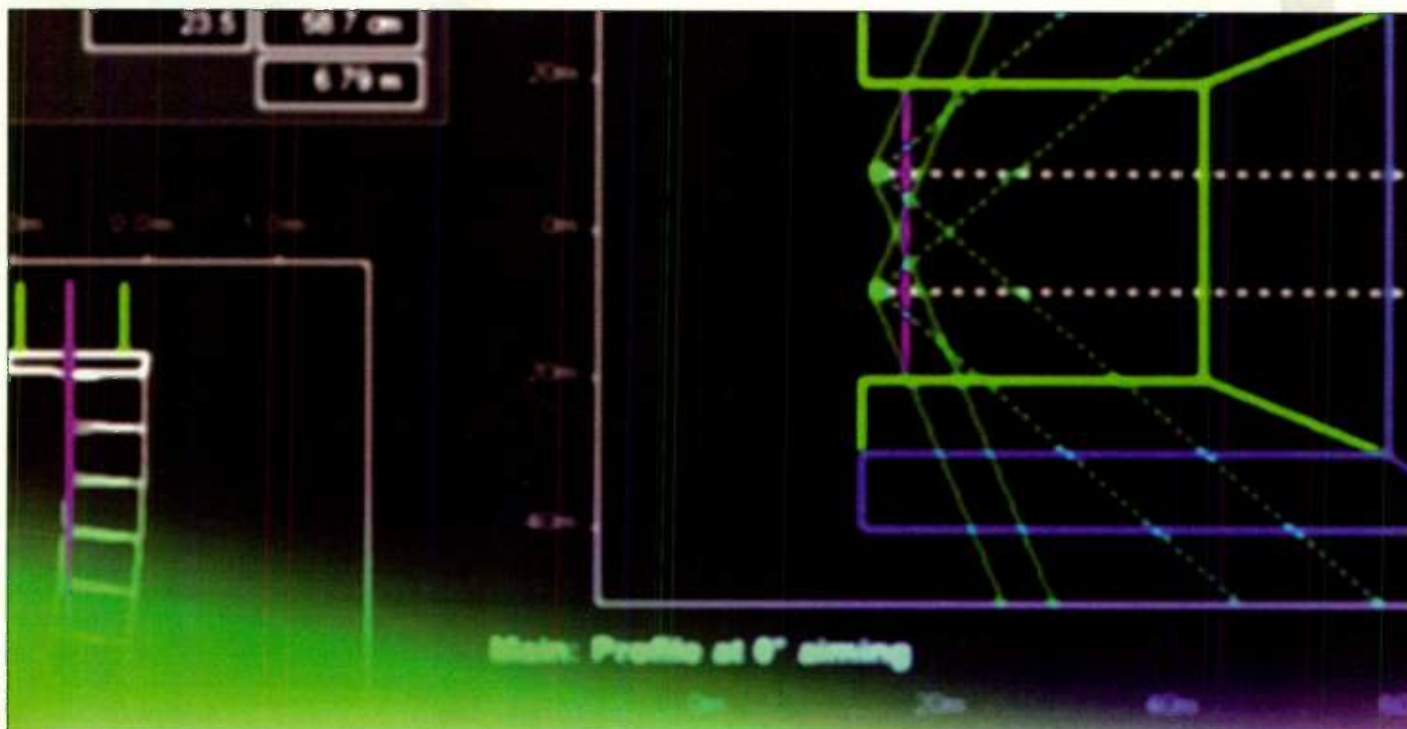
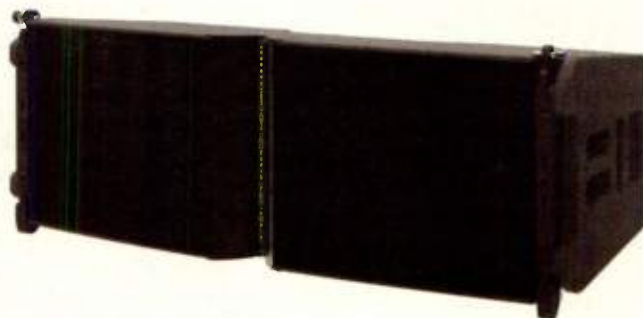
The E219 is loaded with two lightweight, long excursion 19-inch SD19 Kevlar Neodymium drivers



utilizing Adamson's Advanced Cone Architecture. The drivers employ dual five-inch voice coils for power handling, and are mounted in a front-loaded enclosure. The E219 also utilizes a tangential flow venting system that is said to reduce harmonic distortion by minimizing air turbulence.

Weighing in at 249 pounds, the E219 lends itself to rigging situations that benefit from flying subwoofers. The sub is designed to be used as a standalone low frequency component in the Energia system, but can also be combined with the E218 cabinet for larger events. The E219 subwoofer is specified for use and packaged with the Lab.gruppen PLM 20000Q amplifier. Four E219 cabinets can be run from a single amp.

There's more information on all the products featured at prosoundnetwork.com/june2014.



Sonic harmony through a thoughtfully integrated workflow or the sophisticated d&b trilogy: ArrayCalc simulation software, R1 Remote control software and the pristine D80 amplifier make for efficiency.

D80

d&b
audiotechnik

Avengers Assembled

BY CLIVE YOUNG

NEW YORK, NY—*The Avengers* is now the third highest-grossing film of all-time; building on the 2012 movie's tale of superheroes saving New York City, it's only appropriate that Discovery Times Square, an exhibition hall only blocks from where the film's fictional battle took place, would present *Marvel's Avengers S.T.A.T.I.O.N.*, an "immersive experience" that runs through January 4, 2015.

Produced by Victory Hill Exhibitions, the installation allows visitors to enter a high-tech training center—a maze of control rooms, laboratories and corridors—where they can become secret agents, ogle props from the film and learn all about the real-world science behind the comic book characters. Whether they're using the interactive exhibits to map The Hulk's brain, discover how Thor's hammer conducts electricity, test their strength against Captain America or control Iron Man's body armor using the pupils of their eyes, visitors leave both excited and enlightened.

But while the displays are impressive, little thought was initially given

to the audio aspects. As audio post supervisor Mark Edward Lewis recalled, "I said, 'Let me get this straight—you're going to have Iron Man fly in silence?' They figured they'd use some ambiances, but after about an hour, I had them realizing that there's a lot of considerable things that we could do."

As the project progressed, Lewis brought in Frank Serafine as his senior sound designer. "At the beginning, our issue was to get organized over what ended up being 224 speakers on 168 discreet channels and more than 300 sounds that we had to develop," said Lewis.

Just as challenging, however, was ensuring that the sounds of the superheroes—for instance, the buzzes and whirrs of Iron Man's armor—were the same as heard on the big screen. For those, Serafine had to track down pre-dub ProTools sessions of *The Avengers* and related superhero films. "We were able to pull a lot from them, but when you go through a pre-dub, some are 250 or more tracks deep

with sound effects," said Lewis.

That said, the audio team still created roughly two-thirds of the exhibit's sounds. For instance, in *The Avengers*, the Tesseract (a fictional device that creates portals to other worlds) could be heard starting up and shutting down—an effect cre-

(continued on page 52)



Frank Serafine, senior sound designer (left) and Mark Edward Lewis, audio post/visual effects supervisor, created more than 300 sound effects played through dozens of PreSonus speakers in the *Marvel's Avengers S.T.A.T.I.O.N.* exhibition.

briefs

QSC Stays In Vegas

LAS VEGAS, NV—The Mandalay Bay Resort and Casino recently updated its Moorea Beach Club with 22 weather-resistant QSC Audio (qsc.com) AcousticDesign AD-S282H loudspeakers to support background music and DJ performances, installed by AVDB Group (avdb-group.com).

SE Sets Up Merlefest

WILKESBORO, NC—Yamaha Commercial Audio Systems, Inc. (yamahaca.com) provided four CL5 digital audio consoles for this year's MerleFest; the event also variously sported Yamaha PM5D desks, Nexo Geo D loudspeakers, Geo Subs, 45-N monitors, NXAMP 4x4 power amps and more, supplied by SE Systems (sesystems.com).

Adamson Goes In One Direction

BOGOTA, COLUMBIA—One Direction kicked off its world tour in Bogota, Columbia's Estadio el Campin, reaching 60,000 fans via Columbian sound company C. Vilar LTDA's Adamson Systems Engineering (adamsonsystems.com) Energia line arrays, T21 subs and SpekTrix frontfills.

