November 2019



LEADING THE WAY—The growing role of women in the highest echelons of professional audio is exemplified by the current leadership of the Audio Engineering Society, which includes (L – R) President-Elect Agnieszka Roginska, President Nadja Wallaszkovits, Secretary Valerie Tyler (three of the five members of the Board of Directors) and Executive Director Colleen Harper, seen here at the recent AES Convention in New York. Look for more AES show coverage next month.

# Venue Installation Trends Converge

www.prosoundnetwork.com

BY STEVE HARVEY

he audio needs of nightclubs, theaters and houses of worship might appear to be different, yet, like other pro audio applications, they are increasingly converging onto technology platforms that are becoming common across the industry. "Everything is IP," says Ben Davis, an Arizona-based sales engineer for Sound Image. Specifically, "We're seeing lots of integration with Dante. It's doing away with any analog mult cable entirely," he says.

Scott Kalata, director of sales for Masque Sound in New Jersey, agrees. Some venues and (continued on page 48)

# Solar-Powered Sessions

Joachim Garraud recently built his dream studio, LA Good Vibe. It just happens to be a 36-foot RV converted into an eco-friendly, solar-powered mobile recording studio, where the drum booth can sleep up to four people.



## AES: Back in the New York Groove

BY CLIVE YOUNG

NEW YORK, NY—New York City has its famous fall traditions, from holiday parades to the occasional World Series win, but for audio professionals, the arrival of cooler weather means just one thing: the return of the Audio Engineering Society Convention. The annual convocation brings with it an exhibition floor teeming with exciting gear, both new and classic; workshops and panels that expand attendees' knowledge and craft; networking opportunities for catching up with industry friends and making new connections; and lots more. As the convention's slogan goes, if it's about audio, it's at AES.

That doesn't happen by accident. Valerie Tyler, AES

#### SPECIAL REPORT

The AES Convention ended less than 48 hours before we went to press; look for extensive coverage of the show in our December issue

New York 2019 Convention co-chair and AES secretary/ Board of Directors member, noted, "We're so proud of the team that came together to build the absolutely amazing program at the 147th AES Convention. We've expanded the comprehensive technical program to include

(continued on page 49)

#### KCRW's \$38M Media Center

Earlier this year, after a decade of planning and fundraising, flagship NPR station KCRW relocated its studios and staff to the purpose-built, \$38 million KCRW Media Center.



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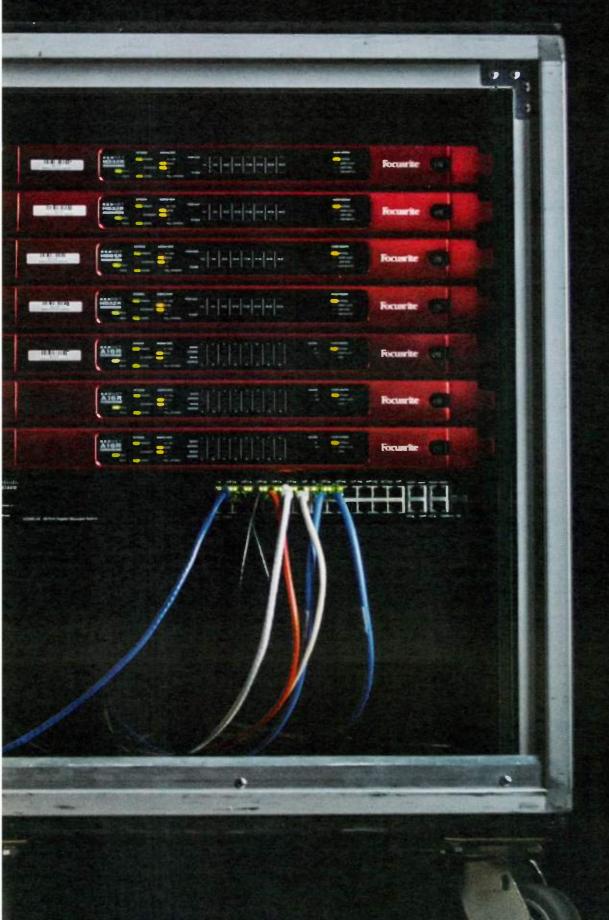
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# IIII sound BUSINESS [5]

# Music Streaming Is Popular, but So Is Stream Ripping =

BY STEVE HARVEY

LONDON, UK-More people are listening to more music, but not always legally, according to the Music Listen-

ing 2019 report from IFPI, the UKheadquartered organization that represents the recorded music industry

Music Listening 2019 examines the ways in which a representative sample of music consumers aged 16-64 engage with recorded music. Survey respondents came from 21 countries: Argentina, Australia, Brazil, Canada, France, Germany, Italy, Japan, Mexico, Netherlands, New Zealand, Poland, Russia, South Africa, South Korea, Spain, Sweden, the United Kingdom and the United States.

The survey paints a picture of engaged music fans. Globally, 54 percent say they love or are fanatical about music; the figure is highest among the 16-24 age group (63 percent). According to the survey, music lovers listen to twice as much music (through streaming services, CD or vinyl), are twice as likely to pay for a streaming music subscription and attend live music events at three times the average.

Respondents said they spend 18 hours a week on average listening to music, up slightly from 17.8 hours in 2018. That's the equivalent of 2.6 hours, or roughly 52 three-minute songs, per day.

Globally, 89 percent of people



Stream ripping's popularity continues to grow, according to IFPI.

listen to music through on-demand streaming, nearly half of which, 47 percent, is via video streaming. Listening via streaming is on the increase worldwide, with the greatest increases among older age groups.

Worldwide, 26 percent of respondents reported purchasing music during the previous month, on CD, vinvl or via download. The top three nations for purchasing music are South Korea (44 percent of respondents), the United States (34 percent) and the United Kingdom (30 percent).

Copyright infringement-using unlicensed sources to listen to or download music-is still widely prevalent. According to IFPI's survey, 27 percent of respondents overall listened to music through copyright infringement during the previous month. That figure was 38 percent among the 16-24 age group.

The most common form of piracy is stream ripping, creating a downloadable file from streaming services. Overall, 23 percent of those surveyed reported that they stream-rip music, with one-third of 16-24-year-olds (34 percent) obtaining music by that method.

www.ifpi.org

#### briefs

#### Alteros Closes

STOW, OH--Audio-Technica U.S. has closed Alteros, discontinuing the manufacturing and development of the subsidiary's products. Founded in 2017, Alteros developed the GTX Series wireless system as a solution for organizations experiencing spectrum difficulties. Audio-Technica U.S. will take the product line in-house and provide warranty and support for existing customers, as well as fulfill existing orders and commitments. The Alteros team will train and equip nel, allowing continuation of the same high levels of service and care.

#### Producer/ Engineer Ed Ackerson Passes

MINNEAPOLIS, MN-Ed Ackerson, producer/engineer, Polara front man, and owner of Flowers Studio (www.flowersstudio.com) and the indie Susstones label, died Oct. 4 four pancreatic cancer. A fixture of the Midwest music scene, Ackerson opened Flowers Studio in 1998 as an ate the big-room vibe of studios from the 1960s and 1970s—a move that attracted sessions by the likes of The Smog, Lizzo and others

#### MPSE to Honor Alonso

LOS ANGELES, CA-The Motion Picture Sound Editors (www.mpse.org) will honor Victoria Alonso with its annual Filmmaker Award. As executive vice president of production at produced films within the Marvel Cinematic Universe that have garnered critical acclaim and amassed including Avengers: Endgame, Captain America, Guardians of the Galaxy, Thor, Black Panther and Captain Marvel, as well as the upcoming Black Widow. She will receive the award at the 67th MPSE Golden Reel Awards ceremony Jan

# Capricorn Sound, Birthplace of Southern Rock, Returns

BY STEVE HARVEY

MACON, GA-Mercer University has announced a series of events to celebrate the rebirth of Macon's historic Capricorn Sound Studios as Mercer Music at Capricorn. First opened 50 years ago, the facility will host a first look at the restored studio that helped define the 1970s Southern Rock sound.

Mercer Music at Capricorn is a 20,000-square-foot multipurpose complex intended to leverage Macon's music heritage to help shape Macon's music future, according to a Mercer University statement. The \$4.3 million renovation project is being funded by tax credits, major grants from the Peyton Anderson Foundation and John S. and James L. Knight Foundation, and gifts from businesses and individuals.

The facility contains the fully restored historic Studio A, plus an additional, larger Studio B suitable for orchestral recording and film scoring, and live performances. API consoles were central to the Capricorn sound,



The facility that put Southern Rock on the map is back from the brink, restored and reinvented for a new generation of musicmakers.

and the main control room continues that legacy with a new custombuilt API 40-channel 2448 desk with Final Touch fader automation and a center-console Pro Tools monitor screen. A new mix room studio features an Avid C-24 work surface and

The main tracking studio and the mix/overdub studio both feature a pair of Focal Solo Be 6.5 monitor speakers, plus Yamaha HS8 nearfields with subwoofers. Both control rooms support surround sound projects via

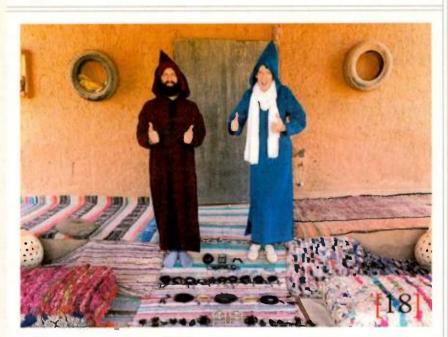
Genelec 8020 5.1 speaker systems.

A complex of 12 rehearsal rooms of various sizes, dubbed the Capricorn Incubator, has been constructed across two floors to facilitate the development of music talent and is open around the clock.

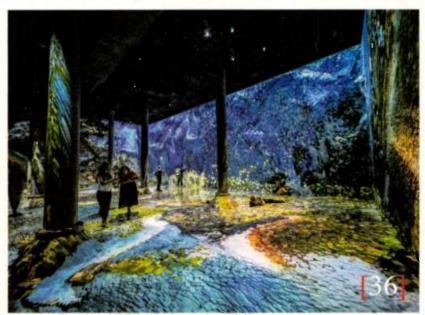
The facility also features 1,200 square feet of interpretive spacethe Capricorn Museum—that tells the story of Capricorn and Macon's music history through artifacts and interactive digital exhibits.

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The program for this year's sixth annual Mix Sound for Film & TV event, a sold-out affair that attracted 650 attendees to the Sony Pictures Studios lot. offered a twin focus-immersive audio and IP networking—that reflected concerns of today's audio industry.

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ArTecHouse Gets Immersive 

ArTecHouse, a new permanent digital art installation space, opened in September at New York City's Chelsea Market, where its careening, Al-fueled visuals are emboldened by a sizable 30.1 immersive audio system.

#### Live Sound Showcase:

If Barbra Streisand and The Who could do it this summer, so could Weird Al-so he did. The prince of parodies played with 41-piece orchestras every night on his recent Strings Attached tour, carrying audio gear from Sound Image for the journey.

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# fromtheEDITOR

#### **CLIVE YOUNG** clive.young@futurenet.com



### One Man's Trash...

About a year ago, I was rummaging through a neighbor's trash-well, not exactly. I was digging through a garage sale, and like they say, one man's trash is another man's treasure ... but what I was finding was trash. As I left, I looked in one last cardboard box on the driveway, and from under all the broken toys and stray playing cards, I pulled out a relic from another age: a consumer MiniDisc of Natalie Cole's 1991 smash, Unforgettable with Love.

Finding a forgotten format is always intriguing, and my interest was piqued. The MiniDisc-a magnetooptical disc housed in a cartridge similar to a 3.5-inch computer floppy-was introduced by Sony in November 1992 to great fanfare. The company touted it as the successor to the compact disc, because consumers could record to it like an audio cassette, but they'd get the audio quality of a CD. In truth, the quality wasn't even close, as it used a lossy data compression scheme called ATRAC (Adaptive TRansform Acoustic Coding) that Sony developed in order to cram 74 minutes of audio on the

The sound quality may have been close enough between the formats to fool some consumers, but ultimately it didn't matter, because in the U.S., no one was listening. The relative handful of commercial Mini-Discs that were released here cost \$5 more than CDs, and Sony's Walkman

MiniDisc players ran more than \$500 (about \$875 today). Adding to the hurdles facing MiniDisc, it wound up going head-to-head against Digital Compact Cassette, another format released around the same time by Sony's rivals Philips and Matsushita. Confused about which overpriced, underwhelming format with little in the way of catalog releases to buy, consumers opted to go with neither and stuck with their trusty analog cassettes until Apple's iPod banished C90s to attics everywhere around the turn of the millennium.

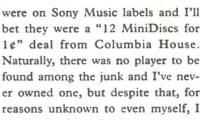
While DCC died a quiet death in 1996, MiniDiscs caught on with consumers in Japan and enjoyed some success in Europe and South America; in the United States, the format even carved out a niche for itself with radio stations, studios, home recordists and news reporters, and Sony milked that for all it could, reportedly selling 22 million recorders worldwide by the time it pulled the plug on MiniDisc hardware in 2011.

Given that the MiniDisc flopped with U.S. consumers, however, commercial releases like the Natalie Cole album I unearthed vanished from stores in the blink of an eye, so it was hard (or perhaps very easy) to believe I'd found one at a garage sale. I dug a little deeper in the cardboard box and soon I'd found a dozen releases. Nearly all of them

bet they were a "12 MiniDiscs for 1¢" deal from Columbia House. Naturally, there was no player to be found among the junk and I've never owned one, but despite that, for reasons unknown to even myself. I bought the dozen for \$2.

A month later, I came to my senses, realized this was yet more clutter I'd introduced to my home office and promptly put them up for sale on the online music collecting site Discogs. Since then, I've sent Simon & Garfunkel's Greatest Hits to Chile, Michael Jackson's Bad to Poland, and other discs elsewhere, but always to other countries ... until last month.

Someone purchased the MiniDisc of Mariah Carey's debut album, Emotions, and wanted it fast, so could I UPS it overnight to New York City? Sure. Then I saw the mailing address: 25 Madison Avenue-Sony's U.S. headquarters. At that point, I had to ask-since Sony owns Columbia Records, wouldn't they have Carev's MiniDisc in a closet somewhere? It turned out they needed it for a corporate display illustrating 40 years of the Walkman, and it was easier to buy one on Discogs than find one internally. Fair enough. I mailed it off, but not before polishing up its plastic case for them. One man's trash is Sony's treasure, apparently, and somewhere that relic of a dead format I picked up for 17¢ is now a museum piece, having fittingly returned from whence it came









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– Ross Hogarth – Producer/Engineer – Van Halen, Keb' Mo', Dweezil Zappa, The Doobie Brothers, Mötley Crüe, R.E.M., Jewel





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- Andy Meyer - FoH - Justin Timberlake, Madonna,

Guns N' Roses, Janet Jackson, Shinedown



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# **Busbee**, Grammy-Nominated Producer and Songwriter, Dead at 43

BY STEVE HARVEY

LOS ANGELES, CA-Grammy-nominated producer and songwriter Michael Busbee, who collaborated extensively with Maren Morris and Lady Antebellum, and co-wrote hits with Pink, Florida Georgia Line, Keith Urban and Rascal Flatts, died Sept. 28 at the

Known professionally as "busbee" (real name Michael James Ryan Busbee), he leaves a wife and three children, including a newborn daughter. The cause of death has not been announced, but earlier this year he was reportedly diagnosed with glioblastoma, a form of brain cancer, and was undergoing treatment.

Born in the Bay Area, Busbee displayed an early talent as a musician, taking up piano at age 7 and trombone in high school, while listening to jazz and Christian music. He moved to Los Angeles in 2000 at the age of 24 to work in the music industry, initially assisting producers including Eric Valentine, owner of Barefoot Recording and UnderToneAudio, before finding his calling in songwriting and

Tim O'Sullivan, Barefoot Recording's studio manager and chief engineer, wrote on Facebook, "Busbee was and always will be a part of Barefoot and of our family. He moved to L.A. in 2000 to help Eric move into Crystal and start Barefoot. His hard work and passion is in our walls and will always be a part of every note



Michael Busbee in November 2018

played here, and we are indebted to him forever.'

Some of Busbee's early collaborations were with American Idol and The X Factor contestants, including Kelly Clarkson, Daughtry, Adam Lambert and Katharine McPhee. In 2012, he co-wrote Pink's Top 40 chart-topping single "Try" and went on to collaborate with Christina Aguilera, Shakira and 5 Seconds of Summer.

His greatest success came in Nashville, where he found his first major placement in 2007 with "Better Now," on Rascal Flatts' doubleplatinum-selling Still Feels Good album. But his country music breakout came with Maren Morris' 2016 debut album, Hero, which spawned the Top 5 country hit "My Church," for which he received a Grammy nomination. He co-produced, with Morris, all but three of the tracks on her follow-up, Girl, which was released earlier this year, also co-writing one song on the album.

Reacting to the news of his passing, Morris wrote on Twitter, "This just doesn't seem fair. I will always love you and the songs and albums I was lucky to make with you, Busbee. Rest well, my sweet friend."

On Instagram, producer and engineer Greg Wells also paid tribute: "Mike Busbee was a friend, a comrade in the insane music business, and graciously always asked me for advice about everything from mixing to songwriting to business ideas to work/family balance to making plugins. He would take me out to dinner often and let the questions fly.... We spoke just a few days ago and planned to get our families together. I'm gutted and will miss my friend, a great guy, husband and father, who was in music for all the right rea-

A search of the BMI repertoire yields more than 1,000 songwriting credits in Busbee's name. Notable titles include Florida Georgia Line's hit ballad "H.O.L.Y.," Rascal Flatts' "Summer Nights," Keith Urban and Carrie Underwood's collaboration "The Fighter," Garth Brooks' 2014 comeback single "People Loving People" and Lady Antebellum's "You Look Good." Busbee worked extensively with Lady Antebellum, including engineering and producing the band's Grammy-nominated 2017 album Heart Break, for which he cowrote six songs.

www.busbeemusic.com

# Studio of Prince Protégé Destroyed by Fire

BY CLIVE YOUNG

LITTLE ROCK, AR-Morris Haves, keyboardist and musical director of Prince's backing band, New Power Generation, was on the road with the group on Sept. 14 when his home and studio outside of Little Rock were consumed by fire.





The home and studio of Prince's musical director, Morris Hayes, were ravaged by fire in mid-

No one was hurt in the fire. What incited the blaze is unknown, but the damage is evident in photos Haves posted to social media on Sept. 19 that show his workstation before and after the fire. Hayes noted online, "I appreciate the prayers and positive energy. Be safe and love on everyone close to you. You never know," adding a hashtag #getinsurancenow.

At the time of the fire, Hayes was in Minneapolis, MN, with NPG, performing at the Concert on the Lawn Series in Maple Grove. The group reformed for a Prince tribute concert in October 2016 and has performed regularly since. Prince died on April 21, 2016, at his Paisley Park home and recording studio near Minneapolis.

Hayes himself worked with Prince on and off for 20-plus years, including playing keyboards for the artist's Super Bowl performance in 2006 and contributing to a dozen albums in the

# Veteran Engineer **David Turner** Killed in Tour **Bus Crash**

SHANDON, CA-David Turner, monitor engineer for country artist Josh Turner, was killed Sept. 18 when the crew tour bus left Highway 46 East 20 minutes outside of Paso Robles and drove off a 50-foot embankment into a creek bed. The other seven passengers of the tour bus were hurt-five with moderate injuries and two with major injuries. David Turner and the artist were not related; the engineer was 64.

Josh Turner and the band were traveling on a separate bus following a show at Vina Robles Amphitheatre in Paso Robles, CA. The crew bus was pulling an equipment trailer and was in the slow lane when it left the roadway, driving through 200 yards of undergrowth before smashing into the dry creek. The impact crushed the front of the bus and ejected two passengers, one of whom was David Turner, according to the San Luis Obispo Tribune. Police are investigating why the bus left the roadway and estimated the vehicle was traveling 55-60 mph at the time.

David Turner, a native of Oxford, MS, was a longtime live sound engineer in the country music scene, having worked for the last 35 years primarily as an FOH engineer and tour manager with Eddie Rabbit, Tammy Wynette, Baillie and the Boys, Restless Heart, The Wilkinsons, Trick Pony, and Patty Loveless. For nearly 14 years, he was monitor engineer for Josh Turner.

In a statement to the media. Universal Music Group Nashville reps said, "Josh Turner and his road family have suffered a devastating loss. Please keep the crew, band and Josh in your thoughts and prayers."

In the wake of the fire, fellow NPG member Tony Mosley has started a GoFundMe page for Hayes to "help him bring the funk back." Morris Hayes GoFundMe Campaign www.gofundme.com/f/morris-hayes-

# Spotify Acquires SoundBetter Audio Pro Marketplace

NEW YORK, NY-Spotify Technology has acquired the SoundBetter global audio production and collaboration marketplace, which helps creators worldwide connect with and hire audio professionals.

