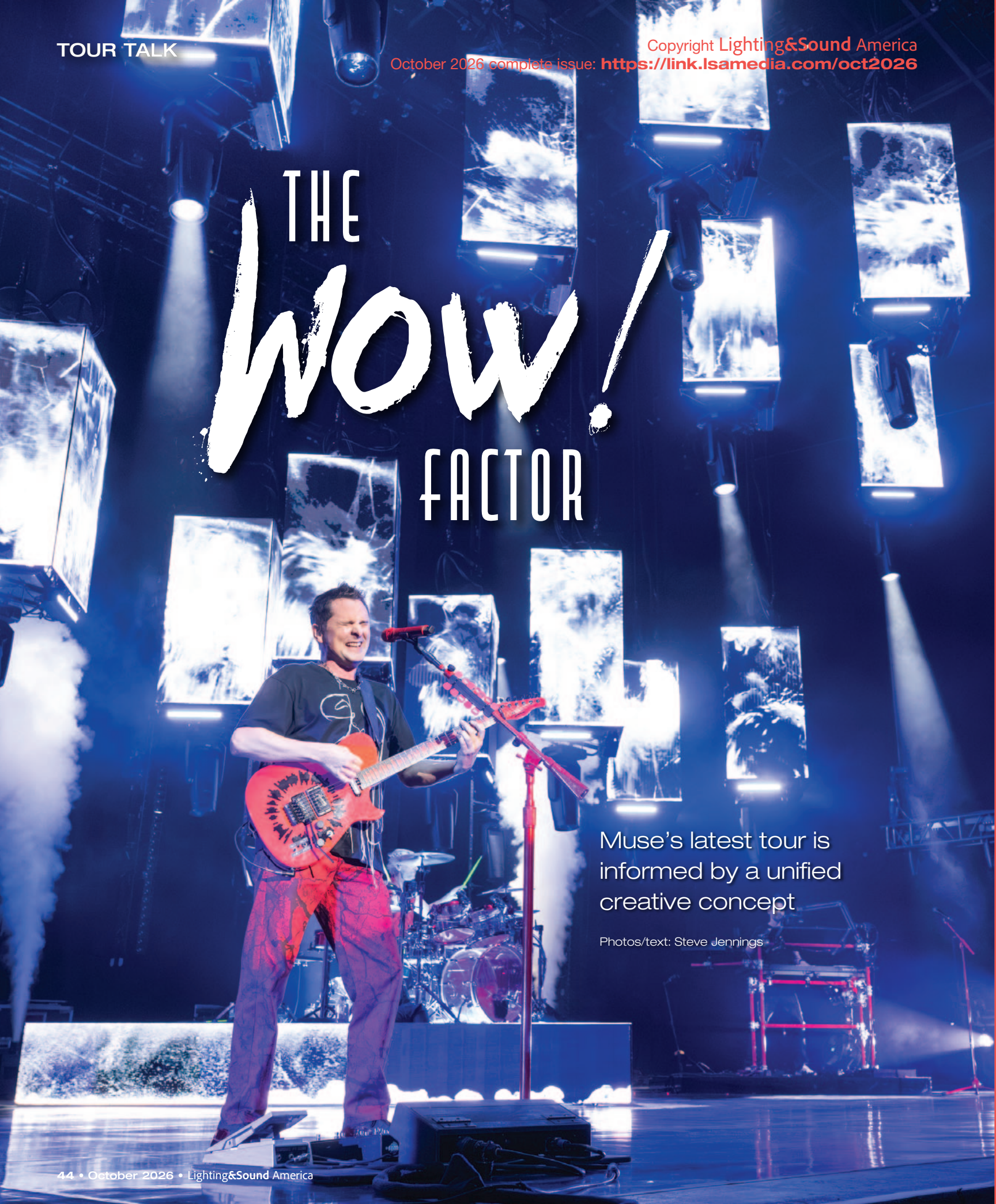
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THE *wow!* FACTOR



Muse's latest tour is informed by a unified creative concept

Photos/text: Steve Jennings



In addition to lasers, the effects package from ER Productions includes (Magic FX) Flameblazers, Eco2jets, Stadiumshots with streamers, and Stadiumblasters with confetti.

Muse is out on the *Wow! Signal Tour*, playing mostly amphitheaters during the US run. The band knows how to get crowds excited with Matt Bellamy's incredible vocal range (and signature falsetto) and his impeccable, innovative, and riff-heavy guitar playing; Chris Wolstenholme's pulsating bass lines; and Dominic Howard's dynamic drumming. The show's visuals include dynamic lighting, automated video pods, lasers, and pyro.