Alford Media Moves To MLA

DALLAS, TX—Corporate event specialist Alford Media has purchased a Martin Audio (martin-audio.com) MLA system comprised of 32 MLA Compact, 32 MLA Mini, 18 DSX and 8 MSX subs, and debuted the rig at a Walmart show at the Orlando Convention Center.

McGraw/Hill Use Ear Trumpets

LAS VEGAS, NV—Tim McGraw and Faith Hill dueted at the 2014 American Country Awards in April, performing "Meanwhile Back at Mama's" into Ear Trumpet Labs (eartrumpetlabs.com) Edwina and Chantelle microphones, respectively.

SSL Live Sits In With Santana

NEW YORK, NY—Santana has been touring the world recently, playing Dubai, Johannesburg, Cape Town and more, hitting each stop with longtime monitor engineer Brian Montgomery in tow to mix stereo wedges and IEMs on an SSL (solidstatellogic.com) Live console.



Hedwig Heads To Broadway

BY KELLEIGH WELCH

NEW YORK, NY—Revived from its off-Broadway and cult classic film counterparts, Broadway's *Hedwig and the Angry Inch* follows an East German transgender rockstar's struggle to fame after her bandmate and ex-lover steals her songs. Starring Neil Patrick Harris of *How I Met Your Mother* fame, the show has been nominated for eight Tony Awards, including Best Revival of a Musical and a Best Sound Design nomination for Tim O'Heir.

The story follows Hedwig, who after falling in love with a U.S. soldier, decides to have a sex change and move with him to the United States. However, the surgery doesn't heal properly for now-female Hedwig. Upon her husband leaving her after their move to Junction City, KS, Hedwig forms a rock band called The



Coming from a recording background, Tim O'Heir has been nominated for a Best Sound Design of a Musical Tony Award for his work on *Hedwig and the Angry Inch*.

Angry Inch and collaborates with her next boyfriend, Tommy Gnosis, who steals her songs and is soon touring large stadiums while Hedwig and her band continue to grace coffee shops and cafes.

With a soundtrack reminiscent of the 1970s glam rock era, the sound system design needed to mimic the setting of a rock club or concert hall, leaving O'Heir, the show's sound designer, with the challenge of creating a high-energy rock show in the historic Belasco Theatre. Production

Resource Group (PRG) supplied the majority of the equipment for the show.

O'Heir came to sound design from the world of record production; besides working with *Hedwig* composer Stephen Trask in 1999 to record the movie version's score, he also tapped his experience working in the studio with artists like The All-American Rejects, The Flaming Lips and Say Anything for the musical.

"My job is to translate a rock and

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Hedwig

(continued from page 42)

roll show to a Broadway audience,” O’Heir said. “It has to be a full-blown, rock concert sound, and my job is to create that in a theater built in 1907, while also figuring out how to keep the audience from running with their fingers in their ears.”

“This production is very fast and furious though,” O’Heir added. “It’s different from a record production. With records, you can go over things. You have that luxury because you’re making something that can last forever. When it’s live theater, it sounds different.”

With the help of sound designer Kai Harada, O’Heir was able to create a rock club atmosphere, bringing in acoustic panels to help with the echoes coming from the balcony sections of the theater. Facing a limited budget, however, reducing the echo relies heavily on a sold-out audience.

The venue also went through a recent renovation, creating another challenge for O’Heir when it came to speaker placement. “All the detail in the theater is plaster, done by Italian artists,” said O’Heir. “Therefore, anything we did, any hole we punched in the wall, has to be repaired. Going into this old theater, we had to be very wary. The walls weren’t built to hang these speakers.”

Even with some anchoring spots added over the years, O’Heir and his team still had to be aware of preserving the building as they hung a variety of loudspeakers from Meyer Sound, including an 11-box M’elodie cluster and 16 M2Ds covering the balcony, mezzanine and far stalls, along with a variety of UPQ-1Ps for inner stalls; UPJ-1Ps for downfill and foldback; two UPJuniors; UP-4XPs for front- and box fills; 600-HPs as truss subs; and a USW-1P sub—along with d&b audiotechnik models.

The band plays a central role in the show, and to stick to the image of a rock and roll band, O’Heir said he wanted to use a live drum set without a plexiglass cover. “I worked with the composer to decide if we wanted to use electronic drums to help control the sound, but we decided it just wouldn’t sound right. Hedwig is a rock and roller, and she’s not going to have plexiglass over her drums,” he said.

All of the performers are equipped with Ultimate Ears in-ear monitors, with a Shure wireless RF system. “With all the drums on stage, the in-ears help cancel everything out,” O’Heir explained.

The sound crew did encounter one issue with the wireless system, O’Heir said, during certain scenes

when Neil Patrick Harris was wearing a customized crystal costume. “The crystals were embedded in lead, and lead cancels out transmissions and reception,” O’Heir said. “We had to make a few costume adjustments and remove some of the beading. It was just something you wouldn’t think would cause a sound issue.”

The show is mixed on a selection of Midas consoles, with a Midas Pro9 at front-of-house, and a Midas Pro2 for monitors. O’Heir said he also

chose to use some Waves plug-ins for the show. He said that while Midas isn’t always a typical choice for a theater performance, it’s a great rock and roll board: “I wouldn’t necessarily choose that desk for other shows, but I’m glad I chose it for this—it sounds fantastic.”

Because of the rock and roll nature of the show, performers are mainly singing into Sennheiser 935 handheld microphones. “Our mics are both wired and wireless,” said

O’Heir. “We had to teach some mic technique, because we can always have a really direct sound as long as the singer is singing into the microphone.”

“This show is really unique,” O’Heir said. “The director, Michael Mayer, is known for his rock and roll productions. There’s not going to be another Broadway show like this—it’s a full-fledged emotional experience.”

Hedwig and the Angry Inch
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Peace and No Quiet

BY STEVE HARVEY

LOS ANGELES, CA—Morrissey will release his tenth studio album in July, *World Peace is None of Your Business*, which was recorded in France in February with producer Joe Chiccarelli. The new project, his first for a new two-album deal with Capitol, comes hard on the heels of his memoir, *Autobiography*, published in October 2013, and spawned a seven-week U.S. tour that is scheduled to end in New York on June 21.

U.K.-based FOH engineer David “Milky” Millward, who has been working with Morrissey since 2004, has developed a compact, networked mix setup that positions an Allen & Heath iLive-80 control surface and PL10 rotary fader plate module, two laptops, an iPad and an iPod Touch all within arm’s reach. The system is interconnected via A&H’s proprietary ACE and Audinate’s Dante networks with Wi-Fi for the handheld devices.

“Because I’ve got a Wi-Fi router, I can connect the iPod Touch for playback and remote-control it from the iPad. So when I’m walking around the room setting the system up, I can be on the third balcony and decide I want to listen to a different track,” says Millward.

At the other end of the redundant Cat5 snake connecting Millward’s iLive to the A&H iDR10 MixRack on-stage, German monitor engineer Tom Vollmers, who previously worked with Morrissey on his 2011 world tour, is using an iLive for the first time. In fact, says Vollmers, “I did a tour in Germany last month and used the iLive-112 be-

cause I knew I was using it for Morrissey. It’s good sounding, I like the surface and the effects are pretty good.” Production provider Eighth Day Sound supplied a d&b technologies Q series sound system for the tour.

Because of the size of the L.A. Sports Arena, N. Hollywood-based Schubert Systems was brought in to supplement the rig. “It’s 12 J8s a side with four J12s underneath, six J Subs flown per side, with 12 V8s per side for out fill,” enumerates Michael



Longtime Morrissey FOH engineer David “Milky” Millward mixes the former Smiths frontman on an Allen & Heath iLive-80.

Mordente, A1/system designer for Schubert Sound. “There are four V2 Subs per side, and four J Subs per side, on the ground, with four Qs for lip fill. A total of 48 D12 ampli-



Morrissey took to the stage at the L.A. Sports Arena, belting into his Shure KSM9HS mic as he tread upon a d&b audiotechnik M-Series wedge. In the distance, monitor engineer Tom Vollmers oversaw an Allen & Heath iLive-112 console at stageside.

fiers are powering it, with three Lake LM44s running AES processing it, plus the [d&b] R1 control system.”