"SoundBetter offers the most comprehensive global marketplace for music and audio production professionals for hire in the world, along with a member community spanning 176 countries and 14,000 cities worldwide," said SoundBetter co-founder and CEO Shachar Gilad. "We are excited to benefit from Spotify's global scale, resources and vision to expand our network and drive more economic opportunities for artists of all levels."

SoundBetter taps into the growing market of audio professionals looking to create content and searching for partners to advance their work. Since its founding in 2012, SoundBetter has developed a community of more than 180,000 artists registered on its



The SoundBetter music/audio production personnel marketplace will be added to Spotify's services for creators.

SoundBetter will join the Spotify for Artists family, which provides services such as insights, profile management and promotion tools to the more than 400,000 artists and their teams using the platform

**Spotify Technology** www.spotify.com

# QSC Acquires Attero Tech

COSTA MESA, CA-In a move expected to bolster its Q-SYS audio, video and control family of offerings, QSC has acquired Fort Wayne, IN-based Attero Tech, a developer of networked AV endpoints and I/O peripherals.

"This acquisition is a natural next step for our organizations given our

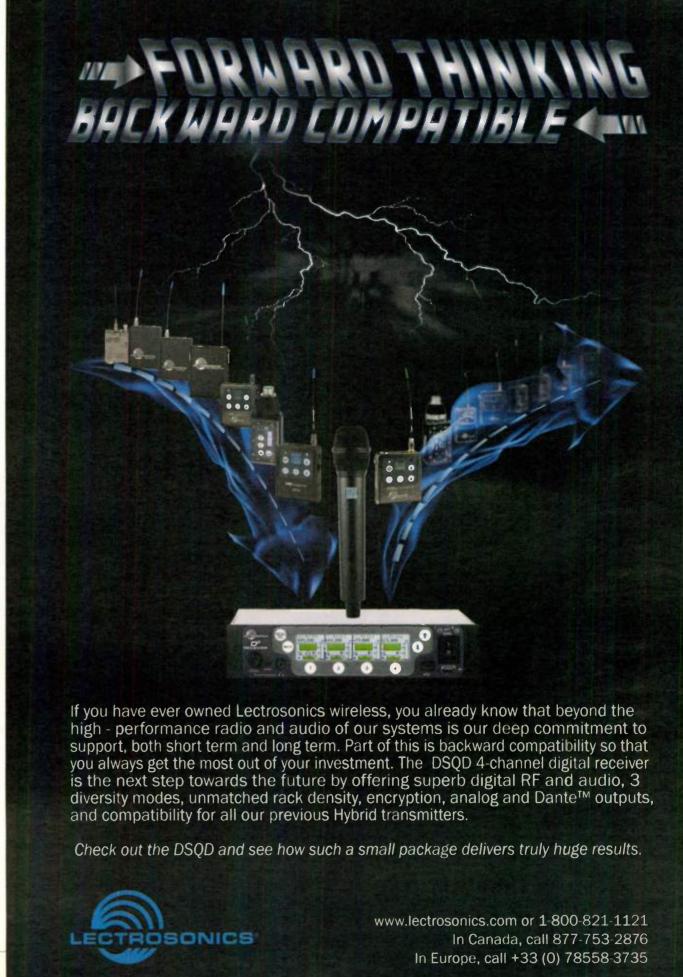


QSC's acquisition of Attero Tech is expected to bolster the company's Q-SYS offerings.

long relationship, highly compatible portfolios and the exceptional shared values and company cooperation that have developed over the last several years," said Jatan Shah, chief operating and technology officer, QSC.

"Both QSC and Attero Tech were early adopters of network audio transport technology, including CobraNet, Dante and AES67. In addition, when QSC expanded the control capabilities of the Q-SYS Ecosystem in 2017, it allowed Attero Tech to become the first manufacturer partner to independently develop Q-SYS Control integration plug-ins." The company has since developed 20 plug-ins for their portfolio of I/O devices.

www.qsc.com



# = Iceland Offers Rebate to Attract Recording Projects

BY STEVE HARVEY

REYKIAVIK, ICELAND-Iceland has announced a financial initiative to attract international recording artists to the country. Touting the creative inspiration of the natural surroundings, the government is offering a 25 percent rebate on all expenses incurred while producing music in the

A dedicated website for the government-backed Record in Iceland program includes a 14-page Q&A and details of the country's recording studios, some of which offer resi-

dential facilities. Reimbursement is available for "hourly studio rates for recording, wage expenses incurred during the recording for hired performers, producers, engineers or studio personnel, post-production (including sound mixing and mastering), and travel and transport costs for musical instruments and lead performers."

The basic stipulation is that a project must comprise at least 30



A 25 percent rebate initiative is intended to help Icelandic recording facilities like Hljóðriti Studios attract international business

minutes of music and be released within 18 months of recording. However, the initiative does extend to film score recording as well as record re-

The country has "a rich talent pool" of composers, arrangers, orchestras and choirs, according to the Record in Iceland website. "It's very easy to find world-class session musicians to play on your recordings-everything from horn sections to percussion wizards and guitar heroes, or

just good piano players."

"There's always one weirdo who does that one thing," says Australianborn composer and producer Ben Frost, a Reykjavik resident, in the program's promotional video. "And he's usually just around the corner."

The Record in Iceland initiative is administered by Iceland Music, a public export office for Icelandic music, in collaboration with Promote Iceland, the country's foreign service and Reykjavik Music City. Iceland's Ministry of Industry and Innovation is funding the program.

Iceland Music's managing director is Sigtryggur Baldursson, drummer and founding member of The Sugarcubes, a band that featured Björk on vocals. Baldursson told Billboard, "Until now, these studios have been something of a hidden secret, but our aim with Record in Iceland is to open these facilities to a far wider range of international artists and businesses, and to make them a compelling commercial proposition."

Production facilities highlighted on the website include Greenhouse Studios, which is equipped with an SSL AWS900 and a Neve Kelso in its two rooms and has hosted sessions with Kanye

West. Another, Masterkey, with expansive views of the coast, features a Rupert Neve 5088 desk and Ocean Way HR3.5 monitors.

Studio Silo, said to be the only Icelandic facility to specialize in tape recording, is equipped with a vintage Amek Angela desk; the facility also offers digital capabilities and has "a striking view across the North Atlantic." SSL-based SyrInd Studio can accommodate a large orchestra and boasts a client list that includes Biork. Sigur Rós and Of Monsters and Men.

Record in Iceland http://record.iceland.is

# **IEM Manufacturers** Team for Trade Group

BY CLIVE YOUNG

NEW YORK, NY-The last two decades have seen in-ear monitors move from being boutique live sound offerings to crucial live production tools that have also made inroads into the world of audiophiles. Aiming to become a central resource for in-ear manufacturers, dealers, suppliers and end users in that market space, the In-Ear Monitor International Trade Organization has been founded.

According to founder Mike Dias, the goal of IEMITO and its website is to act as a repository of information and a directory for its members, offering features such as job placement assistance, industry best practices, trade show participation and others.

Long part of the IEM world, Dias entered the industry with a job at Ultimate Ears in its early days. He ultimately became global sales and marketing director for Logitech, which owns UE today. Having moved on from that role, Dias sees IEMITO as a way to re**IEMITO** 

spond to some of the industry's pressing needs and unify it independently of any single manufacturer: "I've watched the industry grow from the back of a tour bus to what it is today and have been able to cultivate mutual respect and friendships with all of the pioneers of the industry. It was hard not to notice just how big the industry has become and how many manufacturers are now participating globally."

Founding manufacturers include Alclair, Spear Labs, Ultimate Ears, Jerry Harvey Audio, Vision Ears, Sensaphonics, Westone Audio, Audeze, Clear Tune Monitors, 64 Audio, Empire and ACS. Founding IEM dealers include Soundcat, Music Sanctuary and One Custom Audio.

www.inearmonitor.org

# WAMCon New York Sells Out

NEW YORK, NY Women's Audio Mission sold out its WAMCon New York conference, which took place at New York University Steinhardt and The Cutting Room Studios in mid-October. The event provided hands-on audio and recording arts training and networking for more than 100 women and gender non-conforming individuals

WAMCon kicked off with a discussion with Leslie Ann Jones and an "Engineering Prince" panel that gathered four of Prince's engineers who happen to be female: Sylvia Massy, Susan Rogers, Lisa Chamblee and Peggy McCreary.

In the days that followed, WAM-Con New York served up a variety of workshops with producers and engineers, including four-time Grammy-winning engineer Leslie Ann Jones, Sylvia Massy (Tool, Red Hot Chili Peppers), Simone Torres (Sia, Cardi B), Gloria Kaba

(Beyoncé, Kanye West), Jennifer Decilveo (Andra Day, Beth Ditto), mastering engineers Kim Rosen (Aimee Mann, Bonnie Raitt) and Emily Lazar (Dolly Parton, David Bowie), and podcast producers/engineers Chiquita Paschal (Uncivil, Another Round) and Haley Shaw (Gimlet).

"We launched WAMCon in 2017 to bring our award-winning training across the country, connect women and gender non-conforming people to the top pros in the industry, and give them unique access to some of the most iconic audio production spaces in the world," said WAM executive director Terri Winston.

The event was sponsored by Dolby Laboratories, Spotify, the Recording Academy, Shure, Eventide, Universal Audio, Epidemic Sound and others.

Women's Audio Mission www.womensaudiomission.org



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l-acoustics.com • l-isa-immersive.com







# 16] Sound INTERNATIONALIIII

# = Andrea Bocelli Brings It for RCF's 70th Anniversary in Venice

VENICE, ITALY-Italian pro audio manufacturer RCF pulled out all the stops when it celebrated its 70th anniversary on Sept. 19, taking over the Venice Arsenal for an evening of food, company history and a performance by opera superstar Andrea Bocelli, Attendees included nearly 500 RCF distributors, dealers and noted customers from around the

After cocktails, a buffet by chef Massimiliano Alajmo (of Le Calandre fame) and a birthday cake, guests were invited next door, where RCF Group CEO Arturo Vicari addressed the crowd, closing with a surprise announcement that Bocelli would be performing.

For more than an hour, guests were treated to a recital of light opera and populist classics, with the orchestra boosted by Cuban soprano Maria Aleida, Ukrainian principal violinist Anastasiya Petrishak and another regular of Andrea Bocelli's ensemble, Italian singer Laria Della Bidia. The performance led to two encores: "Con te partirò" and then "Nessun Dorma" starring Bocelli and Petrishak.

The P.A. setup for the evening



Andrea Bocelli took center stage to perform for RCF VIPs at the company's recent 70th anniversary celebration.

was tackled by RCF's Engineering Support Group (ESG), which fashioned a central cluster design that met the artist's rider requirements while ensuring coverage of the entire audience. The cluster comprised ten elements of the active HDL 26-A in a compact, curved line array configuration, with single TT 2-A satellite speakers out wide on each side to provide separation. A straight line of seven TT 10-A enclosures, electronically curved using RCF's proprietary RDNet, provided front fills, near a large complement of 13 SUB 9006-AS in a straight line.

Mixing Bocelli's vocals and the soloists on a DiGiCo SD7 was Andrea Taglia, the artist's longtime FOH engineer. Taglia received a separate orchestra mix from a second SD7, created by another longtime collaborator, Francesco La Camera.

www.rcf.it

#### biamp. +

Biamp

Opens New

Headquarters

ANTWERP, BELGIUM-Biamp has

opened its new European headquar-

ters in Antwerp, co-located in the facilities of Apart Audio, which Bi-

amp acquired in July 2019 along with

rooms, warehousing, and office space

for technical support, finance and

sales administration roles, as well as a

fully equipped Biamp experience cen-

ter to provide support for customers,

Apart Audio, has been promoted to

general manager of Biamp Europe

and will oversee Biamp's European

operation. The new headquarters will

strengthen the company's sales, sup-

port and distribution in the region as

Biamp focuses on rapid investment

and expansion in the market.

Kris Vermuyten, former CEO of

The facility includes training

Community Loudspeakers.

partners, and end users.

European



The new HQ is part of an expansion into new verticals in the wake of Biamp's Apart Audio and Community Loudspeakers acquisitions.

In the wake the acquisition of Apart Audio and Community Loudspeakers, Biamp is forming two new sales teams—a retail sales group and large-venue sales group, composed of professionals from the acquired companies-to focus specifically on identifying and taking advantage of opportunities in those sectors. All products within the merged portfolios will be sold and supported through Biamp's global sales and service organization, with regionally located stocking and fulfillment.

"Biamp's European headquarters will provide the region with enhanced logistics, support and overall service for our customers and partners, and will extend Biamp's leadership in the European pro AV market. I am excited to lead the team as we bring Biamp's innovative communications solutions to a quickly growing community of customers," Vermuyten said.

Biamp www.biamp.com

# Woody Tone Studios Opens in Austria

VIENNA, AUSTRIA-Recording studio Woody Tone Studios may be located in a Vienna penthouse, but it carries an exceptionally rustic vibe.

Taking pride of place in the wood-lined control room is a 16-channel Rupert Neve Designs 5088 console loaded with Shelford 5052 Mic Preamp/Inductor EQ modules, complemented by Merging Technologies AD/DA conversion, ATC monitoring, and an extensive collection of fully-restored vintage keyboards.

"Our mission is to provide a fresh take on classic sound, providing personally tailored services such as music and OST recording, overdubbing and artist development," says studio owner Julius Kienlein. "Growing up in Germany, Italy and Australia exposed me to many



The rustic studio is in fact a penthouse facility in Vienna.

different genres of music. As I became a trained musician myself and learned about all that is involved in music production, I've learned that in my favorite records, most often there was a Rupert Neve design in-

The studio's all-analog headphone monitoring setup includes four RNHP Precision Headphone Amplifiers. Two RNDI Active Transformer Direct Interfaces are kept on hand for instrument amplification.

"The 5088 sounds genuine-it captures emotions, channels and amplifies them. The console allows you to make instinctive artistic decisions similar to the way a visual artist freely mixes different paint colors on a palette. One can feel the decades of experience that have gone into laying out the console, making the workflow a dream."

Rupert Neve Designs www.rupertneve.com

Woody Tone Studios www.woodytones.com

# We Out Here Festival Kicks Off with dLive and SQ

CAMBRIDGESHIRE, UK—Allen & Heath mixers tackled FOH and monitor duties for We Out Here Festival, which was curated by BBC Radio 6 DJ Gilles Peterson, his Bronswood Recordings label and Worldwide FM. Taking place across four days in August in rural Cambridgeshire, the festival showcased an eclectic lineup of underground artists and DJs.

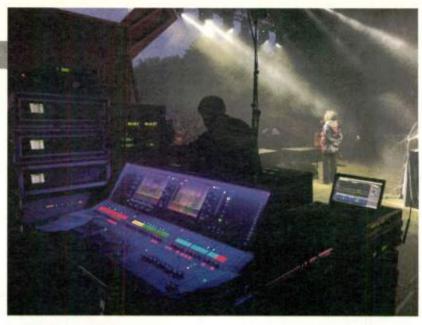
Supplied by AV production company A-Live Sound of Glasgow, Scotland, five Allen & Heath dLive and four SQ systems ran FOH and monitors across seven stages.

Iain Mackie, director at A-Live Sound, said, "I chose to invest in dLive and SQ because they're the best sounding consoles on the market right now. dLive has endless high-quality plug-ins, especially the Hypabass FX and Dyn8. It's also incredibly easy for visiting engineers to just rock up and mix the band because the whole system and interface are very intuitive and well laid out."

The main stage featured two dLive \$7000s and two DM64 MixRacks paired with three Dante cards for virtual soundchecks, multitrack recording and channel splits between consoles. "This was my first real gig on the \$7000, and while I'm used to running festivals on competitor consoles, this event will be a particular favorite for a long time. dLive is so easy to use, self-explanatory, and it sounds really great!" comments Martijn Van Renterghem, chief system designer at A-Live Sound.

Also making full use of dLive's onboard plug-ins, Van Renterghem said, "The plug-ins are so good that I don't think I'll ever bother plugging in my Waves system again! Being able to add the Dyn8 onto any channel is such a great tool."

The Lush Life stage, which presented up-and-coming artists, operated two dLive C3500s connected to two DM48 MixRacks, while the rave-haven Rhythm Corner stage ad-



The main stage featured two dLive \$7000s, one of which is pictured, and two DM64 MixRacks paired with three Dante cards.

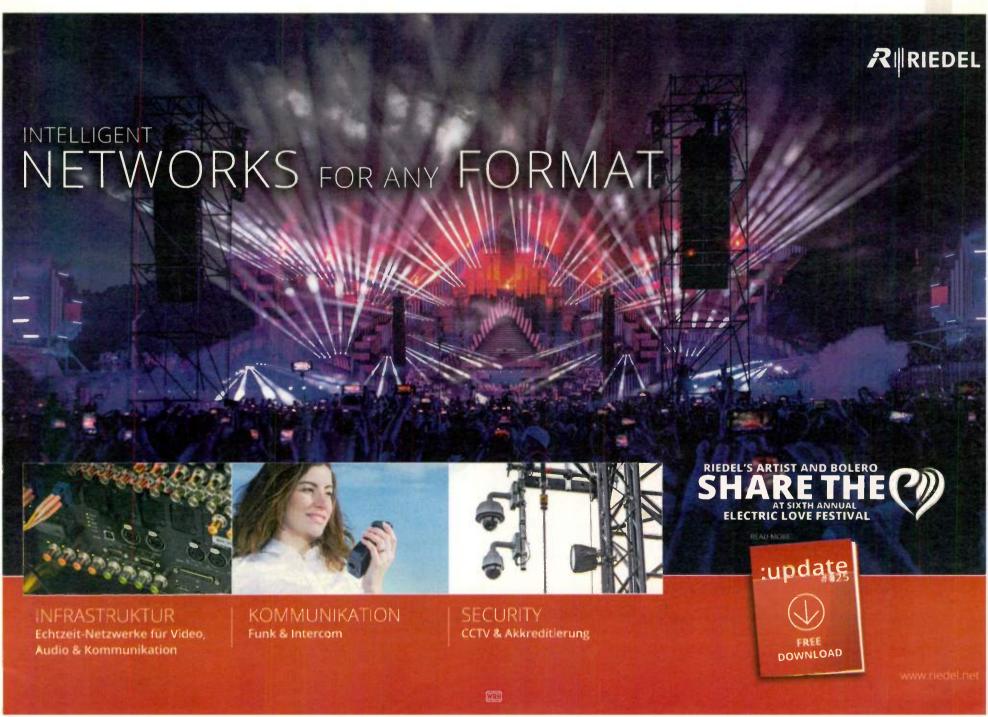
opted a dLive Wings system for FOH and monitors, featuring a C1500 and DM32 MixRack (fitted with a Dante card).

Darren Hutton, sound engineer at A-Live Sound, added, "dLive's interface and workflow is really easy to use, intuitive and sounds fantastic! I was really impressed with the reverbs, which sounded very natural and authentic, especially when mixing on inears. The dLive Director software and additional features such as importing scenes, being able to reset aux mixes and pre-patching show files for visiting engineers were particularly nice

to have, as it meant I was spending less time on the desk and scene management and more time focused on dealing with the artists' needs."

Allen & Heath's SQ series led the charge on FOH and monitors over on the Big Top, Woodland, Forest and Love Dancing stages—the go-to areas for fans of house, electronic, funk and soul. Four DX168 expanders were split across the stages, providing further remote I/O for the artists, as well as DJ setups, changeovers and festival announcements.

Allen & Heath www.allen-heath.com



# 183 SoundRECORDING IIII

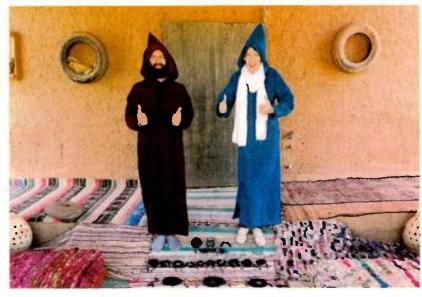
# Everybody Wants to Record the World

BY STEVE HARVEY

MONTREAL, CANADA—The first season of Simon & Greg Record the World, an online video series presented by pure-Mix, poses the question, How do you build a recording studio in a remote part of Senegal when transport is limited and materials are hard to come by? The answer, as demonstrated by both Simon Walls, a Montreal-based music producer, songwriter and adventurer. and Greg Bonnier, a record producer, sound engineer and filmmaker also based in Montreal, is through a little ingenuity and a lot of elbow grease.

Five years ago, while visiting Senegal to explore and to record bands. Walls met some people planning to build a small recording studio. Three years later, he ran into Bonnier at a party and they resolved to help finish the facility.

Not wishing to pass up the opportunity to do some recording while they were in Africa, the pair reached out to Universal Audio and Lauten Audio for support. Bonnier, whose background is in television, also



Simon Walls (left) and Greg Bonnier traveled with recording gear to Morocco for Season 2 of

brought along a camera.