Jesse Lee Stout, creative director/production designer

Stout began working with Muse in 2014 as video content and interactive director for the *Drones World Tour*. "When the band started developing *Simulation Theory*, they brought me on as creative director to help create a continuous narrative and visual language that could connect every part of the campaign," he says. "My role expanded well beyond the live show; I led the creative direction across the album artwork and packaging, photography, merchandise, digital content, the VR arcade experience, the world tour, and ultimately the IMAX concert film." Drawing on aspects of 1980s pop culture, he says, "We pulled inspiration from everything from science-fiction and action films to television, arcade games, skateboard graphics, and the visual language of the early digital era, then reinterpreted those references through the lens of Muse." A highlight was the award-winning *Muse: Simulation Theory VR Experience*.

"Since then," Stout says, "my relationship with the band has continued to evolve. My role has increasingly been about creating one larger world around the band—making sure there's a consistent creative idea connecting what you see on an album cover to what you ultimately experience in an arena or stadium."

Stout grew up in San Francisco's graffiti scene as the Mission School art movement emerged. "At the same time, I was immersed in music culture," he says, "designing flyers and merchandise and creating video-art backdrops for friends' drum-and-bass parties. I've always been interested in the space where music, art, film, design, and physical environments overlap. That work eventually caught the attention of Rihanna's creative director, which led to creating video content for a number of Roc Nation artists, opening the door to larger music projects. I went on to co-



Above: Stout “wanted to have lasers point from the front of house to the stage, reacting to video content,” Boyde says.
Opposite: “Our wall of light, behind the band, is extremely dynamic and allows for intense cueing,” Routhier says.

direct The Weeknd’s first theatrical tour, and things really grew from there.” His firm, Metaform Studio, has worked with Imagine Dragons, Beck, Linkin Park, Phish, Seal, Ozuna, and Tove Lo.

Stout originally created the current design for Muse’s summer 2025 European festival tour, before the visual world for *The WOW! Signal* album had really taken shape. “The production was so well received that the band wanted to carry the core design into the US tour,” he says. “For these shows, I began introducing more specific elements from the new campaign into that existing production. Some details are subtle, like the bespoke clothing the band wears and having virtually all the visible onstage gear painted red. If you look closely at Dom Howard’s drum kit, every piece of metal hardware is red. It’s a small detail, but, under the lights, it’s stunning. The automated LED panels, lasers, and overall sense of scale lend themselves to this idea of deep space and receiving a transmission from somewhere unknown. I’m currently designing an entirely new production for Europe that will bring *The WOW! Signal* campaign aesthetic more prominently to the forefront.”

The icon on the album cover is central to that world, Stout says. “It’s an extruded sound wave designed to feel like some otherworldly object or spacecraft. The original Wow! signal was a mysterious radio signal detected from deep space in 1977, so I became interested in physically visualizing sound: What if the signal wasn’t just something we heard, but an actual object traveling through space? I asked Matt [Bellamy] to send me an isolated vocal of what he felt was the most poignant lyric on the album.” Bellamy’s choice: “It can’t be with just anyone, it’s got to be with you,” from the song “Be with You.” Then, Stout says, “I took the waveform of that vocal, extruded it into a three-dimensional form, and wrapped it back onto itself to create an infinite ring. We call it the Sound Ring. So, the object you see floating in space on the album cover is literally a physical manifestation of Muse’s message being broadcast out into the universe.”

Stout has previously brought lighting designer Sooner Routhier onto numerous projects, and they’ve developed a strong creative shorthand. “She understands that I have a very hands-on approach to show direction,” he says. “I want to be there for every single push of a button. I’m interested not only in what the audience sees, but exactly when they see it, how quickly something moves, when something goes dark, and how all those moments relate to the music. Sooner and her team understand the dynamics I gravitate toward in programming and what I don’t like. I establish the overall visual language, production design, and show direction; then we work closely together, translating that into lighting plots, fixture choices, programming, and cues.

“[Production manager] George Reeves genuinely wants the creative vision to succeed. Even when things need to shift from venue to venue, he and his team put in the extra effort to make sure the show remains as consistent as it was in rehearsals. That same commitment extends across

the entire production team and our vendors. Upstaging [lighting and rigging supplier], D.A.S. Designworks [scenic fabricator], TGR [staging], TAIT [automation], and ER Productions [special effects and lasers] are all incredibly good at taking ambitious ideas and figuring out how to make them happen night after night. A show at this scale really depends on having people who care as much about the details as you do."