Vollmers’ monitor mixes for Morrissey and the two guitar players fed d&b M2 wedges. “One of the best in the world,” he says. “We’re using L-Acoustics Arcs side fills, stacked on L-Acoustics SB28 subs.” The bass player and keyboard player were both on Sennheiser G3 IEMs, while the drummer made use of a G3 IEM plus two wedges.

Millward says of the iLive-80, “It’s 20 faders on the surface, with four layers, so you’ve got 80 faders at any one time. For each song, even if I’m not doing any automation or any changes at all, the one thing I will do is bring up the faders I need for that song to the surface. Plus, I do a lot of mixing on the DCAs.”

Using one song’s set-up by way of example, he elaborates, “At this level, I’ve brought up the kit reverb, snare top and bottom, acoustic guitar and the backing vocals I need. I always have [Morrissey’s] vocal accessible.”

His left-hand laptop runs iLive Editor, which he uses to configure and program the surface. “You go into Strip mode and you can select one or multiple things and drag them. It can be anything—an input, an output, a DCA, an effects return, stereo group. So you’ve got a lot of flexibility. You can do that on the surface as well, but I tend to use the Editor.”

Every Morrissey show is archived to the laptop on Millward’s right: “I’m using Logic to record to a solid

state drive. I’m using the Dante card in the MixRack and the Dante Virtual Sound Card just to do record and playback. So I can do virtual soundchecks, as well.”

Also by Millward’s right hand is an A&H PL10 wall panel, originally intended as an installed sound product. “But it’s ideal,” he says. “It adds a load of quick-access keys, assignable to various functions. So I have instant access to the effects slots.” Four of the iLive surface quick keys also access effects.

“The plug-in culture is a bit of a pet hate of mine, partly because, coming up through analog, I never had access to any of that,” he says. “So I don’t understand this obsession with plug-ins.”

However, the processing—including EQ, reverbs and compressors—in the iLive is very usable, he says. “It has the best built-in reverbs of any console I’ve come across—and I’ve used most of them. I’ve found with so many effects that I’m having to EQ the reverbs and hack nasty frequencies out. But I hardly ever have to touch these, which says a lot for the smoothness and attention to detail.”

Millward has programmed two PL10 switches for PFL. “From the matrix, a copy of my mix is going into the Dante bus. When I have Logic up on the laptop and I press record, I can hear my audience mics on one switch and the mix on another. They don’t appear on the surface but I have them here.”

Neither Morrissey, the band nor the crew have endorsements with any microphone manufacturers, so Millward has simply amassed a variety of brands and models that are

(continued on page 46)

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SD5





Live Sound Showcase

(continued from page 44)

best suited to the job. “But I’ve been around so long that I know people,” he says. “So as far as Shure is concerned, I’ve known Peter James, the managing director of Shure distribution U.K., since he walked into the music shop where I was working as manager when he was selling Studiomaster desks. If I want to try anything, he’s good at letting me try—and everything I’ve tried, we’ve bought.”

In the US, Millward previously had Morrissey on a Shure KSM9. “Now we’re using the KSM9HS,” he reports. “They’re absolutely fabulous. We use it on the hyper-cardioid setting. It’s made a big difference.”

When Millward first signed on with Morrissey, the singer was using a Shure Beta 58 or 58A, he recalls. “It was when the Neumann 105 came out. We rented one when we did five nights at the Wiltern in L.A. and five nights at the Apollo in New York. He liked it, so we used the Neumann for a long time.”

Unfortunately, the 105s didn’t stand up well to rough handling. “Sennheiser eventually said they couldn’t keep repairing them. We owned about eight, and at any one time, there were three or four being repaired.”

He continues, “Peter also lent me a whole kit when they brought out the Beta 98As. [U.K. production company] SSE ended up buying practically all of it and we use them as standard.”

He adds, “In the U.K., Shure Distribution also distributes Radial, so I tried all those lovely Radial boxes, like the JDX, the stereo DI, before we bought them. It’s great stuff and built so well.”

As for the rest of the stage, in addition to various Sennheiser and AKG models, “We’re using the Shure SM57, SM81 and a Beta 91A on the bass drum. Since that came out, I haven’t used two mics on the bass drum.” He adds, “As long as the bass drum is good, anyway.”

Looking over his equipment at front of house, he says, “It was a revelation when I first found an app that could remote control the music on the iPod from the iPad. When technology just works every day and it plays together nicely, that makes

VITALstats

Morrissey

Eighth Day Sound Systems (Highland Heights, OH)

Schubert Systems (N. Hollywood, CA)

<p>FOH Engineer: David “Milky” Millward</p> <p>Monitor Engineer: Tom Vollmers</p> <p>Production/ Tour Manager: Donnie Knutson</p> <p>Systems Tech: Jim Corbin (Eighth Day) Michael Mordente (Schubert Sound)</p> <p>FOH Console: Allen & Heath iLive-80</p> <p>Monitor Console: Allen & Heath iLive-112</p>	<p>House Speakers: d&b audiotechnik J-, Q- and V-Series; Lab.gruppen Lake LM44 processors (Schubert Sound); Dolby Lake Processors (Eighth Day)</p> <p>Monitor Speakers: d&b audiotechnik M-Series</p> <p>House Amplifiers: d&b audiotechnik D12 amplifiers</p> <p>Monitor Amplifiers: d&b audiotechnik D12 amplifiers</p> <p>FOH Equipment/Plug-Ins: Allen & Heath PL10 panel, iLive Editor and Tweak software; Apple MacBook Pro (2), iPad, iPod Touch, Logic software; Rational Acoustics Smart</p>
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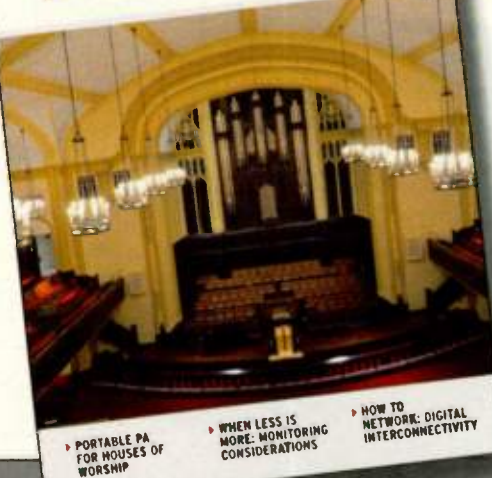


