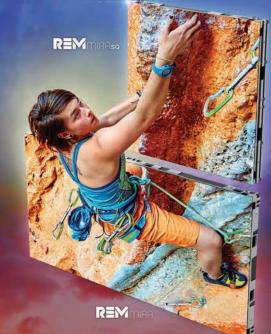




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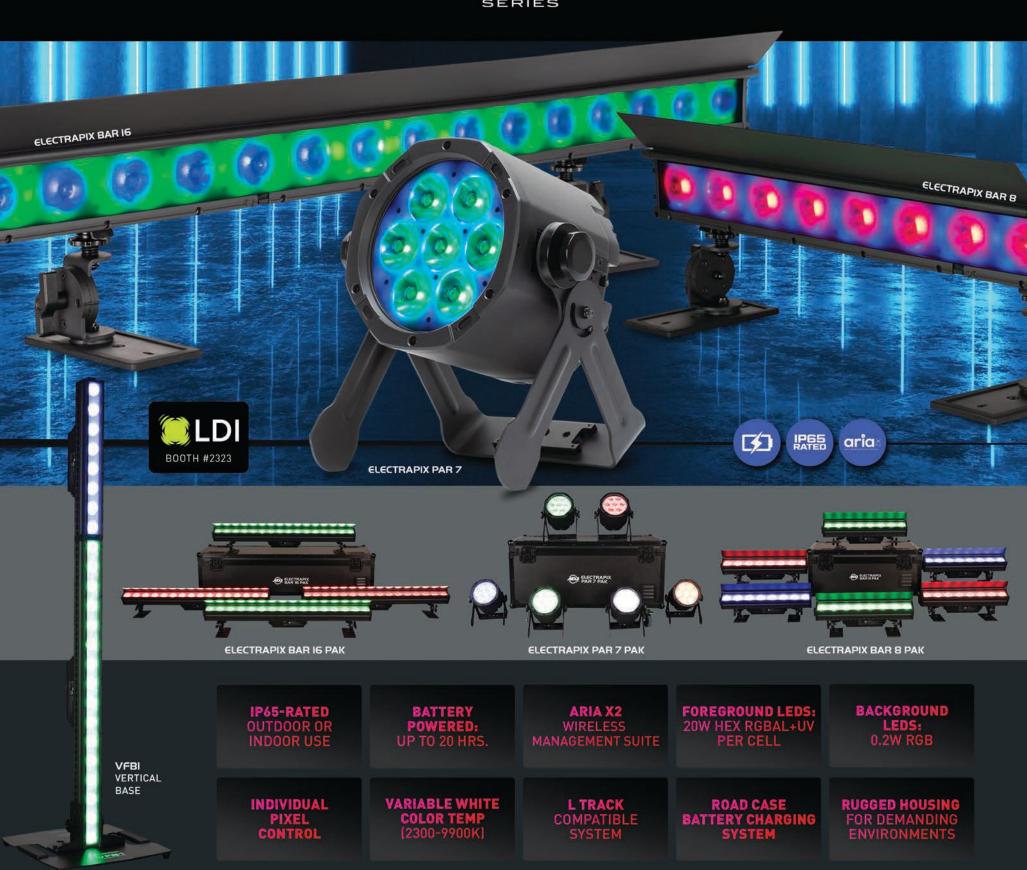


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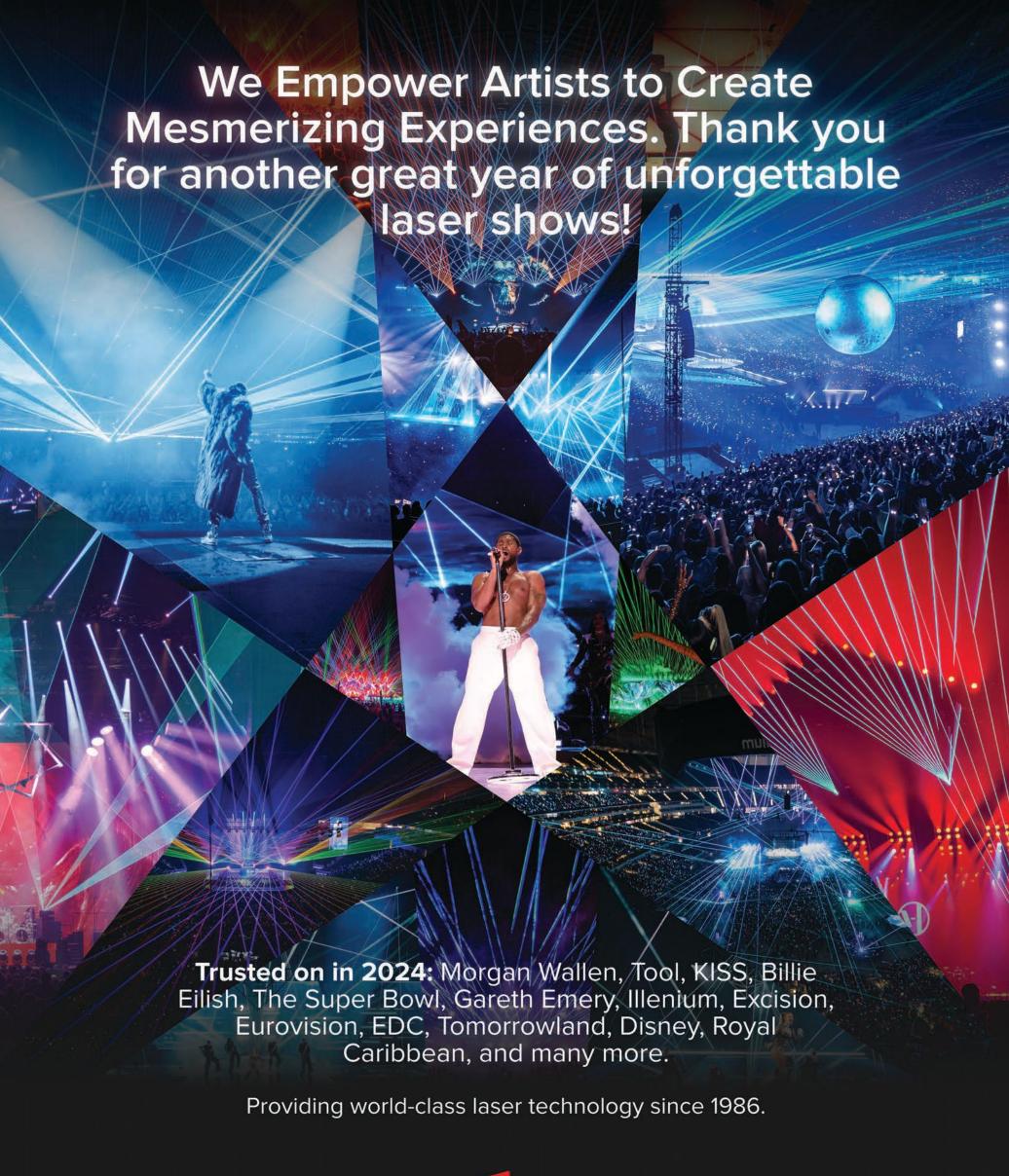
















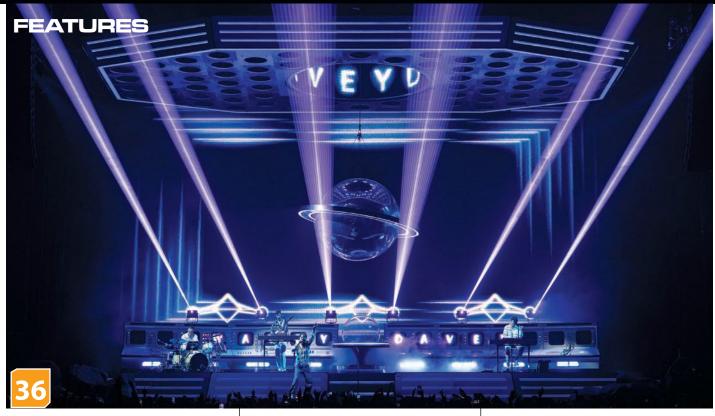




CONTENTS

PROJECTION LIGHTS & STAGING NEWS

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22 Design Focus

Icon Concerts' Omar Herrera, tour manager for the comedy tours of both Jo Koy and Gabriel "Fluffy" Iglesias, turned to 3G Productions for their recent arena-sized shows.

24 Design Insight

Lighting Designer Ryan Pervola shares his design approach for the Texas-based metal-core band, Crown the Empire's 21-city *Not Dead Yet* Tour.

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QUAD-COUPLER 2.5

26 Lighting Focus

The Adele in Munich residency, at Germany's Munich Messe, was huge, and designer Cory FitzGerald, Partner at Silent House, realized a beautiful, all-encompassing lighting design for the outdoor purpose-built stage in mid-summer.

28 Production Support

With a line-up of top country stars, headlined by Luke Combs and Eric Church, the *Concert* for *Carolina* brought together touring teams and vendors for Hurricane Relief in record time to help the devastated North Carolina communities.

32 Production Spotlight

The Cleveland stage for the Rock & Roll Hall of Fame Inductions boasted massive designs and iconic musicians that came together for once-in-a-lifetime performances. The creative team tells us how they worked together to support the musical legends.

36 Behind the Design

The indie rock band Glass Animals are out on their global *Tour of Earth* with design from London-based Cassius Creative along with content design and creation by FRAY Studio. The two fill us in on how the design and vendor together take this dynamic tour to another level.

40 InFocus

On their current *Good Together Tour*, the multi-genre band Lake Street Dive brings their "joyful rebellion" to the stage to make every show impactful and memorable with the help of Lighting Director Andrew Froehlich, who shares how the use of lasers added to that concept.

41 Installation

Pivotal to the success of Las Vegas' Atomic Golf is the work of Coherent Design and their lighting design which illuminates the putting areas with Christie® GS Series laser projectors, and Elation for lighting effects in the driving bays for a fun interactive entertainment experience.

42 Parnelli Spotlight

This year's Parnelli Awards Visionary Honoree Roy Bickel could not have imagined that he would play such a major part in live event and concert touring history, pioneering in a burgeoning industry and shaping it as one of the key riggers in the business.

46 NextGen

Ben Czenze is a young Canadian who already in his early days as a Camera Director and LED / Video Technician is learning the in's and out's of touring, festivals and broadcasts while juggling his freelance career working in Canada.

50 Milestone

Look Solutions USA, headed up by Owner and President Nathan Kahn, is the North American distributor for Look Solutions, the German manufacturer of fog and haze machines, fluids, and accessories. The USA business is celebrating its 20th anniversary of providing atmospheric solutions.

57 Stage Directions: Theater Technology

Kenneth Branagh plays the title role in a new production of *King Lear*, in a fast-paced staging in NYC at The Shed's Griffin Theater. Production Head Consultant Mark Warren talks about the technology that supports the iconic actor's performance.

COLUMNS

55 1.000 Words With ...

We learn a bit more about Lighting Director Kyle Lovan, whose most recent gig is Zach Bryan's *The Quittin' Time Tour '24*.

58 Life's Jam

Rachael Bronstein looks at weathering the winter lull and keeping your finances healthy and warm.

59 Designer Watch

Debi Moen finds out what designers are up to lighting for Christmas and a few big sporting events.

60 LD-at-Large

Chris Lose discusses spinning the wheel programming multi-function hybrid luminaires.

DEPARTMENTS

Editor's Note	4
Industry News	6
On the Move	12
Product News	14
Product in Focus	16
Showtime	17
Buyer's Guide	18
In The Volume	20
Parnelli Ballot	48
Resources: SFX	52
The Callboard	56
Ad Index	59

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Strong Connections



By Michael S. **Eddy**

s an industry, we love to share our ideas and solutions. We happily offer advice on best practices, clever hacks, and new cool technology

discoveries. We readily lend support and a helping hand to our colleagues. The Live Event Production industry, as a community, knows we all rely on each other to successfully accomplish every show. We also know that means mentoring and learning never ends. Our industry, and ourselves, are stronger moving forward collectively. Which is why the many professional associations, support organizations, and inspiring initiatives are so important to connecting us. These resources help strengthen our bonds as well as creating a safety net in an industry that often works on pushing the creative and production limits.

As we close out the year, I thought I would round up a list of those associations and organizations that are invaluable resources to all in our industry. I urge you to visit their websites to learn more about the programs and initiatives they each offer, both for professional growth and personal support. You will find that there is an immense amount of generously shared experience and expertise in this industry available to all in our production community.

And, as ever, please keep me posted on what you're working on and suggesting projects, products, or people you think should be covered in PLSN by contacting me at meddy@timelesscom.com.

Michael S. Eddy **Editor, Projection, Lights & Staging News**



Actor's Equity Association (AEA)

www.actorsequity.org

Amber Health

www.amber.health

American Society of Theatre Consultants (ASTC)

www.theatreconsultants.org

Behind the Scenes

www.behindthescenescharity.org

BTS - Mental Health Initiative

www.behindthescenescharity.org/mentalhealth

Entertainment Community Fund

https://entertainmentcommunity.org

Entertainment Services and Technology Association (ESTA)

www.esta.org

Event Safety Alliance (ESA)

https://eventsafetyalliance.org

Guild of Scenic Artists

www.scenicauild.ora

International Alliance of Theatrical Stage Employees (IATSE)

www.iatse.net

Just a Bunch of Roadies

www.justabunchofroadies.org

MUSICares

www.musicares.org

National Association of Music Merchants (NAMM)

www.namm.org

Society of Properties Artisan Managers (S*P*A*M)

https://propmasters.org

Stage Managers' Association (SMA)

www.stagemanagers.org

United Scenic Artists, Local USA 829, IATSE

www.usa829.org

United States Institute for Theatre Technology (USITT)

www.usitt.org

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ProProduction Sessions Set for Jan. 24 at NAMM Show

The ProProduction Sessions presented by PLSN & FOH, free to NAMM attendees, offer a 'not to be missed' opportunity to gain insightful knowledge from leading Live Event music industry professionals. This year's speakers include Designers Bryan Hartley, Rob Koenig, Jamie Fadden, Cosmo Wilson, and Tour Manager Marty Hom, among others, with a keynote from Producer/ Educator Kevin Lyman. The ProProduction session are Friday, Jan. 24, 2025 at the Anaheim Hilton. Learn more and register at www.namm.org.

Tickets Now Available for 23rd Annual Parnelli **Awards Ceremony**

The 23rd annual Parnelli Awards ceremony is the opportunity to celebrate the best in the Live Event Industry, from

> the Hometown Heroes to the Indispensable Technology product awards, as well as recognizing the incredible touring work of the year by companies and individuals in a full range of production

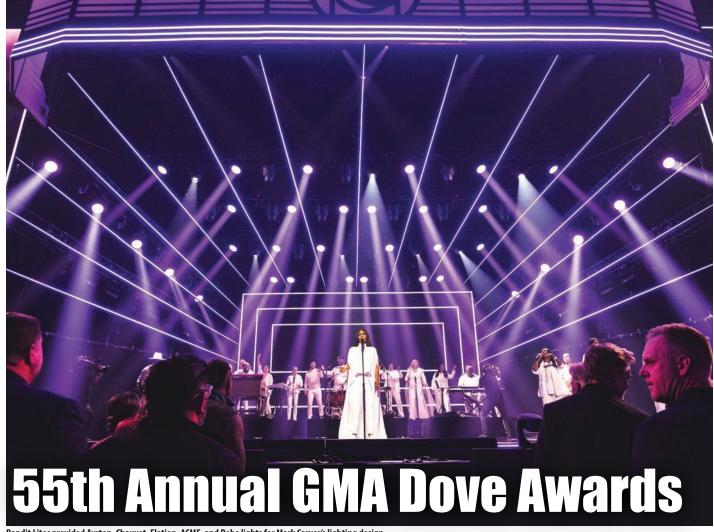
roles. The highest honor in the industry, the evening will also be spotlighting the Parnelli Honorees Malcolm Weldon (Lifetime Achievement), Rov Bickel (Visionary) and Dave Rat (Audio Innovator). Held at the Anaheim Hilton during the NAMM show on Jan. 24, 2025, the gala begins with the Parnelli Cocktail Party at 6 p.m. followed by the awards banquet at 7 p.m. To reserve your seat (or table), go to www.parnelliawards.com.

A Special Thanks to the Parnelli **Classic Golf Tournament Sponsors**

Every year the PLSN/FOH Parnelli Classic golf tournament, a benefit for the Parnelli Scholarship fund, is a great way to meet and network with the lead-

> ers of our industry. Thanks to the incredible sponsors of this always sold-out tournament, industry professionals get more than just a great morning of

golf at the picturesque Legacy Golf Club, they also enjoy a continental breakfast, a lunch barbecue, beverages, range balls, and more. We heartily thank the 2024 sponsors: 3G Productions; 4Wall Entertainment: Advanced Entertainment Services; CPR Tent & Events; Elation; Encompass Event Group: IntelliEvent: Liberty Press; Main Light; NovaStar; Quail Financial Solutions; and ROE Visual.



The 55th annual GMA Dove Awards were presented Oct. 1, 2024 at Nashville's Allen Arena. Lighting Designer Mark Carver worked with Production Manager Scott Moore of Go Live Productions to put this year's top Christian music artists in their best light, relying once again on a rig supplied by Bandit Lites.

Hosted by Tauren Wells, the Dove Awards featured moving performances from Anike, Anne Wilson, CAIN, CeCe Winans, Crowder, Forrest Frank, Joseph Habedank, Maverick City Music with Naomi Raine and Chandler Moore, Natalie Grant, Tauren Wells, Tve Tribbett, and a special multilingual performance of "Holy Forever" from Brian and Jenn Johnson, Miel San Marcos, and Gabriel Guedes.

"We really wanted to push the limits this year while also making sure we met all the necessary technical standards," Carver said. "We focused on color temperature, intensity, and depth of field to create a layered, immersive lighting environment that brought out the best in every artist."

Bandit Lites provided Ayrton Magic Dot-R, Chauvet Rogue R2X Washes, Chauvet COLORado Solo Batten IP65, Elation SixPar 100, ACME Pixel Line IP, ACME Gemini, Robe iForte FS, RoboSpot System, and four grandMA3 full-size consoles for control. The event was designed to look visually dynamic from every angle, with a focus on creating looks that worked both for the live audience and for the cameras.

Carver worked with Programmer André Petrus, Media Programmer Tony Fransen, and Gaffers Luke Carver and Cole Kiracofe, with a big assist from Bandit Lites Project Managers

John Lucksinger and Craig Richter along with Bandit's Jemma Hutchens and Client Rep Mark Scherer.

"I doubt most people realize that much of the overall success of the televised event is due to their immeasurable contributions, but I do," said Moore. "We are already starting conversation for the 2025 edition of this event, and I look forward to seeing what the future has in store."

"It is always a pleasure working with Mark Carver, Scott Moore, and the Go Live Team," said Scherer. "This year's Dove Awards provided new challenges calling for specialty fixtures to accomplish Mark's goals. The ACME Pixel Line and ACME Gemini did just that, allowing for the wash and beam looks desired out of a compact and lightweight form factor."

Balancing Halestorm's Concert Vibe from 'Rock Show' to 'Prom'

When Lighting Designer Rodger Pugh, his Co-Designer Craig Richter, and Production Manager Joey Dileo began working on the lighting for Halestorm's 2024 tour, they collectively developed a clear vision for the show's final design: something between "an '80s rock show and a '90s high school prom."

"For a rock show, you naturally want those big, punchy, high-energy moments, but we also wanted to give the audience room to breathe during the softer, more introspective parts," said Pugh. "For the high-energy, punchy parts, we leaned into bold, saturated colors—like deep reds, electric blues, and intense purples—to give the space a sense of urgency and power. At other points we went with more subtle tones. With this tour, we tried to balance the two elements."

Working with Dileo's production design, Pugh and Richter achieved this equilibrium with help from 48 Chauvet Professional fixtures supplied by Bandit Lites. "We used eight Nexus panels beneath the drummer, which gave us a powerful, rich saturation of light," said Pugh. "The drummer is a central part of the performance, so it was crucial that this area remain a focal point. These panels really made that possible, allowing us to highlight the drummer in a bold, visually striking way."

Pugh, Richter, and the production team, including Sam Morgan and Van Boer, also called upon 40 COLORdash Accent 3 LED washes to generate visual intensity and underscore a range of moods during the show. The compact size of these high output RGBA fixtures made



it possible for the team to position them under each riser tier. "This setup under the risers creates a dynamic pixel grid that adds a ton of depth to the stage visuals," said Pugh. "The combination of these fixtures gave us a layered, immersive design that enhanced the entire visual experience of the show."

Also adding depth to the show were the design's unique light angles and the resultant long shadows. "For this show, I really wanted to explore dynamic shadows and highlights, which gave the performers more texture and presence on stage," explained Pugh, "It also helped build a sense of mystery and movement—sometimes the angles would highlight specific moments, almost like framing a scene in a movie, and other times they created more abstract visuals."