"We thought, the worst that can happen is we make cheesy YouTube videos that are okayish. But I started looking at the shots over there and saw we had something," he says. The pair posted the first season beginning in late 2018, and will shortly release season 2, which follows their

adventures in Morocco earlier this year. Season 3, a trip to the far north of Canada to record the Inuit people of Nunavut, near the Arctic Circle, is already lined up for the end of 2019.

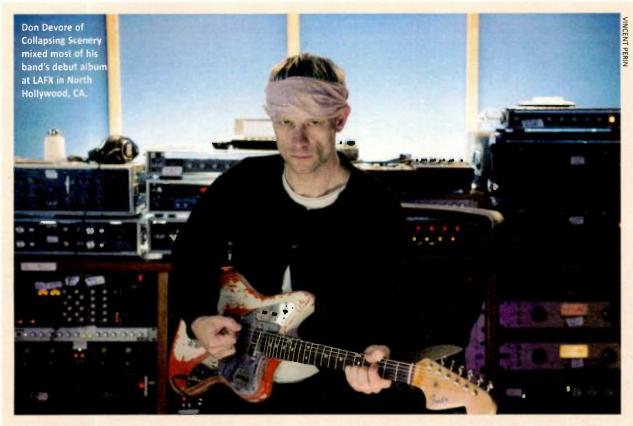
Although Walls and Bonnier both had plenty of remote recording experience, they found themselves somewhat unprepared for West Africa, in retrospect. That's not to say they didn't take enough gear; rather, they took too much and they had to lug it around themselves, by planes, boats, taxis and buses on barely-there roads.

"Trying to figure out strategies for not having regular materials, and thinking what a makeshift absorber or diffusor is, was challenging," says Bonnier. "And bringing the gear was challenging."

It probably wasn't a great idea to carry a 500 Series rack, they admit. "On some of the recordings in Senegal, everything that went through the 500 Series is a little distorted or has issues because of the inconsistent power" in the remote villages, says

They left the 500 Series rack at home for the trip to Morocco and slimmed down their microphone collection. For Senegal, Lauten Audio supplied 10 mics, including a pair each of Clarion FC-357, Atlantis FC-387 and LA-120 models, together with four LA-220s. They also took along a pair of Shure SM57s, a Sennheiser MD 421 and an AKG

(continued on page 23)



# Collapsing Scenery Builds Its Debut

BY STEVE HARVEY

LOS ANGELES, CA-Listen to almost any track on L.A.-based duo Collapsing Scenery's recently released debut album Stress Positions and you might be hard-pressed to guess what year it was recorded. That's likely due to the eclectic influences of band members Reggie Debris and Don Devore, but also their production techniques, which are staunchly analog but also dependent on digital technology.

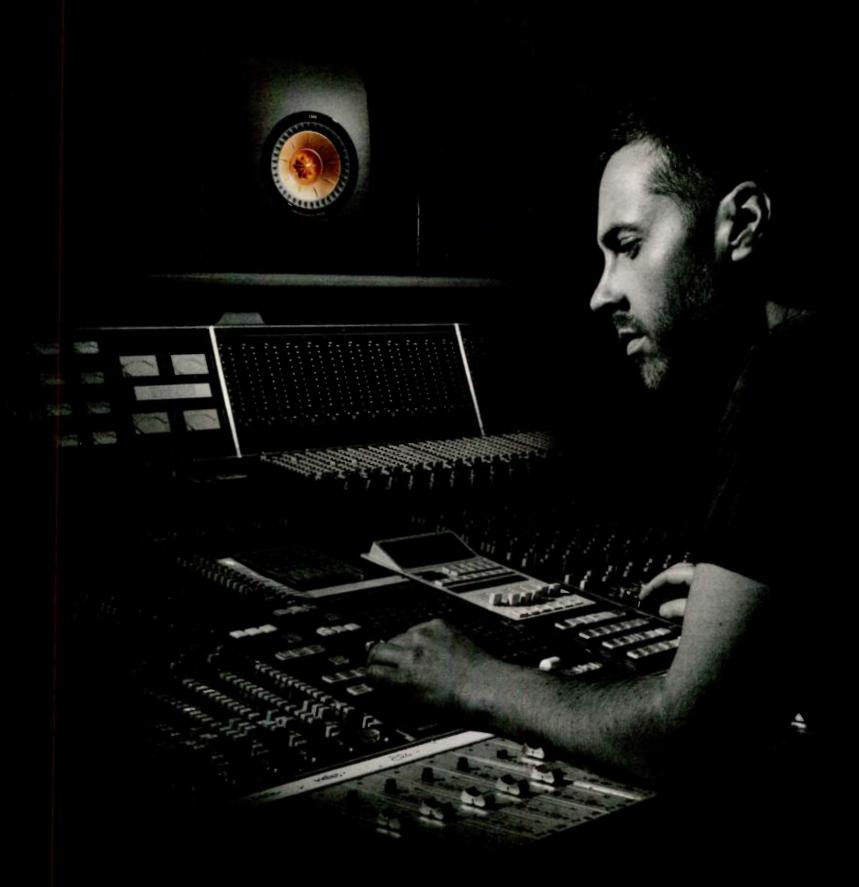
It's difficult to put a finger on the band's timeless sound, an eclectic blend of electro, post-punk, chillwave and dancehall that is simultaneously retro and totally current. But punk, arguably, is at its roots (both musicians come from punk

and hardcore backgrounds) in terms of attitude, approach and especially content, with many of the lyrics railing against injustice.

The album, available in a die-cut, triple-gatefold, double-vinyl package with interchangeable cover art, is the result of the past five years of the band's six-year existence. Not that they haven't been productive; they have also released a string of singles and EPs. But, says multi-instrumentalist and lead vocalist Reggie Debris, "The intention was to make a full body of work. There are some of the earliest and some of the most recent recordings on the album."

Sessions kicked off at Wheeler Ranch in rural Texas, a recommendation from engineer Danny Taylor of Brooklyn's House Under Magic, who has been a constant collaborator with the band. The sessions gave Debris and Devore, with drummer Ryan Rapsys, an opportunity to familiarize themselves with the rig they had assembled for recording and performing, centered largely on Korg's Monotribe and Volca Bass, and Elektron's Analog 4 and Analog Keys. "I still play guitar, but I can get really expressive on those Elektron machines in really varied ways in all sorts of complex musical situations," says Devore

"Don did a bunch of research (continued on page 24)



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# 1201 STUDIOshowcase

# Solar-Powered Sessions

BY STEVE HARVEY

LOS ANGELES, CA-"I'm not doing this to make money. I'm doing it to have fun with people," says Joachim Garraud of LA Good Vibe, a 36-foot RV converted into a mobile recording studio. While LA Good Vibe is hardly the first RV-based production space, it may well be the first carbon-neutral studio to roll across the southwestern states.

Garraud relocated from France to L.A. seven years ago and until recently had a studio in Hollywood. A DJ for more than three decades, he frequently jets around the world for gigs or back and forth to his studio in Paris. Over the years, he's racked up credits as a producer, composer or remixer for a long list of artists, including David Guetta, Jean-Michel Jarre, David Bowie, OMD, Kylie Minogue, Cassius and Moby.

After a few days working with him in L.A., artists visiting from Europe would often start bugging him to drive them to Las Vegas, San Francisco or the ocean, says Garraud, "so I decided to merge both things."

Last year was an opportune time to build an eco-friendly mobile studio, as solar technology took a leap forward and prices dropped, says Garraud. Testing his off-grid concept, he bought a couple of solar panels, hooked them up to a laptop and speakers and-voila! Next he went looking for a vehicle.

"I wanted one that would fit in my driveway, with three slide-out sections," he says. He found a 2009 Fleetwood Classic and spent three months stripping the interior down and reconfiguring it. The vehicle is fully insulated with Dynomat and Kilmat soundproofing materials so artists can work between

destinations without road noises intruding. "In a Bentley or Mercedes, they use 30 square meters [322 square feet]. We used 10 times that," he reports.

Garraud clad the roof in solar panels that generate enough electricity to power everything from air conditioners and the microwave to a four-piece rock band. The energy is stored in batteries located beneath the vehicle's floor panels. "My car is a Tesla; I charge it with the bus,"

RVs are gas-guzzlers, of course. "I made a deal with ClearSky Climate Solutions and I pay for each mile to offset the gas. It means nothing to talk about solar energy other-

The rear bedroom area sleeps four and doubles as a vocal tracking space large enough to accommodate a drum kit. A seating area in the forward lounge also doubles as a bed.

Garraud initially built the bus for personal use, then decided to share it with friends. Now he's offering it to other people, by invitation. "It's like welcoming a guest into your home," he says. "They focus on writing and production, and I take care of everything for them. I cook French food with organic ingredients. It's great to share time with different people with different knowledge and different cultures."



Producer, remixer, composer and DJ Joachim Garraud is also a studio owner, having created LA Good Vibe, a solar-powered, 36-foot mobile studio.

Stepping onto the RV, the first thing that catches the eye is a Pioneer RT-707 reel-to-reel machine mounted above the front windshield. At the end of a project, Garraud says, he will often run off a tape copy for the artist as a souvenir. The Pioneer deck also provides playback on the long drives: "It's sexier than an MP3 player."

The production workstation is installed in a large slide-out section immediately behind the driver's seat. Garraud runs Ableton, monitoring on a pair of Focal Solo6 nearfields with a Sub6. "I had the first Pro Tools license in France, in 1992," he recalls, flying to California to pick up version 1.03, which supported just eight mono tracks. But six years ago he switched to Ableton when Avid abandoned the mobile production market through its reliance on bulky hardware, he says.

A Midas MR18 18-input digital mixer, incorporating 16 preamps, is the heart of the onboard setup and is also mounted in the front fascia. A variety of microphones are available,

including a Neumann U 47 and a Sony C-800G. Garraud has installed 10 Focal 300 series speakers, custom-built to fit into the RV's shallow wall and ceiling spaces, so the mixer is linked to a Behringer unit that routes signals to the vehicle's multiple playback zones. A 100-foot snake extends the setup's reach to the great outdoors.

Installed video screens can display the current session to provide musicians with visual cues as they record or overdub. Garraud also offers video production services, including use of a drone.

The vehicle is truly tricked out. From his driving position, Garraud can ask Google Assistant to repatch signals or change speaker levels. Two iPads mounted next to him handle multiple functions, including not only GPS and solar power management but also mixing. A Wi-Fi unit with three SIM slots, each from different carriers, ensures communications access in all but the most remote areas.

(continued on page 24)



The RV's back bedroom still sleeps four, but it now doubles as an iso booth for drums and



The solar panels generate enough electricity to power everything from air conditioners and the microwave to a four-piece rock band.

# IIIISOFTWAREtech [21]

## Will Your Hardware Rack Move to the Cloud?



**ANDERTON** 

**AES** my 2016 report, I described the company RackFX as "like an Airbnb for

signal processing—there's a community of people with vintage gear. You send a file to them, they process it (although if you don't know what settings to specify, you'll need to go back and forth), and you pay based on how the host sets their price-flat fee, file size, etc. Wacky and weird? Or the Studio Instrument Rentals of the future? Time will tell."

Well, three years later, the fate of RackFX is uncertain. Regardless, time has told us one thing: The world continues its relentless move online. But it's no longer just a software world-even hardware is moving online, as exemplified by Access Analog and Mix Analog, two services that provide access to professional analog audio hardware via an internet connection. While their approaches differ somewhat, their common goal is to put hardware, not just software, in the cloud.

Both services require a relatively speedy online connectionthey recommend a minimum of 10 Mbps, although if you want to use Mix Analog's 192 kHz/24-bit option, you'll need something better than that. Mix Analog uses your browser to send signals back and forth; however, plug-ins for Mac OS and Windows (now in beta testing) will allow communication directly from your DAW. Access Analog is already plug-in based, and supports Mac and Windows (AAX, VST 2, VST 3 and AU).

To use these services, you upload your file to their virtual studio, and then tweak settings to taste, with nearly real-time playback. You can then transfer a final version. Access Analog places emphasis on realtime streaming, so you can choose the buffering time, as well as lossless or compressed audio (although your final file can be done offline, with uncompressed audio).

Because both services depend on hardware, you have to book time to reserve specific pieces of gear. Once in the virtual studio, you send your audio into the hardware. How they control the hardware varies. Mix Analog developed stepped, drop-in, relay-based replacements for existing controls. This has the advantage of providing highly repeatable settings, and eliminating servos reduces the time required to move to a new setting. It's quite clever.

And speaking of clever, Access Analog uses sophisticated robotics, as well as routing options to accommodate different mono/stereo scenarios. You can even place mono

units side-by-side in their rack plugin to process each channel of a stereo signal individually. The plug-in analogy even carries through to being able to save presets and do parameter automation.

The business models of the services are somewhat different. Mix Analog is a subscription service that works like booking a studio-you pay for time. If you don't use up your hours in a billing period, they roll over to the next month. You can use the service free for 30 minutes a day, although the selection of free (continued on page 24)



# [22] tracks look at the recording scene



ARTIST: FREEDONIA FEATURING CHRISTOPHER

**ALBUM: FIREFLY** LABEL: INDEPENDENT PERSONNEL:

Produced by: Freedonia, Christopher Cross Engineered by: Chris Bell, Randy Miller Studio: Blue Rock Studios (Wimberley, TX) Mastered by: Bernie Grundman at Bernie Grundman Mastering

#### **EQUIPMENT NOTES:**

(Hollywood, CA)

Rupert Neve Designs 5088, ADAM Audio S3A, Yamaha NS-10, Avid Pro Tools, Apple Logic



ARTIST: THE MARIACHI GHOST ALBUM: PURO DOLOR

LABEL: SUGAR GATOR RECORDS/PIPE & HAT PERSONNEL:

Produced by: Jesse Zubot Engineered by: Grant Trippel, Lenny Milne, Jesse Zubot

Mix Engineer: Jesse Zubot **Studios:** Exchange District Studios (Winnipeg, MB), Bedside Studios (Winnipeg, MB), Deep Bay Bunker (Bowser, BC)

Mastered by: João Caravalho at João Carvalho Mastering (Toronto, ON)

#### **EQUIPMENT NOTES:**

Rupert Neve Designs 5060 Centerpiece, Dynaudio BM 6A, Yamaha NS-10, Focal Trio Be, Avid Pro Tools



ARTIST: MICHELLE DECK ALBUM: UNPLAYED: THE CHRONICLES OF LADY LYRIC LABEL: INDEPENDENT PERSONNEL:

Produced by: Bil & Michelle Deck

Engineered by: Greg Roller Studio: Roller Music Pro (Branson, MO) Mastered by: Greg Roller of Roller Music Pro

#### **EQUIPMENT NOTES:**

TASCAM DM 4800; outboard preamps: Black Lion Audio Auteur MK2, Warm Audio WA12, Nady TMP 2 tube pre with Sylvania 12AX7s, ART TransX; monitoring: Wharfedale Diamonds 8.1, TASCAM VL-A8, Theater Solutions 15-inch sub, Sony MDR 7506 and 7510 studio headphones; Cakewalk



ARTIST: TOOTHGRINDER ALBUM: I AM LABEL: SPINEFARM RECORDS PERSONNEL:

Produced by: Matt Squire Engineered by: Matt Squire Studio: SOMD Studios (Beltsville, MD) Mastered by: Gentry Studer at Epicenter Mastering (Nashville, TN) **EQUIPMENT NOTES:** 

Manley Reference vocal mic, Warm Audio preamps, Universal Audio UAD Apollo, Dynaudio monitors, Avid Pro Tools 2018, Apple Logic Pro X



ARTIST: ANGELA **PREDHOMME** ALBUM: LOVE

#### LABEL: INDEPENDENT PERSONNEL:

Produced by: Angela Predhomme Engineered by: Angela Predhomme Mix Engineer: Jim Kissling Studio: Home studio Mastered by: Jim Kissling at Jim Kissling Mastering **EQUIPMENT NOTES: JBL** LSR305, Apple Logic Pro



ARTIST: ODDFELLAS **ALBUM: ODDFELLAS** LABEL: SELF-RELEASED **PERSONNEL:** 

Produced by: Bart Rose Engineered by: Bart Rose Studio: Fort Worth Sound (Fort Worth, TX)

#### **EQUIPMENT NOTES: API**

1608 console. Genelec 1032 monitors, Avid Pro Tools HD with Apogee Conversation



#### **ARTIST: BURTON GUIBORD ALBUM:** ARE WE FREE? LABEL: NATIVE VOICES PERSONNEL:

Produced by: Ron Jones Engineered by: Ron Jones Studio: Mobile Tracks Studio (Milwaukee, WI) Mastered by: Gary Tanin at Daystorm Music (Milwaukee, WI)

#### **EQUIPMENT NOTES:**

Yamaha NS-10M with IBL SB-1 subwoofer, Klipsch Heresy, Auratone monitors, Avid Pro Tools



ARTIST: CASS CLAYTON ALBUM: PLAY NICE LABEL: SELF-RELEASED PERSONNEL: Produced by: Taylor Scott

Engineered by: Geoff Gray, Alex Stricker

Studio: Far & Away Studios (Boulder, CO)

Mastered by: David Glasser at Airshow Mastering (Boulder, CO)

**EQUIPMENT NOTES:** Sony DMX-R100, Studer A80, ATC SCM100ASL, Fairchild 670, Telefunken V72, Telefunken ELA M251, Avid Pro Tools



ARTIST. DRIFTING IN SILENCE **ALBUM: AWAY LABEL: LABILE RECORDS** PERSONNEL:

Produced by: Derrick Stembridge Engineered by: Derrick Stembridge Studio: Octagon Studio (Franklinton, NC) Mastered by: Rafael Anton Irisarri at Black Knoll Studio (New York, NY)

**EQUIPMENT NOTES:** Solid State Logic Nucleus 2, Focal Twin6 Be 6.5, Apple Logic



**ARTIST:** AV SUPER SUNSHINE ALBUM: CANDYLAND **REMIXES VOLUME 1** LABEL: VICTOR HOUSE RECORDS

#### PERSONNEL:

Produced by: Michael Bradford Engineered by: Joe Costa, James House Mix Engineer: Michael Bradford

Studios: Chunky Style Music (Los Angeles, CA), RCA Victor Studio A and Dream On Studios (both Nashville TN) Mastered by: Andy VanDette at Engine Room

#### Audio (New York, NY) EQUIPMENT NOTES:

Meyer Sound HD-1 monitors with Mackie subwoofers, Auratones with Hafler amp, Avid Pro Tools

#### notes

#### SSL, Group One Team Up

#### Tipp Taps Project

#### Boston's Mad Oak

Reopens

#### Simon & Greg

(continued from page 18)

D12VR. For Morocco, Walls and Bonnier replaced the bigger largediaphragm condensers with Lauten's new LS-208.

"That was exactly the tool we needed," says Bonnier, who reports that they donated some equipment to the recording studio. "Now they have some releases. It serves a purpose and has created a new revenue stream in this community."

One lesson learned in Senegal was cable management, he continues. Heavy and bulky mic cables were replaced by lavalier mic cable with XLR connectors fitted for Morocco: "We had 360 feet of cable that weighed maybe 3 pounds." And while the collapsible mic stands they took to Senegal were not too heavy, they brought film industry-standard Magic Arms, fitted with 5/8-inch threads, to Morocco, allowing them to hang mics off tables or chairs.

Both carried laptops, with Walls doing most of the recording into Cubase. "He runs the sessions while I film. In the few instances that I record, my computer has Logic," says Bonnier. Typically, everything is saved to the laptops or camera, with backups secreted among their bags, and Bonnier carries a 2 TB SSD with all the media on his person.

UA provided an Apollo X8P interface. "There's no reason why you can't make a record on this thing. That's all you need, and with all the plug-ins, it's a godsend," says Bonnier.

That said, eight channels were sometimes not enough, so they supplemented the X8P with an Arrow interface for their trip to Morocco. "So this time we had three headphone outputs, three DIs and 10 lines with preamps. That was perfect," he says.

"Focal gave us two pairs of Clear Professional, the very high-end openback headphones, which were amazing," says Bonnier. "It's the equivalent of having a studio on your head, so we could mix with those. And we had two pairs of the closed-back Listen Professional headphones."

"I mix in my studio in Montreal," Walls elaborates, "but I do a balance and get a good rough mix for the artist. This year, we got back in February, caught up on some work, and I started mixing in March or April. I do the production and edits, do the mix, then send it to Greg for mastering."

Unlike Senegal, where they recorded musicians on an ad hoc basis, they selected and contacted the

musicians they wanted to work with before leaving for Morocco. It was a whirlwind. "In some instances, we would arrive at night, record the whole of the next day, and the next morning we were off to the next place, so we needed everything we recorded live to be usable because we didn't know if we were going to have time for overdubs," says Bonnier, who recently finished mastering five albums from the trip for release.

The pair handle digital distribution for a 10 percent cut, with the rest going to the musicians. They also advise the musicians about how to collect royalties in their respective territories.