ACT / STATISTICS	CREW	EQUIPMENT
1 CHER BLACK BOX MUSIC	David Bracey (he); Jon Lewis (cher me); Horst Hartmann (bme); Ben Byford (cc); Ulf Oeckel (se); Simon Farell, Björn Boernecke (techs)	HC: DiGiCo SD7; MC: (2) DiGiCo SD7; HS: L-Acoustics (28) K1, (16) K15B, (66) K2, (16) SB28; MS: L-Acoustics: 2x3 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
2 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, UPI-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 Studiotechnik Nanosync HD; MONITOR EQUIPMENT: Waves Sound Grid; TC Electronic System 6000 MKII; Rosendahl Studiotechnik Nanosync HD
3 PAUL SIMON & STING CLAIR	Mike Conner—Simon, Howard Page—Sting (he); Robert Lewis—Simon, Pete Buess—Sting (me); Rachel Adkins (stage se); Donovan Friedman (stage pa/se); Thomas Morris (tech)	HC: Studer Vista 5 (Sting), DiGiCo SD7 (Simon); MC: (2) DiGiCo SD10; HS: Clair i-5/ i-5B, i-3, iMicro, BT218 Subs, R-4III Frontfill; MS: Clair 12am, R-4III Sidefill; IEM: Sennheiser 2000 series; Shure PSM 600 hardwired; HA: Lab.gruppen; MA: Lab.gruppen; HARDWIRED MICS: Earthworks SR30, Shure b52, b91, 57, 81, 98, KSM137; Sennheiser E865; Radial J48 DI; WIRELESS MICS: Shure UR4 Handheld; FOH EQUIPMENT: TC Electronic M6000; Smart C2; Summit TLA100; Rational Acoustics Smaart Live; Lake LM44; SPL De-Esser; MONITOR EQUIPMENT: Yamaha SPX 990; Summit DCL-200; Klark-Teknik DN 6000
4 BRUCE SPRINGSTEEN AND THE E STREET BAND SOLOTECH	John Cooper (he); Monty Carlo, Troy Milner (me); John "Boo" Bruyey (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-SB, 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
5 MILEY CYRUS CLAIR/JPJ AUDIO PTY LTD.	Paul David Hager (he); Vish Wadi (me); David Quigley (cc/se); Kyle Ronan (mse); Jen Smola, Bryce Beauregard, Matt Patterson, Andrew Bongardt (tech)	HC: DiGiCo SD7; MC: Avid Venue Profile; HS: L-Acoustics K1, K1-SB, K2, Kara, SB28, Arcs, P108; Clair i-3; MS: Clair CM-22, R-4; IEM: Sennheiser 2000 Series, G3; Shure PSM600HW; HA: L-Acoustic LA8; Lab.gruppen PLM2000Q; MA: Lab.gruppen PLM2000Q; HARDWIRED MICS: AKG 414, 451, D12; Beyerdynamic M88, TG D 58c; Fishman C-100, V-200-VI; Heil PR-30; Neumann KM 184, U87; Sennheiser MD 431, e815, e904, e935, MKH 416; Shure Beta52A, Beta57A, Beta91A, SM57, SM58, SM91; Avalon U-5; Radial J48, JDI, PZ-DI; WIRELESS MICS: Sennheiser 9000 series; FOH EQUIPMENT: Waves Mercury/SSL Plug-In Bundle; API 2500; Crane Song HEDD 192; dbx 902; Empirical Labs EL-8 distressor, Fatso; Bricasti M7; Eventide H3000; TC Electronic Reverb 4000; Apogee Big Ben; BSS DPR 901, GML 8200; MONITOR EQUIPMENT: Waves Live Bundle; XTA DS800
6 NEIL YOUNG EIGHTH DAY SOUND	Tim Mulligan (be); Dave Lohr (he); Mark Humphries (me); CW Alkire (cc)	HC: DiGiCo SD7; MC: Midas Heritage 3000; HS: d&b Audiotechnik J8, J12, J Sub, B2, Q10; MS: d&b Audiotechnik M4; Northwest Sound; HA: d&b Audiotechnik; MA: d&b Audiotechnik; Crown; HARDWIRED MICS: Neumann; Sennheiser; Grundig; FOH EQUIPMENT: Waves; DigiGrid; Metric Halo; Lexicon 224; MONITOR EQUIPMENT: BSS; Metric Halo
7 TOOL EIGHTH DAY SOUND	Kyle Walsh (he); Alan "Nobby" Hopkinson (be); Beau Alexander (me); Ed Ehrbar (ae); Joey Armada; Carl Popok (techs)	HC: Midas XL-4, Pro2C; MC: DiGiCo SD7; HS: d&b Audiotechnik J8, J12, J Sub, B2, Q10; MS: d&b audiotechnik M2, J8, B2 Q Sub; IEM: Sennheiser; HA: d&b audiotechnik D80; MA: d&b audiotechnik D12; HARDWIRED MICS: Heil; FOH EQUIPMENT: TC Electronic 2290; Lexicon 480L; Yamaha SPX; Summit DCL-200
8 LUKE BRYAN CLAIR	Pete Healey (be/pm); Ed Janiszewski (me); Kevin "Kap" Kapler (se); Gordon Droitcour, Rachel Aull (ae); Tyson Clark (tech)	HC: Avid Venue Profile; MC: DiGiCo SD7; HS: Clair i-5, i-5B, BT-218; IEM: Shure PSM 1000 IEM; Sensaphonics, Westone, Ultimate Ears ear buds; HA: Clair StakRak; Lab.gruppen PLM; HARDWIRED MICS: Shure 91, 98, 57, SM27, Beta98, Beta52; Radial DI; WIRELESS MICS: Shure; MONITOR EQUIPMENT: Yamaha SPX-1000; Eventide Eclipse; TC Electronic M3000
9 THE DAVE MATTHEWS BAND PROMEDIA/ULTRASOUND	Jeff Thomas (be); Ian Kuhn (me); Lonnie Quinn (ame); Joe Lawlor (re); Tom Lyon (s tech); Greg Botimer (m tech); Brad Galvin (tech)	HC: Avid Venue Profile; MC: Avid Venue Profile, SC-48; HS: Meyer Sound Leo, Milo, Mica, LFC-1100, HP-700, MSL-4, CQ; MS: Meyer Sound MJF-212A, Fonz Foot Wedge, Clark Synthesis TST; IEM: Sensaphonics 3D, 2XS; Shure PSM 1000; MA: Crest 7001; Lab.gruppen FP2400; MICS: Neumann; Sennheiser; AKG; Shure; B&K; DPA; Crown; Earthworks; FOH EQUIPMENT: Meyer Sound Galileo; Metric Halo Mobile i/o 2882; Avid Pro Tools 10 HD; Tascam CD Player; Apple Mac Pro; Rational Acoustics Smaart 7.3; MONITOR EQUIPMENT: Apple Mac Pro; Avid Pro Tools 10 HD; PWS GX-8, Helical RHCP; X-keys XK-16; WinRadio WR-G305e
10 JASON ALDEAN SPECTRUM SOUND	Chris Stephens (he); Evan Richner (me); Joseph Lloyd (pm); Jeremy Seawell (se); Ryan Stotts (mtech); Bob Campbell (tech)	HC: Avid Venue; Midas 431 preamps; MC: Avid Venue; Midas 431 preamps; HS: d&b audiotechnik (64) J8, (8) J12, (16) J Sub, (24) B2, (8) Q10; IEM: Shure PSM 1000; Ultimate Ears UE-7, UE-11; HA: d&b audiotechnik D12; HARDWIRED MICS: Audio-Technica AE6100, AE2500, ATM350, ATM450, AT4050, AT4081, AE3000, AT4047/SV; Shure SM57; WIRELESS MICS: Audio-Technica Artist Elite 5000 series wireless with T6100, T1000 transmitters; FOH EQUIPMENT: Lake LM44; ATI DDA 212XLR; Waves Platinum Bundle; Crane Song Phoenix; SPL Transient Designer; Massey De-Esser, vt3; MONITOR EQUIPMENT: Massey L2007, vt3, De-Esser

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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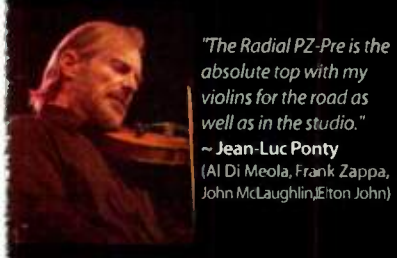
FROM
THE EDITORS OF
PRO SOUND NEWS

Investment in technology by Houses of Worship has experienced remarkable growth, and purchasing has stayed strong even in a weak economy. HOW Sound focuses on the various applications of manufacturers' existing product lines and HOW specific products with content designed to aid HOWs in their selection and implementation of professional audio technology, gear and software.

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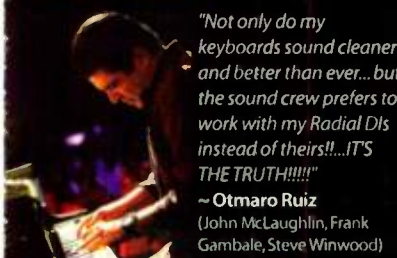
"Radial direct boxes make everything I put through them warm, punchy and clear. They are great DIs."
~ **Chick Corea**
(Elektric Band, Miles Davis, Return to Forever)



"The Radial PZ-Pre is the absolute top with my violins for the road as well as in the studio."
~ **Jean-Luc Ponty**
(Al Di Meola, Frank Zappa, John McLaughlin, Elton John)



"The Radial PZ-DI is the perfect complement to my bass. I finally found the DI that I was looking for. Thank you Radial for making such fantastic products."
~ **Carlos Puerto**
(Chick Corea, David Sanborn, Chris Botti, Herbie Hancock)



"Not only do my keyboards sound cleaner and better than ever... but the sound crew prefers to work with my Radial DIs instead of theirs!... IT'S THE TRUTH!!!!"
~ **Otmaro Ruiz**
(John McLaughlin, Frank Gambale, Steve Winwood)



"I just finished another long recording session followed by a night club gig... and the RADIAL PZ-DI MADE my bass sound as fresh as a daisy!!"
~ **Ron Carter**
(Most recorded bassist in Jazz history)