Sooner Routhier, lighting designer

Muse has long been one of Routhier's favorite bands. "When I was first hired in 2018, it was one of those 'pinch me' moments," she says. "Jesse and I have collaborated on The Weeknd, Imagine Dragons, and just about every Muse tour since *Simulation Theory*. It's fun to see the extreme differences in the creative direction that Jesse builds between each one. He has incredible attention to detail, bridging the overall themes of album branding to tour design. For this, he built out the automated LED pods in the configuration he wanted. He requested a few lights in certain places, but essentially, he let me build the dream. Once we had version one, we passed it back and forth to make changes and land on the final design. The band isn't typically involved in lighting design with me; in rehearsals, they'll watch, give notes on the run-throughs, and we'll execute. It's one of the smoothest processes among the creative team. We've built tremendous trust. Everyone has their unique strengths, and we're set up to make a beautiful show together."

The show was built for European festival stages and had to be flexible enough to fit in the amphitheater run. "There might've been a bit of squeezing to get it a bit slimmer," Routhier says. "But we kept all our lights. In fact, we added side trusses to light the band more when the pods are at their lowest trim, blocking the front light. The team at Upstaging and The Playground [Routhier's company] are amazing at finding solutions that fit in budget and still match the creative brief. The crew [Upstaging] provides is always knowledgeable, has great attitudes, and is very diligent.





Routhier notes the challenge of navigating lighting into spaces between the pods. “In the end, the shadow and movement of the beams through the rigging, pods, and additional lighting fixtures on the pods became a feature of the show.”

“Lighting programmers Jason Giaffo and Bambi [Joseph Morris] have a great working cadence on the console,” she adds. “It’s fun to see the difference in programming styles that each brings to the table. They program on separate consoles and merge files. It’s a speedy way of programming a cue-heavy show. Both are extremely musical. They truly can make the lights look the way the music sounds!”

Routhier notes the challenge of navigating lighting into spaces between the pods. “In the end, the shadow and movement of the beams through the rigging, pods, and additional lighting fixtures on the pods became a feature of the show. Our wall of light, behind the band, is extremely dynamic and allows for intense cueing. Jason and Bambi put the [CHAUVET Professional] PXL Curves through their paces with grandMA3 trickery to get accents I’ve never seen in lighting before. It’s clean and meticulous programming, similar to the music of Muse, complex and detailed.”

Routhier says of Reeves, “I cherish our friendship and his knowledge as a production manager. [Production assistant] Zach Singer is detail-oriented and helpful with on-site needs. Working with your friends makes the experience of being away from home so much more enjoyable. I love working with the two of them. Challenges are met with transparency and cooler heads because of those friendships.”

Jason Giaffo, lighting programmer

For Giaffo, the US leg was the second iteration of a project that began last year as a co-programming journey with Dane Kick for the European run. “This time, it was a lot more about reworking existing songs for new video content and lasers, with a handful of new or reworked songs. The set list is set in stone during rehearsals, which lasts an average of one show. We were told up and down [that certain songs] would not possibly end up on the show. We programmed them anyway; you only fall for that line so many times. That said, there is an overall arc to the show that remains fairly consistent once it is up and running.”

For the original iteration, Giaffo notes that Morris’ main role was maintaining the show, including programming when new songs were added. “During this programming cycle, we split the song load pretty evenly, and a lot of the songs that were ‘new’ for me he had handled on the road.

Overall, we tried sticking to working on songs we had programmed, but since half the original work was someone else's, that wasn't an option. Dissecting Dane's programming was super-interesting; it introduced me to a lot of pixel ideas I had never considered before. The previz was in the same room, on separate MA sessions, with plenty of trading of thoughts and questions and A/B'ing looks for each other. It was a great exchange of ideas, and it's been cool to see how much Bambi [Morris] has grown with the opportunity to get more hands-on with the show."

This time around, Giaffo had a week of previz and a week of rehearsals. "I got more time with Sooner and Bambi during previz. Once rehearsals start, I tend to default as the overnight guy, which can be harder for collaborating with the full creative team but also means not getting interrupted every 14 seconds; there's a love-hate relationship with the overnight role, for sure. Overall, I'd say it felt like we had just enough time."

Giaffo's first iteration on this project was grandMA2-style, avoiding Recipe programming. "To make the file consistent with Kick's existing work and make updates easier, I've now fully adapted to Recipes," he says. "I had to update all my old work into the Recipe workflow. We took the plunge into v2.4 software with this show to take advantage of the new Phaser Recipe system. There were certainly some slamming heads on walls from that decision, but the added flexibility and the ease of making updates to effects was worth the frustration."

