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ERIK VOYKE

JARRE FROM AFAR—Jean-Michel Jarre, often cited as one of the pioneers of EDM, may have had his first hit album more than 40 years ago and played for millions around the world, but he never toured the U.S. until this past spring. *PSN* caught up with the nine-date journey in Los Angeles to learn more about the input-heavy show. See page 45 for more.

DAW Growth in 2017

BY STROTHER BULLINS

Some of us remember aligning analog tape machines while others of us have always had a complete recording studio, sans inputs, in our hands. Many have lived through the transition, experiencing both extremes. Yet today, essentially all of us live on “the grid.” With the rich collections of plug-ins, all incredible in nature, now included with, or available for, digital audio work-

stations (DAWs), the DAW is more complete than ever before. And while we all love hardware, racks and stacks are increasingly unwieldy luxuries while our most frequent tools are computer programs. That said, in 2017, all major DAWs have gained some significant ground in terms of performance, wide-ranging compatibility, cost/availability and intuitiveness.

With Avid’s Pro Tools 12.8 DAW update, the leading DAW

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Urban Renewal: Sound City Returns

The legendary studio immortalized in Dave Grohl’s documentary is back. After years as a private facility, Sound City is reopening its doors, complete with “new” old desks that have recorded everyone from Led Zeppelin to Donna Summer.



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The 600 MHz Transition Has Begun

BY STEVE HARVEY

If you are about to order a wireless microphone or in-ear system that oper-

ates in the 600 MHz band, you need to reconsider. And if you already have such a system specified in an upcoming project, it’s time to issue a

change order.

On July 14, 2016, the Federal Communications Commission published an Order on Reconsideration and Further Notice of Proposed Rulemaking that revised and clarified its rules to promote more effective spectrum access for wireless microphone operations in the TV bands, the repurposed 600 MHz band and other frequency bands. While some of the rules apply more to manufacturers—addressing antenna connections, the

prescribed out-of-band emissions (OOBE) standard and output power restrictions, for example—the main takeaway for operators is that the days of unlimited spectrum for unlimited numbers of wireless mics, in-ears and comms are over.

What the Order does not address is the speed with which the new licensees are beginning to move into the 600 MHz band. Wireless carriers—T-Mobile, Dish, Comcast and AT&T, spe-

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Depeche Mode’s IEM Evolution

Depeche Mode returns to the U.S. this month on its Global Spirit tour. We asked Sarne Thorogood, the group’s monitor engineer of almost two decades, how the job and gear has changed over time.



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MUSICAL INSTRUMENTS

Console Choices Multiply for Music Festivals

BY STROTHER BULLINS

With the popularity of multi-act musical events at an all-time high, mixing console needs at FOH and monitor positions are broader and more complex than ever. After all, many festivals host dozens of acts, and thus dozens of different engineers, each of which will have unique preferences and mixer requirements.

"Festivals obviously present engineers with some unique challenges, especially when not carrying their own desks," offers Derk Hagedorn, Avid senior marketing manager for live sound systems. "Limited time for sound checks and tight switchovers between acts necessitate that engineers need to be able to quickly get up and running on whatever system is provided. Over the past ten years, Avid's Venue consoles—especially the Venue Profile system—have become ubiquitous at festival FOH positions, as almost every engineer has mixed on a Venue system at some time and most have a Venue show file on a USB drive that they can quickly load."

So, what exactly are among the most popular choices in festival mixing today, based on the observations of audio system providers?

"As far as consoles, Avid is still a dominator in the market, with DiGiCo a close second," responds Bryan Baumgardner, operations and logistics for Clearwing Productions. "Feature-set file compatibility is key, especially for fluidity of rental inventory—using what we have available. Avid show files work between D-Show, Profile and SC48 as well as mostly S3L and S6L. DiGiCo SD-Series consoles are fully cross-compatible using the SD-CONVERT software. So, by a long shot, the market is still dominated by Avid Profile and DiGiCo SD10, 5 and 7, with the S6L and Solid State Logic's Live platform becoming increasingly popular."

"Consoles that we see are popular

and accepted for festivals are the Avid Profile, DiGiCo SD10, and the Midas Pro2," offers Daniel Villegas, vice president of Operations of Los Angeles-based Harmony Event Productions. "With that said, we used to choose the production console based off what files most FOH engineers are traveling with for the acts participating in that festival. As our company has grown and the festivals we provide sound for have grown, we find that our festival engineers often look for a solid copy-and-paste feature and customizable input output faders, as well as the ability to move channel faders with ease."