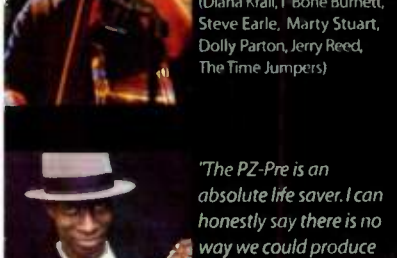
"When I forgot to bring my Radial JDV to a session, my engineer made me go back home to get it! That's how good it is."
~ **Marcus Miller**
(Miles Davis, Herbie Hancock, Michael Jackson, Elton John, Wayne Shorter, David Sanborn)



"The Radial JDI is the cleanest, warmest and best (!!) I've found for plugging my organ in direct and is a great companion to mics on the rotary speakers."
~ **Joey DeFrancesco**
(Miles Davis, Jimmy Smith, Elvin Jones, John McLaughlin)



"I love my Radial Firefly tube direct box and the warmth that it provides."
~ **Dennis Crouch**
(Diana Krall, T Bone Burnett, Steve Earle, Marty Stuart, Dolly Parton, Jerry Reed, The Time Jumpers)



"The PZ-Pre is an absolute life saver. I can honestly say there is no way we could produce the kind of quality acoustic show that we have without it."
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ACT	SOUND CO	VENUE	CREW	EQUIPMENT
Barenaked Ladies	LOGIC SYSTEMS St. Louis, MO	SOULARD FARMERS' MARKET St. Louis, MO	Ziggy Stull (he), Dane Dickman (me)	HC: Avid Venue Profile; MC: Soundcraft V16; HS: Nexo Geo S12; MS: Shure PSM 900; HA: Nexo 4x4
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 ICL-R, IC215S-R; MS: PreSonus StudioLive 328AI
Chris Robinson Brotherhood	SEMIPRO AUDIO Bozeman, MT	EMERSON CULTURAL CENTER Bozeman, MT	Jeremiah Slovarp (he), Luke Flansburg (me), Rich Robiscoe (se)	HC: Avid Venue Profile; MC: Avid Venue SC48; HS: Meyer Sound CQ 2, 650-P, UPA-1P; MS: Meyer Sound UM-1P MJF-212
Cincinnati Ballet with Over The Rhine	SUMMIT PRO WORKS Dayton, OH	ARONOFF CENTER Cincinnati, OH	Michael Sporanski (be), Kyle Hendricks (bme), John Youker (se), Nathan Tse (tech), Alex Runyan (tech)	HC: Avid Venue Profile; MC: Midas Siena 480; HS: Meyer Lyon, 1100-LFC, M'elodie Callisto; MS: Meyer MJF-212A, UPQ 1P, Shure PSM 900
Cosmic Jam 5	STARGROUND CONCERT AUDIO Newark, DE	SUNSATONAL FAMILY CAMPGROUND Millmont, PA	David Muddiman (he), Chip Powell (me), Rhett Camden (tech), Scott Lowery (tech)	HC: APB-Dynasonics Spectra 32; MC: PreSonus StudioLive 24.4.2; HS: Meyer MSL-4, UPA-1P, UPM-1, USW-P; MS: Meyer UM-1P, MSL-4, UPM-1P
Desert Lexus Jazz Festival	MORNINGSTAR PRODUCTIONS LLC Murrieta, CA	INDIAN WELLS TENNIS GARDENS Indian Wells, CA	Alan Morgenstern (he), Jake Hendricksen (me), Jeff Petersen (se), Issac Gomez (tech)	HC: Avid Venue SC48; MC: Yamaha M7CL-48; HS: JBL VRX Compact Line Array; MS: Radian Microwedge, Sennheiser IEM; HA: Crown; MA: QSC MX
Faithstock 2014	ROUSTIES SOUND Huntington, AR	AOG YOUTH CENTER Huntington, AR	Jim Neighbors (he), Matt Bullard (ae)	HC: Soundcraft Expression 2; HS: Peavey QW 4F, QW 118, QW 218; MS: Electro-Voice SxA250; HA: Peavey CS 4080HZ, Crest Pro-Lite 2.0, QSC PLX3102
Hiroshima	DB SOUND OF CHARLOTTE Charlotte, NC	HALTON THEATER Charlotte, NC	Kenny Shouse (he), Dave Barker (me), Matt Barker (tech), Jamel Lee (tech)	HC: Yamaha M7CL-48; MC: Soundcraft Si Performer 3; HS: EAW KF730; MS: JBL SRX712m, Sennheiser G3; HA: Crown; MA: QSC
Los Lonely Boys, Sons of Bill	BOULEVARD PRO Ridgefield Park, NJ	TARRYTOWN MUSIC HALL Tarrytown, NY	Anthony Cioffi (he), Chris Conley (bme), Ralph Grasso (me), Tom O'Malley (bme)	HC: Yamaha CL5; MC: Yamaha PM5D RH; HS: Meyer M2D, 700-HP, M1D; MS: L-Acoustics 112P, Arcs, SB18, Sennheiser G3; MA: L-Acoustics LA8 Rak
Open Hearts Foundation featuring Delta Rae, Angelica Garcia, Cheap Trick	TRINITY SOUND COMPANY Corona, CA	PRIVATE RESIDENCE Malibu, CA	Devin DeVore (he), Jeremy Griffin (tech)	HC: Yamaha QL5; HS: Nexo Geo S12, Nexo PS8, JBL SR4719X; MS: JBL SRX712M; HA: QSC PL380; MA: QSC PL236
Rock & Roll Marathon	RMB AUDIO Raleigh, NC	RED HAT AMPHITHEATER Raleigh, NC	Wayne Sowder (he), Robert Weddings (me), Roger Dennis (se), Cooper Cannady (tech), Gaither Hawkins (tech)	HC: Avid Venue Profile; MC: Avid Venue Profile; HS: Martin Audio MLA Compact, DSX, MLA Mini, MSX; MS: Martin Audio LE1200; HA: Martin Audio; MA: Lab. gruppen
Skillet and Toby Mac	BLACKHAWK AUDIO INC. Nashville, TN	AUSTIN 360 Austin, TX	Robert Taylor (he), Ryan Lampa (he), Heath Mahon (me), Chris Boyd (me), Ted Daniels (se), Wil "Bambi" Thornton (tech)	HC: Avid Venue Profile; MC: Avid Venue Profile; HS: Meyer Leo M, Mica; MS: Meyer 700 HP, JM-1P, Shure PSM 900, PSM 1000
Starship, Mark Farner, Mitch Rider, Detroit Wheels	ACIR PROFESSIONAL Mays Landing, NJ	WILDWOOD CONVENTION CENTER Wildwoods, NJ	John Grasso (he), Bobby Harper (se), Dave Lefko (me), Tim Ziegler (tech), Dan Naggio (tech)	HC: Yamaha PM5D; MC: Yamaha PM5D; HS: d&b audiotechnik J8, J12, B Subs; MS: ACIR Priority Wedges, K-Array; HA: d&b audiotechnik D12
Tony Pace	IMIJ PRODUCTIONS Berlin, CT	WHITE'S OF WESTPORT Westport, MA	Jimi Marturano (he), Chris Bachand (be)	HC: Soundcraft GB4; MC: Soundcraft Si Compact 16; HS: FBT Mxxx 6A, Mxxx 10 SA; MS: FBT Mxxx 4A
Whispering Beard Folk Festival	FREQ CITY SOUND Cincinnati, OH	FIRST STREET Friendship, IL	Dave Lattire (he), Andy Ciarniello (he), Geoff Jung (me)	HC: PreSonus; MC: PreSonus; HS: Freq City proprietary powered line array, Yorkville; MS: Grund Audio GT-1520, MiPro in-ear monitor system; HA: QSC PL4