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Limp Bizkit's 2024 Loserville Tour's Beaming Design

Claypaky Xtylos played a key role in Limp Bizkit's 2024 Loserville Tour, the nu-metal band's 24-stop North American summer road show. Las Vegas-based OSA International, Inc. provided the full production package for the tour, including lighting, cameras, and audio.

The Loserville Tour kicked off in Wisconsin in July and wrapped in San Bernardino, CA at the end of August. Justin Wade, who has worked with Limp Bizkit for about two years, served as Lighting Designer, Programmer, and Operator for the tour.

"I was looking for a punchy beam that would cut through outside natural elements for this all-amphitheater tour," Wade said. "Mark Fetto at OSA International steered me

to Xtylos, whose laser source makes it a lot stronger than many other beams. And Xtylos are compact, so they were a great size for us."

Tasked with using lighting to "enhance" the band, and "not overshadow them," Wade flew three trusses—two onstage and one downstage. "The goal is that once the house lights are out, the audience doesn't realize there are only two trusses in the air. The lights accentuate the band with more power than two trusses suggest."

Wade mounted 12 Xtylos in three clusters of four on the two onstage trusses for "an old-school ACL vibe," calling the Xtylos the "workhorses of the show with their brightness and effects. We relied on them to cut through and shape the stage while washes and spots kept the band lit."

He also credited the Xtylos for "great prisms—you can widen and slow them down for gobo effects and create sort of moving finger effects. You get much more than traditional beams, which helped us create moods," he added. "The open beam gave a hardline cut through the stage for heavier, bolder songs, while the prism effects and rotations helped break up the stage for slower, more melodic songs."

The fixtures also proved to be robust enough for an amphitheater tour. They "hold up well in a touring environment," noted Fetto, Vice President Lighting at OSA International. "As others come out with laser-based fixtures, interest in them has grown. But Xtylos delivers a completely different look from other laser lights in the market. Xtylos is a three-color laser light that gives amazing saturated color you can't get from any other fixture." Wade said he would definitely use Xtylos again. "I'm really happy with them. They have great saturated color, true colors, and color mixing."





The medieval rockers performed on Wacken Open Air's Louder stage with GLP's Creos wash lights.

In Extremo Rocks the 'Holy Ground' of Metal: W:0:E Festival

On the first evening of Wacken Open Air, which ran from July 31-Aug. 3, German medieval rockers In Extremo headlined on the Louder Stage. The band's Lighting Designer, Martin Heining, expanded his design to include 12 of GLP's brand-new Creos wash lights, supplementing the already extensive festival design by none other than LD

Heining used the weatherproof (IP65) devices to deliver a strong backlight with bold colors, creating impressive depth between the set and the video wall. "The Creos exceeded my expectations," said Heining. "They deliver exactly the bite and power that I want to see in rock 'n' roll and metal designs. I think we'll become good friends."



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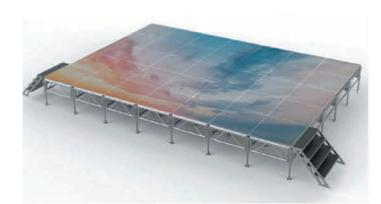




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Four Big Stages at Lollapalooza Berlin 2024 Draw Crowds

Three Germany-based rental and technical production companies supplied a total of more than 500 Robe moving lights for the four main stages at the 2024 edition of Lollapalooza Berlin. The festival was organized by Live Nation and took place Sept. 7-8, 2024 at Berlin's Olympiastadion (Olympic Stadium).

Although the weather was hot, climbing to 87° F on Sept. 7, total attendance for the two-day event reached 110,000. The North and South stages, the Alternative Stage, and Perry's Stage were all equipped with Robe moving lights supplied by TSE (North), the Media Resource Group/MRG (South & Perry's), and Sound Projekt (Alternative). On-site crews appreciated cool water and treats provided by Robe Germany.

North Stage: The North Stage was physically the biggest at the festival—four bays deep, one more than the South Stage—with all structures supplied by Stageco. Freelancer Peter Weist looked after a classic festival rig provided by TSE for acts including headliners OneRepublic and Sam Smith. The Robe fixtures included FORTEs, MegaPointes, and Spiiders, all spread out over four trusses. Four RoboSpots, meanwhile, were paired with four iFORTE LTXs. Although this was TSE Project Manager Thomas Stütz's third time at the festival, TSE has supported Lollapalooza Berlin since it made its debut in 2014.

TSE worked closely with production riggers Big Rig and provided all the trussing and motors they needed to fly lighting, video, and audio. Screen Visions were the LED screen vendor on this stage, while TSE also supplied the d&b audio system, together with 12 crew split between the sound and visual departments.

South Stage: The South and North stages were angled to face away from one another, both in the main area of the stadium, and they alternated performances with plenty of time for the audience to get from one to the other. Media Resources Group (MRG) supplied the South Stage's Robe iFORTEs, BMFLs, and Spiiders, with eight iFORTF LTXs at FOH for followspots paired with eight RoboSpot BaseStations under the stage. K-pop sensation Seventeen were the final act Sunday night. "Obviously, we needed the intensity and brightness of these FORTEs and BMFLs," said Kilian Körber, MRG's onsite Account Manager, with Marvin Amstädter serving as FOH Lighting Coordinator for the stage.

Perry's Stage: MRG also supplied lighting for Perry's Stage, which was located inside the Olympic Stadium building itself and looked after by Oliver Reusch. A haven for EDM and dance

Three vendors—TSE, MRG, and Sound Projekt—supplied nore than 500 Robe moving lights for the four main stages at the two-day event.

music lovers, headliners included Martin Garrix and The Chainsmokers. The rig leaned toward super-quick, effect-heavy fixtures and included 34 MegaPointes, 52 Pointes, 41 Spiiders, four BMFL Blades, 18 Tetra2s, and two standard FORTEs.

Alternative Stage: Sound Projekt returned for the fourth year from their home base in northeast Germany to supply lighting and audio plus stage management services. Project Manager Fabian Schwabe and Lighting Operator/FOH Coordinator Martin Trantow kept things running smoothly for a lineup of acts that included Sam Tompkins, Glass Beams, Christopher, and many more. The setup included 20 MegaPointes, 24 Spiiders, four iPointes, and six iSpiiders.



Brompton's 4K Tessera SX40 LED processor fed visuals to an LED wall comprised of ROE Visual's latest V4ST LED panels.

The Smile Tours in Support of Wall of Eyes Album

The Smile, a supergroup formed four years ago by English drummer, percussionist and record producer Tom Skinner along with Radiohead's Thom Yorke and Jonny Greenwood, followed the late January 2024 release of their second album, Wall of Eyes, with 21 performances between March and June.

After kicking things off at Dublin's 3Arena on March 7, the band performed across 14 countries, including the UK, Germany, Belgium, the Netherlands, Greece, and Italy, before wrapping things up with a show in Rome on June 24.

The Smile's live shows featured an upstage LED wall supplied by Universal Pixels, with dynamic visuals supported by Brompton Technology LED processing. "We've worked with Radiohead and their various side projects since 2017, iust after Universal Pixels was formed," noted Phil Mercer, Commercial Director. "It was great to continue that relationship by working with The Smile on their 2024 tour."

Working with Show Designer, Andi Watson, Universal Pixels supplied a compact, intimate upstage LED wall, built using ROE Visual's latest V4ST LED panels. Brompton's 4K Tessera SX40 LED processor unleashed impressive visuals, with Tessera 10G data distribution units selected to ensure flawless performance.

Additionally, a creative array of ROE Strip linear LEDs were positioned behind the band, driven by a Brompton T1 LED processor. "Interpolated Mode in the T1 processor, which accounts for the physical size of the panel to keep the correct proportions of the image, was essential for mapping the ROE Strip linear LED element," Mercer said. "This tour was a great example of using a newly launched LED product like the V4ST alongside something much more established such as ROE Strip. Both are supported by Brompton LED processing and can be run from the same physical processor."







Look Solutions USA supported the filmmakers with donated fog fluid.

Award-winning Film, Fireline, **Benefits from Fog Solutions**

Indeed's Rising Voices Festival is a program that focuses on providing new opportunities to discover, invest in, and amplify stories created by global majority filmmakers. In 2024, the program ran its fourth season, and 10 filmmakers were chosen from over 700 applications. The theme centered around the future of work, and Fireline was one of the 10 successful applicants. Written and directed by Robin Takao D'Oench and set against the backdrop of an intense Californian wildfire, the film tells the story of Otto, an incarcerated firefighter who is refused parole and is desperately trying to connect with his daughter. Fireline premiered at Tribeca 2024 and won Best VFX at the HollyShorts Film Festival and has qualified for Best Live Action Short Film at the Academy Awards. It is available to watch in the academy screening room.

"The team behind Fireline do a lot of work to help amplify the voices of people who are under-represented in the U.S. film industry," said Simon White, the film's Special Effects Supervisor, "I knew I wanted to help them, so I got in touch with Roger George, Look

Solutions USA distributor in California, and I asked what they could do. They contacted Anna and Nathan in the New York office, who straightaway offered to supply all our fog solutions," he said.

"The location was a summer camp that had already suffered extensive wildfire damage, so we couldn't use any pyrotechnics, or have any flame anywhere, not even a candle," added White, Owner of special effects company Runs with Scissors. "The only way to get the job done was to do it with fog and haze machines. In just one night, we went through a few 20-liter bottles of fluid. You could barely see through it all."

To achieve the desired effects, White relied on Look Solutions' Viper and Power Tiny units. "We were able to place them directly where we wanted them, in burnt out trees, or right next to the light bars," he said, also crediting Look Solutions for the quality of their fog fluid. "They were exactly what we needed to do it right, and the film has been really well received." Read more about Look Solutions USA

Diamond Zhang Impresses with Interactive Visuals

LightAct, a provider of media server technology and software for live events, collaborated with longtime partner Rightway Audio Consultants for the media server programming for the 2024 concert tour for Chinese pop artist Zhang Bichen (a.k.a. Diamond Zhang).

Rightway used LightAct's media servers to bring complex and interactive visual content to life, much of it designed in Notch. The show visuals also benefited from LightAct's integrated NDI 5 streaming and LightAct's ability to work with real-time positional data enabled by BlackTrax tracking technology for responsive, interactive visuals that dynamically followed Zhang's movements on stage.

At the heart of this production setup is



LightAct's reActor xr media server. To meet the show's unique demands, the reActor xr was equipped with a range of Expansion Modules, enhancing its functionality and flexibility. These included Out8, Sync, VIO, and AIO.

Keith Urban Honors Tour Manager

Keith Urban surprised Chuck Hull, his Tour Manager of more than two decades, when he presented him with the Sam "Old Skool" Harden Award at the 2024 Touring Career Workshop in Nashville on Nov. 12. The award's namesake. the late Sam Harden, was a longtime Lighting Designer and Technician at Bandit Lites.

The event also included a keynote speech from noted Tour Manager Marty Hom, who shared stories from his 40 years on the road



with The Rolling Stones, Fleetwood Mac, Barbra Streisand, Beyonce, and Olivia Rodrigo, among others.

On the Move

ASTC (The American Society of Theatre Consultants) announced two new Members and one Associate Member during the Society's Fall Forum meeting in Lubbock, TX. The two new Members are Cathleen Bachman, a Principal with Fischer Dachs Associates: and Laura Wagner, a Senior Consultant with Fischer Dachs Associates, Theatre Consultant Bob Jenista, with Stages Consultants, has been named an ASTC Associate Member.





Brompton Technology announced promotions for Sebastian Kanabar

and Luke Hurford. Kanabar, a Technical Sales Consultant focused on broadcast and film, will now take over as Head of Sales for APAC. Hurford, whose decade at Brompton includes five years as Business Development Manager for the APAC region, will return to the UK to take on the global role of Sales Channel Manager.



Michael Phipps

Christie noted that its parent company. Ushio Inc., has named Michael Phipps President and Chief Operating Officer of Christie Digital Systems, Inc. and its

subsidiaries. Phipps joined Christie in 2008 and served as Christie's Chief Financial Officer since 2019. Phipps takes over for Hideaki Onishi, Christie's President and COO since 2022, who will be returning to Ushio Japan.





Studios & Production Services named Matt 7ahn Di-

Gateway

rector of Marketing. He comes to GSPS from Morris Higham Management, He previously handled marketing duties at Solotech, which had acquired his previous employer, Morris Light & Sound. GSPS also named Cory Walker as its Sales Manager. His three decades of experience including working on behalf of Morpheus Lights and Christie Lites.



Nick Spencer

Green Hippo's parent company, tvONE named Nick Spencer as Technical Product Manager for Hippotizer media servers. He brings a decade of experience as a

Lighting and Media Server Programmer for live and corporate events, concert tours, exhibits, and custom experiences. Green Hippo products are distributed in North America by ACT Entertainment.

Kinetic Lighting announced the addition of Amy D Lux as the new System Sales Account Representative. Lux's appointment comes as Kinetic continues to expand its System Sales Department, following the recent move of Kate Smith, formerly of CalArts, into the role of Systems Project Manager.



a lighting, entertainment, and cruise ship specialist, to Global Sales Director for the company's Maritime division. Perez previously

Robe promoted Tony Perez,

served as Business Development Manager for Robe since 2022 and has played a key role in expansion of the company's business within the cruise industry sector.



Yale University's David Geffen School of Drama has appointed Don Holder to its faculty. Holder, a two-time Tony Award-winning lighting designer, will serve as

Head of the Lighting Design Concentration at the Geffen School and Lighting Design Advisor at Yale Repertory Theatre, effective July 1, 2025. Read more about Holder on page 56.

News in Brief

Absen's intensely bright A Series LED displays are enhancing fan engagement at Inter&Co Stadium, the 25,000-seat home to the Orlando City Soccer Club (MLS) and the Orlando Pride (NWSL). The new displays are part of a broader upgrade to the soccer-specific venue, which opened in downtown Orlando in 2017.

ADJ fixtures were once again used almost exclusively to illuminate the main stage at last summer's SV Arena festival in Powys, Wales. Figure of Eight Events Ltd again took responsibility for the technical production of the stage, deploying recent additions to the company's ADJ inventory including the new Jolt Panel FXIP and Vizi Beam RX2 units.

Astera products served as the solution for UKbased Lighting Designer Phil Supple who was tasked with a unique challenge: to light up 137 windows across 57 rooms at the George Heriot School in Edinburgh, Scotland, for Where to Begin, the opening event of the 2024 Edinburgh International Festival (EIF). Supple used 56 Astera Tubes—40 Titan and eight each Hyperion and Helios—for the project.

Blackmagic Design technologies have enabled World of Wonder Productions, the company

behind RuPaul's Drag Race and other TV shows, to livestream their own events. A recent case in point: the Pink Carpet at RuPaul's DragCon Los Angeles 2024. Along with an ATEM Television Studio 4K8, the setup included Web Presenter 4K and other Blackmagic Design livestream solutions.

Disguise is powering a new video projection installation within Rockefeller Center. Electrosonic created a six-minute video show mapped onto a 10' miniature replica of the famous NYC landmark buildings at Top of the Rock's Immersive Welcome

Elation noted that Australia-based Chameleon Touring Systems made a significant investment in the company's PROTEUS MAXIMUS and PROTEUS BRUTUS luminaires, ULA Group, exclusive Elation distributor in Australia and New Zealand, supplied the fixtures.

ROE Visual's LED technology took center stage at the Black Hat USA conference, held Aug. 3-8 at the Mandalay Bay Convention Center in Las Vegas. ETS provided ROE Visual's Graphite 2.6 for the primary display wall, which measured 30.5 meters in width, and Black Onyx 3.47 LED panels for three delay screens at the conference.





Barndoor 8-way rotational barndoors with integrated SafetyLink



ChargingPlate with PrepBox Charge and set up 8 lights faster than ever

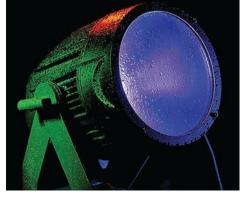


TrackPin Compact
Short pin for SuperClamp
attachment, compatible with
airline tracks



ADJ: UV PAR 100IP IP65 Rated Black Light

A versatile and rugged LED-powered UV luminaire includes a beam angle of 120°, rugged metal construction, IP65 rating, and a 100W C.O.B (Chip On Board) LED source. It outputs ultraviolet light in the 390-399nm range, generating a visible purple light as well as causing white and UV-active décor and materials to glow vividly. It also offers 0-100% dimming, variable speed strobing, and an adjustable refresh rate. Its sturdy variable angle scissor yoke locks securely into place and can serve either as a floor stand or hanging



bracket. The unit measures 14.4" in length and weighs 14.11 lbs. Connectors include IP65 rated locking power input and output sockets alongside 5-pin DMX input and output sockets and includes the Aria X2 wireless system

www.adj.com

Avolites: Titan Remote App

Avolites has released an update to its Titan Remote App, boosting performance and functionality. It is a significant upgrade to the last Titan remote app and can be downloaded from the Google Play or Apple App stores. The Titan remote app works alongside Avolites lighting consoles running Titan software, to provide moving light control from a mobile phone or tablet. Using the Avolites Remote app on a mobile device, with the addition of an external Wireless Access Point, any Avolites lighting console can be remote-controlled using Wi-Fi from an Android or iOS mobile device like a smartphone or tablet. The remote app



also enables running and storing Palettes and running playbacks which is invaluable to lighting designers, directors and operators when rigging, testing and focusing fixtures.

www.avolites.com

Elation: SÖL II & SÖL IV Blinders

Available in 2- and 4-cell configurations, the IP65 rated SŌL II and SŌL IV are equipped with the same LED engine and the same lens accessories as the SŌL I Blinder. The SŌL II's two 350W RGB+Lime+Amber+White LED engines produce a combined 30,750 lumens, while the SŌL IV delivers 59,830 lumens with four engines. Both have variable 16-bit color temperature adjustment (1,800K -8,500K), along with dim-to-warm and redshift emulation. Features include CMY emulation and virtual gel library, along with advanced dimming curves and strobe effects. Optional lens accessories, including a Bowens mount adapter. Both units measure 9.3" D x 16.5" W: the SŌL II is 10.3" H and weighs 24.7 lbs.; the SŌL IV is 16.54" H and weighs 42.99 lbs.



www.elationlighting.com

ETC: Halcyon Silent

ETC advances its fanless product line even further with the new High End Systems Halcyon Silent. This luminaire balances silent operation with the feature set of ETC's flagship Halcyon family. Halcyon Silent is convection-cooled to eliminate distracting sounds. Acoustics specialists Müller-BBM conducted testing on the luminaire to confirm its quiet operation. At full intensity with background noise removed, Halcyon Silent sound levels measured at 13 dBA. Sound pressure levels less than 20 dBA are considered inaudible. Halcyon Silent produces 18,400 lumens, a 5.5°-60° zoom range, and a new patented color-mixing system utilizing 12 flags. With this technology, users can achieve brighter, more consistent pastels as well as deeper saturation. These color sets can be controlled via simple combined mode, or with a fully individual flag control mode.



www.etcconnect.com

Environmental Lights: Eluxtra LED Tape

Environmental Lights and City Theatrical have jointly developed Eluxtra, a family of LED accent lighting products, combining engineering expertise and years of industry experience. The Eluxtra family includes 24V Eluxtra RGB LED Strip Light, and the 24V Eluxtra 4-in-1 LED Strip Light - RGB plus either 6,500K, 2,700K, Amber, or Indigo. Both are also available in IP65 rated versions. Coming soon are: 12V and 24V Eluxtra 5-in-1 LED Strip Light 5-in-1 offering maximum color customization and control; and 12V Eluxtra 4-in-1 LED Strip Light - RGB plus either 6,500k or Amber in a 12V version. These new products are a blend of innovation and practicality, offering



professionals consistent performance, streamlined connections, and easy installation. The Eluxtra line will be available from both Environmental Lights and City Theatrical.

www.EnvironmentalLights.com

GLP: FUSION Creos Wash

The Creos is an IP65 rated LED washlight with 18 40W RGBL LEDs arranged in three rows of six pixels each and motorized 1:12 zoom ranges from a 4.3° beam to a homogeneous 52° wash. Its motorized lamp head that can be swiveled through 190°. Set to High Output, the Creos delivers a total output of 7,600 lumens, with up to 673 kcd light intensity. With its clusterable design, with consistent LED pixel pitch, several devices can be lined up horizontally and form into a seamless, gigantic LED bar. In addition to the standard color temperature of 6,500 K, users can choose other fixed color temperatures (3,200K,



4,200K, 5,600K, and 8,000K). Connectors include powerCON True 1 In/Out and DMX 5pin In/Out and two fail-safe ethernet ports.

www.germanlightproducts.com

Kino Flo: FreeStyle Air Max

The FreeStyle Air Max integrates seamlessly with existing FreeStyle systems. Compatible with FreeStyle mounts, extension cables, and LED-140 & LED-150 Series controllers, this portable thin profile panel offers the advantages of easy deployment and favorable cost of ownership. In addition to a twist-on mount for light stands, and corner bumpers for 4-point hangs, the unit comes with eyelets to simplify overhead and other surface attachment. Rigid construction prevents any flex when handling and safeguards the integrity of its components. Ease of maintenance is built into a user serviceable design. It features a removable upper rail and quick access to pull-out LED platens that are easily replaced or repaired. It measures 39.5 x 2 x 22", and weighs 7.5 lbs.



www.kinoflo.com

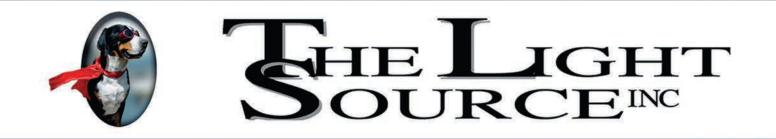
SPH Engineering: Drone Show Creator

SPH Engineering has launched the Drone Show Creator, a software solution designed to empower beginners and professionals to easily design breathtaking drone shows. With its intuitive interface and powerful feature set, Drone Show Creator lets animators focus on creativity, making it easy to turn concepts into stunning aerial displays and drone choreography without technical barriers. Drone Show Creator is more than just a design tool—it's an



all-in-one solution that allows users to seamlessly integrate 3D models, images, video projections, texts, QR codes, and more into their shows. The new software dramatically accelerates the production of stunning drone choreography, cutting down the time it takes to create shows and bringing creative visions to life in real time.

www.droneshowsoftware.com



FLYING HIGH





The Light Source LED lights are flying high with quality. Incredible light output, even coverage, and smooth dimming create outstanding lighting. White output is generated with dedicated white LEDs. RGB colors are rich and saturated. Ruggedly built, the fixtures are made to last. Made in the USA, information and tech support is only a phone call away.