Also, his first run was his first time using CHAUVET COLORado PXL Curves. "They have quickly become one of my favorite effect lights," he says. "They have so much output that you can break them up into multiple systems without losing impact, creating some complex-but-cohesive looks. The [GLP] JDC Line 500s were also great. I'd used them before but only in long extended lines. Using them as individual fixtures mounted to the video pod was more interesting and allowed me to make 'blocky' moves that I might not otherwise get away with. Pixel-focused fixtures like these are where MA3 and recipes really shine and make me grateful to have made the transition."

Joseph "Bambi" Morris, lighting programmer/director

Morris says he originally reached out to Routhier via Facebook, a modern "cold call," if you will. They chatted and emailed, and then she offered him a tour with Disturbed. "From there it was a whirlwind, and here we are on Muse," he says.

During the show, Morris focuses on keeping comms clear for the automation department to announce its many moves. "When I have real followspots and not just my automated spots, I call the show like any other followspot show. I have access to speak to everyone; sometimes I will talk to lasers, video, or an audio tech onstage if I need to."

Lighting fixtures consist of 40 CHAUVET Professional COLORado PXL Curves on the upstage wall; 60 Robe iFORTE LTX WB white source LED IP65 moving units on the upstage wall, in the overhead pods, and sides; 20 GLP JDC Line 1000s as the downstage blinders; 40 GLP JDC Line 500s on the flown pods as strobes; and six CHAUVET Color STRIKE Ms underneath the drum riser for cue hits.

A drummer, Morris says it's hard for him to stand still while directing lights. Laughing, he adds, "I am always headbanging or rocking out to some degree. I'm having a really great time out here on Muse; we've got a great crew, and it has been smooth sailing. Thank you all!"

Doug Sager, automation programmer

A full-time senior show programmer for TAIT, Sager was hired by Reeves. Christian Mulville is the tour's project manager, and Lizz Bender was responsible for staffing the TAIT crew.

Sager describes the automation setup as a "five-wide-by-four-deep matrix of pods consisting of LED panels in a chevron shape with lighting fixtures hanging underneath, all moving vertically via a single Kinesys Apex hoist per pod." He notes that nearly every song includes moves—"some simple and some with challenges, especially as the primary variable I had to work with was distance traveled since most of our moves were at or very close to maximum hoist speed. To prevent the pods from twisting, the hook speed was halved. Throughout, I leveraged timecode in conjunction with the timing and cueing tools of the TAIT Navigator automation platform to create clean, concise moves that are safe, dynamic, and interesting."

During his two previz sessions, he says, "I used a Beckhoff server, a Brainstorm [Electronics] Timecode Distripalyzer, and a Dell laptop running Navigator GUI 'moving' simulated axes." The pods' video content and lighting looks were programmed by members of the team, he says. "We used the Depence platform to combine input from all three disciplines to create a cohesive output so we could watch how they worked together and adjust accordingly. For this, I was outputting PosiStageNet, which was also sent to [the special effects department] during the run for precise position monitoring so that they can shoot lasers onto the pods whilst performing show moves."

Sager says it was a real pleasure working on this project with Stout and the rest of the creative team. "Unfortunately, as I was not at rehearsals, I had not actually seen any of our work in person until the tour rolled through my hometown recently. The band rocked, and the show looked great. Jody Diaz Francis had been able to take the initial programming and tweak it as necessary during the rehearsal process and did a fantastic job, which I knew would be the case as we've been friends since working together on the 2014 Sochi Winter Olympics."

Jody Diaz Francis, automation operator

Diaz Francis first started working with Muse last summer as a freelance operator for TAIT. “This show is one of the busiest for automation that I’ve worked on, with moves in practically every song and multiple sequences that last three or four minutes,” he says. “Not only do we have a lot of automation moves, but the pods come so close to the stage that we have to keep our eyes on everyone moving around, both band and camera crew. We have Sydney Fansler, my automation tech, on comms, spotting from stage left while I operate and spot from stage right, as well as our stage manager, Stuart Tucker, keeping eyes out for us.”

Diaz Francis runs the show on TAIT’s Navigator system with a NAV: Polaris console. “I run 20 Apex 500kg [1,102lb] hoists, one per pod, which are set up with redundant blocks that eliminate any pod rotation, which is what would happen if they were just hanging directly from the hook. I have two separate lines of timecode running into two Distripalyzers that send via timecode to my GUI, where I have a custom panel that allows for swapping TC sources, allowing me to have main and spare Brainstorms active at all times.