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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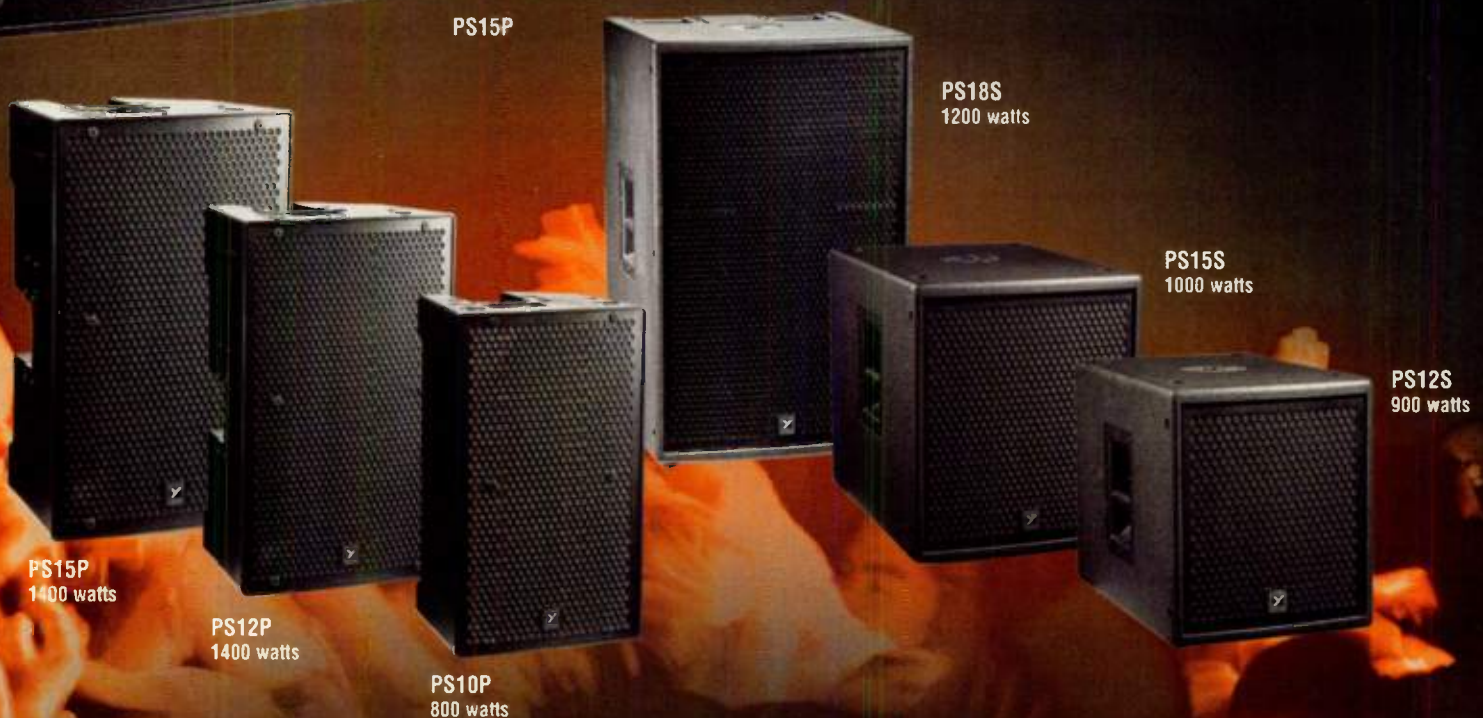


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Avengers

(continued from page 42)

ated by recording a giant turbine. There was no running time heard in the film, however, so Serafine had to create a 15-second startup, 30-second run and 15-second shutdown. When it came time to create a visual effect of what a NASA mapping of

the Tesseract's energy output would look like, Lewis suggested putting a frequency analyzer on the turbine sound. Before long, sound designer Francois Blaignan was running the sound through a ProTools rig with iZotope's RX3 Complete Audio Repair plug-in—and the resulting visual, with a new skin draped over the RX3 controls, is now part of the Tesseract exhibit.

Eschewing major networking, all

sound and video for each exhibit is localized to that room, served off Hewlett-Packard workstations and Apple Mac Minis. "I doubt there's a Mac Mini available in any Apple store in NYC right now," Serafine half-joked, though in fact, most of the pro audio gear used was supplied by Guitar Center Pro. While the entire 10,000-square-foot exhibition was pre-built in a Valencia, CA warehouse and then dismantled and

shipped via nine semi-trailer trucks, each room's audio tracks had to be mixed onsite in New York to be optimized to the exhibit space. With all the equipment hidden behind walls, each room's audio tracks were mixed on iPads using PreSonus AB-1818VSL Remote software connected via WiFi to AudioBox 1818VSL interfaces that were often being used for show control as well.

At eye-level, the exhibition is flawless, but above, the rooms have open ceilings, with the exhibition hall's matte black ceiling only a few feet above the walls. "The rooms are so reflective; we're constantly fighting for isolation in about 50 audio zones throughout the exhibit," said Serafine. Numerous live sound loudspeakers were tested and didn't work on multiple levels, he said: "We saw very clearly, very quickly, that not only was there a cost problem, but also a dispersion pattern problem—because they're meant for dispersing sound, but we don't want it banging around, room to room."

Ultimately, they chose to use PreSonus Eris E5, E8 and Sceptre S6 studio monitors and Temblor T10 subwoofers inside the exhibition, while JBL LSR305s cover the gift shop and cueing area. Since the PreSonus monitors had to be placed just above the exhibition walls aimed into the rooms, their front-firing acoustic ports help keep the bass contained to specific spaces.

As a result, volume is kept to roughly 78 dB in each room, but the audio team wanted more impact in a few cases. That was solved by putting multiple 3-inch-high ButtKicker Mini LFEs—small transducers meant to sit under a drum throne—beneath the floor; audio team member Carl Yanchar mounted them in parallel within layers of 1-inch plywood and rubber boots, "otherwise they sound great until you hear them plunk as they unscrew themselves," said Lewis. Extremely low frequencies are EQ'd away from the series wired transducers, as the ButtKickers can reproduce transients, but with sustained LF energy, "they overheat and then shut off for 10 minutes." The payoff comes in an exhibit where visitors watch a life-sized Hulk (in reality, a visual effect on an 81-square-foot touchscreen) punch the wall. "When you put three of them under the floor and get a transient of about 115 dB at 35 Hz, it's intense," said Lewis. "We ran those punch noises and were laughing like little kids, going 'We're going to scare the crap out of people!'"

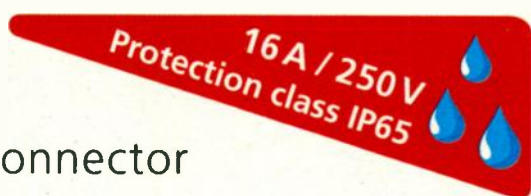
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Jennifer Smith

Avid recently named **Jennifer Smith** to senior vice president and chief marketing officer (CMO). In her new role, Smith will be a key member of Avid's Executive Leadership Team, reporting directly to Avid's CEO Louis Hernandez, Jr. She will be responsible for driving all aspects of Avid's worldwide market presence and growth, including its strategic positioning, go-to-market strategies, and all marketing disciplines within the organization. Her role will be vital in fulfilling the Avid Everywhere vision to help media organizations and content creators connect with their audiences more effectively through innovative technologies such as the Avid MediaCentral Platform. Smith will also oversee Avid's strategic collaboration with customers via the Avid Customer Association.

Smith brings fifteen years of senior management experience in technology marketing at major software companies both in the U.S. and internationally. She joins Avid from Progress Software, where she held increasingly senior leadership roles on the marketing team before becoming the company's chief marketing officer and senior vice president, and where she led a very successful re-branding initiative.

QSC has appointed two new employees to its Systems sales team, nam-



Mike DeFreece



Frank West

ing **Mike DeFreece** director of Sales for the Eastern Region and **Frank West** director of Sales for the Central Region. They will join director of Western Regional Sales Ray Biba in the company's Systems business unit.

DeFreece brings more than 20 years of industry experience to his new role at QSC. Most recently, he served as the Southeast Regional Manager for Biamp Systems where he was responsible for overseeing all aspects of Biamp's business. Previously, DeFreece was a sales rep with Millar Electronics, an independent rep firm in the Southeast, as well as the VP of Operations for Don Fillers & Associates, a commercial and residential AV integrator in Knoxville, TN.

West joins QSC with more than 15 years of experience in the professional audio/video marketplace. West's previous work includes a stint as the Regional Director for the South Central USA, Central and South Americas with Biamp. Prior to joining Biamp, West served as Regional Sales Manager for Fast Multimedia, a video editing solutions company.



Damian Murphy, Pure Groove Systems

Q: What is your new position, and what does it entail?
A: I am the founder of Pure Groove Systems, which is a unique partnership with Danley Sound Labs; together we design, promote and distribute revolutionary sound systems for nightlife, live entertainment, festival and touring.