704-504-8399 thelightsource.com

Flex Introduces Seamless Payment Integration Built for the Event Industry

anaging inventory and payments for live events can be a logistical nightmare. In the past, there has been no true alternative to the fragmented workflow required for invoicing, tracking, and receiving payments, as the process has required multiple separate platforms that need to be kept up to date manually.

Founded in 2009 by Chris Stein, Flex Rental Solutions offers Flex. Trusted by leading production companies world-



wide, Flex simplifies operations with its powerful platform, helping businesses reduce errors, stay organized and grow. From inventory

tracking to invoicing and payments, Flex delivers the tools businesses need to stay ahead in a fast-paced industry.

For Flex Rental Solutions, the mission has always been to improve their customer's workflows, a goal that made them the operating system of choice for the live events industry. In pursuit of that mission, Flex has partnered with PayEngine to integrate payment processing directly into its platform, delivering the streamlined solution customers have been asking for.

"Our customers needed a seamless experience, and we're thrilled to offer it," says Maria Barker, Vice-President of Operations at Flex. She's been at the forefront of launching Flex Payments, a game-changer for event companies looking to optimize and simplify their operations.

With this tight integration, users will experience streamlined workflows where the status of payment requests is always visible. Payments are applied in near real-time, and notifications are sent directly in-app as payments are received. This ensures an efficient, accurate, and transparent process, reducing the manual efforts needed by Flex's customers and enhancing operational clarity.

Why Integrated Payments Matter

When Flex started hearing feedback about the inefficiencies and increased margin for error caused by the lack of a synchronized payments workflow, they knew something had to change. The complexities of managing separate systems often lead to errors, duplication of work, and delays in payments, resulting in delayed preparations and rushed timelines, where costly mistakes are often made.

"An integrated payment solution directly aligns with our mission to improve our customer's workflows," Barker explains. By bringing payments into the same platform as quotes and invoices, Flex eliminates redundant steps in the workflow, creating a cleaner, smoother process.

INTRODUCING FLEX PAYMENTS in partnership with PayEngine





A Streamlined Workflow

What sets Flex Payments apart is that customers no longer have to interrupt their workflow and leave Flex to request or check the status of a payment. It's now synchronized and available on the same user interface as managing inventory or generating a quote. This partnership between Flex Rental Solutions and PavEngine eliminates disjointed processes, giving Flex users more time to focus on their business rather than tedious and redundant administrative tasks. The benefits are clear: fewer errors, faster turnarounds, and significantly less manual effort.

"We're all about reducing friction," says Barker. "Now, our customers can send a quote, an invoice, and receive payment — all within Flex. It's easier to get paid, easier to track those payments, and ultimately easier to run your business."

Faster Payments, Healthier Cash Flow

Delayed payments are a common frustration in the live events industry. Flex Payments speeds up the process, giving Flex customers the advantage of next-day funding — so they can get paid faster and keep their cash flow moving. "Nextday funding can make all the difference for companies managing tight cash flows," Barker notes.

Integrating Flex Payments also helps to reduce discrepancies that often slow down payment cycles. "No more going back and forth between programs to make sure the invoiced amount matches the quote. Flex Payments eliminates that manual, error-prone effort and brings the information you need all into the same place," she adds.

Smarter Operations, Same End-Client Experience

Flex Payments streamlines operations for event companies without adding extra steps for the end clients. According to Barker, Flex's goal is to improve efficiency for customers while

ensuring their clients experience the same seamless process they're accustomed to. By integrating quotes, invoices, and payments into one unified system, Flex helps companies save time and money—reducing errors and speeding up payment cycles—all without impacting the client-facing workflow.

Looking ahead, Flex has ambitious plans, including automated payment schedules, deposit features, and more user-friendly ways to track payments.

Powerful Workflow Meets Best-in-Class Security

Security is always top of mind when it comes to payments. and that's one of the primary reasons Flex chose PayEngine as their partner to bring integrated payments to Flex customers.

"We partnered with PayEngine because they have the reputation and experience to offer our customers secure and reliable payment processing," says Barker. "They've helped us launch a product that's not only easy to use but also highly secure."

In partnership with PayEngine, Flex also offers comprehensive support for customers transitioning to the new payment system. "We're with them every step of the way," Barker reassures. Customers implementing Flex Payments can look forward to a smooth transition, supported by the experts from Flex and PayEngine.

The Future is Seamless

For the live events and entertainment industries, the logistical headaches of managing inventory and payments are becoming a thing of the past. Flex Payments offers a streamlined, integrated solution that reduces stress, improves cash flow, and enhances the overall workflow.

"Customers have long been interested in having integrated payments capabilities in Flex, and we're thrilled to release those today. On the heels of StaffingPlus, DocuSign, and RFID enhancements, our commitment to being the most comprehensive platform in the industry has never been stronger," says Founder and CEO, Chris Stein. Flex has been a cornerstone of efficiency in the live events industry for nearly 20 years—and with more innovations on the horizon, they're just getting started.

Note: Flex Payments is now available as part of user subscriptions to Flex Rental Solutions. For more info, visit flexrentalsolutions.com/flex-payments.

This insightful content from Flex Rental Solutions was shared with PLSN by Lindsay Schwartz, who operates Lindsay Schwartz Consulting + Creative, Isconsultingcreative.com



MOTIONLESS IN WHITE

Lighting Company: Squeek Lights
Venue: Mohegan Sun Arena, Wilkes-Barre, PA

PRODUCTION TEAM

Tour Manager:

Logan Beaver

Production Designer:

Victor Zeiser

Lighting Designer:

Steven H Kosiba

Lighting Crew Chief:

Benjamin Jarrett

Video Director:Paul Buchholz, Magic Orb

Pyro Lead:

Elliot Evans

VENDOR

Special Effects: Atlanta Special FX

GEAR

Lighting

- 24 ACME Geist Beam
- 12 ACME Tornado
- 16 ADJ Hex Panel 32 IP
- 12 ADJ Jolt Panel FX IP
- **24** Chauvet Maverick Storm Hybrid
- 22 Chauvet Rogue R3X Wash
- 6 Chauvet Color STRIKE M
- 1 grandMA3 full-size Console
- 1 grandMA3 light Console
- 1 grandMA3 NPU L

Video

36 INFILED AMT 8.3 Touring Panel

Staging/Rigging

- 22 Chainmaster 1-Ton Motors
- 8 CM Prostar ¼-Ton Motors Motion Labs Motor Controllers
- **24** Tyler Truss GT Truss, 8'

EVENT DETAILS

Squeek Lights was brought on to design and execute a pair of hometown arena shows for Motionless in White which took place over Halloween.

HULAWEEN 2024 MEADOW STAGE

PRODUCTION TEAM

Production Manager: James Morris

Lighting Designers: Michael Smalley & Chris Ruppel

L1: Josiah Hunt

V1: Zach Stafford

L2s: Drew Alley, Charlie Letts Master Electrician: Tom Nguyen V1 LED Lead: Clark Johnson

VENDOR

Video, Special Effects, Staging/Rigging: Music Matters Productions

GEAR

Lighting

- 16 Chauvet Color STRIKE M
- 14 Elation Proteus Maximus IP65
- 17 Elation Proteus Maximus
- 16 Elation DTW Blinder 350 IP
- 16 Elation DTW Blinder 700IP
- 16 Elation ACL 360 Bar
- 36 Martin MAC One
- 34 Martin MAC Ultra Performance
- 16 Portman P2 Hexaline
- 4 Robe MegaPointe
- 1 Follow-Me System Package
- 2 grandMA3 full-size Console

Video

168 INFILED AR4.6+ Panel XL

- 40 INFILED AR4.6+ Panel STD
- 2 NovaStar NovaPro UHD Jr. 4K Processor

SFX/Atmospherics

- 1 ADJ M440 Mirror Ball 40"
- 2 Smoke Factory DATA II Fogger

AND ASSESSED AND A

4 hazebase Base Hazer Pro

Lighting Company: Music Matters Productions **Venue:** Spirit of Suwannee Music Park, Live Oak, FL



Staging and Rigging

- 2 Tyler Truss GT Truss 5'
- 16 Tyler Truss GT Truss 8'
- 11 Tyler Truss GT Truss 10'
- 2 12" Box Truss 10'
- 1 12" Box Truss 5'
- 6 20.5" Box Truss 10'
- 1 20.5" x 20.5" x 233" OD Circle Truss
- 1 12"x 12' OD Circle Truss
- 32 CM 1-Ton Motor
- 10 CM 2-Ton Motor
- 15 CM ½-Ton Motor
- Motion Labs 8 Way Distro

EVENT DETAILS

Meadow Stage at this year's Hulaween was *scary* good thanks to the incredible lighting design by MMP's friends at PHNTM. MMP noted they were honored to be a part of the production, providing gear and support for audio, lighting, video, and rigging.

2024 LATIN GRAMMYS

PRODUCTION TEAM

Lighting Designer: Tom Kenny **Lighting Directors:** David Convertino, Joseph Vineyard, Felix Peralta

Head Gaffer/Project Manager: Alex Flores
Best Boy: Michael Smallman
Head Lighting Tech: Michael Mustica

Head Lighting Tech: Michael Mustica **Lighting Tech:** Adam Hagin, John Weise, Rommer Matute **Account Rep:** Bob Suchocki

GEAR

Lighting

Chauvet Maverick MK3 Wash Chroma-Q Color Force II Chroma-Q Studio Force II Elation Artiste Mondrian



Elation Artiste Picasso
GLP impression X4 Bar 20
GLP JDC1 Hybrid Strobe
Martin MAC Aura XB
Robe RoboSpot Follow Spot Systems
Robe Pointe
Robe MegaPointe

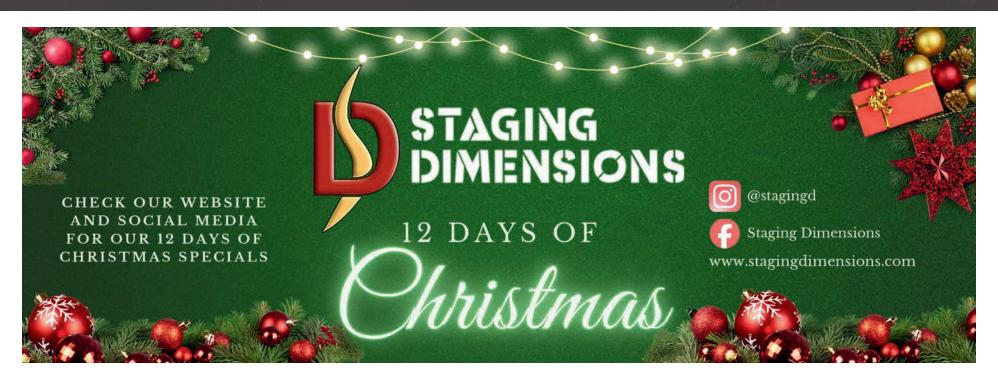
Lighting Company: 4Wall Entertainment **Venue:** Kaseya Center, Miami, FL

MA Lighting grandMA3 Full-Size Tyler Truss GT Truss

SFX/Atmospherics MDG TheONE Look Solutions Viper NT

EVENT DETAILS

The Latin Grammys celebrated their 25th anniversary at Miami's Kaseya Center with an award show that was full of impressive musical moments. 4Wall provided LD Tom Kenny and the lighting team with a lighting rental package for the event that featured performances by Anitta, Becky G, Alejandro Fernández, Kali Uchis, Luis Fonsi, Pitbull with Bon Jovi, and more.



BUYERSGUIDE / **WINCHES & HOISTS**

All Access Staging: Versa Track Winch

The Versa Track Winch is a highly configurable system designed specifically for moving scenic elements laterally. Its streamlined design allows for flexible mounting options, including under or on top of truss—and even vertically—and it's compatible with various



track systems (Shown here with Rose Brand Triple E Unibeam).

Also, the Versa Track Winch travels up to 60' at 26"/second, with acceleration up to 12"/second². Using either show control or pendant operation, the Versa Track Winch offers a straightforward solution for efficient and reliable horizontal movement. Visit the All Access website for more information on the Versa Track Winch.

Applied Electronics: MC Series Hoist Control

Off-the-shelf and custom hoist control systems for portable and permanent applications. From chain and wire rope hoists to cable reels and linear actuators they can configure turnkey controllers to meet nearly any need. Systems ranging from 4 to 48 channels can be coupled with voltages ranging from 110V/220V single phase to 208V/440V 3 phase. An independent emergency safety stop circuit is incorporated into every system and can be supplemented with the addition of dead-man switches, load cell monitor-



ing, and their SMART run detection system. Handheld remotes feature individual bump buttons and color-coded LEDs. Units are available in both Pelican and ATA-style cases with 7pin, dual twist, or P-14 connectors. Custom interface boxes / wall plates, logo engraving, touchscreens, and custom colors available. Made in the USA and UL Listed.

www.appliednn.com

Creative Conners, Inc.: Spotline v2

The Spotline V2 is a versatile hoist with a lifting capacity up to 750 lb. with a maximum speed of 36"/sec and 100' of travel. It can be over-sped to increase the maximum speed to 72"/sec with a reduced capacity of 375 lb. The hoist supports diverse scenarios including flying scenery, curtain, props, LED screen, and performer flying. The Spotline V2 includes an integral load cell, redundant brakes, initial and ultimate limits, and cross groove



detection. It is fully compliant with ANSI E1.6-1 2021 Powered Hoists Systems and ANSI E1.43-2016 Performer Flying Systems standards. Its square tube frame allows mounting on floors, grids, or trusses. Optional accessories like the Spotline Tensioner convert the hoist to a deck winch, or the Zero-Fleet Sled simplifies rigging.

ETC: Prodigy P75

ETC's Prodigy P75 hoists provide a simple, low-profile way to manipulate stage electrics, scenery, and curtains for setup, storage, and performance in some of the largest venues around the nation. P75 hoists were designed to reduce the space and structure requirements



for stage rigging systems. The Prodigy Hybrid Drum manages up to eight lift lines with 75' of travel, all in a slim footprint of 12 -14". Hoists can be installed upright, underhung, or vertically and support use with traditional upright or underhung head blocks and loft blocks. Fixed speed P75 hoists manage loads up to 3,300 lb. and the P75-SC self-climbing hoist is designed to fit within truss systems to support arena lighting and other loads.

GENeRICO: 8-Way Motor Controllers

GENeRICO ETL listed 8-way motor controllers available in 'lay-down' and rack mountable style for truss use with 21-pin Tajimi or P-26 connectors. GENeRICO motor PDs operate seamlessly with leading brands of hoists. All GENeRICO motor PDs come with an ATA case as standard. Four-channel units are coming soon plus 16- and 24-way pendants. Both 21- and 26-pin control cables and extensions in stock in January. GE-NeRICO is proud of its affordablitiv as well, noting that GENeRICO's pricing cannot be beaten.



www.genericoep.com

GIS Corporation: LP2500/BL.D8

The GIS LP2500/B.D8 hoist is the newest LP series addition. Offering a 4T lift capacity in single fall equipped at 12.5 FPM. GIS hoists are reliable and long-lasting with an aluminum casing and cover that's weatherproof with an IP65 rating as standard. They are easy to operate with quiet running thanks to their three-step drive and helical gearing. The polygonal design of the hoist allows for easy maintenance. It's usable as a stationary or climbing hoist without modification. Options include different operating and control voltages, the easy assembly of a second brake, and a wide range of accessories and options.



www.gis-corp.us

IWEISS: Paragon Hoist

The newly patented Paragon hoist is a compact, highly engineered, and safe overhead lifting solution designed for theatrical stage systems, banner drops, or elevated displays. This unique, multi-line hoist features two gear motors with brakes, redundant drive chains, chain break detection, and motor synchronization for a minimal footprint. With a width of only 1', it installs easily in tight spaces and can be positioned on 8" centers when used on opposing sides. The Paragon offers 3/16" or 1/4" lift



cables, a 4-element rotary limit switch, optional encoder, variable speed operation, and separate motor control cabinet and control station for added flexibility.

PRG: ST12 Performer Fly

The ST12 Performer Fly Hoist is a versatile single-axis cable hoist, capable of performer flight operations with a working load limit of 500 lb. An AC servo motor ensures safe operation, and the hoist can be controlled via any PRG Stage Command® 7.5 kW drive system. With two independent brake systems, cross-groove sensors, easy-to-adjust limit switches, a SIL3 absolute encoder, and optional slack line sensors, your load moves safely every time. Flexible mounting options are available, and the hoisting line can be rigged for vertical or horizontal applications. An integrated accessory mounting system allows for custom solutions and accessories to fit your requirements.



www.PRG.com

Rose Brand / ADC: SDRX2 ConTour Winch

New ADC SDRX2 ConTour Winch offers reliable, accurate, affordable theatrical automation that operates via Art-Net, Modbus/TCP, sACN, or ADC Axis1 Touch Controller. Packed with safety features, including SIL3 compliance; emergency stop circuit over ethernet; 24VDC primary, power-off brake; and more. Dual synchronized lift lines send integrated power and 10/100 data down to control your scenic or lighting effect while preventing loads from spinning. In fact, power and data to the lifted object is independent of the winch's power and data network, so moon boxes, video panels, etc. are more easily flown, energized and controlled, 50lb load capacity includes two 10A (18ga) conductors for power and four twisted pair data conductors (24ga) for data. Travel speed of 0 – 3'/sec and 25' (7.6m) of lift-line travel.

SGPS ShowRig: Double Drum Yo-Yo Winch

The SGPS Double Drum Yo-Yo Winches set a high standard for strength and versatility in concert touring and live event rigging. Available in 4', 5', 6', 8', 10', and 12' lengths, these winches offer some of the highest lifting capacities on the market, supporting loads up to 2,000 lbs. Designed to integrate seamlessly with 20.5" box trusses, they make it easy to assemble motor grids and ensure lifting points are precisely where needed. With a dual drum system for smooth, controlled motion and built-in safety features like a rotating



shaft limit switch, these winches provide reliable performance in a compact, adaptable design—built to meet the demands of any production environment.

www.sgpsshowrig.com

TAIT: Kinesys Apex Hoist

TAIT's Kinesys Apex Hoists provide smooth, variable-speed lifting, from zero to full speed, lifting up to 2,750 lbs., with a high load-to-size ratio and lifting speeds of up to 100'/sec. Containing dual near-silent brakes, dual encoders, four limits, and a built-in load cell, these hoists are ideal for both theatrical applications on a busy grid and for concert touring where precision group control and ultra-smooth lifting is needed.



In the U.S., Apex meets ANSI 1.43 for overhead motion and lifting, and for production itineraries that include Europe, the Apex Hoist has all the safety features recommended by EN 17206 for all lifting use cases.

www.kinesys.com

TOMCAT USA: EXE Ace 1,000kg

The Ace is EXE Technology's D8 chain hoist line, available at capacities from 500kg to 2,000kg. The EXE Ace 1,000kg is extremely compact and light. An Ace 1T can be rigged inside a 20.5" truss and rotate 360° on its swivel hook. When outfitted with 60' of lift, the Ace 1T weighs in at 93 lbs. The reduced weight benefits hoisting capacity, ease of handling, and reduces freight costs. The clutch is outside the load path, and internal rotary limits are standard. The padded rotating handles are ergonomic and durable. All load bearing components are readily accessible allowing fast inspections. EXE chain hoists may be integrated into any 3PH hoist control system, including but not limited to: Skjonberg, Motion Labs, and Kinesys.



www.exetechnology.com

Wenger | J.R. Clancy: PowerLift® Hoist

The PowerLift is an economical, automated hoisting system available in a range of fixed or variable speeds to meet your requirements. Its versatile mounting clip system enables the PowerLift to be installed in virtually any space, including performance spaces without a conventional grid. The clip mounting options make this possible, even if the supporting steelwork is not in the optimum position. Features include speeds up to



sition. Features include speeds up to 180 FPM (1 m/s); travel up to 62' (19m); and a gross capacity of up to 2,500 lbs. (1,134 kg).

https://performance.wengercorp.com

Whirlwind: PLMC Motor Controller and SKB Series

The PLMC-SKB Series from Whirlwind consists of one of its Power Link® PLMC Motor Controller series mounted in a *waterproof SKB series rolling case, which offers the ultimate in portability and weatherproof protection. Now you can have your Whirlwind PLMC motor controller in an easy to transport, *waterproof case. [*The SKB case is only waterproof when closed and latched.] There are a variety of configurations and choices of remote controllers. With the PLMC-SKB Series, you get all the features of Whirlwind's traditional PLMC motor controllers in a small, portable, weatherproof solution.



www.whirlwindusa.com



COMING NEXT MONTH

IP65 LUMINAIRES

We start 2025 off by comparing IP65 rated luminaires that are protected from the elements including dust and water.