"When Allen & Heath's dLive hit the market, we began to supply festivals with dLive S5000 and S7000s," continues Villegas. "We did this because we found dLives provide our festival engineers with those features as well as stellar sound quality.... When the dLive is put up side by side with previous consoles of choice at a festival, it's amazing to see peoples' astonished reaction to the dLive's sound and functionality. If placed on monitors, the dLive makes setup and multi-band mixing a breeze. Putting the console on a network and using the iPad to notch problem frequencies out add to the already high functionality speed of the console. The customizable fader banks make it easy for our monitor engineers to accommodate every band from festivals' start to finish."

Also popular in festival settings are Yamaha's broad range of live mixing solutions, as Yamaha's notable workflow is widely understood by most of today's working live engineers. "Most engineers would agree that Yamaha consoles have a very intuitive user interface—very important in a festival situation," offers Marc Lopez, director of marketing, commercial audio products, Yamaha Professional Audio. "There are many operational paradigms that have remained consistent throughout our 30 years of designing digital mixers, and many useful improvements such as online/offline editor software, flexible patching, and iPad control, to name a few. These designs and improvements make Yamaha con-



David Loy, FOH engineer for Kane Brown, mixed the artist on a Yamaha RIVAGE PM10 console provided by Morris, at this year's CMA Festival in Nashville, TN.

soles a steadfast choice for any mix situation. For the past 15 years, we have been offering a hands-on training program originally conceived to usher engineers into the digital age, and now, into the networking era. A great balance of reliable, consistent product and an established training and support system, makes a successful formula for a festival-friendly console."

Nashville-based Morris Light & Sound provided audio for four stages at this year's CMA Festival, offering Nexo STM line arrays paired with Yamaha consoles—notably including the recent flagship Rivage PM10—monitors and more for the four-day festival. "The guys at Morris had a solid file built ahead of time on the Yamaha PM10, and after getting my bearings of the desk's layout, it was smooth sailing," said David Loy, FOH engineer for artist Kane Brown. "Personally, I appreciated several features: The console's expanded channel section was a familiar sight for my eyes and extremely helpful. Having every controllable parameter of a channel just an arm's reach away was perfect for the festival situation where speed was key. Using the Rupert Neve Designs Silk, I dialed in the Blue Silk transformer on my drums and bass while adding the Red Silk circuit on my guitars and Kane's vocal. Immediately, the harmonic relationship between my kick and bass was so smooth; my lead vocal shined and was just how I needed Kane's voice to sound. Since he jumps so much between his baritone to tenor ranges, the Red Silk circuit really helped emphasize some of those characteristics of his voice at all times that I would typically have to get with EQ. But instead with the PM10, I was able to get those aspects just with one knob. It was stellar."

Depending on the musical styles

featured in a given festival, console needs and requirements may vary. "For smaller acts—van/trailer types—the [Behringer] X32/M32 platform is widely used," explains Baumgardner. "Rock/metal festivals are also dominated by X32/M32 as well as largely the Midas Pro series. Interestingly enough, a lot of the more 'trendy' acts are going back to analog—API Paragons, Midas XL4s, H3000s, etcetera. Certain EDM acts require [Yamaha] PM5Ds; however, that market is still largely dominated by Avid Profiles. The 'general' broader scope of acts are on DiGiCo or Avid, as mentioned before. And finally, with 'A list' acts, you can almost assume it will be a DiGiCo SD7. We often find the best combo for festivals is just to put an SD10 and a Profile in each position paired with a 'festival' desk of some sort at FOH, like a DiGiCo S21 or Midas Pro1 to handle DJ/MC/Video and so on."

Meanwhile, Villegas wisely offers the following: "Regardless of the genre of music being mixed, sound quality of the mixing desk should always be top notch."

Agreeing, FOH engineer Drew Thorton—also of Harmony Event Productions—attests that any good mixer can (and should) be workable regardless of genre.

"Compressors do tend to change things a bit from desk to desk," he admits. "And I do feel like any aggressive music such as rock or some pop bands require more of an edge, so having some kind of fast and punchy compression helps. Some other genres may be complemented with a more open and round sound. Simply put, the diversity in stock compression is what can make our jobs easier to slip from genre to genre in a fast-paced festival setting."