There's a threefold reason for doing these projects, says Bonnier, "The first reason is to help artists who otherwise wouldn't have the chance to make records. The second is an archival purpose; in some cases, we're re-

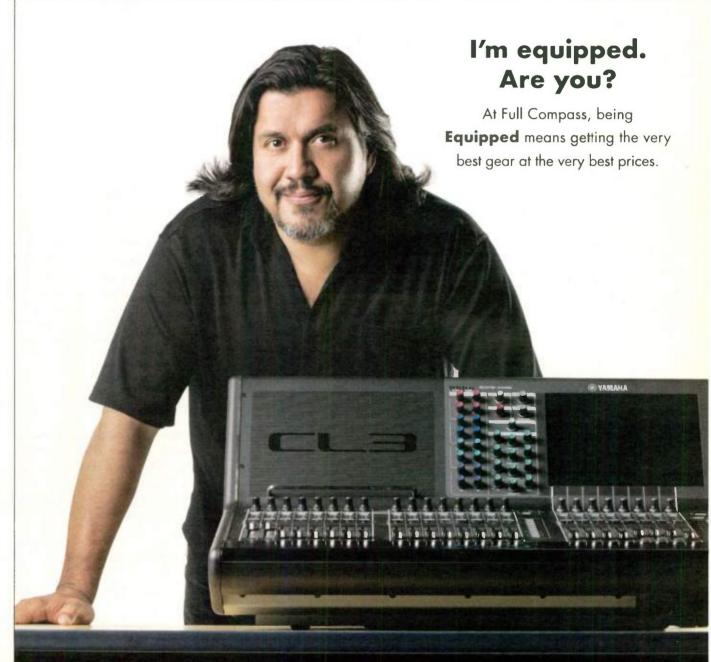
cording stuff that was never recorded or is from dying cultures. And the third is to show people that you don't need a million-dollar studio to make a great record, to show the value of creating music and not dwelling on the gear."

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# CollapsingScenery

(continued from page 18,

leading up to that recording about building a rig and the kind of gear that we wanted. We recorded for a week straight and had 24 hours of jams by the end of it," Debris reports. "Then we started to chop it up, piece it together and turn it into songs. And nothing was on the grid, so that was a challenge."

"It's like 15,000 edits," says Devore. "That gestation process is where the flavor is."

"Some of the oddness and eccentricities definitely come from that piecemeal approach," agrees Debris. "Certain songs I would write on a keyboard and then we'd record them, but most of them came from jams."

Work continued at other studios over subsequent years between bouts of globetrotting and other projects. The album credit list is extensive, encompassing numerous guest artists and collaborators, plus studios including Fluxivity, Sonic Six, Mozart, O'Deer, Transmitter Park/House Under Magic, Dubway and Strange Weather in the New York metro area: Big Yard and Gee Jam in Jamaica; and, in the L.A. area, Sunset Sound, Redstar, comp-ny and the band's downtown space. Oh, and Sönghellir, a reverberant cave in Iceland, heard to great effect on the a cappella opening track "I Never Knew."

But home away from home was LAFX in North Hollywood. "In previous recordings, we found API consoles were the best, so we tried to find the biggest one we could," says Debris.

"LAFX has a vintage API, 48 across. The headroom is crazy," says Devore. "It's a beautiful studio and

the best people. Spencer Guerra, who we did 108 sessions with, was the best assistant anybody could wish for."

Since LAFX has a rental department that can fill any gaps in the already extensive outboard selection in the room, Devore, the band's principal mixer, was in his element. Some favorite pieces included an Eventide H300, Lexicon PCM 42, Pultec stereo EQs, and Neve 33609 and UA 1176 compressors. At the end of the chain was a Maselec mastering EQ—an idea borrowed from producer Dave Friedman, Devore reports. "And we had a couple of Studer and

ments that weren't used. "Sometimes I'll hear alternate mixes and there are little bits that I wish were on the album. There's all kinds of stuff that pops up that we've forgotten about. But you have to let that stuff go."

Although they spent time fine-tuning the Stress Positions mixes, the old-school approach of fingers on faders means that each pass can often be a unique performance. "Not only do I like the eccentricity and particularity of that, but also it's like playing the board as an instrument. It's fully part of the song," says Debris. "That eccentricity gets stamped out when you mix in the box."

"If there's anything that sets this record and our recordings in general apart, it's that the writing, recording and mixing process is completely enmeshed."

Reggie Debris

ATR recorders as slap-backs on auxes 1 and 2 at all times."

"If there's anything that sets this record and our recordings in general apart, it's that the writing, recording and mixing process is completely enmeshed," says Debris. "Everything is happening all at once at all timeseven mastering, to some extent, because of the Maselec. A lot of the stuff was more or less mastered by the time we gave it to Heba Kadry at Timeless Mastering in Brooklyn. She's an essential part of the team. Every time the masters came back, we were so stoked." (She has since left Timeless and opened Heba Kadry Mastering.)

The mixes that ended up on the record were carefully chosen, Debris says, but sending stems out for remixing has reminded him of some ele-

Collapsing Scenery takes its analog audio-centric concept to the live stage. "We travel with our own compact yet powerful P.A. and can set up anywhere," says Devore. The concept was driven by bad experiences with previous bands: "Some of my least favorite experiences playing live ever are from being so far behind a P.A."

The rig comprises DAS and Danley Sound boxes, including the latter's SM80 tops and TH115 subs. "It's so sexy to have a minimal three-way system," says Devore. "It's like the venue is a giant living room. It's all behind us, sound system-style, and we have two mics, gated. We set up on stage and don't even use the house P.A. Our soundcheck is 15 seconds."

Collapsing Scenery www.collapsingscenery.com

#### Studio Showcase

(continued from page 20)

Garraud focuses on a sunny four-state region—California, Arizona, Nevada and Utah—that offers some spectacular scenery. "Location is inspiration," he says. He has subscribed to a Bureau of Land Management program that provides access to 250 million acres of public land and has also made deals with local landowners to park overnight. Since launching the bus in April, he's visited over three dozen spots, including the Grand Canyon and Joshua Tree National Park.

Indeed, for LA Good Vibe's debut session, Garraud picked up French pop-rockers Yard of Blondes at LAX when they landed at 5:30 a.m. and whisked them off to a dry lakebed in the Mojave Desert, three hours to the northeast. "They went to bed and had a power nap while I drove. The idea was to do a 24-hour trip, including writing, recording, mixing and mastering. It was to show that you can sleep, have breakfast, write, record and drive at the same time: you don't lose time with the trip." More recent guests have included deadmau5, Jean-Michel Jarre and Dirtyphonics.

"It's an alternative solution to producing music," says Garraud. "I'm not able to bring tons of equipment because I don't have space, so I'm not competing with professional studios, but it's something that can really help the creative process."

LA Good Vibe www.lagoodvibe.com

#### Software Tech

(continued from page 21)

gear is smaller than that of the three paid tiers, which range from \$15 to \$60 per month. Higher prices buy more storage space for storing files and bounces, higher sample rates, and additional "studio" time. Your money buys credits at Mix Analog; after the initial purchase, your credit card is out of the picture.

Access Analog currently has introductory pricing. Final pricing ranges from \$9.99 for 30 minutes to \$37.99 for three hours; the service is not subscription-based, and the plug-in is free.

Of course, the 800-pound goril-

la here is latency—the same problem that scuttled early online collaboration services, none of which survived. What's worse, latency is able to creep in at several different points in the audio production proatic. But in a multitrack scenario, the online audio can easily get out of sync with your tracks. With a fast connection and a DAW with flexible maximum delay compensation, you're probably okay. DAWs like Pro

The world continues its relentless move online. But it's no longer just a software world—even hardware is moving online.

cess; there's plug-in latency, internet latency, robotics latency, and the A/D conversion latency getting your audio into the hardware. Optimally, if you process something like a stereo master through an online tape recorder, latency is less problem-

Tools and Logic may require moving existing tracks to allow everything to sync up. (Or premix your tracks, mute the other tracks, and move only the premix as you process in the cloud.)

Is this the new Studio Instrument

Rentals? Time will tell. Factors working against it are latency, the niche nature of the market, the lack of convenience compared to using plug-in emulations, and, frankly, the fact that plug-in emulations are getting pretty darn good. Still, there are some situations where digital has not yet managed to outdo analog. Whether people are willing to pay for that difference is the question.

Craig Anderton's new educational web site, www.craiganderton.org, is now online as a companion to the www.craiganderton.com commercial site.

Access Analog www.accessanalog.com

Mix Analog www.mixanalog.com

# IIIIsound POST | BROADCAST [25]

#### briefs

#### Barnett Upmixes with Nugen

LOS ANGELES, CA-Re-recording mixer Joe Barnett, whose credits include American History X, Crazy Heart, When in Rome, Chronicle, 2 Guns, Luke Cage, Daredevil and The OA, has come to rely on Nugen Audio's (www.nugenaudio.com) Halo Upmix for his surround sound mixes, most recently using it on Netflix's Iron Fist.

#### Riot Remotes with Calrec

SAN A CLARI A, CA-Riot Games, developer and publisher of multiplayer online battle arena game League of Legends, has implemented Calrec's (www.calrec.com) RP1 remote broadcast mixing system and Artemis mixing consoles to help overcome the challenges of latency. transport and control in at-home or REMI production workflows.

#### Alchemy Pedals After Foley

WESTCHESTER, NY -Getting the bic rcle sounds right was a central cha lenge for Alchemy Post Sound (www.alchemypostsound.com) principal and Foley artist Leslie Bloome and his ream when working on The Climb the directorial debut of Michael Angelo Covino, who supplied one of the film's bikes so the team could accurately capture its workings.

#### Game Creek Adopts Lawo IP

RASTATT, GERMANY-Lawo (www. lawo com) has announced a grow ing partnership with Game Creek Viaco, supplying IP technology for video and audio routing, multiview ers and overall orchestration and control for an expanding fleet of IP OB trucks, including Bravo and Columbia, both 53-foot Expandos with an HD production unit of 64 feet by 24 feet working area.



Caleb Hollenbeck of Formosa Group cautioned that working in a smaller, 7.1.4 room rather

# Sound for Film & TV **Event Provides Insights**

BY STEVE HARVEY

CULVER CITY, CA-The program for this year's sixth annual Mix Sound for Film & TV event, a sold-out affair that attracted 650 attendees to the Sony Pictures Studios lot, offered a twin focus-immersive audio and IP networking-that reflected concerns

of today's audio industry. That's not to say there weren't the usual sessions digging into the creative process behind some of the latest productions, such as Once Upon a Time ... in Hollywood, Spider-Man: Far from Home. Carnival Row and others, but in session after session, discussion turned to immersive sound formats

and AoIP workflows.

Award-winning sound designer and entrepreneur Wylie Stateman kicked things off with a keynote offering his vision for achieving even greater respect for sound in movies. With a career dedicated to reducing friction in the audio post process, Stateman put forward the idea of creating a new holistic role-DP+D, or sound director, producer and designer-a combination of three very different mindsets that could advocate for sound from start to finish on a

"Standing up for good sound at the start saves money downstream," he said. "Solving problems early brings creative relief when most needed: at the finish line."

That struggle is real, as confirmed during the Motion Picture Sound Editors' panel on immersive audio workflows from concept to mix. Asked when she is typically brought onto a project, sound designer and supervising sound editor Paula Fairfield responded, "Not soon enough. We're often brought on way late."

Dolby Atmos is starting to become the de facto audio format in film and TV, even when the deliverables call for 7.1 or 5.1—which is the intention behind the manufac-

(continued on page 26)

# Inside KCRW's \$38M Media Center

BY STEVE HARVEY

SANTA MONICA, CA-Call it left of the dial, non-commercial or simply what it is, an NPR-member station broadcasting news, talk and freeform music from the campus of Santa Monica College, KCRW 89.9 FM has long enjoyed a national, even international influence that belies its Southern California location. The station had been operating for decades out of subterranean quarters beneath the college's cafeteria, but earlier this year, after a decade of planning and fundraising, its studios and staff relocated to the Center for Media and Design satellite campus and a new purpose-built, \$38 million KCRW Media Center.

"Five months ago, when we started broadcasting from here, was the first time our whole staff had been together in 30 years," says KCRW CEO Jill Smayo during a tour of the 34,000-square-foot facility. The striking building, emblazoned with bands of bright vellow, was designed, along with the rest of the new campus, by Clive Wilkinson Architects, whose client list includes Google, UCLA and TBWA\Chiat\Day.

Any artists worth their salt have



About two dozen DJs pass through the music master control room, On Air 1, during a typical veek's 80 hours of music programming.

long made a live performance on KCRW's flagship three-hour Morning Becomes Eclectic show one of their first priorities when breaking into the U.S. market. Those that have are legion, and include the likes of Adele, Coldplay and Radiohead, Happily, the elusive stairs to the old basement studios are now a distant memory, replaced by crew-friendly tour bus parking and an easy load-in plus a green room, lounge and showers at the new building.

"The first floor is dedicated to music programming and technical operations; the second and third floors host our staff and are mostly open office space, but there are studios on all three floors," says Smayo, who reports that staff members were previously scattered across five locations. The new energy-efficient building is being submitted for LEED Silver certification, she adds.

(continued on page 27)

#### Sound for Film

(continued from page 25)

turer's scalable object-based platform, of course. "I've started doing my 5.1 mixes in Atmos because the object-based panning is so much fun, and easier," reported Cheryl Ottenritter of Ott House Audio. "It also sounds better, and when it goes down to 2.0, the texture is maintained so much better." That also speeds things up when the director comes back for a full Dolby Atmos mix, she said.

But Caleb Hollenbeck of Formosa Group warned, "Day one, if you don't know what you need to deliver, it can be a huge issue because of the way you have to configure the [Dolby Atmos] RMU [rendering and mastering unit]." Once set, you need to stick with the initial configuration, he said, "unless you want to make massive changes downstream. I've seen people eat handfuls of money because of that."

Hollenbeck noted that working in a smaller, 7.1.4 room rather than one set up for 9.1.6 can inhibit the creative process. "The difference between mixing in 7.1.4 and 9.1.6 is big, especially when you're talking about object-based panning. The additional speakers of the larger configuration highlight the differences between object and 7.1 bed panning," he said. It may not seem like a big deal now, but 95 percent of consumers, he predicted, will soon be able to experience Dolby Atmos content in a binaural fold-down, at which time those differences will become more apparent.

"I always listen to all the folddowns the re-renders of what I'm mixing before I even get past the



Sound designer Wylie Stateman kicked things off with a keynote offering his vision for achieving even greater respect for sound in movies.

first five minutes, just like you do with 5.1," said Ottenritter. "I do a lot of limiting and compressing of the objects, so I don't have to worry about true peaks on the re-renders, because I don't have time to do the other passes" on the limited-budget projects on which she typically works.

Producer and engineer George Massenburg, in an unscheduled appearance, played a song by Alicia Keys that he recently mixed in Dolby Atmos, reworking Manny Marroquin's original mix using a 7.1 bed and about 20 objects. He, too, addressed the challenge of maintaining control of dynamics in an immersive format. "My approach is to use a more RMS-sensitive leveler, a dynamic range controller, on various instruments going into the mix, so we didn't have as much pressure automatically leveling the mix," Massenburg said.

Bus compression is a challenge in immersive formats with current technology. "I feel it's almost impossible to do a bus compressor that will, in a generalized room, take into account all the objects and the different orientation," Massenburg observed. "It's hard to do in Pro Tools; you can't have dynamic range control across different DSPs in the HDX array."

Discussing audio-over-IP environments in general and the Dante protocol in particular, Mark Binder of audio post house IMN said, "The biggest thing about this protocol is that it has made the improbable probable for someone like me with a budget. It allows us to compete. You no longer need to be a massive million-dollar corporation to own a studio."

During a discussion on designing and building networked and immersive audio rooms, Brian Armstrong of integration firm Streamline System Design noted that there are considerations beyond the audio equipment. "You have to factor in what you have to do with the room to make it sound good. Because once you bring the SPL up in the room, when you're listening at reference level, the room comes alive," he said.

The admission cost into an interface is a lot cheaper with AoIP than traditional ways, said Dan Shimiaei of Formosa Group, which has standardized on Focusrite's Dante-enabled RedNet gear. "You end up with a

patchbay built into the environment. We use a BSS environment for our back end to do speaker management, and that's a continuation of audio over IP."

With millions of smartphones and tablets becoming Dolby Atmosenabled, David Henszey of Henszey Sound predicted that "personal electronics are going to be the next big

> "The difference between mixing in 7.1.4 and 9.1.6 is big, especially when you're talking about object-based panning." Caleb Hollenbeck

thing" for the format. When mixing immersive content, said Henszey, who also has BSS monitor management, "I can switch my cue system to binaural. I spend as much time in 2.0 and binaural as I do in Atmos or any of the other [configurations], because that's how most people are going to

Mix Presents Sound for Film and TV is produced by Future, the media company that also publishes Pro Sound News.

Mix Presents Sound for Film & TV www.mixsoundforfilm.com



Producer and engineer George Massenburg

#### **KCRW**

(continued from page 25)

Exterior wood finishes provide a visual cue to the production areas, many of which feature windows between studios and hallways, and Clive Wilkinson's signature color accents. The building houses video livestreaming and edit suites as well as audio edit bays, voice recording booths, interview rooms and broadcast studios-about two dozen production and post-production rooms in total, supported by a technical equipment room on each of the three floors.

One of the few split-format stations in the country offering both music and news/talk, KCRW now has two master control studios on separate floors. "We allow them to toggle between each other all day instead of playing musical chairs, which they've been doing for so long," she says.

"We have 11 radio studios, all audio-over-IP," reports broadcast IT engineer Jon Connolly, formerly of Keycode in Burbank, the AV integrator for the entire facility. Axia specialist Gregory Dahl of Second Opinion Communications and Axia supplier Broadcasters General Store were also involved.

In all, 12 Axia Fusion AoIP consoles sit on a Telos Livewire network with four Cisco 3850 Ethernet switches and scores of Axia xNodes for audio I/O and GPIO. Three Axia IP Tablets add fader control without needing to physically expand the consoles. Axia's Pathfinder Core Pro Router Controller manages 1,500 audio and GPIO cross-points.

"Everything is nice and clean with the Livewire system," says chief engineer Steve Herbert, who has been with KCRW for about 40 years. "Then the Cisco routers handle the traffic. It's a lot different from a traditional broadcast cross-point from 20 years ago."

"Each room has Pro Tools and we do recording, editing and automation through a Dalet playout system," says Connolly. All the talk-based studios are standardized on Shure SM7 dynamic microphones through Grace Design preamplifiers.

In all, 16 rooms at the campus feature various models of Genelec's new 8000 Series monitors, from the 3-inch 8010 through the 8-inch 8050. "When we redid the facility in 2001, there was a push for Genelecs," says Herbert. "When we came here, everyone liked the brand and the speakers, so we went with this newer line. And as people work from room to room, we want them to all sound the same."

About two dozen DJs pass through the music master control



Every flavor of I/O is available in the performance studio, with recording over MADI to a 64-channel Avid Pro Tools system.

room, On Air 1, during a typical week's 80 hours of music programming. The studio is outfitted with CDJ machines, turntables and other devices, and supports any playback platform the DJs prefer. "We made accommodations so they can do whatever they want, however they want," savs Smavo.

"Any of the rooms can go on air," adds Herbert, "but we usually just bounce back and forth between the two main on-air studios."

The live music studio, located down a short hallway from the artist and load-in entrance, is built around an SSL C200 digital broadcast mixing console, one of the last off the production line. "We figured, since we are known for audio, we could spend a chunk of change on that piece of it,"

says Herbert. The previous live studio console, a Yamaha DM2000, now sits in an upstairs studio.

Every flavor of I/O is available in the performance studio, the engineers report, with recording over MADI to a 64-channel Avid Pro Tools system. The control room's credenza, with seating behind, is loaded with mic preamps, processing and effects, much of it from the previous location.

"Having the seating in the back was a design we brought over from the old place. Artists will often bring management and people to direct the mix," says Herbert.

Monitors in the room include a pair of flown ADAM Audio S4X-V mains, plus S3H near/midfields on the SSL's meter bridge, together with a pair of legacy Genelec 1031As from the old location.

The live performance area, which doubles as a meeting or event space and accommodates 90 chairs, is a significant upgrade from the previous location. It offers a double-height ceiling, plus a rear mezzanine above the control room that holds 40 audience members.

Live shows for students and the public are also held in the campus' central courtyard, which can host as many as 1,500 people. "We're much more than a radio station," says Smayo. "We're a cultural institution and a convener of our community." Genelec

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# 1281 SoundTECHNOLOGYIIII

# innovations: the manufacturer's view

# Something in the Air:

#### EZ ACOUSTICS SIGNATURE SERIES BY PETER D'ANTONIO

BY MARC VIADIU

he idea of quantifying the sound absorption of different surfaces dates back to the late 19th century with the work of architectural acoustics pioneer Wallace Clement Sabine. However, acoustic treatment as part of the pro audio industry remained a forgotten, or at least ignored, science until nearly the end of the 20th century, when it finally started gaining traction among the general population of music and audio professionals.