THE PARNELLI NOMINATED MTN WEATHER MODULE



REVOLUTIONIZING WEATHER MONITORING FOR EVENTS

PROVIDING UNMATCHED INDUSTRY-LEADING AI WEATHER TECHNOLOGY



MO

MUSHANG Launches VFX Lab in Sydney

th 14 years of experience in visual creativity, and building on their successful operation of the Shanghai MUSHANG XR Stage, MUSHANG has expanded its advanced video production capabilities to Sydney with its latest MUSHANG VFX Lab. Purported to be the largest permanent virtual production studio in Sydney, the facility is equipped to handle some of the industry's most demanding projects in film, television, and advertising.

MUSHANG VFX Lab is designed to bring its clients' most ambitions visions to life. The studio features Hollywood-grade equiment, including Brompton Technology LED processing, ROE Visual LED panels, as well as industry-leading technology from Disguise, Stype, and MRMC Bolt systems; all integrated to create a state-of-the-art virtual production eco-system. MUSHANG's VFX Lab can support a wide range of creative visual productions. from feature films and broadcasts to commercials and episodic content.

While MUSHANG Shanghai studio focuses on commercial advertising with comprehensive services from concept to execution, the Sydney-based MUSHANG VFX Lab places a distinct emphasis on virtual production. It provides technical and equipment support to production teams and creators needing advanced virtual production solutions.

"MUSHANG's thrilled to bring our extensive experience to our first virtual production facility in Australia," shares Henry Sha, CEO & Founder at MUSHANG VFX Lab. "Australia has a long-standing reputation for producing high-caliber VFX films and productions, providing a dynamic talent pool, so we decided on Sydney. For this studio, we're utilizing solutions from our trusted production partners, including Brompton Technology LED processing, ROE Visual screens, Disguise virtual systems, Stype tracking, MRMC Bolt robotic arms, ARRI lighting, and Sony Venice 2 cameras with top-tier Leitz Prime lenses and Cooke Anamorphic FF SF lenses. This golden combination of partners has been instrumental in countless projects, and we're confident it will continue to drive our success for many more vears to come. Having this selection of worldclass equipment, paired with our expert team of producers, directors of photography, Unreal Engine artists, and virtual production consultants, ensures the highest quality experience for our clients."

The brand new MUSHANG VFX Lab features an 18m x 4.5m meticulously engineered curved ROE Visual Black Pearl BP2V2 LED wall complemented by a ceiling of Carbon Series CB5MKII LED panels. This configuration ensures outstanding visual fidelity with an impressive 8K resolution across the entire space. Designed for virtual production applications, the BP2V2 LED panel is used in a myriad of studios across the globe. ROE Visual and MUSHANG previously collaborated to create the Shanghai MUSHANG XR Stage in 2021, which has been instrumental in delivering high-quality advertising for renowned brands from the SAIC. Unilever Global, and Henkel group. Sha states: "Our choice for ROE Visual was a no-brainer; the company has established itself as the go-







to brand in virtual production technology. Having successfully operated our first virtual production studio for over three years, we were confident in ROE Visual's commitment to quality and service, enabling us to focus on efficient studio operations."

The studio's LED setup, featuring ROE Visual's BP2V2 panels for the main wall and CB5 MK2 panels for the ceiling, is calibrated with Brompton's Hydra measurement system and is Brompton HDR-ready. With a near-8K resolution, the display is driven by two 4K Tessera SX40 processors, a Tessera S8, and five Tessera XD 10G distribution units, providing unmatched clarity and performance. Since its opening in September, the studio has already completed two commercial projects, both of which utilized



Brompton's advanced Tessera feature set, including HFR+ (High Frame Rate), adding new creative possibilities for diverse productions. "Brompton has been a reliable and steadfast partner for us," continues Sha, "In commercial advertising, what we need most is stable performance and efficient application, and Brompton has consistently excelled at both. Brompton was an obvious choice for us when designing the VFX Lab in Sydney. Following three successful years operating our first virtual studio in Shanghai, we remain committed to Brompton as our trusted partner. We find Brompton and ROE Visual to be the ideal combination for virtual production."

"We're delighted to be part of such a powerful collective of partners at MUSHANG VFX Lab in Sydney," says Elijah Ebo, Director of APAC Operations at Brompton. "It's inspiring to see the synergy between our LED processing technology and the other high-caliber equipment in the studio, all brought together by MUSHANG's expert team to create one of the most cutting-edge setups in virtual production today. We look forward to supporting their continued success as they push creative boundaries in the industry."

As MUSHANG VFX Lab continues to explore the Australian market, the team aims to demonstrate the potential of virtual production for local production companies, showing how it can open new doors for expansion. "Located in Alexandria, just a 10-minute drive from Sydney's city center, our studio offers convenience, with ample parking and space for productions of all sizes. We're excited about future collaborations in film, television, and beyond," exclaims Sha.

One of the studio's first projects—secured within the first month of openingwas a TV commercial for local Australian fast-food chain Hungry Jack's, produced by HelloFuture TV. "Feedback from directors, cinematographers, and production staff has been overwhelmingly positive, with high praise for the possibilities our virtual production studio offers."

Sha concludes, "In the rapidly evolving landscape of virtual production, MUSHANG VFX Lab emerges as a pioneer for creative innovation. Since its opening, MUSHANG VFX Lab has earned praise for its advanced capabilities and forward-looking approach. It's clear that this is the future of filmmaking, particularly when efficiency and cost control are paramount."

This insightful content was shared by ROE Visual and Brompton Technology, both industry leaders in LED and video production solutions. Learn more about Brompton Technology at https://www.bromptontech.com/. Learn more about ROE Visual at https://www.roevisual.com



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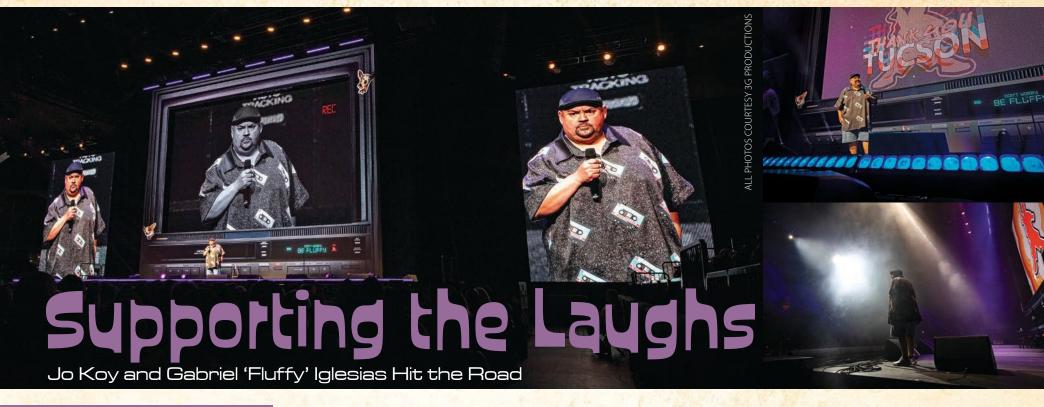
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By Kevin M. **Mitchell**

t's a cliché, but rock stars want to be actors, and actors want to rock stars," says Omar Herrera, who knows a bit about all this as he was with Live Nation before becoming Director of Post Production at Icon Concerts. "Well, comedians want to be rock stars too. So, we bring that rock and roll sensibility, style, and vibe to comedy but also the efficiency." Supporting that 'rock and roll sensibility and efficiency' is 3G Productions. Herrera has had a long relationship with 3G and its Executive Vice President, Jay Curiel. When it came time to mount major. arena-sized tours by comedians Jo Koy and Gabriel "Fluffy" Iglesias, Herrera didn't hesitate to turn to the 3G team.

3G handles major tours, festivals, sporting events, corporate gatherings, and today is a turnkey operation for any live event. "We supported Jo Koy's last few tours with Omar, then when Fluffy became an Icon client, he turned to us as well to reimagine the production for his arena tour," says Keith Conrad, CEO of 3G Productions. Koy was the first comedian to sell out T Mobile Arena in Las Vegas in November 2022, and 3G Productions was there. "That was a cool event to be a part of, in both Jo's and our hometown; then to continue the relationship over the last couple years was special," Conrad says. "We don't take these relationships lightly."

Conrad started with 3G in 2012, becoming its CEO in 2021. 3G started out as an audio production and rental company. "During the pandemic, we reimagined what the company was going to be, and we determined we needed to be a full-service production company," Conrad says. "We had the clients and relationships, but not enough equipment." They quadrupled their gear and became a one-stop shop. With Curiel's connection with Herrera, and because they were able to take care of all aspects of production and do it better than Herrera's previous experiences, the relationship between 3G and Icon grew.

Conrad says the two biggest components to supporting comedians in arenas are audio-"You've got to make sure it's very clear, right?"—and video. When Conrad says it's a "one-stop shop," he means it—3G's Andy Ruiz designed the shows with Herrera and is a long-time employee. So is Martin Ruiz, Andy's brother, who serves as a 3G Production Manager. One advantage of having an

in-house design is that they can provide that service at no additional charge. 3G provides the complete crew, so there is a consistent, experienced team that is sent out on the road for all the acts they serve.

Andy Ruiz has been in the business for more than 25 years. "I was touring the world, and in 2017, I got pulled in by 3G to help them expand further from just being a sound company," he says, while also moving further into production design as more comedians started doing arena tours. "They have been moving up to bigger spaces and wanting more production, especially video," he notes. "We weren't super into comedy until a few years ago when we supported a George Lopez show, and as big as that was, it doesn't compare to what we're doing with Icon now."

In addition to being Director of Production for Icon concerts, Herrera functions as the Tour Manager for each artist. The process for these two shows (and all Icon productions) is that he starts imagining how the set could look and conceptualizes it, relying on his years doing shows along with additional research. He then brings Andy Ruiz in, who goes to work on the design aspect, infusing his creativity in it as well. "We like to present two choices to the artist," Herrera explains. "Further discussions and changes are made, and then something comes to fruition in a timely manner, and Andy has done a stellar job taking care of them." The process is putting together a three- or four-truck package and "giving the artist the best possible show we can, and that means doing it rock and roll touring style," Ruiz adds.

Gabriel 'Fluffy' Iglesias

While the 3G team had supported the earlier (and somewhat smaller) comedy tour for Koy, the tour for Gabriel "Fluffy" Iglesias marked the first big arena comedy tour for the 3G team. "Fluffy always has had big productions with a lot of scenic, so he wanted another big show, but to be smart about it," Ruiz says. He wanted a 90s theme with an oldschool feeling, and a giant VHS tape recorder set piece emerged as the key focal point for the production design. "But in making a massive VHS set, we knew it had to be done with LED, and something that loaded in under four hours and out in under two hours every day. So, it became a matter of how we can be aggressive; build a massive show for his comedy

tour with production at the level he's used to. but go in and out and up and down faster." The team was able to make it happen and met Iglesias' expectations within the budget and time constraints. "It looks great, and people love it—they think this is a 20-truck tour, but we're rolling it with just three."

Once that set piece was in place, they had a new challenge: Since the set is so close to the downstage edge, the lighting had to be chosen wisely. "It had to be rock and roll, but [we had to] make sure the framing on the fixtures worked and that there was no bleeding out into areas, blinding audience members." So, they settled on the Elation Proteus Maximus "for the brightness to create that downstage wash which we're really happy with," says Ruiz. Robe MegaPointes brightened it all further, creating that eye candy while also making the stage look bigger. The design also includes some MegaPointes to cut through the haze provided by two Antari F7 Smaze Hazers.

The Gabriel Iglesias production is also an especially video-heavy show, with content created by Brian Enterline. "Brian just killed it with the 90s graphics and really made that giant TV authentic," Ruiz says. "You really think you're watching an old show on VHS, but it's in 4K and looks awesome." All set components were designed and built by the 3G team. (They also lit Iglesias' Netflix special a few months ago.)

Jo Koy

For the current Koy tour, 3G invested in additional automation and a Kinesys tracking system that moves the video walls during the show. While the two shows share a lot, there are some differences with Koy's. He has a DJ package, for example, and his style of really interreacting with the audience affected the

"Jo wanted some specific items, and Omar and I had some ideas," Ruiz says. Koy specifically wanted a different approach to what arena comedy tours have done with video. Taking all the ideas, Ruiz then rendered design ideas in Vectorworks. Different versions of the show came and went until they were all excited about what they landed on, "Jo really took a different direction and wanted automation, curved screens, [Robel RoboSpots, and more lighting [effects] that aren't typical to comedy shows. He and his team also came up with some great video content."

"We had to choose fixtures that had some punch," Ruiz says. "In a situation where you'd normally have four lights, we had to pick one that could do the work of four. So, we chose the rig that we did because it gave us either the best eye candy or it covered the crowd best; Jo really loves to light up the crowd so that was always an important consideration. We really had to go with something big and bright to cover it all." He landed on 30 Robe Tetra2s, which "are great eye candy plus gave us the backlight we were looking for."

Solutions to Challenges

"Jo and Fluffy are super enthusiastic about all aspects of their shows," Ruiz says. "They love to interact with us as much as they love being on stage. There is no ego—they are just cool people. They do the work and aren't above doing sound checks every day. They iust really care."

The challenge with both tours is that they are arena-scale but sometimes must be able to fit into smaller theaters (Koy a bit more often than Iglesias—sometimes going from an 18,000-seat arena one day to a 2,000-seat theater the next). "It's difficult when you're traveling with an arena rig and you start loading into a theater, because right away you have to be selective about what you're taking off the truck. It's a matter of figuring out on the fly how much you can hang, etc." Ruiz credits his brother Martin with being especially astute at this task.

Herrera says he's worked with 3G for most of his career, citing Curiel as "a mentor, a colleague, a confessor, and a confidant. That's something that is invaluable in this industry." He trusts the 3G team and values their work ethic and appreciates their ability to handle situations and challenges expeditiously.

Herrera again emphasizes the importance of bringing the rock and roll approach to comedians. But there are differences—pleasant ones. "I will say this in regard to both mediums: comedy is much more civilized," he says with a laugh. "The egos are less, the entourages smaller, and you can get at least six hours of sleep out on the road if you want. But our rock and roll adaptability and onsite problem-solving skills are just as critical in comedy as in music. In that respect, Andy and I are a great team. There's a fluidity that we have from rock and roll which translates to comedy well." PLSN



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By Michael S. **Eddy**

exas-based metalcore band, Crown the Empire wrapped up its 21-city Not Dead Yet Tour, featuring a lighting design by Ryan Pervola, having crossed the U.S. Produced by Live Nation, the tour marked Pervola's first with the band, though he had previously worked adjacently to Crown the Empire when he was with Tetrarch in 2021. Both bands supported the headliner Atreyu on The Baptize Tour, and Crown the Empire opened in 2023 for Nothing More when Pervola was working with that band.

Design Development

Though he was familiar with the band, when he got tapped to design for Crown the Empire, Pervola started doing research on the band's aesthetics; looking at their promo artwork, as well as what they had for their last album cycle and older albums. "It looked like they were going for a very—not grungy, but a coarser, rougher design," states the designer. "Their previous stage setups had giant cross, tombstone-like things; the backdrop had lots of skeletons and scratches. It brought memories of old school, hardcore punk, I wanted to approach creating a show that was just as punchy visually as what they were trying to go for musically. I believe I gave them that, a show that was super punchy, yet it was super compact. Since many of the songs have jumpy breakdowns, with a lot of different variations, I wanted to give them something that would punch and pop every time."

Having worked with a lot of metal bands, Pervola has developed a design and program-



ming style "where I program my lights as if it were a percussive instrument instead of something more sweeping," he says. "Metalcore bands like Crown feature a ton of breakdowns. sometimes two or three different ones in the same song, and often just hitting strobes isn't enough. I tend to always program to the drummer, so I always go with a rhythmic approach to hits and chases and try to apply different types of hits and styles based on the tempos and movement of the song. Sometimes it can have me overthinking elements, but in the end, it gives a show that looks super unique and matches all of the speed and tempo changes that can occur during a single song. Crown songs are fairly complicated and complex with their breakdowns and structure, so I wanted to make sure no moment on stage looked flat or

static. Every tom hit or double hit is considered and noted in my programming, which helps make things more visually stunning for a guitar solo or a pre-breakdown moment. It makes for an incredibly fun and creatively fulfilling experience, especially when the band loves it just as much."

The band also gave Pervola input on what they wanted and feedback through his design process. "I gave the band a lot of information as I went along," he explains. "I programmed the show at home with everything timecoded and used Capture to create videos of how it looked with the backdrop and the set pieces so the band could see visually how each song looked. After I sent them the videos, they would give me feedback on the changes they wanted to see. They'd send notes

back on things to tweak, and I'd send videos of the revised cues and how it now looked. This let me really give them a complete, full show of what we wanted, working together. I love being able to have the band's input on things. I want to make sure that they are getting a show that represents what their music is. Overall, they were really, really happy with the final product. I didn't tour with the show, so when they came through my hometown of Baltimore, I went to see the show in person, and they were over the moon with how everything looked. It felt good to have been able to give the band exactly what they were looking for and seeing it onstage."

Crown the Empire, which formed in 2010 in their hometown of Dallas, TX, has a lot of material to draw from for their set list, so Pervola listened to a lot of their music as he prepared his tour design. "A lot of their songs, and sounds, have evolved over time," he describes. "It was a show that very much felt like a greatest hits tour. They were pulling songs from different eras of their catalog. So, it was just a matter of sitting down and listening to the songs. I'd make notes, like 'this song feels super serious. This one feels very slow and melodic.' Just getting the feeling for each song. There's a song, 'Johnny Ringo,' that sounds very much like a carnival barker at a circus. So, I went with a whole vibe of making it seem like it's inside an evil circus tent. I sent the band a video of that idea, and their guitarist, Brandon, was over the moon with how it looked, saying that I had captured the whole vibe perfectly. I felt that I was on the right approach and knew it was just a matter of listening to each song, finding its direction."

Though they have a deep catalog, for the Not Dead Yet Tour run, the band had a set list they stuck with, allowing the show to be fully timecoded. Even so, Pervola planned ahead for that 'just in case' moment when things may go differently. "This show is fully timecoded, the set list is locked in," says Pervola. "However, normally with my timecoded shows, if they want to move things around, usually I can give an artist some leeway; it's just whatever song they want to pull from. I program the whole pool of songs, and then the LD can vary around when they want to make a change."

Key Gear Choices

Pervola worked closely with PRG, the lighting vendor, to realize his design with their support. "I was able to get the fixtures that I wanted for my design. I really wanted to use [GLP] JDC1s as a rear light punch and I really wanted [Martin] MAC Auras to create this big sort of silhouette from the side; something super aggressive for an aggressive looking show. I wanted the band to be hit from all kinds of different angles, and around from the sides. I wanted to create lighting looks that were this big footprint of lights moving around on stage from the different sides. I used the GLP impression X4 Bars, which could do a really good job of getting different side lit angles to capture the moodier songs and have the JDC1s in Full mode just to be able to fill in the space in the back and then punch the audience when the big, bouncy breakdowns happen. So, they could just swap back and forth and have the Auras capture the band. PRG was able to hook us up and get us pretty much exactly what we wanted. At one point, I was going with a different light on stage, and then switched to the Robe Spikie at the suggestion of my Lighting Director/Board Op, Chris Galante. He felt that they would fit better on stage, as well as transport better, so we switched to the Spikie and considering some of the venues that we were in, they did the job perfectly."

Practical Flexibility

Since the tour played a range of venues in terms of size, the design needed to be able to load-in and load-out efficiently. "Because we had limited space of how we could store things from city to city, we took the entire lighting rig and condensed it so that everything lived on pipe and base—and on wheels. All they had to do was roll out from the truck to the stage and just plug it in and it was set to go. There were no overly complicated matters of having to unpack lights and setting everything up from scratch every day. We made it very modular so that it would just roll on stage, ready to go, and come off easily and pack right back up."