Q: How has your background prepared you for your new role?
A: I'm originally from Manchester, England where the music scene in the late 80s and 90s was explosive. I was heavily influenced by the bands coming out of there; it was a really exciting time for music and my experiences at the Hacienda inspired me to become a music promoter. I have been in the music industry for over 25 years now, having produced thousands of events and worked with some of the biggest artists in the industry, so I've heard a lot of sound systems and I thought that I had heard the best in the business. I was wrong. I was introduced to the Danley team last year and after hearing a demo, I immediately knew that the speakers were very special. Quality sound systems play a massive role in a great music experience, therefore it's our goal to get these speakers into venues and events so fans can enjoy music and be inspired by them.

Q: What new marketing initiatives are we likely to see from the company?
A: Our systems speak for themselves, so exposure is key. As a promoter, I know that most artists care about audio and want to be heard on the best sound systems, so it was important to reach out to artists who would embrace this technology. We have formed strategic partnerships, and we have just wrapped high-profile events such as MMW in Miami, Union in Amsterdam, MayDay Festival in Germany, and most recently, Lightning in a Bottle's Woogie stage in CA. The feedback has been resoundingly positive, particularly from artists and audiophiles, as well as the media, which has resulted in interest from around the world. We are in the process of building an exclusive network of dealers and distributors who share in our vision about audio.

Q: What are your short- and long-term goals?
A: Short term is all about exposing our systems to the industry and the audience globally. This will organically lead into our longer term goal, which is to raise the industry standard in sound systems worldwide, and have our systems in every city so that fans have the opportunity to experience music the way it is meant to be heard.

Q: What is the greatest challenge that you face?
A: Changing the industry's mind about what it thinks is a good sound system. Again, it's all about exposure. The story, info and specs on our website are very impressive, but once you actually experience the power, definition and clarity of our systems there is an obvious difference—hearing is believing.

L-Acoustics has appointed three new employees to its U.S. team, naming **David Brooks** to applications engineer, touring liaison, USA; **Andre Pichette** to head of Application, Install, USA; and **Chris "Sully" Sullivan** to application engineer, making him L-Acoustic's first technical support position on the east coast.



Left to right: André Pichette, Chris "Sully" Sullivan, David Brooks

With 30 years of experience to his credit—including running monitor mixes for N'Sync—Brooks is now tasked with providing additional support for touring clients, liaising with production and sound companies, and facilitating education for FOH and system engineers.

Pichette, who most recently served as director of Integration and Operations at Solotech Las Vegas since 2010, brings three decades of audio experience to his new role with the loudspeaker manufacture.

Sullivan has previously served as optimization engineer for Elite Multimedia in addition to mixing touring FOH sound for Gary Allan, Luke Bryan, Joe Nichols, Jaci Velasquez and Point of Grace.

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Community Watch

STEVE JOHNSON, CEO,
COMMUNITY PROFESSIONAL
LOUDSPEAKERS

BY KELLEIGH WELCH

Reflecting on his 20-plus years in the audio industry, Steve Johnson, CEO of Chester, PA-based Community Professional Loudspeakers, turns to a quote from *The Godfather III* to sum up his experience so far: “Just when I thought I was out...they pull me back in.”

“I remember someone telling me many years ago that once you’re in pro audio, you’ll never get out,” Johnson elaborated. “My career path seems to suggest this is really true.”

From a young age, Johnson wanted to pursue a career in electronics, specifically audio. After graduating Kansas State University with a degree in electrical engineering, Johnson joined Motorola as an RF engineer, working with many early-generation cell phones, including the original flip phone, the MicroTAC. While at Motorola, Johnson decided to shift his career focus to product management, earning an MBA in Marketing and Finance through Northwestern University. It was this shift that eventually led him to apply for a job with Shure, which was looking for a product manager for its wireless microphone business.

“Having been an RF engineer, I knew a thing or two about wireless, and having played saxophone in bands throughout college, I also had experience with microphones. I joined the company in 1993, combining electronics and audio—two things I was passionate about,” Johnson said.

Johnson joined Community Professional Loudspeakers as its CEO in September 2013, having spent 10 years with Shure as its product manager and later as vice president of Global Marketing, followed by a return to Motorola for a few years as director of Product Marketing.

“While it was nice to be back in a familiar environment, I missed pro audio,” Johnson said about his second tour with Motorola. “I joined Harman Music Group as VP of Marketing in 2007, and more recently, I worked for Bosch as business line manager for Pro Sound and global brand manager for Electro-Voice, Dynacord and RTS.”

Coming into his position as CEO of Community, Johnson said he was al-

ways familiar with the company’s products, but was amazed to learn about the applications the company designed beyond outdoor loudspeakers.

“Community also makes many of its own transducers and has extensive manufacturing capabilities in the USA and China. I figured if I didn’t know these things, then many others in the industry were also not aware. I saw an opportunity to shine a light on a great brand—one of the originals of pro audio—so I jumped at the chance to become part of the team,” said Johnson.

Johnson said his extensive background in management and market-

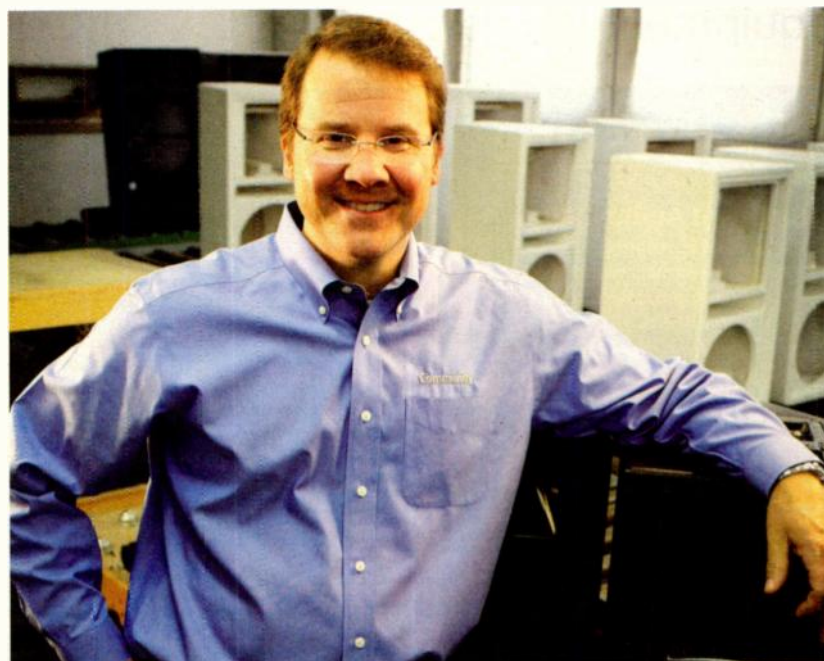
“If we truly understand the needs of customers and stay focused on delivering system solutions that meet or exceed their needs, then I am confident of our chances for continued success.”

Steve Johnson

ing, plus his early experience in engineering, has helped him to strengthen Community’s product over the last eight months. However, one of his biggest challenges coming in as CEO was filling the role left vacant by the company’s previous CEO, Tim Dorwart, who passed away in the summer of 2013.

“In the brief time that he served as CEO of Community, Tim had helped the organization to see the potential for much greater growth and to believe in itself and its future. While I never had the pleasure of knowing Tim, he was well-respected by the organization and is missed. He’s a tough act to follow,” Johnson said.

Johnson said it also took some adjusting for him to fully understand Community’s product line, setting goals for the company to simplify its



Steve Johnson joined Community Professional Loudspeakers as its CEO in September 2013.

full line catalog to make it easier for customers to understand the brand and its offerings.

“I’ve enjoyed the work we’ve done to lay the foundation for our brand-building initiatives,” Johnson said. “I’m excited to debut a new visual identity at InfoComm, along with the I Series, a new line of installed loudspeakers featuring great performance and a more contemporary industrial design.” The I Series is specifically designed for house of worship and live theater applications. Johnson revealed that the company is also working on a series of products that will incorporate the “Multisource Wave-

a home office in California and international sales manager Max Lindsay is based in England. The company has two warehouses as well—one in Pennsylvania and another in Amsterdam for European distributors.

Community takes pride in customer support. “Our Technical Applications Group, headed by Dave Howden, is comprised of highly skilled individuals, and I am confident that it provides a significantly higher level of support than similar teams of larger pro audio manufacturers,” Johnson said. “Making it easier for our customers is an important part of everything we do. We are passionate about audio and strive to create and deliver solutions that bring big, beautiful sound to bold visions.”