Regarding how recent festival engineers seem to thrive with particular consoles, Baumgardner explains Clearwing's shipment of DiGiCo mixers to the Summerfest Festival and B96 Summer Bash, respectively. "We use DiGiCo everywhere," he offers, "then we supplement other consoles as needed. Although putting SD10s and Profiles in both positions at festivals is the easy thing to do, the budget doesn't always permit it. In that case, we pick one flavor, and try to negotiate to have all artists use

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A bevy of DiGiCo consoles await shipment to the Summerfest Festival from Clearwing Productions in Milwaukee, WI.

Festival Marketplace

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rock and jam bands. “Folk festivals seem to stay consistently successful, yet under-the-radar as well,” he adds.

Avid festival attendee Michaela Marchardt, who covers them for a Tennessee publication called Blank Newspaper, also found this year’s Bonnaroo “a lot more EDM and hip hop than usual. It’s not your hippie festival anymore.” The switch likely resulted in ticket sales from people who had never attended before. “That’s just what kids these days want to see,” Marchardt notes, adding that a younger crowd doesn’t mind camping in the Tennessee summer heat for four days.

“On the other hand, you have these new festivals like Desert Trip, Pilgrimage and Arroyo Seco that pop up, targeting a more mature audience and making a family-friendly atmosphere their priority,” she observes. “These festivals tend to end earlier every night and people don’t have to camp there,” she adds.

Marchardt’s observation is borne out by recent MusicWatch Inc. data, which found the average Millennial spends \$118 at a festival, whereas the younger Boomer spends \$121 and

the older Boomers’ spend goes down to \$74.

“The demand for live experiences is happening across the generational board,” notes Mitchell. “Decades before Millennials were heading to Wanderlust or Coachella, the Boomers were making history at Woodstock. They are now retired, their kids are grown and out of the house, and they are looking for new ways to connect with them.”

Amenities ranging from no bathroom lines to the usage of cashless, RFID wristband technology, help fans that spend hundreds of dollars for a multi-day pass at a large event enjoy themselves more.

Some of those technologies are in use at New York City’s Governor’s Ball, which had to cancel its third day in 2016 because of bad weather, but that was luckily not the case June 2-4 this year. “Attendance figures were up significantly,” Mellor points out. “Once you factor that, in addition to this year’s strong turnout, the economic impact is in stark contrast to last year. More people means more spending on food, hotels, bars, merchandise and many other types of expenditures.”

On a smaller scale, fans of specific genres, such as folk, blues, country and jazz, can relish their favorite musical category in a day or two at regional, genre-specific festivals. While events like bluegrass-orient-

ed Merlefest in Wilkesboro, NC or the neo folk-tinged Clearwater Festival in Croton-On-Hudson, NY may draw fans to idyllic settings, focused festivals work in metropolitan areas, too. New York City’s Jazz at Lincoln Center (JLC) runs an annual three-day indoor event in April honoring composer Thelonious Monk, featuring musicians from around the world. The program spreads out among its three indoor venues.

“It’s a festival, but they’re separately ticketed events,” notes Jason Olaine, JLC director of programming and tours, adding that attendance for the Monk festival grows annually and they’re considering an all-access pass for next year. JLC also partners with Caramoor Center for Music and the Arts in upstate Katonah, NY for the Caramoor Jazz Festival, which held its 24th annual all-day event on July 15 with legendary jazz pianist McCoy Tyner as the headliner.

Mounting a successful music festival takes a perfect storm of good weather, enticing lineup, synergistic sponsorships, cash reserves, and competent management.

“A well-curated festival,” sums up Burger, “is like making the perfect mix tape—it’s all about the perfect blend. On the whole, the U.S. festival scene is more vital than ever, a year-round situation now, much like they’ve been hosting in Europe for years.”

RF Wrangling

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ing to get crazy,” he says.

“The problem I’m running into with Panorama is that there’s a large chunk of spectrum that is unusable, from 566 to 638 MHz. We’re trying to wrangle our way around it. I have 60 bands coming in and four different sound companies, and there are ENG crews and everything else happening.”

Advance information suggests that many of Panorama’s artists have equipment that operates in those unusable frequencies, Lane reports. “If you bring something, there’s no point even turning it on,” he cautions. “You can use festival RF that’s already coordinated, from one of the audio companies providing per stage, or you’ll have to rent.”