As the tour was playing a mix of smaller venues, as well as some bigger venues, like the House of Blues in Chicago, Pervola wanted to create a show with flexibility; he wanted it to be able to grow or shrink in footprint but to always look big. "I looked at the larger venues and created a show that had big depth, shape, and scale of a bigger show," he comments, "then when we went to a smaller venue, we could condense it in a way that would not take away from the aggressiveness of the design and looks. We basically were able to take the same show and filter it into two different sizes. It was, by design, very easy to scale down, it was just a matter of cutting a set piece or scootching everything more onstage since it was four pipes upstage and then four pipes offstage, two per side."



Paige Newman, Account Executive and Thomas Walls, Project Manager

On the solutions PRG helped provi

Crown the Empire was seeking quality lighting support all while needing to adhere to a budget-friendly production within a short timeline. PRG's artist development team specializes in this kind of support, providing scalable, cost-effective solutions that allow developing artists to achieve impactful, professional-quality shows.

n supporting the creative and production team:

Working with LD Ryan Pervola and Production Manager Drew Sullivan was a highly collaborative experience. Ryan's vision required a lighting setup that was dynamic and complementary of the stage and could enhance the intensity of Crown the Empire's performances. Pervola chose fixtures that enabled the lighting to really shape the atmosphere and drama of each song. With Drew managing the production, we worked closely to keep everything in sync—ensuring equipment fit smoothly within budget, delivery timelines, and operational needs. Our open line of communication and shared commitment to creative integrity made it easy to adjust for each show's specific demands while staying aligned with the tour's overall aesthetic goals.

On why PRG was the right vendor for this tour:

PRG was the right partner for this tour because we bring an extensive inventory, dedicat $ed \ support \ teams, multiple \ locations \ for \ ease \ of \ gear \ swaps \ across \ the \ country, \ and \ deep$ experience in live events, allowing us to fully support the creative of Crown the Empire's team while remaining adaptable to any changes on the road. Additionally, our commitment to service and rapid response to any on-the-ground challenges ensured the production team had confidence that PRG would be there to support them every step of the way.

Working on this tour was an exciting opportunity for PRG to support an incredible band and crew while also being a small part of such an epic experience for fans of Crown the Empire. It's always rewarding to work with such a dedicated team to bring a vision to life, and we're proud to have been a part of this tour's success which such talented individuals.



Vendor Support

As noted, PRG was the lighting vendor for the tour, and Pervola comments that "they were absolutely fantastic. PRG was more than helpful and checked in with us on a regular basis. When we needed some lights to be swapped out because we were having issues, which happens on any tour, they sent us exactly what we needed to get everything up and running. They were also super awesome to work with getting the quotes, getting us everything we needed while being able to stay within our budget. They were great and I would absolutely work with them in the future for other shows."

In terms of the set pieces and the backdrop, those were handled by Joshua Howe at Laboratory Creative who worked closely with the tour's Production Director, Drew Sullivan to deliver the scenic elements. "The team at Laboratory Creative sent me all the dimensions and scale for everything so I could have someone create a 3D model of the set pieces to scale," says Pervola. "Then I added them to my renders with the light passing through. It looked one-to-one exactly as it would look on stage. It was really satisfying to be able to see the show I programmed in Capture on my computer in my studio and then see pictures

and videos of the actual tour on Instagram and YouTube, as well as seeing it in person, and it looked exactly the same as I had designed it," he says.

Pervola adds that the "level of detail in the renders really helped in conveying my design ideas to the band, which is what I always strive for. I like to have complete transparency with the band of what the show is going to look like and get their feedback during the design process. A lot of the best ideas come out of collaboration. There were a couple of songs where the band wanted to change the color scheme up, or how the bridge looked. It wasn't necessarily what I had envisioned, but it was what they wanted. When I saw it live, I have to say, I thought that it looked way better. To me that's how collaboration should work, especially considering that I come from a theater background before moving into concert work. Different ideas put together often make something cool; it comes out better than just the ideas of one person. I think different perspectives and different ideas work better together."

If Pervola was speaking with another designer, someone who works in this industry and really understands touring music, he'd highlight streamlining the production aspects of the show. "The ability to take simple aspects of the design and programming and make it look more complicated than it can come across," notes the designer. "I often help people with timecoding, especially remotely, and I was working with a different artist and designer recently, helping them timecode their show, and among the advice and tips I offered on how to streamline the process of putting on a production was make sure it tours easily. First, you have to find a way in the design to make it so the show can go up simply and easily, that it's not a big, gigantic mess of cable. Think about setting it all up and all the different tactile things you have to do every day to make it work. I love that my Lighting Director/Board Op, Chris Galante took the show and found a way to take the load-in and -out process and make it even faster than I had intended. The other piece of advice is to go with what your gut is saying on a song, but don't be afraid to get input from others. Sometimes other people have great ideas that you can implement that work better than what you originally planned. Be open to input while designing the show."

Pervola sums up his satisfying experience designing for Crown the Empire. "Everybody was awesome, and I'm appreciative of Drew bringing me on board to design the show," he states. "It felt awesome to be able to put everything that I had in my brain on stage without, I think, too much restriction. They gave me free rein, saying 'this is the budget, do whatever you want to do.' I felt like the design was a good representation of the band and what they were trying to go for on this particular tour. Also, thanks to Chris Galante for holding down the fort on the road, taking care of the day-to-day, and for just making everything easier for all the different venues. Chris is local here in Baltimore, he's worked with me on some union gigs and some corporate gigs, and I knew he had a background working with a bunch of other touring acts, so I knew he'd be a good fit on this tour, and he really was great. I wanted to make sure there was somebody that I could give the keys to and they would drive the car without a problem." Seems like Crown the Empire's Not Dead Yet Tour drove straight through in the fast lane all the way. PLSN



ne Adele in Munich residency, at Germany's Munich Messe last August, was huge in every respect. Her residency took place on a fully bespoke, purpose-built stage in front of a 772' x 62.5' (220m x 19m) LED screen. comprised of ROE Visual's Carbon 5 Markll panels (awarded a GUINNESS WORLD RECORDS™ title for the Largest Continuous Outdoor LED Screen). The massive LED wall provided 4,625 square meters of screen to back up the production. An over 650' (200m) semi-circular stage was located in front of the main video screen, paired with a 305' (93m)-long curved runway connecting each side of the main stage to a B-stage in the center of the venue, allowing Adele to get close to her fans. The Adele Arena in Munich hosted approximately 80,000 fans each night for just 10 performances over five weekends in August. The purpose-built outdoor venue was designed by Production Designer Florian Wieder, with the overall scenography design concept created by STUFISH Entertainment Architects. Once the residency wrapped, the venue was taken down and the site returned to its previous state.

The creative team behind Adele in Munich spent a year working on the various aspects of this massive undertaking with everything designed around these unique performances. all of which was intended to bring the artist as close as possible to as many of her fans as possible in the audience. Lighting the show for daylight, dusk, and darkness was another challenge, as being mid-summer, all the performances had to be aligned with that natural transition. The beautiful, all-encompassing lighting was designed by Cory FitzGerald, Partner with global design & production agency, Silent House Group. FitzGerald started designing for Adele in 2022 for her Las Vegas residency, then also designed lighting for her BST Hyde Park, London shows that same year.

Massive Design

With the giant seamless curved screen idea already in place, FitzGerald started to consider his lighting positions in the custom arena. The massive screen, and the vast overall dimensions of the performance space, meant he needed bright and powerful fixtures to properly illuminate Adele's performance. Lighting was vital "to recreate some of the theatrical style and ambience of Las Vegas in this completely new and different context," he explains, seeking to combine the drama of beautiful, bespoke big operatic looks with the video elements—both I-Mag and created content—in a poetic harmonv. Since this was a completely bespoke build. FitzGerald and the lighting team were able to

place towers and other lighting positions, plus quantities of floor lighting during the early phases of the ideation process following detailed negotiations with the other departments. His overall design would encompass around 2,000 luminaires, which were all provided by UK-based Neg Earth Lights.

FitzGerald implemented 125 Ayrton Cobra and 85 Avrton Domino Profile IP65 rated fixtures in his massive and impressive design. The Domino Profile fixtures were located in the overhead stage rig and upstage floor areas from where FitzGerald used them for ev-

stage light and audience light to aerial effects. "But it was the ground row of Dominos that ended up being the workhorse of the stage floor system, creating a horizon of lights behind the band and Adele," says Fitz-Gerald, "and big beam and break up effects in the camera backgrounds. The Dominos are great big-lens punchy fixtures which not only performed fantastically but looked great too."

The Cobra laser-sourced fixtures were arraved along the central and side thrusts and the B-stage which also saw a lot of action, from where FitzGerald used them as beam lights for graphic patterns in the night sky, as well as for textures to create unique breakup looks. "One number, "Hold On," was particularly impressive in that it featured a unique use of Cobra beams and searchlights through the crowd that then became a massive geometric array into the sky," explains FitzGerald. "It was really great to finally get to utilize all that punch and versatility of the Cobra."

Having used Ayrton fixtures before to light Adele, FitzGerald and his team saw the potential of Domino Profile and Cobra for such a project of this size and prestige: "We had used the Domino in Adele's Vegas residency and decided to keep them for Munich because of their versatility," he explains. "We'd tried Cobra before, but never quite to the extent we used it on this show. I'm really impressed with the brightness and the reliability of both of them."

Out in the Weather

With most of the massive performance area in the open air during summer in Germany, the IP65 rating of the fixtures was essential. "The entire rig was exposed to the elements all day and night in this production, and we'd seen a LOT of rain since day one of load in," comments the designer. "The fixtures held up great in the weather and the beams looked amazing in a drizzle."

FitzGerald's lighting design also featured over 250 Robe moving lights. The iFORTE LTXs used for multiple key lighting positions for the artist: 112 of them were used for key lighting positioned on 11 of the FOH towers in multiples of eight or 12 per tower. The throw distances from these towers ranged between 50' and 400' depending on the stage areas they were focused on. Twenty-five of the iFORTE LTXs were running on a tag-and-anchor tracking system with two on the Robe FPV RoboSpot followspot system. FitzGerald had 18 iF-ORTE LTXs deployed to combat direct sunlight during portions of some performances.

FitzGerald praised the Neg Earth Lights' team for sourcing so many during an exceptionally busy European summer season, commenting that in an ideal world he "initially would have like a few more, but the results using these—combined with around 2,000 other lights in the rig—enabled the creation of a perfect visual collage." He first used the iFORTE LTXs as followspots on Justin Timberlake's Forget Tomorrow world tour and they have been a go-to for that task. He likes the huge lens and the intensity, as well as the "excellent CT white range. Obviously, the reliability it a must, and the IP65 rating is also great, making them ideal for both indoor and outdoor stadiums and scenarios."

The lighting design also included 36 standard iFORTES that were positioned around the structures for key lighting the band. Thirteen laser-based Robe iBOLTs were also part of the massive lighting rig. These were a late addition to the lighting plot, but FitzGerald was excited to be using this new 500W white phosphor laser source from Robe, Five iBOLTs were rigged on the two scroll towers on either end of the screen, with three upstage center, used for back light effects. FitzGerald really liked them, commenting, "They are super-bright, very controllable, and have lots of options; [they have] great looking gobo effects and really punch through everything. They produced cool back lighting plus stylish back-of-camera looks for the live mix cut by the show's Creative Director Matt Askem, as well as complemented the overall impressive architectural installation with "big, bold and purposeful looks," FitzGerald added.

Audience Lighting

To illuminate the audience, as well as to provide additional effects, FitzGerald chose 400 SGM Light P-10 RGBW LED Strobe Washes. The P-10s were installed above the audience on pylons at multiple points in the arena to provide a good wash of color over the audience. The P-10 has an IP65 rating and proven track record in touring. With a lumen

output of over 40,000 lumens, the P-10s easily brought the lighting effects into the crowd. Also, the rig included a large quantity of SGM Light's Q-8 Strobe Washes around the stage. Wireless DMX and SGM Light's patented dehumidification process make the P-10 and O-8 go-to fixtures for any outdoor event. Along with Neg Earth, Motion Group and Solotech in Germany supported Adele in Munich.

Vendor Support

As noted, the lighting equipment for Adele in Munich was supplied by UK-based Neg Earth Lights. "I want to say a huge thanks to the Neg Earth crew who worked tirelessly for weeks to get this show up and working," comments Fitz-Gerald, "and also to Programmer Davey Martinez, and Lighting Director Nick Van Nostrand, as well as System Tech JJ Contini who got it all working and looking amazing." Martinez and Van Nostrand also worked with FitzGerald on Adele's Las Vegas residency. "We had all learned a lot from Las Vegas in terms of how to use scale to our advantage," says FitzGerald, who also highlighted the work of Lighting Crew Chief, Keith Johnson, and Joao Magalhaes, Systems Engineer, from Neg Earth Lights for their "amazing work making it happen."

Adele in Munich was Production Directed by Paul English. The structures were built by Stageco, with staging and automation from TAIT. The massive ROE Visual video screen was provided and built by Solotech, and the video content was produced by Treatment Studio, overseen by Creative Director Matt Askem.

There were numerous creative challenges for lighting this massive event. Apart from breaking new ground on multiple levels, the sheer scale of the stage design and scenography and the integration of all the technical elements to deliver this truly world-class show to so many people were enormous. 'To showcase some incredibly intimate and personal moments highly effectively in that expansive space was a test for all involved including the artist—but creative mastery, experience, everyone's understanding of the theatricality and essence of performance, and of course, some truly outstanding teamwork and a smattering of show magic all combined to make it a record-breaker not only in size but also in collective achievement," FitzGerald concludes. PLSN

This informative content was provided by Avrton, Robe, and SGM, Learn more about each of these leading lighting companies at www.avrton.eu, www.robe.cz, and www.sgmlight.com



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CONCERTSTUFF.COM



record-setting 82,000 people attended the Concert for Carolina, held at the Bank of America Stadium in Charlotte, NC, a headliner packed disaster relief fundraiser. The evening featured multiple acts including North Carolina natives Luke Combs and Eric Church, along with Billy Strings, Sheryl Crow, Keith Urban and James Taylor. The event raised more than \$24 million to help those affected by Hurricane Helene that devastated had the state just a month before. In essentially three weeks, the production and creative teams from the Combs and Church camps pulled together with a range of vendors to realize this massive stadium concert in an incredibly tight timeline. In his own words, Jerry Slone, Production Manager for Luke Combs, takes us through all the efforts that went on behind the scenes to pull off the successful benefit concert—as well as allowina for live audio & video streams—with so many artists, in so short a time, in such a large venue. We also got insights from a range of companies that stepped up to support this worthwhile cause.



JERRY SLONE Production Manager, Luke Combs

On the challenges and solutions of putting on a massive benefit concert in less than a month:

This concert came out of nowhere and was definitely unplanned since, of course, the hurricane was unplanned as well. Luke wanted to do this concert, so he made calls to other artists, while management made calls to the stadium and found out that they had a Saturday available. So, we had artists, the venue was available, and we could have three days

to get everything built. When we got the official green light, we had 28 days to get it all planned, loaded-in, and done.

The whole spirit of this event was 'let's do this,' but of course, there were some obstacles we needed to address. The idea came about to do the show in 360°, in the middle of the stadium, so we could maximize ticket sales. So, it was 360° in-the-round, on a stage that my team had never been a part of and had never seen in person. We had some photos and schematics but had never touched it. We didn't have a lighting or video design; we didn't have the P.A. So, we started with a stage we'd never seen, with a production that didn't exist, and a 28-day timeline.

This production would normally take us four to five months to build—draw it, render it, and go back and forth developing it. Suddenly, we've got about three weeks. I remember being in a meeting with Kevin Northrup, Luke's LD who was designing the benefit concert, and some other folks looking at how the video walls would work; where the lighting could be; our production requirements, thinking 'we need to settle everything now.' Which we did and I said, 'In 12 days, this is going to be hanging.' We all knew we had to make decisions and keep moving. The time for drawing and figuring it out was over. It was time to start fabricating and bolting stuff together.

It had the vibe of being like a festival stage. We were doing a production for not one or two bands, but four bands. Also, we had several acoustic artists/songwriters as opening acts. The big challenge was trying to create something that looked good, was quick to get in and up, minimized trucking, but still had a lot of marquee

value on the production side to give the fans their money's worth. All in a very small window of time. We had Eric Church's camp involved, as well as Billy Strings' and James Taylor's camp. It worked great. Team Luke took the lead on the design. Eric's Production Manager, Michael Kosciolek, was in step with me on scheduling and logistics and how we laid out tech world. James Taylor and Billy String's camps were there to do whatever we needed from them. They said, 'We'll be there early, we'll play late. We're just honored to be a part of the event.'

Time was absolutely the biggest hurdle. We did get lucky as Morgan Wallen was playing the stadium the weekend before, so CES already had generators there for power—they're the power company for Luke, so that was a no-brainer. The field covering was also already down; there were forklifts and golf carts on site. All we had to do was top up the gennies, tighten up the field cover, and clean up the golf carts. Also, AEG and Live Nation worked hand in hand on this. AEG took the lead on artist movement and scheduling, and Live Nation took the lead on field operations—gear movement, making sure the forklifts and cranes were there for the steel build. I walked into their office, labeled AEG/Live Nation. I looked left and right and saw some of my favorite people who are as good at what they do as anyone on the planet. It was nice to see; a little friendly competition is good and seeing them working together for this cause was great.

On supporting the various production and

We had a previz setup at front of house, so anyone that wasn't Kevin, or Team Luke could

sit in the previz booth and work in real-time, even as someone was on the rig as well. We just handed off the system to them and let them do their thing. My Video Director, Tyler Hutcheson, worked with Butch Allen from Eric's camp, on camera shots and I-Mag moves. Tyler and the Moo TV team helped the other camps with their needs and requests. It was a drop all the gates and let everybody do what they needed to do for their show. Everybody worked hand-in-hand through some very late nights.

On streaming the audio and video of the concert:

Another twist to all of this was that the concert was going to stream audio live on Sirius XM, and a full video stream through VEEPS. This allowed for more people to see or hear the concert and donate. There were all kinds of infrastructure we had to deal with and put in place to make it all happen. Starting with getting the building's IT/engineering team to make sure the CAT6 data streams were secure and had the required speed. We created a dedicated broadcast mix facility in a locker room.

On vendor support:

The core vendors were the ones we use for Luke's tour, so we had SES provide lighting and audio, Moo TV is our video company. Basically, Team Luke vendors and the support was incredible. Of course, the first person on board was Mike Brammer and the Concert Stuff Group—SES, G2 Structures. They have been so supportive over the years and it was no different on this. Moo TV has also toured with Luke



for the last few years. When I called Travis Walker over at Moo TV, he immediately brought in Scott [Scovill, Moo TV Owner]. They were 100% in supporting this concert. They didn't hesitate; whatever was needed. They brought so much professional detail. The camera operators were Team Luke, so they know our show, and made it good for our video director. For the stage, instead of an eyesore of a ramp to get gear up and down. TAIT provided a lift, which was nice and let us scale everything back on stage. With Luke, for instance, I could break my risers into 4'x8' sections, roll them on the lift, and get them off nice and easy. Whenever it came time to reset, it was easy to restore and not need a small army of local hands to push everything up a ramp. All Access came in big helping us out by providing us with a 48' turntable, which they built out to our deck height, so there wasn't a step up; it was all a flat playing surface.

Our lighting and video team have toured together for the last few years, so they meshed well with everyone else. The vendors didn't hesitate—whatever gear was needed; whatever personnel was needed—was supplied. It was always, 'we're here to help' from every single vendor. And these vendors covered all the expenses—not just the gear rental costs—but the crew payroll as well. They were all great.

On reflecting back to those 28 days:

The workload, at times, was crushing, and I don't use that word often. But it was for me. in particular. My jaw hurt after three weeks of clenching my teeth so hard with all the challenges. When the concert was over, I realized my face didn't hurt anymore. During the week leading up to the concert, I had a lot of other projects going on simultaneously, including an advance team doing site visits in Australia and New Zealand for Luke's tour. Honestly, I don't know if it could have gone any better given the parameters we had. Everybody really stepped up. I can't ring the bell enough for Kevin Northrup and his design. For what Concert Stuff Group did: Moo TV: TAIT: All Access—nobody hesitated. Nobody flinched. There were moments were I felt that we weren't doing just a concert but also doing an award show; a festival: and at times, a telethon all at once. We had a dozen live cameras for I-Mag, and that many more on the field capturing it and documenting it all. Also, we had a massive silent auction going on, audio and video streaming, plus a concert, plus MCs—just handling all that.