Looking forward, Johnson said his main goal is to continue to develop Community’s team and execute his long-term vision for the company. A big focus now is in the global markets, putting more emphasis on selling outside of North America. “We will continue to put more emphasis on working with our international distributors to better support them and to ensure our brand-building efforts have the necessary global reach and are regionally tailored for appropriateness,” Johnson explained.

“Community is a great brand with a rich pro-audio heritage that is focused exclusively on the installation market,” said Johnson. “It’s my responsibility to chart a path that will enable the company to grow profitably far into the future. Part of the challenge is to not allow the organization to be distracted by opportunities beyond the installation market. If we truly understand the needs of customers and stay focused on delivering system solutions that meet or exceed their needs, then I am confident of our chances for continued success.”

Community Professional Loudspeakers
www.communitypro.com

Tozzoli

(continued from page 30)

Control for a D-Command ES. I'm using the new Avid HD interfaces. I have a 32-input system with a collection of things I've sort of collected over the past 15 years, which include an API 3124, a Focusrite ISA428, two Mindprint DTCs, PreSonus ADL600, a Trident S40 and an Amek System 9098. And I also have two of the original 8-channel Digi PREs.

I've been an ADAM speaker user for a long time. I used the ADAM A8Xs for the recording and mixing. I'm also using Chris Pelonis Model 42 cubes, just when I need to reference a small speaker...kind of get a real-world vibe going.

Let's talk about what's in the box.

Plug-in wise, I'm using a variety of products. I love the McDSP stuff; I used the 4030 Retro Compressor quite a bit. I also dig using SoundToys EchoBoy, FilterFreak, Tremolator and PanMan. I've got the Waves Platinum collection, and my latest addition is the Sonnox Elite Bundle, which is a really amazing tool box of sonic loveliness. I used a lot of things like the Limiter, TransMod, EQ and Reverb. Also, iZotope RX3 helped me out a lot.

That lets you do a lot of production on your own.

And knowing all the software, it just gives me the freedom to kind of do whatever it is I need to do. I can do my own comps.

Luckily, you do have that knowledge.

Exactly. I had a lot of fun with a song like "Walk the Walk," where I was really constructing a drum solo. It was a song that started off on V-Drums, just because I like to experiment. With that song, I realized that even though the V-Drums sounded pretty cool, this is one of those songs where I needed air moving around some acoustic drums. That's when I came to you.

An outside engineer such as myself comes into your home and your space. How about the give-and-take on how you work with an audio engineer—since you can do a lot yourself?

Being a professional drummer for a number of years and making tons of records, I find my best acoustic drum set recordings have always been a collaboration between a knowledgeable engineer and myself. When I'm a drummer, I'm a drummer. I need somebody in there that I trust to collaborate with me on how to get a great sound and to capture the performance.

THERE'S MORE ▶ This article is but a small part of Rich's and Omar's dialog. For the full transcript, visit prosoundnetwork.com/june2014.

Anderton

(continued from page 30)

drive, Thunderbolt can pretty much smoke anything. Besides, any system bottlenecks often exist outside of the port, like within the computer, a peripheral or device drivers.

So ignore the web, the naysayers and the fanbois of various protocols—the reality is that you're basically okay no matter what you do. If you choose USB, with rare exceptions, anything USB 2.0 will work with USB 3.0 and by definition anything 3.0 does (should) work, so you will (should) be future-proof for quite some time. If you choose FireWire 400 or 800, even though FireWire ports may be getting harder to find, cards and adapters remain viable. Thunderbolt-to-FireWire and USB adapters exist, so even if Thunderbolt takes over the world tomorrow, you should be able to use the peripherals you have today. There are even reports of using FireWire devices with Thunderbolt-to-FireWire adapters connected to Macs running Boot Camp.

Still, all of this has to be qualified with "in theory." Some older devices that should work are broken, and will likely never be fixed. There are issues with how much power devices can draw from a port. Thunderbolt 2 is emerging. And at what point does a house of cards with adapter cables, translators and cards start to fall apart?

Contemplate the situation with ports long enough, and you just might find yourself wishing for a different kind of port altogether...or maybe an Armagnac.

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A Pearl of a Production

BY JACQUES SONYIEUX

Kristeen Young's latest album, *The Knife Shift*, is a bold and sonically diverse record that evokes a strong rock sensibility set against a thoroughly modern soundscape. Working with industry veteran Tony Visconti (David Bowie, *The Next Day*) as co-producer, Young enlisted Dave Grohl to contribute drums and guitar to the record. This helped establish the overall tone and direction for the record, which is hard hitting and emotionally driving. Young, currently on tour with Morrissey and already looking towards her next project, is squarely focused on the future—but *Pro Sound News* asked her to take a moment in the middle of her tour to reflect on the recording of *The Knife Shift*, which releases this month.



Kristeen Young recorded her latest album, *The Knife Shift*, with producer Tony Visconti and rock impresario Dave Grohl.

ON VETTING NEW MATERIAL:

I've been touring with Morrissey for about a year and a half and the material on my new album consisted of songs that I had written in between all the tours and playing live. In fact, I think I played almost all the songs live before we went into the studio. I've been playing solo on the tour, so for the most part, the songs are very different on the record. I like to play things live and work out material in advance, kind of like a comic performer does. My voice seems to settle into the song better if I play it live first. If I record it too early, a lot of times my voice isn't right. I like to live with it for a little while before I record it.

ON WORKING WITH TONY VISCONTI AND DAVE GROHL:

We've worked on a few records to-

gether and have a very stable working relationship. Tony is a great anchor, and that's kind of what I feel like his presence is like on all my recording sessions. Also, I always have lots of ideas and he always recommends running with them. He doesn't say, 'No, that's impossible.' I really like that open kind of energy in people. Dave Grohl, for example, has that same kind of energy in abundance and was ready to try anything. I am also a co-producer on this record along with Tony, since I did lot more work this time around.

One of the first things that we did on this record was go to the studio in LA where Dave Grohl and I played the initial tracks. He played drums, and I played keyboards and sang. In fact, you can hear my voice in some of the drum tracks. This was very inspiring and fun, and for me, it was

my favorite part of all the sessions. This experience sort of catapulted all the other parts of the record forward and set the tone for everything.

ON EMOTIONS AND SOUNDS:

I can get really emotional in the studio and Tony and I have screamed at each other. For the most part, I find the recording process very liberating however, and I love that part. The mixing process can be very tense for me though. I try to not let it become that way, but it is all about trying to communicate sound to other people and that can be difficult. Sometimes Tony and I can come from completely different places—he can be very meticulous and 'pretty' with sounds, and I am completely the opposite. I always want things to sound much uglier. In the end, we usually meet in the middle somewhere.

ON RECORDING VOCALS:

I try not to do a lot of comping on the vocals and I do like to lay down a single, entire performance. That's also why I like to sing the songs live for a while so I can find the voice I want before I get in the studio. On my next record, I want to do even more of that. We test different mics in the beginning but keep things moving. I don't really like anything to be a long process and I want to keep the flow moving as fast as possible. My core belief is that the magic is in the moment and it is important to get things done quickly. I try not to belabor anything.

It's very hard for me to record voice with anyone else besides Tony because he is very meticulous with his feedback. Other people I record with will be like "That's great!"—even when I know when something is not great. I feel like Tony gets the best performances out of vocalists because he is so meticulous with that feedback.

ON REFLECTION AND SELF-CRITICISM:

I don't listen to any of my music after I finish it, at least not for a very long time. Honestly, I usually feel bad about everything immediately after I've recorded it; I always want to change everything. When I do listen to it though, it gives me more perspective on what I want to do on the next record and helps make the direction a more clear moving forward. For example, on my next record, I already know that I want it to be more 'live sounding' and that I want to record it very quickly. I am not going to want such a multi-layered ProTools-type of record.

ON COMBINING PERSPECTIVES:

Tony and I come from very different places, sonically speaking, so we will try different versions of things. I will pull a little in my direction and he will pull in his. For example, "Jealous of Loved Children" was one of the songs that we had about three different arrangements on until we found the right one. I am on the fence with a lot of different styles, so I need to get all the percentages just right.

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.



THERE'S MORE ▶ Hear "Pearl of a Girl," Kristeen Young's latest single, at prosoundnetwork.com/june2014.

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