“The [Leyard CLM 6] LED panels are mounted to a custom frame which allows three lighting fixtures hanging below. In total, they weigh approximately 300kg [661.3lb] and, as mentioned before, hang from a ‘redundant block,’ which basically runs the chain through two pulleys and back up to the truss. Tracking-wise, we provide the laser system, an EDMX position programmed on an I/O panel that allows us to send the laser console DMX values from 0 to 255, with 0 being the stage floor and 255 the maximum trim we can get at each venue. When the trims change on lower roofs, this parameter has to be adjusted before the laser team got round to focusing on the pods.”

He thanks Sager, noting, “We’ve been friends for over a decade now, and whenever we get to work together on a project it’s always a great experience. He has a grasp of Navigator that’s unique, and I enjoy learning new tricks from him when it comes to programming complex sequences. Having to adjust cues that he has written becomes quite a fun project as I figure out his logic on how to get around things.”

Tom Kirk, video director

Kirk has known Muse since its inception; at 11, he saw the band, then called Rocket Baby Dolls, in a rustic British pub, paying to an audience consisting of a man and his dog. Always interested in photography and film, he borrowed a VHS camera from his school media department and filmed the band’s early shows and rehearsals.

When Muse started adding video elements, Kirk says. “I was already on tour with the band, directing, filming, and editing their first behind-the-scenes film, *Hullabaloo*. Their original lighting designer, Oli Metcalfe, and I worked closely together and programmed those early shows on a [High End Systems] Wholehog lighting control desk. Back then, it was just me in the pit holding a Sony PD150, cabled to my engineer, and five mini cams onstage; on a headset, I directed the shows blind, calling for cuts between my camera and the mini cams, which my engineer would switch! Crazy to think back on that, but it seemed to work!”

This tour utilizes two Disguise GX3+ servers. “I’m co-founder of Hidden Road Studios and very proud of our work when it comes to the Notch looks we created for this tour.” Disguise servers, he says, “are so dependable and stable” that they are “our go-to for all things when possible.” For the amphitheater dates, the camera setup includes two Ricoh 5RC wireless gimbals onstage, one Grass Valley camera with a Fujinon long lens at the front of house, one Grass Valley camera on a track and dolly in the pit, one Panasonic box camera on a pole cam in the pit, two Sony FR7 PTZs, and four Panasonic Mini box cameras. Video gear was supplied by Colour Sound Experiment. Cameras and media servers were supplied by NightHawk Video.

“This is the first time we have dedicated wireless cameras onstage at all times with the band,” Kirk says. “We lean into those a lot more than on more traditional camera packages. We work hard to make those shots as dynamic, intimate, and cinematic as possible. The band really leans into the looks we achieve; in the song ‘Madness,’ Matt sings directly into a fisheye lens,” which, he says, looks great on the screens. “We brought in two amazing cinematographers [John Barrett and Blaine Dunkley] to man these wireless cameras, and their combined experience in film really shines through. Another shot we all love is a very small wireless camera attached to Chris’ bright red bass. He’s a machine on that bass,” giving fans a thrilling, close-up look at the musician’s finger movements.

“Some shout-outs go to all the production people, on and off the road,” Kirk says, citing the NightHawk Video crew, including Casey Lawson (video crew chief/track and dolly), Alex Castaneda (video engineering), John Barrett (DP/wireless camera operator), Blaine Dunkley (wireless cam operator), Wesley Nott (pole cam operator), Marty Hanrahan (mini cameras and PTZ operator), Matt Ardoin (Disguise programmer), NightHawk sales director Todd Le Pere, Leon Roll (Nighthawk technical director), Bryan Venhorst (NightHawk director of engineering), and the Notch effects team at Hidden Road Studios.

Marc Carolan, front-of-house engineer

Carolan mixes on an Avid S6L console. He says all the major consoles sound great, each having a different flavor, but he declines to pick a best-sounding board. “Taste is subjective,” he notes. “However, in terms of workflow, the Avid S6L is an ever-evolving platform. The team is incredibly reactive, and every major update brings new possibili-



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ties; this is what I really love about it. I feel like I'm constantly evolving along with it. The power of the events section is incredible. If there's a 'wish I had' moment, it generally becomes real on the next update. I have to mention the excellent work done by the inimitable Gareth Owen with his companion module [Fourier Audio transform.engine], which has opened up a whole new world in my workflow."