Three and a half weeks to put it all altogether: crazy but we did it. I was blessed to be a part of it, but I'm glad it's over. Seriously, there were a LOT of other variables, but I can't say enough about how it all came out. Everybody stayed focused on what we were there for. Everybody paid attention to how everyone else's camps worked. There were some moments that were a little more difficult than others, but overall, we got to the end of it with very few hiccups and raised a whole lot of money for a lot people that really needed it. PLSN





CONCERT STUFF GROUP

Michael Brammer, Chief Strategy Officer

On the solutions CSG brought to the event:

The largest challenge we faced would have to be the timeline, from the day the hurricane hit until show day was 28 days. It is highly unusual to successfully execute a show of this magnitude completely from scratch in that short amount of time. For a typical stadium tour, you would have anywhere from 9-18 months of planning, design, building, prep, rehearsal, programming etc. One of the ways we were able to navigate through this was to work in lockstep with Luke's [Combs] team. From the moment we hit go, we were all in constant communication, working together to achieve the best possible outcome for the show. At the same time, we decided to keep the core team as small and lean as possible and commit immediately to decisions as they were made. Utilizing Concert Stuff Groups' (CSG) SES (Special Event Services) and G2 Structures helped streamline all communication and lead the coordination and direction. instead of creating delays by having to go to multiple outside vendors.

One of the more interesting details was that we were able to open up several more sections of floor seats, and didn't need nearly as many production seat kills as a typical stadium show would need because SES deployed the Outline GTO PA system for the show, which has been touring with Luke Combs for the past two years. Implementing this system was a strategic decision, as it required no delays to cover the entire stadium. Being able to sell those seats helped raise significantly more money that went directly to the cause.

On supporting the production and creative

It was truly an honor to work alongside these gentlemen. We all had the same mindset of setting aside our egos and personal preferences in order to come together for the greater cause. Kevin [LD Northrup] was very gracious in his approach to the design, which was a "what do you have available", instead of "this is what I want". There was a very collaborative mentality amongst all the decision makers and crew, which is the culture Jerry [PM Slone] promotes. History has proven that type of culture always leads to an incredible result.

On why Concert Stuff Group (SES/G2

Structures) was the right vendor:CSG has been working with Luke's camp for almost nine years. We were one of the first calls he and his management made when he decided to put on a benefit show. Being based in North Carolina, our hearts were in the same place as his, trying to take care of our extended family and community. From the moment the hurricane made its way through our state. it was never a question of "should we help", rather it was "how can we help". Combining Luke's ideas with both G2 and SES' extensive stadium and large event experience, especially considering the shorter than normal time frame, made us the natural choice to support the vision. It was such an honor for the CSG companies to be a part of the Concert for Carolina. We are proud to have been part of a team that cared so much about giving back.

MOO TU

Travis Walker, General Manager

On the solutions Moo TV brought to the event:

Anytime a show comes together in a very short timeframe, it can be a challenge to ensure that we have the right amount of team members and the product available, ready to go. However, when we heard Luke was doing a benefit show for the people of North Carolina and knew all the good it would do for those communities, we were excited to help with anything we could. A lot of the gear was similar to the setup Moo TV provided on the Luke Combs' stadium tour this summer, which made it helpful to have a starting point with the video engineering and server systems. One change was that this show required a substantial number of cameras in order to capture the action of a 360° stadium show including (5) FOH cameras, (3) handhelds, (6) 4K robotic cameras, (3) POV cameras, and several Canon C400s throughout the field and lower bowl. In addition to the C400s that Luke Combs' Creative Director Zach Massey brought in for a cinematic look, Moo TV added Panasonic PLV100 cameras with cinema lenses on stage to give the show the intimate feel Zach was looking for. (A huge thank you to Panasonic for donating the use of the PLV100s to this show.) So, there were obstacles in integrating more cameras and new/ different camera models from Luke's summer set up, but between Jerry Slone [PM], Tyler Hutcheson [Video Director], and the amazing Moo TV crew we have working with Luke, everything came together to produce another great looking stadium show.

On supporting the production and creative

Luke's team has always been an amazing group of people to work with. They approach obstacles and challenges head-on and are always bringing the team together to find the best solution. We've had a great partnership over the last few years that has produced many great shows we are proud to have been a part of. This show was no different.

On why Moo TV was the right vendor:

Moo TV has a very skilled professional team, beginning with the Project Manager, Brian Morris who worked with the video team as well as the engineering team. It is comforting to know that we are able to execute an event of this magnitude in such a timely fashion. At Moo TV, we are beyond grateful to be in a position to have the opportunity to give back. It is also personal to us when it is for a cause that is near and dear to one of the artists that we get the opportunity to serve on the road each year. In a sense, we all become family, and to get to help a family member is a priority for us. We were happy to be a small part in this incredible event so that those af-. fected can begin rebuilding their lives.

TAIT

Butch Allen, VP, Global Business Development

On the solutions TAIT brought to the event:

For this event TAIT provided staging and a lift to help with artist and backline transitions

for the show. The biggest challenge was the show being in the round, so we had to come up with a different approach for equipment storage around the stage since there wasn't a traditional backstage. In collaboration with G2 Structures and All Access, we were able to get the equipment and crew needed to achieve an in the round show with very little time and maximize attendance to raise funds for the cause.

On supporting the production and creative

Kevin and Jerry led the universal design and production charge working selflessly for this important project. Huge shout out to the Luke Combs and Eric Church teams for their commitment and fortitude. Special recognition to Luke Combs' Stage Manager Matthew Hornbeck for his extraordinary efforts. Jim Brammer gave us the tools, the people, and his passion. When inspiration, intention, and execution meld that is the true definition of design.

On why TAIT was the right vendor:

Given TAIT's long-standing relationships with Eric Church and countless others involved, it brought the right combination together to pull this off. Our familiarity meant we already knew the best way to collaborate to quickly create a successful show to help the people in need. The effects of Hurricane Helene were devastating, and when we were approached about the Concert for Carolina, we jumped at the opportunity to support the cause. The artists, 72,000+ guests, the production teams, vendors, and countless others led with their hearts to support this worthy endeavor. I've never been so humbled, and this moment truly moved people.

PIXMOB

Hila Aviran, Head of Music

On the solutions PixMob brought to the

A lot of people know us for technology we've used for over a decade, which is our Infrared infrastructure. Over the last few years, we have released an FCC certified Radio Frequency (RF) solution that is literally plug and play. We're able to deliver the same big impactful unified effects as Infrared with no rigging, no gear, and no load in time. This came in super handy with this fast turnaround gig. Given that this was a hurricane relief concert and not a typical show that you can spend weeks or months preparing for, there was little time to get everything together. We were pleased to be able to get one of our experienced stadium crews together overnight and move inventory around the world to make it happen. On the client's side, their team was very responsive and collaborative, so it made everything run smoothly.

On supporting the production and creative

These are people in the industry with years of experience in putting together massive shows. We were lucky to have been in their hands, and we aimed to be as independent as possible so as not to add anything to their plates. Butch Allen holds a special place in Pix-Mob's heart and was helpful in the process to ensure we came in and delivered at 110%.

On why PixMob was the right vendor:

PixMob is an expert in large scale concerts. We love every type of show—club, theater, arena-but a stadium is the ultimate playground for us. We have a robust supply chain that can deliver large scale shows within days, and a team that has decades of experience in deploying multi-artist, multi-element productions on short notice. Our experience mixed with the fact that we'll never commit to something we can't deliver, ensures our clients get a risk-free, high reward experience with us. We are grateful to have been a part of this show. To be able to see tens of thousands of people come together and feel solaced for a few hours was humbling and beautiful.







By Michael S. **Eddy**

n October 19, 2024, The Rock & Roll Hall of Fame held its 2024 Induction Ceremony at Rocket Mortgage Field-House in Cleveland. This year's Inductees one of the biggest classes—included Mary J. Blige, Cher, Dave Matthews Band, Foreigner, Peter Frampton, Kool & the Gang, Ozzy Osbourne, and A Tribe Called Quest, along with other influential artists that were honored. It was an unforgettable night of music and celebration: the ceremony ran a record five hours and 24 minutes, streaming live on Disney+. (ABC will air an edited, primetime special on Wednesday, Jan. 1, 2025.) Lighting the ceremony was Designer Allen Branton and his team including Lighting Directors Kevin Lawson, Felix Peralta, and George Gountas, along with Video Screens Designer, Bianca Moncada and her team from Darmah. They took the time to speak with PLSN on the lighting and video designs that supported this amazing night of music.

Branton has handled lighting the ceremony for over two decades. A few years back he introduced Moncada and Darmah to the production to handle the video design. A close working relationship has ensued over the years. These lighting and video departments closely

collaborate to produce stunning visuals keeping the long night fresh looking. "We've had a lot of practice with this particular creature," says Branton. "We changed the formula of how this gets built about four years ago. Since the backgrounds are all video panel-based—they're virtual backgrounds. We have discussions of what each act looks like, so the color palettes and themes of what's going on, and which ones are driven more by video. We get storyboards of what each will look like and then we light around that foundation. The Darmah team build all those looks, which has really elevated this show. That's how we keep it fresh."

■ Blurring Video and Lighting

Lighting Director Peralta has seen this merging of lighting and video developing through his extensive work in television. Over the years, as lighting has become more LED-based, with pixel control, it has become easier for lighting and video elements to blur the lines between these two departments. "I've worked with Bianca and her husband, Rodrigo [Proal the Owner and CEO of Darmah] for over 15 years on a variety of TV projects," he says. "Over that time, we've learned from them what video can do for the environment, and they've learned from us what lighting can add. It's been a nice evo-

lution as lighting and video have become very closely blended. Other TV LDs and I watched as lighting started to look more like video, and video morphed into something that looked like lighting, We were all in the middle of this convergence and we could create a cool vibe with the visual imagery that complimented one another. So, a lot of Darmah's content was stylized and started to feel more environmental; more like lighting. That's been a nice evolution. Now when Bianca and I do these shows together, especially the Rock & Roll Hall of Fame, we're in synch and know how to push each other; together, we've been able to come up with some cool moments."

The video and lighting teams start working together from day one as the visual designs are developed. "The way we work is that Felix, Kevin, and George, along with Bianca and our Gaffer, Alex Flores get on the phone months before the show," says Branton. "Once we get the first renderings from the production designer and hear from the director and producer, we'll start talking about what the lighting and video wants to do for us and for the show. The designs are based on using [ROE Visual] Vanish 8mm screen technology, where we're using a massive lighting rig behind it. That allows lights and video to interplay." Moncada also enjoys this

working relationship, commenting that "It's fun and we have a common goal, making a cohesive look that fully supports the performances. Allen is so humble, and I love that he supports us 100%. We're both important to the show; no one is more important than the other. He respects the fact that it's not just lighting only anymore; it's really a whole canvas. Especially for this show where we develop an environment that becomes scenery. He supports that notion, and we love him for that."

Light Through the Screen

Branton feels that with the ability to create video imagery that's married to each performer, that it allows more latitude. "We've been playing with lights coming through the screen for several years now. When we're inducting an artist, there are images of them over their career. We have lighting accents around the images, or at the bottom, but we could let light blow through the Vanish screen and just blow the image away, or melt it down and then restore with new imagery. Trying to keep things interesting."

With this show, the composition of the hero screen is important, and the integration of lighting and video is a key element to the visual design of the ceremony. The top of the hero



screen is solid ROE Vanish 4T with a 4mm pixel pitch to display hi res images of the artist, and the bottom and sides are transparent ROE Vanish 8mm. Then on the face of lighting trusses, bordering the main screen, are digiLED 3.9mm panels for scenic video. "A key element is the two main side screens and the bottom of the hero screen," explains Moncada, "with the very translucent panels, which are Vanish that Darmah worked closely with ROE to tweak to have a higher transparency."

These days, the creative team has imagery that's much more refined, and they have taken the time, early on, to work with the givens they have in the run up to the show. "We set up a previz room and work backstage before the lighting system is ready and the programmers move out to the floor," explains Branton. "Felix and Bianca had worked in previz in their respective studios before coming to Cleveland, so they had a rough draft of what the screens would do and how lighting would interact with what they had already worked out. When we get it on camera, we can see if we like the way the light looks with an image. Bianca's system allows her to manipulate those images in infinite ways throughout the show."

Digital Details

The Darmah team added a lot of details into the content they created like digital lighting elements to blur the line even further between real and digital, as well as created movement in the content to mimic scenic automation moves. "Aside from pushing the transparency and having this amazing scenic video, there's also very particular things in the content design," says Moncada. "It's not new, but we've evolved it—the integration of the hero pictures within the scenic environments. We treat images, so they look like they are being affected, or a part of the scenic elements. I think they look amazing. It's something that's not just a giant picture on top of the environment. For instance, we had this environment for the Jimmy Buffet tribute, with the content being lit by moonlight; the whole environment was moonlight on water. It was just so magical having the full integration of the lighting developed in a way that it would support the way that the content was lit. That's one piece where we put in as much detail as possible; and it showed in the integration of the hero pictures."

Moncada continues, "The second thing was to create movement in the scenic pieces. We have so many kinetic scenic elements with movement, so we studied the speed of the real scenic movement, and we recreated them in the content. Some of the performances had scenic movement to create the illusion of having these giant rigged elements moving. That was impressive when you know how to do it in a proper way by studying the movement and the way the light hits the elements. A lot of details went into that. We really try to push as much as possible with all the technical knowl-

edge that we have, but then study how we can take this to the digital world, respecting automation and lighting, but making them as realistic enough to be able to trick your eye."

Lighting Elements

There are a lot of components and elements that go into each performance segment, especially with a live show—and one where production doesn't know the show's running time. Once they have the themes and colors chosen, then it's a matter of creating a task list for the lighting team to choose and specify the fixtures they will need for the lighting design. "We mix it up to a certain extent," says Branton, "we have a sense of the show, but we have different inductees each year. We look at the list and see what the requirements are. There will be somebody that justifies a radical lighting statement, so we start there as step one. We want to be sure to take care of that piece, which this year was Ozzy Osborne. We want to be equipped for those segments. There may be a characteristic or iconic image that's suggested. For Kool and the Gang, we used police lights that were drawn from their music videos. Alternatively, Mary J. Blige had a design with storyboards. We added some custom things to pull off her request. You have to have a rep plot for rock & roll TV."

Over half of the lighting rig is not blowing through the screen. A lot of it is framing the screen—horizontally along the bottom or vertically along the sides. "We had a linear line of light along the edge of the stage, as well as used vertically around the screen," says Lighting Director Gountas. "Those were ACME Pixel Lines. We try to pick a product with a linear profile to make a consistent linear element in the rig. The video screens sit on top of the lights, so it felt like one continuous surface."

Branton feels that linear lighting element is one of his signature elements. "We have an uninterrupted linear light source along the floor, the width of the stage," Branton says, "with the scenery and screen on top of it. That defines the horizon line and lets us add as much visual weight as we require. Then we have those same lights going up the edge of the screens. That's a common environmental background everywhere. This is a multi-camera show with 22 cameras. We take care to have those linear lighting elements wrapping around in the environment in enough places that when the camera is cut to there, you feel like you're still on the same planet. It gives the viewer a frame of reference. One of the ways to keep that consistent is to have the element right on the floor, because every shot will relate to the performers in some way; most of the cameras will see it regardless of composition."

On the sides of the screens, there were angled lighting trusses. "In terms of lights, we had a linear option, a beam option, and a strobe element on those trusses," says Gountas. "There are three options for those positions, and they can provide three layers

of effects. We used Robe ACME Pixel Lines, MegaPointes, and Color STRIKE Ms. We create consistent elements by having less of a variety of fixture types, which helps tie it all together.

The team looks at all the components and the venue and how they can place the lights where they need them. "We want to be able to color the entire place to light up the audience to match the palette of the piece that's being performed," says Branton, "so, when they shoot the reverse, it all is unified. In terms of the verticals in the air, it's only seen in the wide shot. That's one of the things that's important when you start to translate music to television. The rig itself is seen seldomly; maybe 5% of the time. You have to make hay down on the ground because they're mostly shooting the performers, not the wide shot."

Key Equipment

All three lighting directors pride themselves on keeping current with lighting technology and continue to push looking for the right tools for the right tasks; something to create a unique moment for this show. "This year, we featured about 130 of the ACME Pixel Lines," comments Peralta. "That was a great fixture that really gave us a lot of flexibility and range with color, pixel control, and volume in terms of brightness as well as the strobe element. We used a range of the [Elation] Proteus Excaliburs, along with the Proteus Brutus, Brad Hafer from 4Wall upgraded us with a dozen of the Brutus units. The Brutus, which is the big brother of the Excalibur, is close to a Syncrolite from back in the day. The Brutus is a beautiful light that really gave us a lot of range and firepower. We used those behind the Vanish video screens, all the way up high. It was the right light, for the right spot."

Lawson adds that there are flavors of lights that suit the team for various big tasks. "We've gotten to the point where most of the rigs are all LED, which is great for my end of things," says the LD. "When I light an arena full of people with high output LEDs, I know those lights are consistent throughout the whole field, as well as fixture to fixture. I used to chase edges of color mixing, and lamp life with discharge fixtures, now with high output LEDs we don't have to worry about any of that anymore. So, when George and I focus the ringside VIP seating, we have to be sure that all exposures and color are consistent. This year, we had Chauvet MK3 Profiles for most of the audience lighting, along with Robe FORTEs for the VIP areas and for stage key lights. Then we had more MK3 Profiles, MK3 Washes, and VL3600s filling in other needs. We were pretty much all LED, except the Elation Excaliburs and the BMFL FollowSpots."

Splitting The Roles

Peralta has been working with Branton and the lighting team on the Rock & Roll Hall of Fame Induction shows for quite a while now and knows the system and production inside



PRODUCTION TEAM

Production Designer: Bruce Rodgers
Lighting Designer: Allen Branton
Video Screens Designer: Bianca Moncada
Lighting Directors: Felix Peralta,
Kevin Lawson, George Gountas
Head Gaffer: Alex Flores
Best Boy: Michael Smallman
Lighting Techs: Adam Hagin,
Matthew Weede, Benoit St-Aubin,
Brendan Johnson, Justin Grotteland
Media Servers Engineer: Erick Mothelet
Content Design Supervisor: Victor Martin
Video Project Manager: Guy Benjamin
Video Crew Chief: Brent Jones
Video Techs: Jody Lane, David DeRosa,

VENDORS

Erik Hartman

Lighting: 4Wall Entertainment Video: Pete's Big TVs, Darmah Studio Content Design & Programming: Darmah Studio

GEAR

Lighting

- ACME Pixel Line IP
- Astera Helios Tube
- Astera AX3 LightDrop
- Astera AX5 Triple PAR
- Chauvet Rogue R1 BeamWash
- Chauvet Maverick MK3 WashChauvet Maverik MK3 Profile
- Chauvet Color STRIKE M
- Chauvet COLORado 2 Solo
- Chauvet COLORdash Accent 3
- Chroma-Q Studio Force II
- Lycian 1295 Extreme Long Throw Followspot
- Elation Proteus Maximus
- Elation Proteus Excalibur
- ETC Source Four LED Series 2 Daylight
- Robe RoboSpot Packages
- Robe MegaPointe
- Vari-Lite VL3600 Profile MA Lighting grandMA3 full-size Console

Atmospherics

- MDG ATMe APS Haze Generator
- Look Solutions Viper NT Fog Machine
- Jem AF-1 Fan

Rigging

• Tyler GT Truss

Video

- Disguise GX3 Media Server
- 2 Disguise VX4+ Media Server
- **11** 4K 8x8 Lightware Router Switcher
- 77 ROE Visual Vanish 4T Video Panel
- **7** ROE Visual Vanish 8T Video Panel
- ROE Visual Vanish 8S Video Panel
- 187 DigiLED 3.9mm Video Panel1 Brompton Tessera SX40 Processor
- 4 Brompton XD Distribution Box
- NovaStar MCTRL4K Processor



PRODUCTIONSPOTLIGHT

and out. In splitting up the LD duties, Peralta handles the lighting for the environment of the show, "Kevin is lighting all the faces—key, back, as well as side and foot lighting," explains Peralta, "and my responsibility becomes the environment. I'm lighting the music and telling the story, collaborating with team video, so that it all feels like it's being created from the same place." Gountas wears a lot of hats on this show. "I do all the drafting from Allen," says Gountas. "Once we get on site, I'm the floor LD with a meter, while Allen is in the truck with the director; while Felix and Kevin are doing their thing. I spend more time with Kevin because he deals with faces, color correcting all the lights and followspots to look appropriate for TV, and focusing audience lights.

In the last few years, Branton has started to rely more on his lighting directors to keep an eye on the design. "It really has become a nice collaboration," says Peralta, "He trusts us as much as we trust him. He's been great about inviting us into the process. Allen is one of the great editors of our time; he's not one to micromanage every facet. He's watching the monitor and gives us feedback in real-time as to how things look. Sometimes I don't have the opportunity to look up. I'm under the hood, going with my instincts and processing all the data management for my work, so I really rely on Allen to look over the top and help me balance it all. It's something that a team which has been together for 20 years can really pull off. It's a great symphony, especially on a show where there is such a time constraint. It's really a testament, not just to the lighting department, but to all the departments involved. The only way to get this show done in such a short time, with such high production values, is with all the right people in the right spots. It's like a football or baseball team and everyone is just executing their tasks. That's the only way we can do this."