Today, most musicians and audio workers accept acoustic treatment as a necessity in their studios and workspaces. Despite this acknowledgement, however, acoustic product development hasn't really kept up with the pace of change of other pro audio products. The common acoustic solution continues to be a piece of foam or mineral fibers attached to a solid surface, also known as the acoustic panel.

Not only has acoustic treatment design stayed relatively stagnant, but the cost of quality treatment has not fallen the way other pro audio technologies have, such as audio processing and D/A conversion. People looking to save money often take a do-it-yourself approach to acoustic treatment, even if they know very little about the science of sound ab-

After many years as an audio engineer in Europe, I wanted to do something about these problems. I founded EZ Acoustics in 2010 with a simple guiding principle: more acoustics for less money. We have always strived to create effective, reliable and cost-effective acoustic treatment. That philosophy has carried us along as we've expanded operations into 18 countries and serve many more across Europe, Asia and Africa as one of the largest international suppliers.

The goal of "more acoustics for less money" never lets us rest on our laurels. As we expanded into the United States-which we did in May 2017—we wanted to take the next big step in offering high-performance acoustic treatment to customers on any budget.

Thinking about, researching and developing products that deliver the same or better acoustics at



more affordable prices led our engineers years ago to the idea of using air-yes, the most basic and common ingredient around—as a benefit. We were anxious to begin developing products that use an air cavity as part of an acoustic absorbent. We just needed to find the right time once EZ Acoustics was established.

Then at the 2018 NAMM Show in Anaheim, CA, we met a living legend of acoustic research, Peter D'Antonio, Ph.D., at the annual TEC Awards ceremony. Peter played a key role in the acoustic awakening of the late 20th century. After developing a widely adopted design for recording studios at Underground Sound in Maryland in 1974, he led virtually the entire sound diffusion industry by commercializing sound diffusing surfaces in 1983 with his company, RPG Diffusor Systems, Besides that, Peter has registered multiple patents for

varieties of number-theoretic, fractal and optimized diffusing and absorbing surfaces.

From that very first conversation in Anaheim, Peter and I connected on a number of shared ideas for innovations in pro audio goods. It turned out he also had an idea for using strategic air cavities in acoustic materials. He introduced us to Variable Depth Air Cavity (VDAC) technology, which provides minimum point-of-contact with the mounting surface, so most of the foam can be positioned away from the wall for optimum absorption.

Since that revelatory moment, it was clear that EZ Acoustics had to collaborate with Peter on VDAC products. That collaboration has led to a new line called Signature Series by Peter D'Antonio. So far, the Signature Series includes Pro-Foam, which is used for medium- to high-frequency absorption, and Pro-Corner, the equivalent of a corner bass trap for low frequencies.

While EZ Acoustics had created some prototypes of air-cavity products in the early years of the company, Peter's new designs were much better than those previous attempts. improving on the efficiency and sound absorption of the acoustic ma-

ProFoam is made with a layer of foam only 1 inch thick, compared to competing foam wedges that use 2 inches of material. Even with 50 percent less foam, ProFoam scores a better absorption coefficient of 0.85

reduction in material also helps keep the price down. The ProCorner product benefits from VDAC technology and scores an NRC of 1, promising total absorption across the audio

Besides better performance from its VDAC, ProFoam features a second big innovation. Nested technology allows users to stack layers of foam on top of one another, expanding the array of absorption. This capability lets people expand their absorption levels without wasting the acoustic material they already have.

Most of EZ Acoustics' previous air cavity designs lacked this nested, stackable technology that makes the Signature Series by Peter D'Antonio so versatile. Also, the optimized design of these new products creates a minimal amount of foam waste, which makes them more environmentally friendly. All of these various benefits add up to what we think is a true revolution in acoustic

As EZ Acoustics expands its presence throughout the United States, I'm very excited for our new users to take advantage of the innovations in the Signature Series by Peter D'Antonio. I hope that "more acoustics for less money" can become more than just a company motto, but rather a movement for the acoustic treatment world-one that will lead to affordable vet efficient results.

Marc Viadiu is the founder and chief engineer of EZ Acoustics.





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#### THE METALLIANCE REPORT:

# Picking Your Reference Speakers

BY THE METALLIANCE

One of the single most important decisions you will make in your career as an engineer will be your speakers. How they affect your work, someone's performance and how they translate to every other listening space are all necessary considerations. Everything you do will be filtered through the quality (or lack thereof) of your monitors. So how to evaluate loudspeakers? Easy-start out knowing that there are an awful lot of 'em, and ... wow, uh, why are there so many? The reason is that there's no way there's one that works for everybody or every situation or every source. At least with a reference with known faults, you can make reasonably informed decisions. Our METAlliance members all approach monitor analysis with similar methods to start, but individually reach their conclusions based on more than just tech and specs.

For George Massenburg, the first step is thinking about where, and to what, he wants to listen to most. For him, the easiest selection is picking a reference nearfield speaker in a control room, or any "controlled room"-one that's large enough for reasonable low-frequency performance, is isolated and quiet, and has a good balance between absorption and diffusion. And it has to be comfortable. You'll be in there for long periods of time and discomfort affects everything.

"It's listening for all of the usual things, like a reasonably flat spectral response," he says. "You might do a quick measurement with the Smaart Tools app on an iPhone, then listen for more obvious things: artifacts like a 'spiky' high end, peaky low end, the lack of the low octave on a source. We know we should have deep bottom, and 'sparkle' from a source having great high end. Listen both on- and off-axis too."

He continues, "You might be impressed by 'punchy' low end, but just as quickly be dubious that you might be being hyped. We've all known that a great speaker will have a great 'soundstage,' but you should also be able to accurately identify localization cues between multiple monitors. A razor-sharp center image can give me the chills."

Frank Filipetti will spend an hour or more listening to various aspects of monitors under consideration. Diffusion, diffraction, frequency response, transient response



The METAlliance includes (I-r) Ed Cherney, Chuck Ainlay, Al Schmitt, George Massenburg, Elliot Scheiner and Frank Filipetti.

and transparency are all things he'll consider, but he listens for something else as well. Like many of our METAlliance founders, he uses a reference song, James Taylor's "Line 'Em Up" from the LP Hourglass. When he has a "holy s---" moment while listening, he reflects on what it was that he heard and considers why it affected him. For many years, he says, he listened to speakers (and microphones) just by how they sounded, not by how they affected him: "I had an epiphany one day where I realized that, just as in writing a song or producing a recording, the key word in choosing a speaker is 'emotion.' Nothing else

have asked me, 'What speakers do you use?' The belief I concern myself with is 'Beauty is in the eyes of the beholder.' I have been through so many monitors over my life. Everybody's ears are different. Whatever gives you the right balance and holds up on other systems is the one you should use. For me, I came across two monitors that worked, but always felt I had to try new ones as well. I would always come back to those two systems that always made the mix sound right. Just be concerned with what sounds right to you and the people you trust."

Chuck Ainlay explains his most recent speaker decision-making process. "Over the years, my speaker

A solid reference that meets the technical needs and gives you joy is one of the most valuable tools in your arsenal. Remember, you'll be probably be staring at these things for a good portion of your everyday life!

Al Schmitt says it this way: "Obviously, when listening for new speakers, I listen with my ears, but I also listen with my body. At first I focus with my ears, but then I get into the focus-how the speakers make me feel, what my bones feel like when I'm listening. Then it's decision time. Do I like them enough to buy? Everyone hears differently, so you are your own judge."

Elliott Scheiner says something similar, sharing, "I can't even remember how many times people needs have changed somewhat. I was pretty much a mercenary guy who would move from studio to studio, sometimes daily or even multiple studios daily. Back in those days, it was nice to see the ubiquitous white-coned woofer speaker in each studio. At least I had a reference I knew the faults of and could make reasonably informed decisions. I have never really loved working on those particular speakers, though, and I began a search for the speaker that would make my engineering life better. I've been



The METAlliance—Al Schmitt, Chuck Ainlay, Ed Cherney, Elliot Scheiner, Frank Filipetti and George Massenburg, along with the late Phil Ramone-has the dual goals of mentoring through our "In Session" events, and conveying to audio pro-fessionals and semi-professionals our choices for the highest quality hardware and software by shining a ation through a certification process and product reviews in this column. Our mission is to promote the highest quality in the art and science of recording music.

through at least a dozen different nearfield monitors. Some were passive, some powered, and I can only say that there's no such a thing as the 'perfect' speaker."

Ainlay adds, "All that being said, what I look for in a speaker is one that isn't hyped, has low distortion, can generate high SPL levels without going into power limiting, and has decent low-end excursion. I now have speakers I've settled on, and at the moment, they seem to get me to mixes I'm happy with, that clients can listen to. We need to leave the studio confident that what they heard will translate to the real world."

Importantly, his choice of testing environments is clear. "To find out if a speaker is going to satisfy all the criteria, you've got to test it while tracking, where you've got to make critical equalization decisions, and while mixing, where all the decisions you make must translate to a wide variety of playback environments. In other words, it takes a good bit of trial and error to know if a speaker suits your needs. Once you find a pair of speakers that works for you, stick with them. The more you understand what you are listening to, the better your work will be."

A solid reference that meets the technical needs and gives you joy is one of the most valuable tools in your arsenal. Remember, you'll be probably be staring at these things for a good portion of your everyday

**METAlliance** www.metalliance.com

#### FOCUSRITE SCARLETT 18120 3RD GEN INTERFACE ■ RØDE RØDECASTER PRO





Focusrite Scarlett 18i20 3rd Gen Interface

#### FOCUSRITE SCARLETT 18120 3RD GEN INTERFACE

#### BY FRANK VERDEROSA

People often ask me what audio interface I recommend. I always answer with two questions: "What are you recording?" and "What's your budget?" There are products on the market that will suit any answers-there is literally something for everyone. Focusrite has taken that idea and run with it in its new lineup of Scarlett interfaces. While this review focuses on the Scarlett 18i20 3rd generation interface, many of the advancements I mention carry across the entire Scarlett line.

Let's start with what you get: For \$499.99, you get a rack-mountable (1RU) interface that can serve as the brains of a respectable production

studio. In addition to the 18 inputs (which we'll get to later), you get enough outputs (20) to drive two sets of stereo speakers and a 5.1 surround array-with a stereo output left over for a cue system. The front panel offers dual headphone outputs with individual control, a speaker switcher, a dimmer and—impressively—a talkback button!

While Focusrite has managed to neatly pack the front panel full of knobs and buttons, nothing looks or feels compromised. The knobs are solid and secure, turning smoothly. The buttons engage well and are laid out in a sleek, ergonomic design. You can mount the 18i20 in a rack or choose to not connect the supplied rack ears and use the 18i20 as a desktop interface. Weighing a solid

7 pounds, you don't have to worry about it sliding away from you as you

One issue I had, which might very well be a fault in the unit I was sent, is that the USB-C cable seems to not sit securely enough in the back. On several occasions when I had to move it, the poorly seated cable prompted my computer to tell me the interface was no longer connected. A loose cable is not the end of the world, especially once the unit is in place, but it's certainly something to be mindful of

New to the Scarlett line is Air, which is an emulation of the sound of Focusrite's transformer-based mic preamps; it adds a clean brightness to whichever channel you assign it (via Focusrite's control software).

An "Air" LED will light under the knob on the interface to let you know it's engaged. It's a nice touch, but I wonder whether you can't achieve the same effect with post EQ. Air is smooth and adds a nice crispness to vocals, voiceovers and instruments alike, so while I believe in "leaving it flat" (particularly for voiceover recording), I can see why people appreciate it. Adding Air to Scarlett is a nice bonus, and it brings the unit's capabilities a little closer to the Clarett line.

The speaker switcher works with the first two pairs of outputs (1&2/3&4), which you'll need to keep in mind when mapping your I/O for surround or other applications. It would be nice if the dim was adjust-

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#### RØDE RØDECASTER PRO PODCAST PRODUCTION STUDIO

Fun. Joyous. Efficient. It's hard to pick the best word to start this review because they all apply equally well to the RødeCaster Pro all-in-one podcast production studio from Røde. Oddly enough, I started a very different review when I first received the unit—but a recent firmware update radically changed the functionality of this machine, making it something that I simply had to own. (Editor's note: As this review went to press, Røde updated its firmware a second time, releasing v2.0. This review is based on the v1.2 firmware released in late June 2019.)

In a sea of portable digital recorders, what sets this \$599 device apart? RødeCaster Pro offers four XLR inputs with phantom power, four Class A servo-biased preamps, USB playback input, mini-plug input, Bluetooth connection, eight stereo sound playback pads, onboard multitrack microSD card storage, computer connectivity via USB-C, five headphone outputs with four volume knobs, stereo speaker connection via two 1/4inch outputs, and control over all of it via eight faders and an extremely intuitive touchscreen.



Røde RødeCaster Pro

Aphex's Aural Exciter and Big Bottom have been incorporated into RødeCaster Pro's audio processing section. Additional processors include highpass filter, noise gate, compressor, de-esser and ducking. All of these options can be turned on/off in the advanced menu. There are variations on these stored as presets that help vou choose the sound that's right for you without having to be an engineer.

And that's really the point of this machine. It's designed to be ready to use even if you're not a recording engineer. Røde has helpfully included presets to quickly fire up the mic you've connected, with custom settings for Røde's PodMic, Procaster, Broadcaster, NT1, NT1-A and NT2-A, and general settings for condenser and dynamic mics.

The device offers multiple re-

cording options. You can produce your show live to a stereo file on the microSD card (not included), along with all your preloaded music cues and sound effects, with the ability for people to call in/Skype in (or both at once). If you need more control, you can flip an internal setting to allow multitrack recording to the card, which you can then import into your editing software via the free RødeCaster Pro app. The file format is 24-bit, 48k WAV, stored on the card as a single "Poly Wave" file. You'll need to extract the discrete tracks via the app before bringing it into your editing software. The process is painless.

With the included USB-C cable. you can connect your computer and use it as a multichannel interface. You'll need to go to the advanced menu to switch to "multitrack via USB." My Pro Tools system discovered it immediately, and the I/O setup was a breeze. The track recording options mirror those for saving to the internal card. For added protection, you can record to the card and your computer simultaneously, but

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#### Focusrite

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able, but I wasn't able to find a way to change it.

Not being one to pore over manuals, when I unboxed the 18i20 3rd Gen, I went right to Pro Tools I/O and got to work. Setting up I/O was as simple as you'd expect; straight away, I did some experimenting with latency to see how low I could go before Pro Tools glitched. I recorded a bunch of VO, and while I got it to a pretty low latency (setting the buffer to a mere 32!), I couldn't quite shake that "phasing" sound in my headphones. This might have been less noticeable for an instrument, but for most applications, you'll probably want to switch to zero latency mode. This is assignable in the mix control software.

The front panel provides easy-toread LED metering. It's a nice touch for checking signal and setting levels quickly. There are two phantom power buttons, for inputs 1-4 and/ or 5-8, and I'm of two minds about this setup. For one, it makes it easy to get phantom power going when you need it, but at the same time, my instincts tell me it would be better if we could turn phantom on per individual channel. Most modern mics won't be adversely affected by sending phantom to them when they don't require it, but still, this setup makes me twitch a little. It's nice that each input can be assigned a pad via a button right under its knob. Inputs 1 and 2 have an added button for

instrument level. Each input has an LED indicator for PAD, AIR, plus INST for 1 and 2.

Speaking of inputs, you get a total of eight pre's, consisting of two combi jacks on the front that double as dual instrument level in, plus six additional combi jacks on the back. If you're planning on rack mounting, it's super handy to have those two front-facing inputs available for quick access to a guitar, bass, synth or whatever you might need. On the rear, you get eight additional optical inputs (via ADAT I/O), stereo SP-DIF I/O, MIDI I/O and word clock sync. Add it all up and you've got 18 inputs and 20 outputs simultaneously, with 24-bit, 192 kHz capability, with preamps that deliver a gain range of 56 dB and a dynamic range of 111 dB.

At the end of the day, however, all that matters is how it sounds. I tested the inputs with voiceovervocals, acoustic guitars and other string instruments, electric guitar and some drums. The sound was consistently clean and practically noise-free. At no point did I feel that the 18i20 couldn't handle what I was throwing at it. It's amazing that you can set up a powerful project studio, band recording session or complete production studio for TV and radio commercial work at this price point.

Which unit in the Scarlett lineup is best for you depends on your needs and budget, but at this price, the 18i20 3rd Gen will have you set for a long time without breaking the bank. **Focusrite** 

www.focusrite.com

### Røde Microphones

(continued from page 31)

it's important to note that the built-in processing does not carry over to Pro Tools.

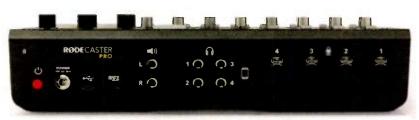
What I absolutely love about this system is that it can serve as the centerpiece of a podcast studio, or you can take it on the road and record a podcast without having to lug around a computer as well.

Setup is really fast. Put it on your desk, plug it in and you're ready to rock. I love that it has a locking power port. The cable screws into place to prevent accidental disconnection. It's a thoughtful and smart touch!

Updating the firmware is important if your unit didn't ship with the ability to multitrack. The companion apps for Mac or PC are effortless and smooth. You'll notice a warning card on the headphone volume controlswhile that's just Røde making sure someone doesn't blow their eardrums out, it's important to note that the headphones here give you plenty of gain. You can limit that gain via the touchscreen if you want to protect yourself and others.

While RødeCaster Pro is certainly not the only digital recorder in this price range, it distinguishes itself by how well it functions for podcasters. The customizable playback buttons are a fun and easy way to store music cues, clips and effects. The app makes loading clips a snap, and you can choose how they behave when you tap the corresponding pad (play once, loop, etc.). The designers even included a couple of whiteboards so you can make a cheat sheet for which sounds are assigned to which pad,





and it comes loaded with sounds so you can get a feel for it the moment you turn it on.

While each track has its own solo and record mute button, keep in mind that engaging them affects what everyone hears in their headphones. It would be great if the headphone jack on the front of the unit was the only one able to hear soloed tracks; that would be helpful for real-time spot checking. It's important to note that pressing solo on a track doesn't affect whether it's recording or notbut pressing the record icon definitely does.

In addition to the secure power port, other smart features ensure smooth operation. When you tap the power button on the back, the system doesn't just power down; an

on-screen prompt asks you to confirm the action, which should prevent unintentional power downs. It's also useful that on startup, the unit reconnects Bluetooth, remembers mic settings and retains the last sound files loaded onto the pads.

I initially questioned the use of a microSD card for storage instead of a full-size SD card, but I've read that certain microSD cards actually perform better. It fits snugly and securely into its slot on the back of the device, and it seems unlikely you'll ever unintentionally remove it. Since these cards typically come with an adapter, getting it into your computer is simple. I'm just always worried I'll lose such a tiny thing!

Røde may not have intended it, but this is also a perfect solution for

voice actors with home studios. Not only are you getting solid mic pre's with easy-to-use processing, but you also get an excellent phone patch system. The built-in headphone jacks keep clients in your ear, and you can mute them easily between takes. Each hit of the record button creates a new take that you can upload after the fact. And if you're on the go, you can do all this without a computer thanks to the microSD card storage.

When I first fired this thing up, the look of it was so inviting that it made me want to get to work. The analogy I can give is that it's like loading up GarageBand on an iPad versus having to fire up your entire studio to create. My creative inspirations are often doused by the time I turn everything on and get all the devices communicating, whereas GarageBand is simply launch and go! The same applies here: When you hit the power button, the machine is ready to produce a great

(Available as a download on Røde's website, v2.0 firmware allows users to save and load shows via the RødeCaster companion app; settings can also be saved on their own. A new Podcast Transfer Mode transfers podcasts from the microSD card to a computer directly from RødeCaster Pro. New Sound Pad features include a home screen indicator that tells which pad is playing and how long until it finishes, easier access to the sound pad configuration screen, more onboard control and a new Pause playback mode. Eight banks of sounds can now be saved to a Rode-Caster Pro. Lastly, RødeCaster Pro and the companion app now communicate in real time.)

Røde Microphones www.rode.com

# Roland SE-02 Analog Synthesizer

#### BY BRUCE MACPHERSON

If you read Rich Tozzoli's review piece in June about our annual St. John recording retreat, you're already familiar with his proposition that the smaller and more fully featured a piece of gear is, the more likely it's going to be included in your carry-on. The SE-02 was the perfect candidate for our trip! Analog is the big factor here. It was the only analog synth I was able to bring to St. John, and what a pleasant and powerful difference it made to our tracks. Big, ballsy bass; subtle, smooth or cutting melody lead lines; and guttural sound effects were where this synth

# KRK Audio Tools App

#### BY ROB TAVAGLIONE

It's only natural that a monitor manufacturer would develop an app that helps users set up and use its monitors. The KRK Audio Tools app does that and more.

A Spectrum Analyzer uses FFT to generate a frequency analysis versus amplitude plot. An optional Peak Hold function indicates the highest values of a curve; you can tap a given frequency and see its value as well as current amplitude level. You can continue tapping or drag the cursor to easily find other frequency values and then swipe it off screen to remove it.