Like many engineers, Carolan started by playing an instrument, in his case the guitar; he also studied classical violin and played in bands as a teenager. "I was always messing about with old tape recorders, making the most out of very little equipment to record music. When I moved to Dublin to study telecommunications and electronics, I became involved with a group who had bought equipment to record a soundtrack but didn't know how to use it. This collective morphed into an underground studio/label. Independent music was flourishing in Dublin, and I got to produce lots of great bands, who I would pester to let me do their live sound. One break led to another, and then one of these bands supported Muse on their Origin of Symmetry Tour, and that's how I first got connected with Muse."

Carolan says he has always tried to cross-pollinate ideas between the studio and the live domain. "The advent of modern line array has easily been the biggest change. I have no romantic memory of older point source systems. Some were great, but mostly they were not. Mixing was sometimes survival!" This is the band's third tour using d&b audiotechnik's GSL system, and the third with Matt Besford-Foster as systems engineer [working alongside Carolan and front-of-house tech Eddie O'Brien], with support from Matt Vickers from Skan PA in the design stage. "Apart from its musicality, I also love how [the GSL] behaves across its dynamic range," Carolan says. "It stays cohesive and coherent. On this tour, with some floor constraints in US amphitheaters, we opted to add a substantial flown sub component, which has also worked out very well. Of course, the other benefit with GSL is how incredibly clean the sound onstage is."

Carolan likes to combine analog, onboard, and outboard plug-ins, always following the ethos of the best tool for the job. "Onboard tends to be more 'utility'-type plug-ins. I love the Avid Pro Expander for gating, Multiband Dynamics for some housekeeping, and Oeksound Soothe



The video cubes consist of Leyard CLM 6 panels. Sager describes the automation setup as a "five-wide by four-deep matrix of pods consisting of LED panels in a chevron shape with lighting fixtures hanging underneath, all moving vertically via a single Kinesys Apex hoist per pod."

Live, which I helped to Beta. I'm also a big fan of McDSP. The AE600 is indispensable, and I love the Fuzz Face for some of the distorted vocal effects I use during the show." His analog outboard choices have developed over the 25 years he has been mixing. "Some have been stalwarts: dbx 160s for kick/snare, Empirical Labs Distressors on vocals. I also always use the Rupert Neve Designs 5059 analog summer, the TUBE-TECH SMC2B, and the GML 8200 EQ on all my shows. When making changes, I go through a rigorous evaluation process, never changing for change's sake. This tour, I've added a TUBE-TECH CL 1B on bass, an older-model Manley ELOP on guitar, and the bonkers Eventide Omnipressor. There's also Midas XL42 channel strips for all my primary channels. I'm also about to try out the SSL Revival 4000s, which I am quite excited about." He was involved very early on in the development of the now-ubiquitous Fourier transform.engine. "I'm also using my Fourier Transform to host some favorite plug-ins from SSL, UAD, Softube, and FabFilter," he adds.

When complimented about his mix, Carolan says, "Well, I do start with an excellent source! Muse, as well as being incredible—and consistent!—musicians, also have an excellent understanding of their tone. A lot of work has been put in at source, and the backline crew is outstanding. Balance is the key. A lot of the time, I try to stay out of the way; when the balance is good, I take my hands off the faders. Sometimes, it involves complex automation; I love to make sure the details are there. I also love to make sure the dynamic intention of the songs comes across."

Matt Besford-Foster, systems engineer

Besford-Foster notes that Skan PA Hire is Muse's longtime audio vendor. "Chris Fitch, director of Skan, has been the band's account handler for that whole period and continues in that role. When specifying the PA system for this tour, Marc and I discussed his desire to again use d&b [audiotechnik] GSL [loudspeakers] and include flown subs in the design. The rest flowed from there. I came up with a design and box counts, and Skan were able to supply based on this."

The PA design is based on a core knowledge of deploying GSL. "My main focus with the amphitheaters is using

the correct number of speakers in the hangs so I can guarantee coverage and SPL without trying to put in too many boxes and making the inter-box angles too tight," Besford-Foster says. "I aim for mechanically correct designs where minimum electronic manipulation/correction is required. I find this approach creates a natural and responsive PA system. Most shows include 16 GSLs in the main hangs, 12 GSL side hangs, six SL-Subs flown behind the mains, and 16 SL-Subs on the ground in a sub array. For front fills, we use eight Y10Ps on Skan-designed platforms; they fit on top of the subs and help reduce the coupling they would otherwise create in those positions.