What strategies can audio equipment RF coordinators employ in this new environment, which has shrunk by 192 MHz since 2010? Stoffo, who says that he has already done his last show using 600 MHz equipment, says, “In-ears are nice, but if you have to lose something, it seems like you already have wedges out there. That’ll free up half-a-dozen to a dozen frequencies.

On a larger show like the Grammys, it could be two-dozen frequencies.” It remains to be seen if there will be push-back from artists concerned about their hearing, however.

Beyond that, he suggests, “You’re going to have to have background vocalists on wires. There’s no need to have a wireless mic on a stand that doesn’t move.”

“There was an artist at Coachella this year whose band played behind the stage,” says Lane. “They weren’t even in view of the audience, yet some of them were wireless. We made it work, but stuff like that has got to go away.”

Stoffo’s new venture is Radio Active Designs (RAD), an analog, VHF intercom system that packs many channels into relatively little bandwidth. VHF gear, unlike Part 15 unlicensed products operating in spectrum above the TV bands, offers the advantage that it can be coordinated, he also notes. “Nobody owns 902 to 928 MHz, or the 1.9 GHz and 2.4 GHz bands. Those airwaves are unlicensed; that means if you get interfered with, you have nowhere to go to troubleshoot, and you have no rights or priority in those bands.”

Stoffo has long since pulled his intercoms out of UHF at shows such

as the Country Music Association Awards, where typically 100 of the 250 wireless channels are comms. “We’ve been using Telex and HME, which are above 600 MHz. Now you also have Clear-Com, RAD, Telex, Riedel and CoachComm out of the traditional UHF spectrum. That doubles the number of frequencies you can use for UHF microphones.”

Adopting distributed antenna systems is another option. And instead of running hundreds, if not thousands, of pounds of copper cable, says Stoffo, “You’re going to see people run a couple of strands of fiber. We like the Zinwave system, which is a pretty high-end fiber system that covers VHF all the way up through the high-band [1.9 GHz/2.4 GHz] FreeSpeak stuff.”

Antenna farms would enable multiple stages to operate simultaneously without interfering with each other, says Lane. “But there’s seven stages at Coachella, and I’d need a bunch of cable, a load-in day, three guys—the price keeps going up.”

The bottom line for sound companies and any other entities that qualify is to get a license, says Lane. “I can’t believe there aren’t any major sound companies that haven’t gone to Part 74. But if they haven’t yet, then they’re not preparing for this.”

Consoles

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that. At quick-turn festivals—like B96 Summer Bash, which has basically no changeovers—there is a DiGiCo and a Profile at both ends of the snake.”

“Long billed as the ‘World’s Largest Music Festival,’ Summerfest brings in nearly a million visitors to see and hear more than 800 acts performing over an 11-day run,” explains Clearwing Productions’ president and CEO Gregg Brunclik. “Clearwing has been providing audio for Summerfest since 1995, and it’s a fast-paced, punishing schedule of amazing artists, rain or shine. We’ve been increasingly relying on DiGiCo consoles for more and more stages each year, and we’re thrilled to now finally have them on every single Summerfest venue. Why? Because they’re without a doubt the most requested console brand on touring riders, their reliability has been absolutely rock-solid, and the service and support we’ve received from DiGiCo’s distributor, Group One, has been second to none. Period.”

“For multi-act festivals, a console with superb functionality as well as great sound quality is what we look to provide our clients,” says Villegas for his frequent choice of Allen & Heath’s dLive. “During festivals, the sound team is always under a time crunch. That is why we always provide a console that allows the show to run as smooth as possible and sound the best at the same time. Therefore, we chose the dLive for this year’s Music Tastes Good Festival, One Love Reggae Fest, for When We Were Young Fest, and will continue to do so at our upcoming festivals.”

“Mixing multiple bands, or even hosting multiple engineers, you do really need the flexibility to change things up quick and fast,” concludes Thorton. “Every single engineer does things differently and I will say that it always makes things easier to mix when you know where everything is.”

That goes for their wireless equipment inventory, too, he says. For the past couple of years, Lane has been advising production providers to sell off their affected RF gear to areas of the world where 600 MHz is still accessible. Otherwise, he says, “There’s a ton of gear that’s going to end up being paperweights.”