A Level meter ranges from -72 dB to 0 dB, with green values indicating RMS level and yellow representing peak. A numerical peak level indicator at the bottom of the meter is reset with a tap, as is red over indicator.

The Monitor Align function wins the "elegance through simplicity" award. On screen, there's nothing more than two speaker icons facing a human head. With each of your monitors facing straight ahead, you are directed to place your phone on each (in turn) and rotate the monitor

inward until you achieve the ideal value of exactly 30 degrees. As long as your monitors are in an equidistant triangle with KRK Audio Tools App your head, with tweeters

at ear level (and 5 feet apart), you've now got perfect placement.

The EQ Recommendation function works only with G4 ROKIT monitors. It's quite straightforward. A pink noise generator and a meter indicate when you've got sufficient level; then you hit play to start a 20-second analysis. You're supposed to move your phone in an X-pattern right around the sweet spot for the best averaging, and then the app gives you a recommended EO setting for both high and low frequencies. This function works well enough that it will be an indispensable tool for those first learning to balance their rooms.

Delay allows you to generate a brief test tone, first measured right in front of the woofer as "time zero" reference, and then measured at the listening position for each monitor individually.

Polarity (you've guessed it) indi-



cates positive or negative polarity as you test each speaker individually (of course). What's interesting is that you need to hold your phone close to the woofer, not the tweeter; in certain speaker models, the tweeters have reverse polarity.

Finally, the RTA and the Level Meter provide a sound generator in order to do their thing. A sine wave is available anywhere from 20 to 20 kHz; a continuous sine wave sweep is offered with selectable frequency start/stop points (over anywhere from 0.5 to 20 seconds in duration) with both pink and white noise selectable. Output level for each test signal and routing to left, right or both channels are also selectable.

All in all, the Audio Tools app has some features that are useful to have at all times. Considering that it's free, this app is a must-have.

**KRK Systems** www.krksys.com



Roland SE-02 Analog Synthesizer

#### truly shined.

Laid out much like a Minimoog, with extras like pulse width modulation, dedicated LFO with additional waveforms such as S&H with MIDI sync and mixable X-mod capabilities, along with the built-in analog tape-style delay effect, it's very easy to love. Doubling as a tactile surface controller for Omnisphere 2.6 (with its hardware synth integration) and other synths that accept MIDI CC data we used it on just about everything. Unlike a true Minimoog's 3rd OSC the SE-02's 3rd OSC does not go low frequency enough as a modulating LFO. I hope to see a firmware update to allow the 3rd OSC to go ultra low. All in all, a huge winner. The Roland Studio Electronics collaboration was an island favorite.

Roland www.roland.com

# McDSP 6060 Ultimate Module Collection

#### BY MIKE DWYER

The 6060 Ultimate Module Collection by McDSP is just that: an ultimate collection of more than 30 modules, including 12 EQs, 10 compressors, gates, distortion, tape emulation and more. You can add up to six of these modules inside an instance of 6060, making it incredibly easy to create and tweak your ultimate channel strip without ever leaving the single plug-in window. You can also split these six modules into two separate parallel chains that can be mixed together at the output stage. That means that if you want to apply some gentle tube compression followed by a super smooth Neve-style EQ, and mix that in parallel with some super aggressive 1176-style compression followed by extreme filtering and heavy saturation, this plug-in has you covered. No need to set up sends and buses; it can all be done in a single plug-in.

Another great feature of the 6060 is that you can very easily audition different styles of compression or EQ. If you're not quite sure which compressor you want to use, you can set your attack, release, ratio and threshold settings, and then click through the different compressors. It will keep your settings relatively close on each compressor, so you can very quickly find the one that works for your track. While there are far too many modules to cover here, I'll mention a few that really stood out. First up is Bass Optimized Bias, or BOB for short. If you've got a bass or a kick drum lacking in low end, BOB can help! With up to 24 dB of focused low-end boost, BOB can beef up any track. It also features

a Squash knob that applies frequencyselective compression to the boosted low end to help keep it under control.

Another winner is the S671. With just two knobs, it's fast and easy to get the results you want. Turn up the Saturation knob to add a little extra grit and attitude to guitar or keyboard tracks, and use the Tone knob to dial in the sound you're after. The addition of a feedback/feedforward selector on a number of the compressors is another great feature. The feedforward compression is a little more grabby and bite-y, while the feedback option is smoother and rounder, all of which provide even more compression flavors to the already numerous options.

McDSP

www.mcdsp.com



McDSP 6060 Ultimate Module Collection

# [34] SoundPRODUCTSIII

#### **Manley Limited Edition Mic**

For the company's 30th anniversary, Manley Laboratories is releasing a limited run of its Reference Cardioid tube microphone in a custom pearlescent white finish with red accents. Only 100 of the Reference Cardioid XXX Anniversary Limited Edition mics will be produced. This anniversary mic model features the Manley Power Switch-Mode Power



Supply, currently used in the Manley Reference Silver Microphone and said to be "empirically quieter" than the microphone's original linear PSU. The new power supply is universal, allowing it to work anywhere in the world without a voltage changeover switch or power transformer rewiring.

#### Sommer Cable Compact TT Module

The SYC1-3501 TT (Tiny Telephone) patch bay module is an ultra-compact module that provides 16 patch points. The module fits into one slot of Sommer's SYSBOXX modular panel system, and can be configured with jumpers to cover all conceivable operating modes: without normalization or half, full grounding, completely disconnected, or connected with up/down options. The SYC1-3501 may also be connected to other SYSBOXX modules (XLR, combi jack, DB25, multipins, Euroblock and others) via a ribbon cable system. For mechanical installation in a rack, the module can be integrated into the SYSPAN5XL, PBA2-SYS12 or any SYSBOXX frame.

#### **Celestion Laney Cabinets IR Collection**

Celestion teamed with Laney Amplification to create a range of cabinet impulse responses based on the tones of Laney's Black Country Custom cabinets, the LA212 2x12 and the LA412 4x12. The range of cabinet impulse responses is for producers and musicians who want to replicate the tone Laney Cabs provide when loaded with the G12M Greenback and Heritage Series G12H (75) Celestion speakers. Celestion has used the



same range of studio mics (Shure SM57, Royer R-121 and Sennheiser MD421) in the same six adjustable positions as the current range of cabinet impulse responses to offer the same options: Balanced, Bright, Thin, Fat, Dark and Dark 2, as well as an additional rear mic for the open back cabinets. Both of the Laney Cabinet impulse responses have additionally been recorded using a Neumann TLM 107 room mic (left, right and stereo) to allow users to mix in as much tone as required.

#### Reason Studios Reason 11

Reason 11 brings with it six new devices, various workflow improvements, a new Reason Suite product and, most radically, the option to use Reason Rack's synths, instruments and effects with any DAW via the Reason Rack plug-in. Letting users



load Reason devices into any DAW, the Reason Rack Plug-In is debuting in VST 3 form, with the AU version shipping later this year.

Reason 11 comes in three versions: Reason Intro, Reason and Reason Suite. Reason Suite is a large collection of instruments, effects and other music-making tools—more than 70 devices in total, including the newly released Scenic Hybrid Instrument, along with Reason Studios devices including Complex-1 Modular Synth, Umpf Club Drums, Umpf Retro Beats, Reason Electric Bass, Reason Drum Kits, Processed Pianos, Layers Wave Edition, Layers, Parsec Spectral Synthesizer, Radical Keys, Polar Dual Pitch Shifter, Rotor Rotary Speaker, PolyStep Sequencer, Quad Note Generator, and Drum Sequencer.

#### **Steinberg UR-C Audio Interfaces**

Steinberg has introduced a new line of USB 3.0 audio interfaces aimed at music production. The range includes the UR22C, UR44C and UR22C Recording Pack. A fourth unit, the UR816C rackmount interface, will debut in November. Common features across the line of UR-C audio interfaces in-

#### Sony UWP-D21 Wireless Microphone System

Announced at the NAB Show in April, Sony's UWP-D21 wireless microphones are now available. (Other recently announced models, the UWP-D22 and UWP-D26, are expected to ship in December.) UWP-D series wireless systems enable direct digital audio interface and skip the D/A and A/D process in combination with Sony's new SMAD-P5 MI shoe adapter and compatible camcorders



(including Sony's PXW-Z280 and PXW-Z190 XDCAM models using firmware version 3.0), as well as the Alpha 7R IV (ILCE-7RM4) 35mm full-frame camera. Using the SMAD-P5 MI shoe, audio signals are transmitted from the wireless receiver to a connected camera without a cable connection. UWP-D systems share audio information such as RF level meter, audio mute status and low-battery alerts for the transmitters, and display them on the camera's viewfinder. The wireless systems' reduced size and weight enable the mobility required for applications including news, remote, documentary, sports and wedding production.

clude USB Type-C (USB 3.1 Gen 1 SuperSpeed) connectivity, 32-bit/192 kHz audio resolution and MIDI. All models deliver DSP power, so producers can use effects when monitoring audio without latency. Along with the dspMixFx mixer that accesses the DSP effects, each interface comes with a comprehensive



software bundle: Cubase AI music production software, the Basic FX Suite consisting of effects and sound processing tools, and the iOS Cubasis LE iPad music production app.

#### BAE Audio 73EQL

The 73EQL equalizer module condenses BAE's 1073 lineup to a 500-series format. The unit features the same Carnhill/St. Ives transformers, inductors and Elma switches as its 19-inch rack brethren, and uses the same electronics and circuitry as the famed 1073. The 73EQL provides tonal shaping options, sporting a three-band EQ section and highpass



filter controls, allowing users to shape nuances of sound sources while imparting the sound character of the 1073.

#### Dynaudio Core 47, Core Sub Studio **Monitors**

Introduced at the 2019 NAMM show, Dynaudio's Core 47 compact threeway monitor and Core Sub are now shipping. Core 47 sports a 7-inch woofer, a dedicated 4-inch midrange driver and a 28mm Esotar Pro tweeter. Meanwhile, Core Sub is a powered



subwoofer with four 9-inch long-throw woofers and 1,000W of power. Core 47 and Core Sub have digital inputs (AES3) and support up to 24-bit/192 kHz signals; the internal DSP operates at the same level when using the analog inputs. The speakers include specialized decoupling pads and a wall/ceiling installation bracket. With the appropriate adapter, it can double as a desk stand. Both the Core 47 and Core Sub use Pascal Class-D amplifiers.

There's more information on all the products featured at prosoundnetwork.com/nov2019.

# **IIII**soundPRODUCTS

#### DiGiCo Chilli 6

DiGiCo has revealed the first "flavor" in its Spice Rack processor collection for Quantum 7: Chilli 6 is six-band dynamic compressor/expander. Comprising a four-band, fourth-order frequency splitter with



adjustable crossover and slope control, plus two independent fourth-order parametric EQ bands, the new processor can be freely inserted on any channel type in any position. Controlled from the console's Master screen and its work surface controls, Chilli 6's two floating bands allow control of envelope shaping for definable frequency bands. The compressor/expander's Range control restricts maximum gain change between -24 dB and +18 dB, and a Dyn Angle control determines level at which maximum gain change occurs.

#### QSC KS118 Subwoofer

The KS118 active subwoofer joins QSC's KS Series subwoofer family. Intended for use in mobile entertainment, AV rental, event production, clubs and performance applications, the KS118 sports a long excursion 18-inch direct radiating driver powered by a 3,600W Class-D amplifier, aiming to provide high sound pressure levels



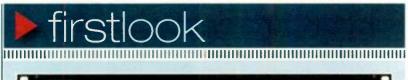
with dynamic reproduction of very low frequencies. Onboard DSP optimizes system performance and allows two units to be placed in a cardioid arrangement. DEEP mode provides additional low-frequency extension and driver excursion processing. Housed in a premium birch enclosure, the KS118 has aluminum handles and four rear-mounted low-noise casters. A top-mounted M20 threaded pole receptacle accepts a 35mm pole for easy vertical deployment with K.2 Series and other full-range loudspeakers.

#### Arista Corp. E-Vocal Duo+ AoIP Group

The E-Vocal Duo+ AoIP product group consists of three models: the ARS-0202-A00 analog audio to Dante to analog audio interface; the ARS-2020-A11 dual XLR microphone to Dante



interface; and the ARS-0202-B11 dual XLR microphone to Dante interface. The E-Vocal Duo+ ARS-0202-A00 can be used to connect legacy audio gear to the Dante world, allowing two channels of analog audio input to be integrated into a Dante network. Conversely, it also converts a Dante stream into two channels of analog audio output signal. The Arista E-Vocal Duo+ ARS-2020-A11 and E-Vocal Duo+ ARS-2020-B11 are both dual XLR microphone to Dante interfaces used to bring dynamic or condenser microphones into Dante networks. Two audio signal outputs enable Lip-Sync delay of up to 170 ms/ch to synchronize the audio stream to the video stream. The ARS-2020-11 has an RJ45 copper network interface, while the ARS-2020-B11 has an SFP connector for Fiber interface.





#### Sonifex Multichannel Dante I/Os

Sonifex unveiled three multichannel Dante audio interfaces, the AVN-AI04, AVN-AI08 and AVN-AO16. The AVN-AI04 provides four and the AVN-AI08 provides eight balanced analog inputs and outputs to and from the Dante network, while the AVN-AO16 audio converter and interface creates up to 16 analog outputs from the Dante AoIP networking standard. Conceived to be simple to configure and operate, the rackmount products sport a 1U form factor, use Neutrik XLR connectors, are Dante Domain Manager-compliant and AES67-compliant, and use PoE for power.

#### Allen & Heath Avantis 96 kHz Mixer

Filling the space between Allen & Heath's SQ mixers and flagship dLive consoles, Avantis is a digital mixer aimed at venues, houses of worship, touring and similar applications. Based



on the company's XCVI FPGA engine, the 96 kHz, 64 channel/42 configurable bus console sports twin full HD touchscreens, a variety of I/O options, and processing derived from the company's dLive mixing system. Wrapping all this together is the desk's Continuity UI, which is intended to create a greater interactivity between screens and physical controls, according to the company. The system features 12 XLR analog inputs, 12 XLR analog outputs, plus AES (stereo in, 2x stereo out). The desk also has a pair of I/O ports that accept dLive option cards, including Dante (64x64 and 128x128), Waves, gigaACE, MADI and more, expanding the scope for system integration, FoH/monitor splits and multitrack recording.

#### **Audio Precision APx500 Flex**

The APx500 Flex audio analyzer is Audio Precision's APx500 measurement software operating independently of an AP hardware analyzer, with licensing controlled by an APx500 Flex Key. In lieu of a purpose-built analyzer, Flex can be paired with ASIO-capable third-party audio interfaces to create a cost-effective solution for a variety of acoustic and electrical test applications. Measurement scenarios where hardware performance re-



quirements are secondary to test system price—such as production line test of speakers, headphones and microphones—are ideal candidates for Flex. APx500 Flex allows users to leverage test development done in the R&D cycle through the ability to import project and template files developed for AP hardware analyzers, thereby reducing test development time and maintaining consistency in test methodology across the organization. APx500 Flex also makes for a powerful portable audio measurement system for application engineers and QA technicians on the go.

#### Symetrix Composer v7.2

Symetrix has updated Composer for Windows, its programming software for Edge, Radius NX, Prism and Solus NX DSPs. Composer enables integrators to program a complete end-to-end DSP signal path using just one application. Version 7.2 adds several im-



portant features. The new Emailer Module enables sending email notification directly from the DSP hardware, triggered by any event in the DSP design. Amplifier monitoring and control has been added for the Powersoft Duecanali, Quattrocanali, Ottocanali, X4 and X8 amplifiers, and for Panasonic WP-DM9XX amps. This enables Powersoft amplifiers to communicate current, alarms, thermal, and impedance stats directly to the DSP for real-time display on portable and fixed devices. The number of simultaneous TCP/IP connections Control Server can host has been dramatically increased from 6 to 1,000, allowing far more simultaneous users and control interfaces.

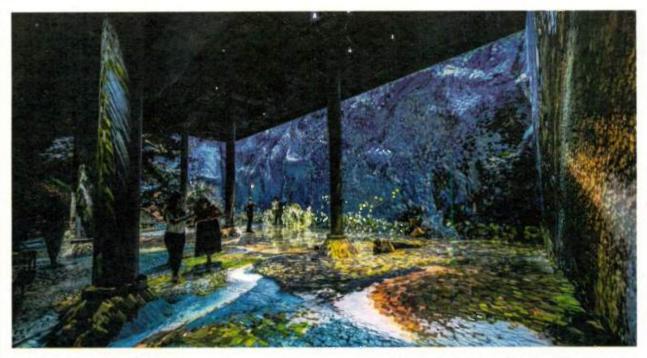
#### **Audinate Dante Virtual Soundcard**

Audinate has announced the availability of Dante Virtual Soundcard for installation in virtual Windows environments using Type-1 hypervisors. Dante Virtual Soundcard interfaces directly with audio software running on virtual machines, allowing distribution of media playback, centralized recording and more. Dante



Virtual Soundcard turns any computer into a Dante endpoint for networked audio, providing a standard WDM or ASIO audio interface that allows any installed audio software to send and receive up to 64 channels of lossless audio over a standard 1 Gbps network to any Dante-enabled AV endpoints, including other instances of Dante Virtual Soundcard.

# 1361 SOUNDREINFORCEMENTIIII



New York City's ArTecHouse digital art space uses L-Acoustics' L-ISA Immersive Hyperreal Sound technology to provide artists with a 30.1 mix for

# ArTecHouse Gets Immersive Underground

BY CLIVE YOUNG

NEW YORK, NY-The term "jaw-dropping" doesn't do justice to the new ArTecHouse digital art space located beneath Chelsea Market in the massive building's former boiler room. New York City's first permanent ven-

ue constructed solely for new media art, ArTecHouse opened its doors in September, kicking off with Machine Hallucination, a flowing, ebbing, pulsing immersive work by Los Angelesbased digital artist Refik Anadol that surrounds visitors with stylized visuals and a fluctuating soundscape to

The site isn't ArTecHouse's first endeavor-it has similar locations in Washington, D.C., and Miami-but the New York space is its most technologically ambitious to date, and Anadol's Machine Hallucination pushes (continued on page 42)

-1111111



Elements from more than 70 pop songs are heard throughout the show via a house system based around Meyer Sound Leopard arrays.

# Inside the Sound Design of Moulin Rouge

BY CLIVE YOUNG

NEW YORK, NY-Moulin Rouge! might be the ultimate jukebox musical. The show, which opened on Broadway in late July, may be set in 1900, but it uses a very 21st-century genrethe mashup-to weave elements from more than 70 pop songs into an ambitious, wide-ranging score. Based on the 2001 movie musical, the stage adaptation adds in numerous songs from the last 17 years as it follows the doomed love affair of Christian, a poor composer, and Satine, a worldly dancer. Set at the titular Paris cabaret, the show sports resplendent costuming and lush scenery, so it was

only fitting that the audio match. Charged with that task was Tony-winning sound designer Peter Hylenski.

"This show traverses many different musical styles; what I was trying to accomplish with the sound design was to stay true to the musical material, but allow the musicality of our show to connect with the storytelling," said Hylenski. "The sound really had to connect and work hand in glove. There are moments where it's a rock concert and moments where it's an intimate solo guitar with vocal, so it's this dynamic, moving, sweeping, cinematic sound in a lot of ways, and that was the goal: to take the audience on a journey."

Providing that musicality is a mix of live instruments-drums, two guitars, bass, string quartet, brass quartet and two keyboards-and some track augmentation. "The core of the music is played by our live band. That's the foundation of how the music is created for the show," said Hylenski. "Seventy songs or not, that's where it all starts. What we look at with the music department is, How do we give the show its own sound and make sure each number sounds somewhat unique or has something else to offer?"

Like many Broadway shows these (continued on page 40)

#### briefs

#### Bose Brought for Beatification

MADRID, SPAIN—Delta Sound Spair provided audio for a Roman Catholic ceremony marking the beatification of Guadalupe Ortiz de Landazuri in May. The company covered the 11,000-seat Palacio de Vistalegre with a Bose Professional (pro.bose com) ShowMatch DeltaQ system comprising 40 ShowMatch modules configured in two main 12-box left/right SMS118 bass modules for low-frequency extension.