"Liam [Tucker, the audio crew chief] and I have worked together for a long time," Besford-Foster says. "First thing each morning, I measure the venue for ArrayCalc, and Liam will confirm power requirements, cable runs, and any venue specifics which will impact equipment positions. Having an established relationship with Marc and his FOH tech, Eddie O'Brien, means we share the same sonic vision of how we expect the PA system to perform. There is little discussion on how we achieve things, especially once the tour is up and running. I know the choices to make to get the results; if anything is particularly challenging, it is mainly Eddie and I who work together to overcome it so we can present Marc with the same platform to mix every day."

Once he has finished his ArrayCalc measurements, Besford-Foster says, "I'll give the angles to my PA techs, and we will get to work rigging the system—testing the speakers, getting in the right order, trimming the PA, and then listen and tune them. Eddie O'Brien and I tune the PA system and get ready for Marc for line check and soundchecks. With the Muse soundcheck complete, I'll work with the supports and babysit the systems for their soundchecks, too. During the show, I monitor the PA with R1 control software from d&b and make sure everything is operating correctly. There is generally always some fine adjustment to make in the first few songs, and it is at this point that I'll walk the room and make any necessary adjustments as I go."

Matt Napier, monitor engineer

Napier switched to the DiGiCo Quantum 852 console for this tour, importing the Quantum 7 file. The 852 provided additional functionality such as channel macros, which are particularly useful for him. "Then, given Muse's frequent festival appearances, the new brighter screens have been beneficial during daytime setup. Another notable feature is the improved thermal efficiency. For our US tour with outdoor shows, the console performed exceptionally well in numerous hot outdoor environments."

A significant modification for Napier was implementing a sophisticated routing and bus compression scheme for drum sounds. "The band had experimented with this during recording and requested it for the tour," he says. "Live monitoring necessitates careful consideration of latency paths, so we made minor adjustments to achieve the desired result. The Quantum engine's exceptional processing power was useful in this regard."

He adds, "As a crew, we have a pretty comprehensive system of checks between Marc, the backline department, and myself, making sure all the levels are consistent. Offstage left for Chris and offstage right for Matt, their respective guitar worlds are managed by their long-term techs, Jon Ashworth [bass] and Chris Whitemyer [guitars], and our drum tech, Andy Henderson. It's a gear nerd's dream world of computers, pedals, fractals, and magic. They put a lot of time into getting these sounds right."

Tucker is arguably the glue that holds the show together on the audio side, Napier notes. "Whilst I'm there," he says, "Liam acts as the monitor tech, and way more than that—audio crew chief, RF tech, mic stand wrangler, audio advance. Answering audio questions for production, liaising with Skan PA and local audio vendors, and let's not forget Friday colorful shirt guy."

Bellamy's vocal microphone is predominantly a Neumann KMS 105. "It's been in play long before I arrived," Napier says. "It was, I believe, Marc Carolan's call to try a 105 many years ago. It suits Matt's voice and style beautifully. It's particularly good on the sections where we use the slightly overdriven Avalon VT-737 [tube channel strip] for a distorted/saturated sound. Matt plays the mic like an instrument and 'digs' in a bit harder to get the crunch. Chris [Wolstenholme] is on a Shure Beta 58A with his vocal tone." Wireless bodypacks include Wisycom MPR 50s with Shure Axient Digital on the guitars.

Interestingly, he adds, "Muse are unique in that they use generic IEMs. I mean, we use really good generics [Westone Pro X50], and they all get a good seal, so the result is the same as using customs. Mix-wise, they all pretty much have a full mix. I'd say they probably have their own instrument favored by a few decibels, as you'd expect in a monitor mix. They certainly know what they want, and they are all incredibly technical, so as a monitor engineer, it's a joy. They pretty much just let me do my thing, which is appreciated."

Napier is a longtime DiGiCo user. He has dabbled with other consoles but doesn't see any reason to switch. "I reckon all modern consoles sound pretty good; it's just the interface that lets you get the final product. I do think DiGiCo has a fantastic setup. If the band wanted to add a 40-piece orchestra, no sweat. I can't imagine how you'd do that on another system. As for the company, they listen to users and keep making the ecosystem better. I use both onboard effects and outboard. Mustard EQ and compression are fantastic; the MSE works really well. I've got a few instances of nodal processing going on, and with the 852, it feels like I've got unlimited buss/aux infrastructure."

Napier uses some external hardware and software. He runs SSL E-Channel Strip and some 1176 emulation, plus Universal Audio Teletronix LA-3A plug-ins on Bellamy and Wolstenhome's vocals. "I have a little plug-in chain I use on the IEM stage: an SSL G Master Bus compressor, and a few other bits. For the Avalon distorted sound I mentioned, we have UAD 737 plug-ins running on an Apollo. We still use Analogue Sans Amps for heavy vocal distorted sound, and we have iZotope Vocal Synth for vocoders running on the main stage.