Lighting Task List

Lawson comments that there aren't any secrets to Branton's method. "It begins with this document we all started using a long time ago-a task list. It's basically an allocation sheet, or wish list. It's built on Allen's method of lighting from the close-up out. The final bit is the wide shot. It literally starts with followspots, then key lighting for the band, then for the audience. We start with the primary, secondary, then tertiary before we put in any kind of beam, strobe, or anything that's not used to light a human. The idea of building from the close-up out is what Allen has always strived for: to make sure that everybody looks their absolute best. If there's a school of Allen Branton Lighting, that's lesson number 1. If they choose something edgy, weird, or whatever, we'll go with them down that avenue. For example, this year we lit Ozzy Osbourne primarily with footlights that looked great with metal guitar players. It has an edge to it that wouldn't work with a followspot."

There have been times that Branton has come in with a plan, but all that goes out the window when he sees the artist at rehearsal. He and his team must be prepared to pivot quickly. Again, the rep plot idea comes in handy in these situations. "It's back to the design, you have to make sure all the parts are there," Branton says. "You imagine you might use it in a certain way, but a lot of times we decide once we see them. We thought our plan would work; but it doesn't. There are times when there are so many people on stage that you have to light it flat and generically to be



4WALL ENTERTAINMENT

Alex Flores, Gaffer/ 4Wall Director of Live Events

On the solutions 4Wall brought to the ceremony:

I think one of the challenges we face every time we do this show is the load-in time. We have to be 100% show ready in just three days. We work very closely with Lighting Designer Allen Branton to make sure we can hit his targets, plus we prep shows like this almost like a tour, so it loads-in quickly and easily, and is fully prepped and tested, so the production teams can get up and running right away. This allows them to maximize their time onsite. Also, we are constantly communicating with Production Manager Gary Lanvy and Production Rigger Brian Lolly for production updates.

On supporting the creative teams:

It is always a pleasure for me—and 4 Wall—to work with this creative team. We have all known each other for so long, and we have a great rapport; we all work together so effortlessly. Fortunately, everyone fully understands the industry, as well as the challenges we can have in different situations.

On why 4Wall Entertainment was the right vendor:

One of the reasons 4Wall is the right company for this type of show is because of the technical and production support from each of our locations. We have a lot of people on staff who have worked a long time in this part of the industry and have years of experience that they can bring to bear on projects like this. They know that there can be very last-minute changes that happen in TV concerts, and 4Wall is there to support the production teams in overcoming these changes. We also use some of the best production techs for our projects. I personally think our industry is like a baseball team, you need to have the right player to play in each position. I always make sure that we have those positions well covered so there are no surprises.

PETE'S BIG TUS

Guy Benjamin, Vice President

On the solutions Pete's Big TVs brought to the ceremony:

I would say that the biggest challenge was using three different types of LED video panels. Each type of LED panel required its own set of LED processing. Getting all the processing in sync, without adding delay to the I-Mag element was a challenge. This was further complicated by also integrating the house screens. The solution was to work closely with the content team from Darmah, and importantly, the Production Engineering team, led by Gayle DePoli, to be sure that everyone was on the same page, working together. It was important to ensure that the entire team was aware that any change in one area could have an impact on the entire system.

On supporting the creative teams:

It is always a good experience working with Allen Branton. Having worked on this production with him for many years, we know what to expect and respect his vision for the look of the show.

On why Pete's Big TVs was the right vendor:

Pete's Big TVs has been working with the Hall of Fame for over 30 years. Because of this we have a pretty seamless working relationship with the entire team. We know the routine which really minimizes any surprises. Given the tight schedule for this event, that efficiency saves everyone time and money. Even after 30 years, we love working on this show each year. There is always excitement about what the night will bring. We are not a vendor simply waiting to load out. We are fans that really enjoy the evening... however long it may be.

sure that the director can capture the story that all these stars are out there, together. They use this footage in the museum as archival footage. If we're horsing around, trying to be creative and you can't see anybody, then that doesn't work for their long-term purposes. It needs to be a bit more conservative. If I was doing a whole Ozzy concert, I might do a lot of the songs with only backlight, where you couldn't see the face. But in that context, I'm going to have 20 or 30 songs, you know who it is. In our show where you see two or three songs, you just don't make radical state-

ments. It's inappropriate to the occasion."

Lawson agrees with Branton on the need to be able to fully capture the artist's performances, adding, "We have evolved slowly into what the lighting is now for the Hall of Fame. It's come a long way from an industry party in a ballroom to this big arena show. It's always kept a bit of an unplugged element because it never wants to be, production-wise, bigger than the music. Every one of the inductees is in some way at the top of their game musically. We cover the events as they unfold and add the appropriate amount of spectacle, interest,

and percussive nature from Felix's environmental lighting. It becomes about seeing the musicians get their moment in the sun. For some of them, this is the last time a lot of them will play together. Or it's the first time some have played together in a long time. I think all that dictates the style of the show that's more documentary. We're trying to capture these incredible moments with these incredible acts and not overshadow them."

Vendor Support

4Wall's support was perfect as usual," says Branton. "Brad Hafer and his team have been with us for a long time. During all my years lighting in television with automated equipment, I was used to a failure rate of 10% to 15% a day. Fixtures were constantly going up and down out of the rig to be repaired. Years ago, when Brad first approached me about being the lighting vendor for this production, he promised a failure rate of zero. When I asked the gaffer on that show what the failure rate was, he said zero. I thought that I was in the Twilight Zone; that really got my attention. I haven't used anybody else much since. They take such pride in having everything working and prepping it well, so it's ready to go. If you're sitting in my chair and you have a menu of dreams, it's really enhanced if you know the gear will be ready and working. It won't slow you done. That's a huge advantage; and just a different level. 4Wall was perfect. Whatever the schedule says about then we're going to be ready, it's always early with 4Wall."

On the video side, Pete's Big TVs has been the LED screens provider for the R&R HoF Induction Ceremony for nearly three decades. They worked closely with the Darmah team, as well as the engineering team on this production. "This was our fourth year working with Pete's Big TVs on the ceremony and their team was great," says Moncada. "They are always very supportive, and if anything isn't working they're right there making it right. They are very used to this environment as well. They have a great team of people working to support this show. I am normally on headset with Brent Jones, their crew chief. I think that the integration with Darmah's Vanish screens and the screens they supplied was amazing."

A lot of the success of this show comes down to the team that's backing up Branton and his designs. In addition to Lighting Directors Peralta, Lawson, and Gountas, the Gaffers include Alex Flores, who is also the 4Wall Project Manager, and Michael Smallman. "Alex is the key to a lot of our success," state Branton. "I've got a good team between Felix, Kevin, George, Mikey, and Alex, as well as Bianca and her Darmah team. It's a great time and it's good to have the time to work when everything is solid."

The thing about this show that Gountas enjoys the most is working with Branton and team lighting. "Allen's a legend and I learn a lot," he says. "Being able to work with them and collaborate with them for all these years has been a thrill. It's a nice to do a show with a ton of good music and it's a really good time." Peralta feels that it's a privilege and an honor to work on this production. "It's really become something that I like to think is one of the most important shows. It's really music royalty at its best and this music deserves high quality production values. As a team, it's our longest legacy show and it's one we're most proud of being a part of because of the music. It's all about the music, which is so amazing that it's worth everyone's best efforts."

Charles and the



IIGHT HUMOR



Award-winning lighting designer Jon gets a chance to teach the next generation of artists, but it will take more than flowery language to win over these critics. Will they ever come to appreciate the secrets of great lighting, or will the future hold only darkness? Find out on this Light Humor episode, 'The Lighting Class.'

WATCH THE NEW EPISODE





lass Animals are out with their global Tour of Earth headlining some of the biggest venues of their career, including Madison Square Garden and London's O2. The production design for the tour was provided by London-based Cassius Creative along with content creation by FRAY Studio, also based in London. Supporting the tour was Concert Stuff Group (CSG). As a longtime vendor for the band, CSG provided lighting, video, rigging and audio gear for the tour along with trucking and tour buses. Other tour vendors included All Access Staging providing staging and lifts; and ER Productions supplying the lasers and special effects. Dan Hill Co-Founder of Cassius Creative and Adam Young, Co-Founder & Creative Director at FRAY Studio, took us through the creative process for this tour.



Talk about the aesthetic you were going for to support Glass Animals.

We call the aesthetic retro futurism. It's a fresh, modern take on retro space travel that never really existed. We referenced films like Barbarella and 2001: A Space Odyssey, along with vintage Star Trek elements. Mixed with modernist architecture to create this retro futuristic world for them to perform in this kind of spaceship-like environment. We went through a few ideas and worked collaboratively with [Glass Animals frontman] Dave Bayley on how we create this space. We ended up with a spaceship, with the guys inside an enormous interior environment with computers and spaceship control consoles on a platform for them to perform on, then they can come down the front stairs to be amongst the rocks of the world they've landed on. Obviously, technology-wise within that design we didn't want it to feel like we created this world and then put lights and trusses around it; that feels like a concert. So, instead we wanted everything embedded within this spaceship structure. It feels contained, very purposeful, and it doesn't feel like there's other gig elements. Obviously, there is because of the fact it is a concert, but visually it all feels cohesive and part of this one scenic structural piece for the band.

How did you incorporate video into your production desian?

FRAY really ran with the content, and I'll let them speak





about that portion, but in terms of the design and visuals we wanted, we went with an expanse of a back wall of video with a lot of negative space and darkness. You never see the edges of the video screen. That was crucial for us, so the video screen was purposely oversized to get a big image, but then have vignetting of a faded black edge to every piece of content. You never see the hard edge of that screen, so it gives the feeling of floating in space. We also wanted to embed video screens in the scenic elements to give it that Sci-Fi finish and practical spaceship feel. There we had 16 mini screens that became almost like old school computer CRT screens. We also had a 360° ticker-tape video element that went around the chromosphere and planet that was an extension of the back screen. It did its own thing, which was an extra visual dimension within that structure. We also had a Pepper's Ghost/hologram element that was a late addition

to the show. We always had a void in the middle of the set where we wanted a centerpiece, so we ended up with an almost Jetsons-style bubble. It's a great form and we could embed the hologram-style effect. It was a great nod to the tech world in a very fun way that fits the space aesthetics. There's a lot of video surfaces and then there's the I-Mag support outside, which is more traditional. We went with ROE CB5 for the video screens; the main upstage one measures 18m $\,x$ 9.6m; and the side I-Mags are 6m x 4.8m.

Above the stage, you have an over 50' wide octagon with a central halo containing LED video panels and a large reflective sphere with Saturn-like rings and scenic LED elements. Talk about the lighting designed into the scenic elements.

The scenic LED, which was created by LED Creative in the UK, is layered with video elements in the ceiling. We also have a three-meter sphere that's reflective in the center of the ceiling. It reflects the world below and is surrounded by video panels. For the encore, it lowers down and floats in the middle of the video screen. When you add the rings, it's almost four meters in diameter. That was fabricated by Megaflatables in the UK. We use wireless LED on it that helps it come alive, which is a nice moment. We have hundreds of channels of hidden illumination to bring that all to life. There are 70 [Ayrton] Diablos built within the ceiling piece and housed in custom inserts where they and scenic LEDs shine down onto the band. These inserts replaced traditional lighting trusses. The Diablo, which were purposely chosen as a smaller fixture, yet multifunctional, did a great job with their punch while being hidden out of the way. With those we could do a whole grid of beams coming down.

Around the ceiling, the majority of the lighting is also hidden and discreet; intentionally kept out of the way. There are spots hidden behind the upstage ceiling—nine Ayrton Domino LTs flown upstage of the spaceship to give a wash across the back of the set and emanate an ephemeral glow. Four [Ayrton] Perseos are on the upstage truss with the Dominos to backlight the band and create a hard-edged beam around each band member for solos. Then within the consoles on



the floor, there's an array of GLP JDC Lines, and JDC1 strobes that are almost one with the video screens. They have the punch as strobes and can be a visual feature as well. Also on the floor, we used Ayrton Dominos, a bigger, more powerful light. A single Perseo is upstage of the deck to silhouette the band as they enter and exit the stage. Sixteen [Ayrton] Boras act as key lights and side lights for the band; they are mounted on the FOH truss and two side trusses. Two more Perseos are positioned on FOH trusses as specials for large rock scenic pieces and moments with the crowd.

Talk about your remote followspot control for this tour.

We used the zactrack Smart followspot system—a three target system. Even though there are four in the band, the drummer doesn't move, but the other three do, so they had a target each. We had units on the side truss as well as the front truss, and as a rear spot, so we had five points of coverage. We don't always use five on them, but it's nice to be able to use a system and move around a lot and get clever with them without having to think about it. We keep them well lit for the camera treatment for the live audience, but in a creative way. We can immerse them in color or have these top spot moments and keep it precise whether Dave is clamoring on the rocks or playing guitar. It worked really well and we're happy with it. It was the first time we had used this system. Our Lighting Director, Alex Noel, who also programmed the show, did a great job of keeping it in check every day.

How was the support of your vendors?

It was very good working with SES in the U.S. for this tour. They handled the lighting, video screens, and the rigging. They were great support for the tour, as they have had a longterm relationship with Glass Animals, longer than we have. It was a really good core crew. All the integration between all the departments was so intertwined, everyone pulled together to make it work. The staging elements—decking and a performer lift for Dave to rise up—were supplied by All Access Staging, who did an excellent job as well. This was hidden behind our Jetsons sphere, and he could be raised up to place him in the middle of the video screen essentially. He looked like he was floating there. The scenic fabrication was handled by Ox Events in the UK. In terms of special effects, we had a front Kabuki drape, fog, along with lasers and lift systems for the lasers, that was supplied by ER Productions. They came up with a way for the six 6 ER Productions' AT30 lasers to be mounted on six Wahlberg lifting columns, so the lasers could be hidden out of the way, and then pop up when they were needed. It was a clever solution.

Talk about your collaboration with FRAY Studio on this project.

Cassius and FRAY go way back on a whole bunch of proj-

ects. We love working with those guys; there's such a relationship there, which is a shortcut to getting where we need to be quickly. The lighting and the video feels very integrated; the lighting of the band and the effect lighting, how that sits with the live camera and the camera treatments along with the content. Every color, texture, and energy all feels and speaks to the fact that we've got a nice working relationship; which is great.

CONTENT CREATION

What were some of the technical challenges in creating content for the Glass Animals?

For the Glass Animals specifically, unlike I'd say probably 95% of the acts we work with, there was no click or backing track. A click track makes it very easy to make content because you have a track they are locked to. Whereas with Glass Animals, they are much more freewheeling, more likely to improvise. This makes it very difficult to make content that feels musical because each night they could play faster or slower; it's a kind of guesswork. So, we took two different approaches. Some of the show has fully rendered content, but because of the way they play certain songs, they have to be split into many different parts. Then you have to have an incredibly good operator who knows the music, knows the video design, and can trigger it at the right point during the song. Some of the tracks ended up being close to 200 video files just to be able to trigger it and make it feel musical. Also, we had 23 different video surfaces on stage that all have a unique video source going to each of them. Ed White, who programmed and operates the video, is incredible at running the show. He just knows the music, how they're performing it, and can sense what's coming before it happens.

Talk about how you and your team treat the real-time content.

Yes, that is the other part of the show, we decided to make guite a lot of the show real-time content. Partly in Notch and partly in Touch Designer. The way the band is set up—even their acoustic instruments like drum kits—generates a MIDI Note. Every hit of the cymbal, kick of the drum, every note on the keyboard generates a MIDI Note that is sent into a vast network. Ed developed a system that runs through QLab to filter the MIDI Notes and makes them usable as on/off switches. Then from that we harvested the ones we wanted out using Disguise and could link them up into various Notch blocks and Touch Designer commands. For certain songs there's a driving beat and we visually needed to represent that beat. We could really lock the visual to the kick drum, for example, because the two are directly linked together. That visual is only going to respond to the kick drum. There were quite a few tracks where everything is being driven by MIDI Notes

RODUCTION TEAM

Production Manager: Simon Lutkin Tour Manager: Tom Allen

Production & Lighting Design: Cassius Creative **Lighting Director/Programmer:** Alex Noel

Lighting Crew Chief: Troy Grubb

Lighting Techs: Patrick Wheeler, Zachary Baltz,

Travis Pigman, Lydia Lewis, Jonathan Fishman

Video Director: Ed Coleman

Video Programmer/Operator: Ed White

LED Crew Chief: Nathaniel Benjiman Gott

LED Techs: William Zachary Curtis, Aurora Murphy

Riggers: Gwen Hall, Rosie Capuano SFX / Laser Operator, US: Nathan Jin

SFX / Operator, UK: Paolo Roselli

Stage Manager: Dora Gaskill

Lighting, Video, Rigging: Special Event Services

Video: High End TV **Content:** FRAY Studio

Special FX/Lasers: ER Productions

Staging/Scenic: All Access Staging **Scenic Fabrication:** Ox Event House

Scenic LED: LED Creative

that the band generated. If the band stopped playing, then the visuals would just stop.

Talk about collaborating with Dave Bayley from the band on the content.

Dave was very involved from the beginning and gave us a list of random ideas attached to songs and a long list of references. We took the common threads across all of it and could then mold that into an entire show that felt coherent, but doesn't feel like it's repeating itself; which is always the tricky part. There were a ton of references to films from the 60s and 70s, retro video games, early 80s and 90s computer graphics. Dave was really interested in having 60s and 70s filmic grain. We ended up making an imaginary decade that didn't really exist but that felt very retro.

Tell us about the workflow to get your content to all 23 different screens and video surfaces on the set.

We used Disguise to distribute the files, which ended upfor a complete stage look—all got packed down to four different video files. One fed the big screen at the back; one fed the hologram; one fed the computer monitors, and then one fed the ceiling. So, to create a complete look on stage, all video files played back at the same time. It was quite a complicated show in terms of sequencing that was all handled in Disguise just because there wasn't really any other way of doing it. By working in Disguise, we could pre-viz all in a 3D model and judge the sense of scale and be ready for rehearsals with these very complicated songs already laid out on a timeline. We had five days of technical rehearsal in the UK for this tour since the set was built in the there. Then there was a month until the first show in the U.S. while they shipped everything over, so we had a couple weeks of tidy up time between rehearsals and the first show to make changes and be ready.

How were you dealing with the live camera feeds for the

We had to work closely with Ed Coleman, the Camera Director because every single song had a unique camera treatment made for it. Because of the retro era we created, we ended up using a lot of Notch tools like Nvidia background removal and a lot of the AI tools that are built in to be able to separate the people from the background so we could then treat the people and backgrounds separately. That required a lot of experimenting to work out exactly what was the best composition to keep the Al happy, and to keep the signal and that separation of people and background stable. We worked closely with the Cassius team on key light as well, making sure people had enough backlight on them to give them enough definition from the background to let the AI separate the people from the background. All the I-Mag was treated; there was no clean I-Mag in this show.

CONCERT STUFF GROUP

Michael Brammer, Chief Strategy Officer

On the solutions to challenges SES

This tour was the band's largest and most ambitious yet. With a large and unique design on a rather compressed prep and rehearsal schedule, we knew everyone had to come together and work efficiently to make sure the band and their designer's vision were executed to the highest standard. Some of the unique and "out of this world" features included a roof pod to hide the overhead lighting fixtures, space-themed mission control set pieces that incorporated lighting fixtures and video panels, and an automated inflatable planet. To top it all off, it was a show that wasn't timecoded at all.

In order to achieve that live feeling that wasn't on rails, a zactrack Smart system and a large complement of Ayrton fixtures were chosen to bring the extraordinary set to life. We are predominantly an Ayrton house. The zactrack automated followspot system is an exciting piece to have in our inventory. With the support of ACT Entertainment and Ambersphere, we were able to build out a touring system that performed well beyond our expectations.

On supporting the production team:

Working with the talented teams that have created this tour has been a blessing. We find the entire team to be an absolute pleasure to work with. Everyone, including the band, is welcoming, respectful and reasonable. Simon [PM Lutkin] and the design team from Cassius are standout professionals that make the dayto-day partnership smooth and gratifying. They run an incredibly well-oiled machine and consistently create an environment on the road that everyone enjoys being a part of. We listen to what they want to do and bring to life their vision through our extensive knowledge of working with, and the capabilities of, the systems. We're very grateful to Glass Animals and the designers at Cassius for their trust in us to execute their vision.

On why Concert Stuff Group (SES) was

SES has been involved with Glass. Animals since their How to be a Human





Being album campaign back in 2016. Other Concert Stuff companies have supported the band throughout the years as well (SET with trucking and Musical Coaches with buses). Over that time, we have built a very good working relationship with the entire GA team. The integration of the multiple CSG companies across a single tour has become a staple for many artists. It helps to create a more seamless system that allows the companies to speak to each other easily and drive more efficiency. As a longtime vendor for the band, CSG provided audio, video, lighting, and rigging equipment for the tour along with trucking and tour buses. This is an incredible tour to be part of.