#### Heil Sound Goes Psycho

LAS VEGAS, NV—The recent Psycho Las Vegas Festival took over the Mandalay Bay Resort & Casino in Las Vegas, hosting four stages including the Events Center arena, the House of Blues Music Hall, and two smaller stages, hosting the likes of the Original Misfits, Clutch, Opeth and others. Heil Sound (www.heilsound. com) mics, including PR35s, PR30s, PR48s and PR40s, were deployed pany was the official microphone

#### QSC Gets in the Vans

CHICAGO, IL-Classic skater lifestyle brand Vans has been holding House of Vans events around the country featuring everything from skateboarding to street art and musical performances. For many of them, Vans' North America lifestyle events manager Chuck Radue fields a QSC (www.qsc.com) TouchMix-30 Pro digital mixer, KW153 and K12.2 active

#### Martin Makes 900-Year Anniversary

кент, ик—Leeds Castle recently marked its 900 year anniversary with a massive classical summer concert RG Jones Sound Engineering covered the 11,000 in attendance with a Martin Audio (www.martin audio. com) Wavefront Precision Longbow system, using 16 WPL elements per side for the main hangs, with eight Wavefront Precision Compact for the outfills, a dozen WPL for the Hill Fill and four-a-side Wavefront Precision Mini for the infills

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## LIVESOUNDshowcaseIIII

### Weird Al Yankovic Gets Strung Up on Tour

#### BY CLIVE YOUNG

SACRAMENTO, CA-Hunter S. Thompson once wrote, "When the going gets weird, the weird turn pro." That said, it seems inconceivable that it's been 40 years since Weird Al Yankovic turned pro, recording a parody of The Knack ("My Bologna") in a college bathroom. The track became a hit and today, revered for his clever original tunes as well as his trademark parodies, Yankovic has sold more than 12 million albums, netted five Grammy Awards in the process and become a consummate performer, touring the country regularly. Following 2018's The Ridiculously Self-Indulgent, Ill-Advised Vanity Tour, which focused solely on his original songs in a low-key, often acoustic setting, this year saw the comedian violently hurl himself 180 degrees in the opposite direction, hitting the road for the Strings Attached Tour, where he and his band performed with orchestras at all 67 shows across 64 venues.

Along for the ride were longtime FOH engineer Albert "Big Al" Rettich and monitor engineer Dana Beaudin, using monitors and control gear provided by Sound Image (Escondido, CA). Using locally supplied or house P.A.s at every stop helped simplify setting up each day-a necessity as there was little downtime after load-in was done.

'Every afternoon, it's a new orchestra and we have a three-hour rehearsal with them," said Beaudin backstage at the Memorial Auditorium in Sacramento. "I use a previous show and play it back through virtual soundcheck for the rehearsals; that way. Al and the band don't have to come in every day."

Complicating the rehearsal process was the fact that while there was a new 41-piece orchestra at nearly every show, the musician count occasionally ballooned past 70 pieces when the tour teamed up with larger ensembles like the Nashville Symphony, the National Symphony Orchestra and the Colorado Symphony Orchestra. Keeping everyone in line were father and son team Arnie and Eric Roth, who alternated conducting duties throughout the tour, with the lone exception of a show at Red Rocks Amphitheatre in Colorado, where arranger Scott O'Neil filled in.

Manning a DiGiCo SD5 at stage-side, Beaudin provided a wired click system for all the orchestras' principals; otherwise, the musi-



Some orchestral concerts are staid affairs, but on the Strings Attached tour, it wasn't uncommon for Weird Al Yankovic to tear through the crowd, wireless Shure SM87A mic in hand.

"Weird Al's fanbase is multi-generational, so we get kids, their parents and their grandparents—it's anywhere from 8-year-olds to 80-year-olds in our crowd."

cians heard Yankovic and the band through a pair of Yamaha speakers on sticks used as side fills to provide some reference for the songs. "A lot of the principals bring their own earbuds," said Beaudin, "and I

discovered early on in the tour that depending on the quality of what they had, trying to send them an actual mix with the click was really difficult. Everyone was, 'Oh, can I get some of this? Can I get some of

Monitor engineer Dana Beaudin (left) and FOH engineer "Big Al" Rettich (right) behind the DiGiCo SD5 monitor console provided by Sound Image.

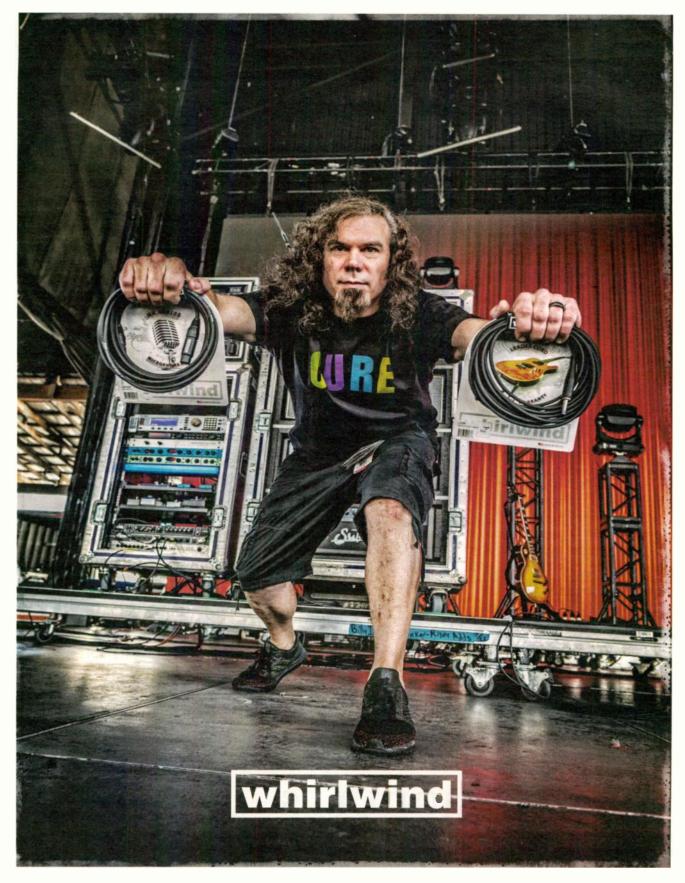
this?' It's just easier to send them straight click down the earbuds."

The band, however-Jim West (guitar), Steve Jay (bass), Ruben Valtierra (keys) and Jon "Bermuda" Schwartz (drums), touring for the first time with backing vocalists (Lisa Popeil, Monique Donnelly and Scottie Haskell)received full mixes via in-ear monitors. "Everybody's on JH Audio," said Beaudin. "Most of the guys are on JH 16s, the bass player's on the Ambient FRs, and then the singers are on JH11s. They all get a general mix with themselves in front; the drummer's the exception when it's songs that have a click track. It's pretty much just his drums on one side, click on the other, and then a bit of Al for timing."

With large numbers of musicians comes large numbers of inputs. "I was on an SD5 last year with Al as well, so it's more inputs this time, going from 40-something to 134. It's just a bit more time to set up every day, and space is obviously more of an issue."

DiGiCo SD5s were used at both front of house and monitors; in addition to two 56-input SD-Racks on stage, a pair of SD-MiNi Racksprimary and backup-handled the video lines, and videos were triggered manually via QLab. Mean-

(continued on page 42)



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#### Moulin Rouge

(continued from page 36)

days, Moulin Rouge's stage deck inside the 1,400-seat Al Hirschfeld Theater is built over the traditional orchestra pit, expanding out into the audience, while also sporting catwalks and side stages on the periphery of the house. As a result, the conductor is located beneath the stage where the orchestra pit would have been and the rest of the band is in custom-built studio rooms—some in the basement, others in a dressing room. "Every inch of that theater is filled with something at this point because the show is so massive," said Hylenski.

The studio rooms were built offsite at audio provider PRG's facility in New Jersey, along with the rest of the sound system. "Between floating the floors, putting in air conditioning and electrics, and getting all the audio lines and network lines for the monitoring system run in, we're essentially building a recording studio plus doing a live show at the same time!" said Hylenski. "It's pretty cool, but a lot of work. Everything's got to run at an accelerated construction schedule and be built in modular ways so it can assemble very quickly, even those studio rooms. We built their walls and ceilings off-site, trucked them to the theater, lowered them into place in the basement, assembled the ceiling, and then built the stage floor for the actual show on top of that. It's pretty crazy."

The expanded stage deck meant that bringing the band's music to the audience was no simple task. "There are a number of challenges. Because of the way the set breaks through the proscenium and out into the house, a lot of typical speaker positions became unusable," said Hylenski. While d&b audiotechnik E6s and E8s are used for the surround system, the production is mainly based around Meyer Sound loudspeakers, with two 11-box Leopard arrays, 28 MM-4 and 23 MM-4XP miniature speakers, 24 UPJunior compact loudspeakers, and numerous UPQ and UPM-line speakers, including the first Broadway installation of the ultra-wide-coverage UPO-D3.

"The new UPQ-D series is fantastic. We're using those as building blocks and fitting them in where we can, working closely with the set department to get them exactly where we need them but still have them look appropriate and fit into the world," said Hylenski. "There's Meyer MM-4XPs and UP-4XPs that we're using for front fills and little side fills, all the stage foldback for the cast is self-powered Meyer UPJs and UPJuniors, more MM-4s are in the floor of the set, and the set pieces have foldback built-in, so there are speakers pretty much everywhere."

Low end is provided by 900-LFCs and 1100-LFCs, and all the delay systems are also Meyer: "The theater has a very long under-balcony, so we've got two rings of delays, which gives an immediacy to the sound and allows it to feel even from front to



Lectrosonics SSM wireless packs are used to transmit the cast, which is captured using Sennheiser MKE 1 microphone elements worn on custom headsets.

back so that we're giving that concert experience equally to everyone, but can bring the level down for dialogue and still have it feel natural and realistic."

The music passing through those speakers is mixed on a pair of Avid S6L consoles, chosen primarily for the number of inputs and flexibility they can provide. Along for the ride are Waves SoundGrid Extreme servers. "They're a fairly standard addition for my systems. I'm accustomed to a lot of the analog-modeled plugins that Waves offers, so I love being able to implement them and have the flexibility of having some great-sounding chains through the Waves plug-in system."

In all, there are 108 inputs on one Avid desk and 118 on the other—the culmination of 40-plus radio mics for the cast; a slew of "voice of God" utility mics for the director, choreographer and stage managers; stem mixes; sound effects; and a cavalcade of different mics on the band. "It goes back to the fact that we have 70 songs-how do you differentiate them? We mic things and use inputs more like you might in the studio, so the drums have a number of inputs set up for them, with multiple mics on top of the snare, room mics and all the normal toys that you might have in a studio. For instance, you can change the perspective of the drums-get a close-mic drum mic sound, or turn those down and bring up the room mics to give it a bit more air. Then the acoustics have mics, the guitars have pedals; it's all those types of flavors, so it starts to add up input-wise, plus we have Ableton tracks coming in as well."

Lectrosonics SSM wireless packs are used to transmit the cast, which is captured using Sennheiser MKE 1 microphone elements worn on custom headsets. Hylenski explained, "We have a very handy, crafty A2, Jonny Massena, who went to school for watchmaking, so he's got a unique set of skills. Because the costumes are very period and the dancing is very rigorous, Jonny made one or two custom headsets and they worked out well, so we kept going down that path. Now pretty much everyone is on a custom headset with one or sometimes two MKE 1s, because we run redundancy for the principal characters."

With the show playing nightly to packed houses, Hylenski has already begun working on another movie adaptation—Almost Famous—where he'll no doubt apply lessons learned from the challenges he and his team faced on Moulin Rouge: "There was a lot of work done to keep the sound clean and powerful, but also create a seamless sonic experience to match the seamless visual experience. I think it's pretty cool how we handled it."

Moulin Rouge www.moulinrougemusical.com

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#### ArTecHouse

(continued from page 36)

the equipment available, creating everchanging visuals based on more than 300 million images scraped from social networks and historical records of New York City, all analyzed using artificial intelligence to create new graphics.

The visuals, mapped to every wall and pillar in the space, are enacted using Barco-powered, 16K resolution, 150-megapixel laser projection technology, reportedly resulting in the largest seamless megapixel count currently in use by a cultural institution. At the same time, the digital art space is the first of its kind to use L-Acoustics' L-ISA Immersive Hyperreal Sound technology, providing audio across 32 separate channels to create a multidimensional sound experience.

"We designed the system for the space back in February, spending a couple of months going through it with the venue owners and talking about what sort of things might come through the space in the future, not just the inaugural installation," said Jesse Stevens, application engineer, USA/Canada, L-Acoustics.

The result is a 30.1 system with 30 independent channels presented through 20 L-Acoustics X8 speakers placed around the perimeter of the space, and another 10 smaller

not lost on artists. "We are adapting their scores to the space, and they're not used to such an immersive and detailed system," said Stevens. "They're used to a general left, right, maybe three or four channels if they're lucky. To come in here and have 30 channels to work with in ultra-high resolution, and to be able to place objects anywhere in the space is

"To come in here and have 30 channels to work with in ultra-high resolution and to be able to place objects anywhere in the space is a great creative treat for the artists."

Jesse Stevens

5XT speakers located directly overhead, placed down the center of the room. The setup is supplemented by two SB15m subs in the middle of the room. Powering the entire system are a half-dozen LA4x amplifiers.

The creative possibilities the extensive system brings to the table are

a great creative treat for the artists."

Kerim Karaoglu, Refik Anadol's composer for *Machine Hallucination*, came into the space with his compositions prepped in Apple Logic Pro. Stevens noted, "We used the L-Acoustics L-ISA source control plugin for digital audio workstations; it

controls lead sources so that they can move all the objects with automation in the session itself. Once we showed them what was possible, they were able to take the mix they had and adapt it to this high-resolution space, where they can make sounds go all around you and in every direction."

Despite time constraints for getting the immersive mix completed on site in a space where the artist anda contractors were racing to complete their respective installations in time for ArTecHouse's grand opening, Karaoglu had a straightforward experience mixing in 30.1. "It was actually pretty easy," said Karaoglu. "Working in an immersive room, it was really helpful to use the L-ISA system because you just have to get it in front of you [in the space] and it opens up the barriers and helps you to get inside the mix."

ArTecHouse

www.artechouse.com/nyc

L-Acoustics www.l-acoustics.com

#### Weird Al

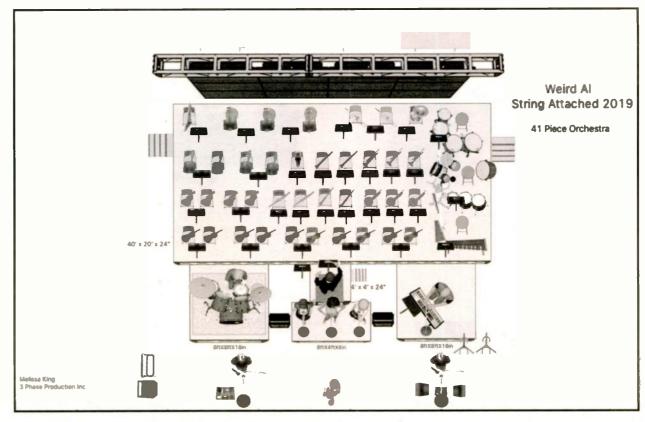
(continued from page 38)

while, another SD-MiNi resided at front of house for Lake system processor inserts.

Despite the enormous number of musicians on stage, miking was relatively simple, according to Beaudin. "The nice thing with the band is the only acoustic thing on stage is the drum set; everything else is direct. The guitar player's on a Fractal [Audio amp modeler], the bass player's direct, and same with the keyboard player.' While the bass went via a Whirlwind DI, the acoustic and slide guitars went through Radial JD6s, and all keyboards and a drum sampler passed through Radial Pro D2s. Meanwhile, the strings and most of the brass were captured using DPA d:vote 4099 instrument mics, a handful of Audio-Technica AE3000 cardioid condenser instrument mics and a number of Shure Beta56s for percussion.

Vocals are important in any live performance, but when you're dealing with comedy, where every word has to be clear and distinct in order for the jokes to land they're even more crucial. All band vocals were captured via Shure Beta56 mics, with the exception of Yankovic, who used a wireless UHF-R pack with a SM87A microphone.

Much in the same way that everyone wants to know how, say, Brian May or Eddie Van Halen's guitar amps get miked on tour, the big mon-



A stage plot for a typical 41-piece orchestra performance on the tour.

ey question for a Weird Al Yankovic production has to do with how his instrument of choice is captured. "His main accordion has a pickup inside and it's on a wireless UHF-R pack," said Beaudin. "His backup accordion, which we haven't had to use, has a pair of Shure Beta98s inside with a wireless pack that phantom-powers the mice."

Just as the number of musicians on stage ranged from 49 to more than 70, the venue capacities for Yankovic's tour were all over the map as well, underlining the production's wise decision to use locally sourced P.A.s to ensure flexibility. "We're literally going from 2,500 one night to 14,000 people the next," said tour manager Melissa King of 3 Phase Production. "Our average-sized venue is around 6,000 seats, but then again, we're playing the Minnesota State Fair soon—that's sold-out at 12,800. His fanbase is multi-generational, so we get kids, their parents and their grandparents—it's anywhere from 8-year-olds to 80-year-olds in our crowd."

Those fans will have to wait a

while to see Yankovic and company again, as he'll be off the concert trail in 2020. As he readily admitted on his website, "This was our biggest and most elaborate tour ever, and frankly, I'm not sure how we'd ever top it." Nonetheless, it's a safe bet that it won't be long before the court jester of pop is back on stage, getting weird once again.

Sound Image www.sound-image.com

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Colin Liebich

Mojave Audio has partnered with industry veteran Colin Liebich, who will focus on the company's marketing, sales initiatives, social media functions, trade shows ap-

pearances and other events. His early career involved work rigging loudspeakers for Hanley Sound in locations including Fenway Park, Boston Garden and Worcester Centrum. Since then, through his work with BAE Audio and other equipment manufacturers, Liebich established himself in the pro audio community.



Tomas Lilia



Håkan Alfredsson



Anders Jutebrant Ivarsson

Lab.gruppen and Lake have been busy, having named Tomas Lilja as brand leader, Håkan Alfredsson as product category leader and Anders Jutebrant Ivarsson as R&D manager for the two companies. Lilja, who previously held the position of brand manager for Lab. gruppen between 2000 and 2009. will again define and implement the brand strategy. Meanwhile, drawing on 35 years of pro audio experience, Alfredsson will, in communication with clients and departments, be deeply involved in the

development of new products and revisions to existing ones. Ivarsson has more than 12 years' experience in managing and developing organizations within product/solution development and portfolio management in an international context. He has also worked as a consultant to support technology companies to improve their product development.

Renkus-Heinz has promoted Chad DeFranco to engineering manager. He joined the company in September 2018 as a loudspeaker systems engineer. DeFranco has been working in audio since he was 11 years old; at 15, he began engineering at Panama Beach, FL's Club LaVela,



the largest nightclub in the U.S., with a capacity of 6,000, where he stayed for 15 vears. DeFranco went on to found DeFranco Productions, tackling audio system design and installa-

tion. He has also served as an audio system and acoustic engineer at Pure Groove Systems.



Michael Craig Enoch

Professional loudspeaker manufacturer Mode Audio has appointed Michael Craig Enoch vice president of international business development. In the role,

Enoch will be responsible for increasing global sales efforts, with a focus on building distributor and dealer networks worldwide. Enoch has had roles in venue management, event promotion, production, and talent buying for such companies as AEG and Live Nation, managing facilities such as the Mercedes-Benz Arena, Amway Center, the Thomas & Mack Center and the Coors Amphitheater.



Paul Brunelle

Fishman has announced the appointment of Paul Brunelle as vice president of finance. Brunelle brings a diverse finance background to Fishman. He was most recently

the corporate controller for the L.S. Starrett Company, a manufacturer of precision measuring tools and equipment and saw products.



Ashley D. Condon

Riedel Communications has appointed Ashley D. Condon regional sales manager for the Southeastern U.S. Based in Florida, Condon has presented at several SBE.

SMPTE, NAB and PBS events on the evolution of television and broadcasting. Prior to joining Riedel, he was sales manager for the Western U.S. and Canada for iHeartMedia, specializing in master control automation, digital workflows, and managing content chains from creation

to monetization. Condon also served as strategic vertical sales manager for Avid Technologies and director of sales for Florical Systems.



Frank Kunkle

SMPTE has named Frank Kunkle director of marketing. Kunkle is guiding development and implementation of a robust marketing strategy, including campaigns,

events, digital marketing and public relations, while supporting SMPTE's implementation of its three-year strategic plan. Kunkle most recently served as marketing manager at the American National Standards Institute, where he developed and executed marketing plans with a focus on growing the institute's subscription-based product for access to standards, stimulating membership, de-

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

Tom Knesel

Powersoft

A: I am general manager U.S. for Powersoft. In this role, I will be responsible for the U.S. subsid ary/business unit, reporting directly to Powersoft's board of directors in Italy. This will include support for business development activities and working actively to

expand our network of key industry relationships.