"I've known Marc [Carolan] for over 20 years," he notes. "Way back when, I was a PA tech on the Muse Absolution Tour, which is where we first met. When they were looking for someone for the *Will of the People Tour*, Mark suggested my name. He's an amazing engineer and a great friend. He always gets the job done, and the band really trusts him. The only thing is, he's super competitive, so when we run together, we almost die from exhaustion trying to beat each other, which is funny because I'm not competitive at all!"

Harry Boyde, creative designer/laser programmer

Boyde, a senior creative designer at ER Productions, says Stout asked for a different sort of laser show: "He wanted to have lasers point from the front of house to the stage, reacting to video content. I worked with the content creators, Amish Dani and his team at FRAMEWORX, to get video content through lasers; I took data from the automation team, so the laser software follows the video pods as they move in real time."

The front-of-house lasers are ER Productions AT-60X 60W units with scanners to handle complex shapes. Twenty video screens are moving, each tracked individually, Boyde notes. The units are full RGB units with large scan angles. Onstage, AT30 units deliver a traditional overhead scanning look.

Boyde adds, "Paul Conway joined us as the operator and person who delivers the shows on a day-to-day basis, with complicated safety zones to set up, and working with the automation team."

Paul Conway, laser tech/operator

Conway says he and Boyde underwent a three-day handover, sitting side by side and running through the show, positioning, zoning, and coordinating with Diaz to get screens and lasers tracking with each other. "On show two, I took over," Conway says. "Harry was at my side in case I had any questions or needed direction. On show three, we shook hands, and he wished me a good tour."

A freelancer with ER Productions, Conway works primarily with the design company JD3 Lasers. He says, "Jeremy Warford, the laser/SFX tech, assisted me with zoning and aligning our mirrors onstage; they bounce the lasers off and over the crowd. SFX tech Rob Gifford was an absolute pleasure to work with as well. Asher Heigham is a stellar crew chief. We were proud to represent ER Production and bring the Muse vision to fruition."

Rachael Jacobs, project coordinator, ER Productions

Jacob says notes ER Productions has "previously supplied special effects across many Muse tours and events, including the *Will of the People World Tour* in 2023. For the 2026 North American amphitheater run supporting *The Wow! Signal*, we supplied the full SFX package, including the new laser integration."

As opposed to full-color projects that employ a DPSS diode-pumped solid-state source for green with diodes for red and blue, Jacobs says, "Our current touring fleet is all-diode; separate red, green, and blue sources combine in the projector to make full color and white. The diodes are compact, efficient, cooler, and are far more robust on the road. ER Productions AT-60Xs, positioned at the front of house, project onto bespoke 1m mirrors, fabricated by our engineering company, Faber Entertainment Engineering. They also projection-map the onstage video pods in 'Nightshift Superstar.' ER also incorporated four AT30 units onstage, projecting toward the front of house."

The ER package also includes (Magic FX) Flameblazers, Eco2jets, Stadiumshots with streamers, and Stadiumblasters with confetti. "The laser mapping is the signature laser moment of the show," Jacobs says. "Four AT-60X projectors sit at the front of house on Manfrotto wind-up stands, firing back over the audience at height to front-project laser content onto the automated LED pods flying above the stage. The laser artwork sits on top of the video content running on the pods, so lasers and LED read as one image—and as the pods move, the content moves with them."

The next leg of *The Wow! Signal Tour* sees Muse return to the UK and Europe for dates through early December.

The Wow! Signal Tour

Production Crew:
Creative Director/Production Designer: Jesse Lee Stout
Lighting Designer: Sooner Routhier
Lighting Programmer: Jason Giaffo
Lighting Programmer/Director: Joseph "Bambi" Morris
FOH Engineer: Marc Carolan
Systems Engineer: Matthew Besford-Foster
Monitor Engineer: Matt Napier
Video Director: Tom Kirk
Automation Programmer: Doug Sager
Automation Op: Jody Diaz-Francis
Laser Programmer: Harry Boyde
Laser Tech/Op: Paul Conway
Production Manager: George Reeves
Production Assistant: Zachary Singer
Tour Manager: Dom Anderson
Band Manager: Kasey Sobey

Production Companies:
Lighting/Rigging: Upstaging Inc.
Video/LED: Colour Sound Experiment
Cameras/Media Servers: NightHawk Video
Audio: Skan PA Hire/Britannia Row
Set: D.A.S. Designworks
Staging: TGR Productions
Automation: TAIT
SFX/Lasers: ER Productions