60SECONDS

Q: How has your background prepared you for your new role? A: I'm excited about this role with Powersoft as it is an opportunity to comtine my AV industry experience with my background in business management. But beyond the requirements for business acumen, it was a top priority of Powersoft to find someone who snares their values and commitment to building and developing relationships internally and externally. I'm really honored that they have invested their confidence in me to lead the U.S. team

Q: What new marketing initiatives are we likely to see from the company? At While Powersoft is primarily known as a market leader in audio amplification, we also invest heavily in the R&D of complementary technologies ir cluding energy conversion and management. In this regard, I see two areas for near-term focus. First, Powersoft will continue to leverage our leadership position in the touring market into wider offerings and more innovative solutions for the fixed installation market, such as our new Mezzo series amplifier platform. Second, we will put greater emphasis on technologies such as M-Force and Mover, especially in immersive applications where we are able to significantly enhance and create more realistic sensory experiences, not only with respect to music, but also how we "feel" and interact with our environ-

O: What are your short- and long-term goals? A: In the short term, I will be working closely with sales and business development director Luca Giorgi, who held the position of general manager for two years prior to my appointment. One of my top priorities will be to work with the team to ensure a successful transition as Luca moves back to Italy. In the long term, I will focus on building on the company's established foundations so we are positioned for increased growth in the U.S. market. I am pleased to be joining a very capable team and solid infrastructure, and one of

Q: What is the greatest challenge you face? A: Learning Italian! No, seriously—Powersoft has a very open, collaborative and "family"-oriented corporate culture. A major challenge will be for me to act as a steward of this culture, while continuing to establish and grow our U.S. operation and market position.

my goals will be to develop and strengthen our presence even further.

veloping lead acquisition tactics, and managing the brand of the institute's standards platform.



**Bob McAlpine** 

Following a year of working with Multi-Dyne through broadcast industry consultancy Black Pearl Management Group,

industry veteran **Bob McAlpine** has been named

chief operating officer of MultiDyne Fiber Optic Solutions. The appointment marks McAlpine's second stint with MultiDyne, after having served as the company's vice president of global sales and business development in the late 2000s. McAlpine played a key role in the company's recent acquisition of Toronto-based Census Digital and helped MultiDyne establish a presence in the EMEA and APAC regions.







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## 1461 theahaMOMENTIIII

## ■ When Life Gets in the Way

My parents both grew up on farms in Saskatchewan. My grandparents were homesteaders who moved to the prairies at the turn of the last century; there, they dug out and built sod homes to protect themselves from the brutal winter cold and oppressive summer heat before they could afford to build a real house. Mom's family had 11 kids; dad's 13.

At the age of 23, after graduating as an engineer, my father was recruited by Bell Canada. My parents moved to Montreal to follow his job. He retired 35 years later at the age of 58. He had a terrific career, raised a family, was an avid golfer and ended up buying a house on the 9th hole of a Jack Nicklaus-designed 27-hole golf course in Ottawa. Dad used to say, "With golf, you don't want to overdo it-so I don't play on Thursdays." Anyway, back around 1958, he had an idea for inline skates, and his sketches looked very much like the skates that are now sold around the globe. I think he always wished he had pursued his idea, but life got in the way.

Around 2001, I got a call from Little Mountain Studios, famous for recording artists such as Bryan Adams, Aerosmith and Bon Jovi. They wanted to check out the Radial JD7 guitar amp distro, so I brought one to them. While the engineers conducted tests. I was allowed to snoop around-and I jumped at the chance. Little Mountain Studios was renowned for its bass sound, yet it had the same Urei midfield monitors as found in most studios of the era. This intrigued me. Why did this studio have better bass reproduction than the others?

I found a door that accessed the inside of the wall separating the studio and the control room, and inside were two huge concrete pillars used to secure the monitors. A lightbulb went on in my head, as I knew from my years of installing sound systems that if you secured the bass cabinets to the floor, you would get a punchier low-frequency reproduction.

Driving back to the office, I thought about the common practice

of mounting nearfield monitors on a piece of foam to eliminate coupling with the desk, avoiding unwanted resonance or cancel-out frequencies. I was conflicted. If we knew that securing the bass loudspeaker resulted in better bass, like I'd seen at Little Mountain, why would we "float" the loudspeaker on foam? There had to be an acoustic cost to that approach.

Having designed DJ setups for clubs, I also knew that the only way to prevent over-the-top bass from making a turntable skip was to mount it on a solid block of stone; seismic sensors and other test equipment follow the same science. With that

ing, "Why have we not put these on the market?" He had taken the isolators home and was impressed. The idea came off the back burner; soon we got our metal shop to produce a variety of metal splints in different sizes and thicknesses. Through testing, we came to the conclusion that for the stabilizer to work, the splint had to be approximately a quarter of the loudspeaker's weight. We added a thin piece of non-slip neoprene to the top and called it the Recoil Stabilizer.

Knowing full well that the idea would be pooh-poohed by the growing crowd of opinionated online naysayers, I figured I'd better make sure

The best ideas come from paying attention and asking questions. The tough part is following through, because life can sometimes get in the way.

in mind. I set out to find a material I could mount on top of foam that would stabilize the loudspeaker. I started by testing concrete, but quickly realized it was too dusty. Then I tried a marble slab and it worked! The bass was more defined, transients were improved and imaging was clarified. I asked about pricing, however, and the cost was prohibitive.

Then, as with everything, life got in the way; we had just launched a bunch of Radial products, the Primacoustic brand was going through changes, and we had acquired Reamp, so these "isolators" got put on the back burner.

One day Jay Porter, our product manager, came into my office ask-

we had plenty of "market support" before we launched the product. I made up 20 sets of Recoils and sent them to the most influential recording engineers I could find. This list included Al Schmitt, Bruce Swedien, Joe Chiccarelli, Ed Cherney, Daniel Lanois and Frank Filipetti, among others. I figured that if I could get seven to support the idea out of 20, we would be good to go. Of the 20 units we sent out, 19 of the engineers sent back glowing reports; the other one had lost them in a studio move. When we announced the Recoil Stabilizer, the navsayers did their thing as predicted, bad-mouthing the product, but the internet came to the rescue, pointing out that "Al Schmitt **BY PETER JANIS** Peter Janis, former CEO of Radial Engineering, is a 40-year veteran of the music industry. Exit Plan (www.exit-plan.ca), his consulting firm, assists business owners to build their companies and prepare them for eventual sale.

would not support a product if it did not work.'

The best ideas come from paying attention and asking questions. The tough part is following through, because life can sometimes get in the way. Too easily we put these ideas in a file folder with the intention of eventually getting around to bringing them to life. Once an idea has been hatched, I tend to push the idea out and then sell it to the market. I cannot tell you how many times people have stopped by the Radial booth and said, "I don't know how you guys came up with this widget! I didn't know I needed it until I saw it. Now I don't know how I can live without it."

That's what happened with the Recoil Stabilizer. Over the next 15 years, we literally sold thousands of them, and did so for one reason: We pursued the idea despite life almost getting in the way.

Peter Janis, former CEO of Radial Engineering, is a 40-year veteran of the music industry. Exit Plan (www.exit-plan.ca), his consulting firm, assists business owners to build their companies and prepare them for eventual sale.

#### Capricorn

(continued from page 5)

The building comprises a row of four historic structures along Martin Luther King Jr. Blvd., some dating back to around 1880. The complex was purchased in 1967 by Redwal Music, a company founded by Mercer graduate Phil Walden, his brother Alan Walden and Otis Redding. Redding's untimely death later that

year deferred the studio's opening to 1969, when Capricorn Records and the Allman Brothers Band were established in Macon.

Over the following decade, Gregg Allman, Dickey Betts, the Marshall Tucker Band, Livingston Taylor, the Charlie Daniels Band, Wet Willie, Bonnie Bramlett, Elvin Bishop and many others worked at the studio. Capricorn Sound Studios filed for bankruptcy in late 1979, and fell into extreme disrepair in the ensuing

Grand opening festivities for Mercer Music at Capricorn kick off on Dec. 2 with a VIP party, including music by the Randall Bramblett Band, for donors and other invited

The public ceremony that marks the opening of Mercer Music at Capricorn will take place Dec. 3 at 2 p.m. The program, which is free and open to the public, will feature performances on an outdoor stage and in the studios by artists including Marshall Tucker Band and Wet

Willie alumni.

capricorn.mercer.edu

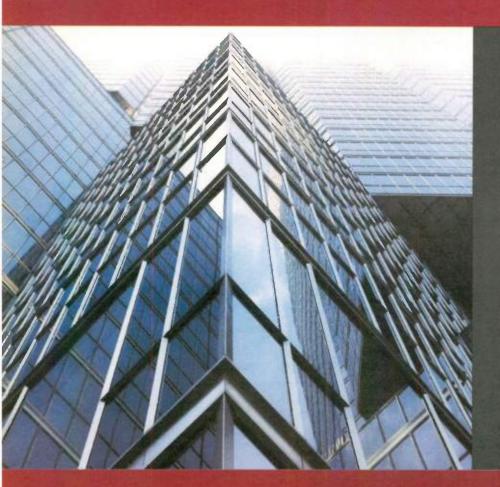
The re-opening celebration will be capped off on Dec. 3 at 8 p.m. with a ticketed Capricorn Revival concert at the Macon City Auditorium featuring former Allman Brothers Band member and current Rolling Stones music director Chuck Leavell, Randall Bramblett Band. and a host of former Capricorn artists and musicians who have been influenced by Capricorn. Mercer Music at Capricorn

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#### Installations

(continued from page 1)

productions use AVB and he still encounters a lot of MADI. "But Dante seems baked in on almost every show, to a greater or lesser degree," he says.

The fact that there is such a large catalog of Dante-enabled products available enables certain efficiencies for audio system operators. For example, says Kalata, "Some shows aren't even using the console manufacturer's mic input cards or using an input rack; they're coming in over Dante from the digital wireless microphones that have Dante outputs."

In Southern California, Michael Warren, president of MW Audio, reports that every system is centered around IP. "I think everything we do now is networking. Even if it's a small venue, a church or a school auditorium, it's usually a small digital console with at least an app controlling the system."

Dante networks do have their advantages. As Kalata notes, "It makes things a little more efficient, a little smaller, a little lighter, more reliable and potentially less expensive."

Nonetheless, challenges remain. For example, manufacturers of larger-format digital consoles allow for fiber connections, Davis says, yet they don't all use the same connectors.

Any venue that caters to touring performers, secular or religious, has to be rider friendly, Davis continues. "You may have what you think is the coolest and greatest console in your venue, but the acts coming through have such a short amount of time

that they want to be able to bring their console in with their show files already built. You have to give them the connectivity that allows for that."

Warren cautions that not all Dante-enabled products are created equal. "You don't know whose products are good and whose are not, except to put them in real-life applications and see what works and what doesn't," he says. Warren has had problems getting gear to work properly, he says, including some maior-brand devices.

As for speakers, Sound Image is not limited to any one brand, says Davis, so he has access to a wide range of tools for his system designs. "Everybody wants a line array, whether a room needs one or not. There are a lot of really well-made products out there from every type of speaker manufacturer. They all have a different niche that they solve."

Offering an example, Warren says, "If you've got a church with a low ceiling, you get a VUE al-4; it's a super tight array and it doesn't hang really low. We don't do point source anymore, but now you've got hybrid point source array boxes for smaller throws," he says, from companies such as PreSonus. "That's an interesting concept."

With the adoption of Dolby Atmos and other object-based platforms by film and television content creators, and the recent announcements regarding the launch of immersive music streaming services, it seems likely that live sound venues willperhaps must-follow suit. There are one or two examples, worldwide, of nightclubs, churches and theaters that have installed immersive systems

from L-Acoustics, d&b audiotechnik and Dolby Laboratories, but Warren is not convinced that there will be a more general uptake anytime soon. "It's a very hard sell. Budgets in a medium-size venue are going to be hard to find for immersive. Maybe in the future, when price points come

Davis is rather more bullish about immersive audio's prospects, and is at least discussing it with his church. theater and club clients. "It's the next big change," he predicts, not least because it's being driven by consumers. Once people are used to having an immersive experience at home or on the move, he says, their expectations are going to be that much higher for live performances.

"That it's becoming mainstream in a disc-less format is huge," he says. "Once the consumer market starts generating revenue, it's going to push it into our commercial industry."

As a live sound mixer, Davis is excited for the creative potential that immersive audio promises. "This new technology is going to allow us to be able to deliver an amplified version of an instrument in a more coherent and realistic manner," he says.

It could also serve a more practical purpose as houses of worship reinvent their audio systems for the future. "A lot of churches, especially older buildings, were designed around a style of worship that was more traditional," says Davis. In contrast, he says, "Immersive opens up a whole new way of creating dimension in your mix. You have a lot more room in the mix instead of playing the volume game" in a

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#### **AES**

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more genres, a broader range of new technologies and a wider breadth of voices than ever before. There's content that will meet every attendee's interests and needs, as well as giving them the opportunity to expand their horizons."

That was certainly true this year, as the convention introduced muchanticipated tracks in EDM and hiphop & R&B; expanded offerings in technologies ranging from immersive and spatial audio to game audio and XR; and more events that continued the society's ongoing mission of fostering inclusivity throughout the audio industry.

Underlining a number of those efforts, hip-hop legend Grandmaster Flash gave the show's keynote address, "Evolution of the Beat." While he modestly claimed at the start, "I speak better with my hands than a mic. I'm not much of a talker," he easily commanded the room as he recounted DJing as a teen in the 1970s and developing what he called the Quick Mix Theory: his homespun, analog method for remixing, looping and extending breaks using only two turntables, two records and a crayon. In the process, Flash created a revolutionary way to reinvent music, laying the musical foundation for hiphop in the process. Closing out with a series of fleet-fingered demonstrations, he looped such classic breaks as the percussion from "Take Me to the Mardi Gras" on Bob James 2 and the Incredible Bongo Band's "Apache" to roars of approval from the standingroom-only crowd.

The opening ceremonies may have

been packed, but it was hardly the only place in the convention center like that, as numerous audio manufacturers unveiled new products on the exhibition floor. Sometimes longawaited, other times presented as an unexpected surprise, the introductions often had throngs of interested attendees checking them out, creating entire regions of the show floor that were difficult and yet enticing to pass through.

Attendance this year was on par with previous years, according to convention officials, but with shifting preregistration numbers, according to Colleen Harper, AES executive director. "The number of attendees opting to register for All-Access badges for the full technical program is nearly 20 percent over and above last year, and tomorrow, and the convention is the flagship of our growing roster of events worldwide."

Also present on the show floor were a variety of educational opportunities as industry pros shared insights and expertise at the Inspiration Stages, which hosted more than 130 sessions throughout the convention, between the new Electronic Dance Music Stage, the Recording Stage, the Live Production Stage and the AES Mix with the Masters stage, along with the AVover-IP Theater and the Software@ AES Theater.

There was plenty to enjoy and learn about outside the exhibition floor, too. Grammy- and Emmy-winning drummer, producer and musical director Steve Jordan presentSound Leslie Ann Jones (yes, Spike's daughter) looked back at his career and continuing influence.

The AES Convention has always provided opportunities to learn and dive deep into the technologies that are part of the pro audio industry. Visitors with an All-Access pass could take in seminars that ranged from "Optical/Fiber Optic Microphone: When and Why Should I Consider Using an Optical Microphone?" to "PMC, Capitol Studios Present: Music in Dolby Atmos," concerning Amazon Music's Atmos Streaming Service, to a look at the future of sports broadcasting with "Live Broadcasting with Object-Based Audio." Even the last day of the show with a closed exhibits floor served up strong panels including "Archiving the '90s," "Producing High-Quality 360/3D VR Concert Videos with 3D Immersive Audio," and the eye-opening "Emergency Preparedness and Safety for Broadcasters."

A key part of any AES show are the panels where engineers unpack their work on great records. The new R&B and hip-hop track hosted engineer Gloria Kaba discussing her work recording A Tribe Called Quest's We Got It From Here. Thank You 4 Your Service; Kevin Killen recounted mixing Peter Gabriel's So and U2's The Unforgettable Fire; and Dave O'Donnell explained the making of Sheryl Crow's latest (and last) album, Threads.

While this year's show is now one for the history books, planning is already underway for the 2020 edition-the 148th Convention-as the AES will return to the Jacob K. Javits Convention Center next fall, Oct. 21-

www.aes.org

"AES New York 2019 is more relevant than ever to an industry where technology and its application is in a constant state of change."

Colleen Harper

proving that AES New York 2019 is more relevant than ever to an industry where technology and its application is in a constant state of change."

Greeting those visitors on the exhibition floor was a wide variety of manufacturers, industry organizations and more. "AES New York has 47 new exhibitors, 236 exhibitors in all—all the leading international professional audio brands are here," noted Graham Kirk, AES director of sales and marketing. "The exhibition is covering the largest footprint with the most exhibitors we've had in any of the last three years. The AES exhibition hall is an unparalleled experience for audio professionals of today

ed another keynote address, "The Love of Recording," discussing his entrance into the industry, what he learned from others and how a desire for his drum sound to be accurately captured on vinyl led to a second career as a producer-one that's found him working with everyone from Keith Richards and Sheryl Crow to John Mayer. Elsewhere, an AES Historical Session became a Hysterical Session with the retrospective "Spike Jones: Preposterous Precision," where panelists Mike Wisland, Arlen Card, Emily Taggart and Grammy-winning producer, engineer and director of music recording and scoring at Skywalker

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## MUSICetc.III

## E All in the Family

#### BY JACQUES SONYIEUX

The genesis of Family of the Year occurred in 2009 when brothers Joseph and Sebastian Keefe relocated to Los Angeles on a wing and a prayer; three years later, they had their first hit with "Hero" from their major-label debut, Loma Vista. And while not yet a household name, each of the band's four albums thus far has shown a depth of songwriting, flawles harmony and emotional vulnerability. The band's latest effort, Goodbye Sunshine Hello Nighttime, is fraught with introspective, singer/songwriter gems immaculately captured by Grammy winning producer Greg Wells. As a complete album, it highlights themes of growing up and loss against a luxurious bed of acoustic guitars, harmonies and Joe Keefe's easygoing but spot-on lead vocals. Pro Sound News spoke to Joe about being in it for the long haul.

#### ON DARKNESS

It's interesting because when people say, "It's a darker record," I was not aware of that darkness. I think a lot of people mistake us for this happy, hippy, jangly folk band. As we grew into ourselves as a group, we became a bit more honest. In the beginning, maybe we were just having a little bit of fun, and the fun became not so fun anymore as we got older. There are also different personalities in the band, and on this record, I kind of forced the guys to follow my direction a little more than on the others. So it is probably my darkness that is being heard.

#### ON WORKING WITH GREG WELLS

We had a meeting with Greg and he was the first person who said, "I really want to make this record with you guys. Please work with me." He was very open and honest about it. Immediately I thought, "That's the person we're supposed to work with." I record a lot at home, so most of the songs were demoed and the vibe of the record was pretty fleshed out. Greg wanted to work on one song at a time until each one was finished rather than doing a bunch of basics in succession. Also, there was no sitting around, going through stuff and



Family of the Year's latest album is Goodbye Sunshine Hello Nighttime.

comping. Once it was done, it was done. We just added elements like a painting. Greg is such a talented musician his pitch is amazing and his ear is absolutely phenomenal.

#### ON TRACKING VOCALS

For the vocals, Greg used multiple compressors that really put the vocal front and center. We tried a few mics including a Neumann U 47, a U 87, and we ultimately ended up using a Telefunken. It was really fun tracking with him. We were just in the zone, getting good takes and not overworking. Sometimes I wanted him to give me more input, but he just kept saying, "Joe, go with your gut. Always go with your gut." Honestly, I'm not a great singer, but I've been working hard on my mic technique with large diaphragm microphones, and this has helped me a lot. For instance, on the really soft stuff where I have to get really close to the mic and get the doubles tight, I shine the most. Singing live is okay, but it's really more fun and rewarding for me to be in the studio working those mics.

#### ON BAND GETAWAYS

As a band, we started putting songs together that we had written and then we took a trip up to Bear Valley, the classic "band getaway." We rented this big house and set up in the living room to write together. The first night was so fun: The power went out, we drank wine together and played guitars. It was so great. But then over the next two days, everyone started fighting and my brother ended up leaving and we got nothing done. We kind of ended up going stir crazy because it felt like there was too much pressure and we had to deliver a record. I think we ended up writing two songs up there in Bear Valley, and

I finished writing those when I got back to L.A.

#### ON CHASING THE DREAM

Honestly, we [Joe and brother Sebastian, drumsl couldn't be more different. We are absolutely opposite. He is really driven, career-minded—a "get up and go" kind of guy with so much energy. I am darker and I would probably still be at home recording demos if it weren't for my brother. In fact, I don't think this album would have gone anywhere without him. Honestly, Family of the Year started out as a mission for uswe left the Vineyard with \$600 each in our pockets and drove to L.A. in a van with all our stuff in it. "Alright, let's make it in L.A. Let's do it!" I think we were hard workers who have battled through a lot of tough times. I love him to death, but we've definitely butted heads over a lot of stuff. We were just a ragtag bunch of kids who started a band, and that has never changed.

#### ON "HERO"

No one thought anything about "Hero" when we made it; it was just like, "Sure, let's put this song on the record as well." I don't know what the catalyst was to have that song pressed as a single, but when it did, it started feeling really good to sing it. It's probably the song I enjoy singing the most because it feels right. I kind of feel like I don't have to write another song in my life because "Hero" says everything I wanted to say. It's all right there. And honestly, that song changed all of our lives.

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



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