ALL ACCESS STAGING

Bryan Schluntz, Sales & Design

On the solutions to challenges All Access ht to the tou

Our main collective challenge was finding an efficient way to incorporate custom elements the band was bringing from the European leg of the tour with the electromechanical and staging options we had in the U.S. The Cassius Creative team, specifically Chris "Squib" Swain and Sam Henderson, and their attention to detail, was vital in addressing these issues. We were able to get a true sense of the pieces they were carrying and figure out streamlined ways to make them work seamlessly with what we had in the U.S. Logistically, getting our hands on the actual custom elements was not a realistic option so we leaned on the cooperation between the Cassius CAD team and the CAD team at All Access, specifically Draftsman David Mendoza, to come up with a plan. From a production standpoint, PM Simon Lutkin did a wonderful job throughout the entire process making sure that we all came together to successfully put the band's creative vision into action.

On a particular solution:

One challenge involved mimicking a lift element the band used in Europe and incorporating their custom lift surround deck, which was key to the overall look of the set. We were able to work closely with our UK facility and Matt Bull to ensure we provided exactly what the band needed. The communication with Cassius and their attention to detail in not only addressing the lift function but also talking through the flow of the show and how the band members would physically use it was both informative and crucial to our success as a group. We worked through the necessary limits and exactly how the lift needed to land within the framing of the stage and the hole within the surround deck. I had worked with Squib on previous projects and appreciate his creative, direct, and solution-based communication style. As usual we were working towards an unmovable deadline so working with a creative team that approaches each challenge that way was extremely helpful. We were all able to put a plan on paper that we felt confident in, and then we built it in our Newton, NJ, facility to test it. Simon was also able to coordinate sending the production team's Lift Tech, Ezra Salmine to our facility for that setup so that he could learn about the Versa Ribbon Lift 12 from Eric Williams, one of our Lift Technicians. While at our Newton facility, Ezra and our staging team for the project, led by Jason Yarlaski, had the opportunity to also go through the structural elements so that he fully understood the labeling system and best practices involved in that part of the build. Having the opportunity to host Ezra and giving him hands-on training with our equipment assured us we were sending him on tour ready to be successful with our lift and staging elements.

On supporting the production teal

This was my first opportunity to work with the Glass Animals production team, and Simon Lutkin in particular, and I hope there are many more in the future. Simon is realistic while unrelenting in driving the collective group towards successfully creating the artist's vision, which is the ideal combination. It is always a pleasure to work with the Cassius Creative team; their professionalism and experience permeates all aspects of their involvement in any project they are a part of, and this one was no different. Squib is timely and communicates what needs to happen clearly, which is helpful in making sure, as a group, we are always progressing towards a successful

On why All Access was the right vendor

Because we have the people and the resources around the world to create exactly what Glass Animals wanted on stage on a world tour. Having locations on multiple continents and direct communication between those locations is key and was a major part of what made this project successful. Picking up duplicate systems around the world and having them accommodate the artist's needs was what was required here, and the worldwide All Access team was glad to be able to deliver that. Also, Jennifer Davies, VP & GM of East Coast Operations, with her wealth of experience and knowledge, was foundational in everything we did out of All Access East on this project. Her expertise and understanding of what people want on tour was invaluable here, as it is on every job that comes out of All Access East.

ER PRODUCTIONS

Ben Couch, Project Manager

On the solutions to challenges ER Productions brought to the tour:

It was critical that the video screen was kept clear, we used our Wahlberg Lifting Columns to achieve this. This allowed the lasers to be hidden behind the set when not in use and lifted into position when required. Also, more and more we are being asked to supply CO2 free FX. ER was required to supply low fog without the use of carbon dioxide which is used to chill the smoke. ER Productions now have a fleet of CO2 free low smoke fixtures called Creepers which are available at all our global locations. For this show we spec'd the new Showven Creeper XL which covered the stage beautifully. There is an additional financial incentive in countries like the U.S., you no longer have the admin and costs to obtain CO2 permits.

On supporting the creative team and why ER Productions was the right vendor:

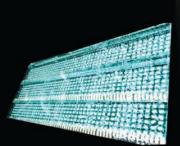
We've worked with Dan and Squib from Cassius for many years now, and it was a pleasure to take their creative brief and help them realize it. Being the right vendor was in part because having physical offices in all the territories that Glass Animals toured is a big advantage for ER. We programmed in the UK in June before touring America in August/September, then the UK and then Australia in November 2024. Equipment can be supplied from each of our locations without the need for expensive freight costs. We can provide a consistent service across all offices and with identical kit provided in all regions. This helps with familiarity and ensures that the client's show looks identical regardless of location, PLSN



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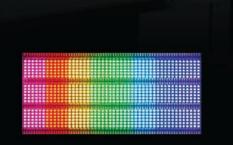




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ontrast takes many forms, whether in color, shape, sound or even attitude, and it's a powerful artistic tool. On their current Good Together Tour, the multigenre band Lake Street Dive uses varied contrasts to make every show impactful and memorable. Audiences experience diverse color palettes, striking staging and special effects elements, intriguing lyrical themes and an overall attitude that the quintet has described as "joyful rebellion."

"One of the things the band kept saying during the lead-up to this tour, was that it's a 'joyful rebellion," Lighting Director Andrew Froehlich explained. "The album is also all about that feeling: There's joy, but a little bit of sourness in there. Everything kind of sucks sometimes, but we're here, we're living, we're breathing, so let's make it better, together." From his spot at front of house, Froehlich makes deft and artful use of contrast to enhance the impact of every song and lighting look. It's a design that intertwines "joyful rebellion," while keeping everything highly cohesive and visually pleasing at the same time.

In explaining his creative methodology, he described it as "deliberate, rhythmic, and punchy," while taking a tailored approach to each individual song. In the rig for this tour, suiting that style, are the five Skywriter HPX M-10 laser fixtures, made by X-Laser. He commented the X-Laser Skywriter fixtures provide just the right dynamic and punch, while fitting into the grandMA3-powered rig seamlessly—and perhaps unexpectedly.

"We never expected or thought we'd be using lasers," Froehlich said. "But with how easy it was to integrate them with [X-Laser's] Mercury firmware, you can just plug in a DMX cable and program straight away with the other lights, it's really incredible. It used to be so inaccessible and expensive and you needed a whole

thing's so streamlined and compact thanks to Mercury. We took advantage of that, and created a rig and an environment that lets us make the most of the lasers as impact effect fixtures."

Froehlich explained, "The lasers are basically guide lights above, with one fixture positioned above each of the five artists in the band." Unlike many typical implementations of laser lighting, Froehlich's design has the laser beams aimed downward at the stage rather than outward over the crowd. The beams reach each artist's spot on stage, providing a more impactful effect than a traditional spot fixture could. With safety in mind, Froehlich aims the lasers with sufficient margin around the performers, who in turn, know to avoid the beams.

Speaking to the overall production design by Emily Cox, Froehlich explained that having the lasers on the tour is a perfect fit for the creative concept that called for a lot of neon.

separate tech and controllers, and now every-

saturated, and "retro" colors throughout. "We were going for a design inspired by James

Turrell from the 1970s and 1980s with a lot of retro, saturated colors with smooth, clean lines," he noted. "Emily came up with a few different options for us and everyone fell in love with the rainbow-shaped backdrop."

Revisiting the concept of contrast, the lasers' sharp, crisp beam effects offer a compelling complement to the soft, smooth, curved edges of the rainbow and its LED strip borders. "Between the lasers and the pixel-mapped LEDs on the fringes of the rainbow frame, it looks so slick," Froehlich pointed out. "And adding the [Blizzard] Torrents on the sides and the chevron truss up top helped keep things dynamic and dimensional."

Seeing all of those fixtures interplay makes for one of the most dynamic and striking moments of the set during the song, "Walking Uphill." Froehlich described how the song builds slowly, and he uses the laser "cone" look during the song's gradual, guitar-only intro. Then, he said, it "slams right into the big first chorus," allowing the entire rig to shine and creating, "decidedly everyone's favorite moment of the show."

No matter which song or look they consider their favorites, concertgoers may be surprised to see lasers on tour with Lake Street Dive. Froehlich said that even the crews watching tour rehearsals told him that they wouldn't think that a band like Lake Street Dive would use lasers. "It's all in the application," Froehlich stated. "The consensus is that the lasers look awesome and have a great impact, and I think as more and more people see what's possible with Mercury, you'll see lasers out with more acts, no matter the genre."

This insightful content was shared with PLSN by X-Laser, a leading manufacturer of high-powered laser fixtures for lighting professionals. Learn more about X-Laser's offerinas at www.x-laser.com.



ATOMIC GOLF LAS VEGAS

hether you're a golf enthusiast or have never swung a club, Atomic Golf in Las Vegas promises an exciting experience as you compete in interactive games that feel more like party activities than serious competition. Atomic Golf is located on a seven-acre site next to the STRAT Tower, just north of the Las Vegas Strip. Spanning four floors spread across 99.000 square feet the popular attraction boasts over 100 high-tech golf bays and eight virtual putting areas. Pivotal to the success of the project is the work of the creative design solutions company, Coherent Design. The Coherent Design team handled the lighting design for the project and also worked with Beaudry Interactive, who created and designed the virtual putting areas. Coherent Design selected to illuminate the putting areas with 32 Christie® GS Series laser projectors, and in the driving bays selected Elation for lighting effects to boost the festive ambiance and enhance the interactive entertainment experience.

Setting the attraction apart, the state-of-the-art technology includes advanced lighting systems, which prominently feature Elation's Proteus Maximus LED profile luminaire, enhancing and supporting the venue's lively party atmosphere. Multiple fixtures are mounted above the top level of driving bays, providing bright, exceptional light that projects hundreds of feet onto the driving range, bathing the space in dynamic color and pattern and reinforcing the interactive experience for guests.

An Entertaining Experience

Atomic Golf is outfitted with multiple bars, lounges, VIP suites, a top-notch kitchen, and more. Tonya Neely, Senior Lighting Designer at Coherent Design, states, "It was important for the owner that the facility stand apart from other similar driving ranges in town. It's an entertainment experience and the atmosphere is very fun, very much a party vibe."

Along with Neely, Coherent Design's lighting design team was headed by Ellen Kuklinski and Jarrod Hetzer. Coherent handled the lighting for all front-of-house spaces, such as the driving and putting areas, and all other areas within the building, and also encompassed lighting controls. Coherent collaborated with Simply Connected on the audio-visual design, low voltage, and access control.

Kuklinski, Director of Lighting Design at Coherent Design, states, "Teamwork was pivotal in achieving Atomic Golf's vision of a dynamic and interactive environment. We worked closely with Bobak Mostaghasi, CEO of Atomic Golf Las Vegas, whose vision and inspiration were key. Our design process was highly collaborative, involving back-and-forth discussions to refine the concept and ensure the lighting met the high expectations."

The facility includes a variety of tech spaces, each with distinct lighting needs, says Neely. Some have static white fixtures to ensure they're getting appropriate light levels, while others are color-changing to support the charismatic, fun atmosphere. "In addition, there is dynamic lighting and interactivity in the driving range," Neely explains, "so when a golfer hits a particular target there is a lighting effect that triggers both on the driving range and in the hitting bays."

Vendor Support

Coherent Design collaborated with 4Wall Entertainment and selected the Proteus Max-



imus fixtures after extensive mockups, determining the best solution for lighting the driving range and covering a substantial distance. Neely emphasizes, "The Proteus Maximus fixtures are crucial for our design, providing moving lights with an adjustable beam, focus, and color change, along with gobos and effects, all in an exterior-rated fixture. To find that in one fixture was amazing and made it easy to be able to achieve the owner's vision of a dynamic, interactive driving range. They have performed fantastically, even during the daytime, providing the high lumen output required and enhancing the overall party experience." Neely adds that the Proteus Maximus also helps differentiate Atomic Golf from similar venues during the holidays and special events by offering custom effects that enhance the visitors' experience.

One project challenge was the tight timeline, requiring Coherent Design to ensure that any fixtures specified could be delivered and installed in time for the opening. Coherent Design collaborated with lighting service provider 4Wall to ensure that the integration and entire theatrical lighting installation met the owner's vision. The lighting control system, designed by Jarrod Hetzer, is actually comprised of several different control systems, between the general area lighting, the hitting bay lighting, the LED matrix circle fixtures, and of course, the Elation fixtures, that all needed to talk together to deliver the advanced technological experience. Coherent Design worked closely with 4Wall's team, led by Barbara Brennan and Will Witner, to deliver an overall system capable of triggering all of these fixtures with interactive moments in the game play.

Relation Lighting Agency, Elation's sales representative in California, ensured that the lighting fixtures met the project's stringent time requirements. Coherent also collaborated with lighting provider 4Wall to ensure that the integration and entire theatrical lighting installation met the owner's vision. "It was a team effort to make sure the entire project came to fruition," Kuklinski stated.

Putting Area

The goal of the putting areas is to create a game that's enjoyable for everyone, regardless of handicap. The virtual putting areas are located outdoors, with an environmental







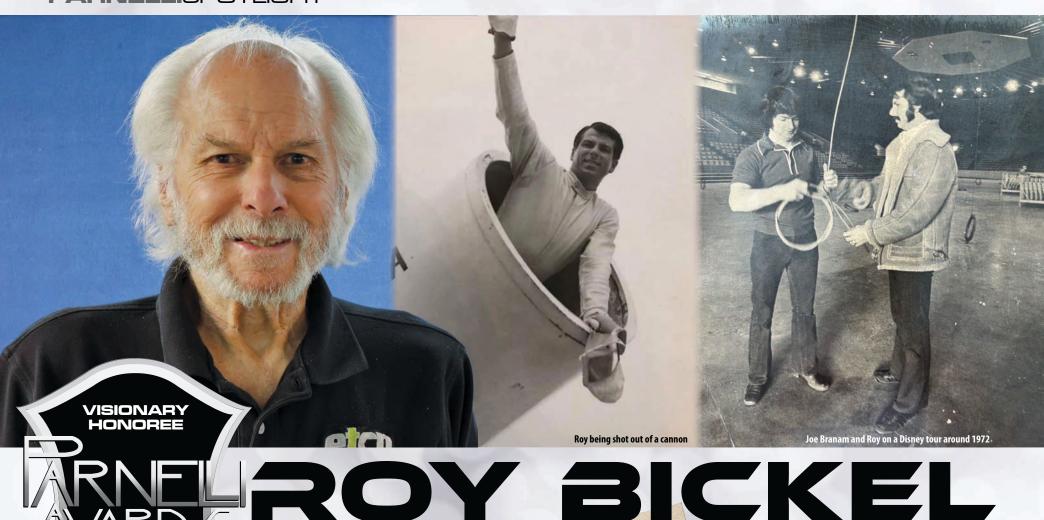
enclosure over the top, where the projectors are housed. Each green is 10' wide by 20' long, with 200 ftL of luminance achieved by four Christie DWU1100-GS projectors. The image is bright enough to use the areas, both day and night, and the content also punches through the bright ceiling lights, with playable time reaching up to 20 hours daily.

Coherent Design selected 32 Christie DWU1100-GS laser projectors for the putting areas, based on years of experience working with Christie technology. "It's a harsh environment so we needed a projector manufacturer that was backed by solid engineering. We know Christie has engineers and project managers who could help us with a successful project," explains Kevin Potts, managing principal, Coherent Design. "There are a lot of companies who make 10,000 lumen projectors, but when we get into more complex projects, we want a manufacturer who has not only the engineering capabilities to build their product but the know-how to implement their product into unique environments." Coherent Design worked with Christie to determine the number of projectors needed, the brightness, and the portal glass for the enclosures. Las Vegas' Simply Connected installed the projectors.

Atomic Golf is a sports entertainment venue that's not just for seasoned golfers but for anyone who wants to have fun. With so many options in Las Vegas' vibrant entertainment landscape, it can be hard to stand out, but thanks to a unique concept and engaging, interactive golfing experiences, Atomic Golf has done just that.

This informative project coverage was shared by two leading production solution companies, Elation Professional and Christie Digital. Learn more about all that Elation has to offer at www.elationlighting.com and visit www.christiedigital.com to find out more about Christie Digital.





s a young man who had run away to join the circus, he quickly agreed to getting shot out of a cannon because... well, why not? Roy Bickel could not have imagined that he would be shot into live event and concert touring history, landing in a burgeoning industry, and shaping it as one of the key riggers in the business. He was on set for many of the industry's brightest moments—and for some of the darker ones, too, like when he was surveying the Conrad room at the Las Vegas Hilton for his boss Elvis when he got the word from Graceland that the king was dead.

By Kevin M. Mitchell

The 'Disney Riggers,' from left: Joe Branam, Jim Barnes, Mike Grassley, and Roy Bickel After six decades, he's still rigging, and still making an impression on old and new friends alike. "I saw him at half a dozen shows, and he still gets respect in every building he walks into," says Live Nation's Chris Weathers. "It's like the kids drop to the floor and do the 'I'm not worthy' [bit from Wayne's World] routine for him." Bickel's career has crossed paths with hundreds in our business, including George Travis, who was honored with the Lifetime Achievement Award in 2013. "If there was an ability for any of us to teleport back in time to stand next to the person who invented the wheel, we'd come away saying, 'hey I met Roy Bickel!' Travis says, alluding to his well-deserved reputation as a storyteller who doesn't "let the facts get in the way."

"Roy is a leader of a very small elite group that I was privileged to be associated with when I was a young truck driver and circus rigger," Travis continues. Those early days were a key learning experience for Travis, and he says that Roy was a "Majordomo" regarding "not only what to do, but what not to do. This is not a past tense note from me because every time I am with Roy or in conversation of his recollection of his own experiences, I am still learning, and I appreciate him all the more."

■ The 'Disney Riggers'

Bickel was born in Miami and after high school graduation,

moved to St. Petersburg where he attended junior college. He took some business courses and, knowing where he landed in life figuratively and literally, it's hard to believe he once sold life insurance for a living. "I tried to sell insurance to people who didn't want it," he says. "I did not enjoy it at all." When he tells you that in 1964, he ran away to join the circus, it's no joke. During his dreaded day-job period, he was also a professional water skier. Once while competing, there were some St. Petersburg Youth Aerial Circus folks watching from the shore. They were impressed and asked him to join their group. He jumped at the chance to go with them, learning stunts on the trapeze, the trampoline, and high wire.

He would meet Hugo Zacchini, a "human cannonball," who was brother to Edmondo, the acrobat who popularized the act in 1922. "There was a rash of accidents, with others coming away with broken legs and a broken back, and so they

asked me if I wanted to be shot out of the cannon and I said 'sure." The propulsion of the cannon was a giant bungie cord, "so it was like a sling shot—the further back it was pulled in the cylinder, the further the distance I would go." He would spend the next five years travelling North America with the group. (Another member of the group, who had been with them since he was 10, was future rigger and Parnelli Visionary honoree and friend Joe Branam.)

Along the way, Bickel was asked if he wanted to also handle rigging for the show for some extra cash—\$75 a week extra, to be exact. A prop boss in New Orleans with a connection to Disney saw his work and was suitably impressed enough to pass his name along. In 1969, Bickel got a call from a show called *Disney on Parade* asking if he could fly to L.A. for an interview to rig the show. He did and got hired.

Disney on Parade was the biggest show on the road in the early 1970s, traveling on five continents. The touring arena show featured live performers portraying the roles of Disney characters in performances based on their films. This included not only Peter Pan and Mary Pop-

pins, but Herbie: The Love Bug... and both the actors and that car had to fly. Bickel became the first of 'the Disney riggers' that included Branam, Rocky Paulson, Mike Grassley, and George Rucavado. (Rocky Rockwell would be hired and considered part of the group later.) They formed the basis of a group that collectively became the pioneers and innovators of live concert touring rigging.

The group contributed to setting standards in a newly emerging industry, setting the rule for a 3/8 cable to be the standard for a one-ton chain motor. They did it by going through all the catalogs of cables and figuring out the breaking strength, what would be safe working loads, and came up with the right cable to use. Then they determined the best lengths were 5′, 10′, 20′, 30′ and 50′. Roy also introduced the use of slings with screw pin anchor shackles, which is still employed today.

In those early days, it was all made up as they went. Bickel says, "We would have two pieces of wire rope for each hand point. There was no bridling, and shows were laid out for dead hangs. They would have two points, a short cable, and a long

cable for maybe two rigging points, with nothing shackled together. There were no baskets or shackles—you tied it." During this time, Bickel did take "the only 'rigging class' there was, and it was in Long Beach. It didn't really teach you how to hang points, but it did teach me how to use the hardware."

Broadway and Rock 'n' Roll

Disney on Parade was an enormously successful show and more than just the ticket holders became fans. One fan of Bickel's work was Peter Feller, a Broadway theatrical set builder and the owner of Feller Scenery Studio. In 1973, he lured Bickel to New York City to work for him. While with Feller, Bickel handled the flying for shows including Mary Poppins, Chicago, The Wiz, and Pippin, plus the touring production of 1974's Peter Pan starring a young Olympic silver medalist gymnast named Cathy Rigby. Then Feller received an interesting call from Jethro Tull's camp and secured a contract to work on that tour. He asked Bickel to put together a crew and go out with him. Bill McManus, who was a pioneering lighting and set designer behind several technology innovations, was also involved. "To Bill's credit, he had bought a chain hoist from CM Hoists—they had been around a long time but nobody in [live event] rigging knew what to do with them," says Bickel. The pair met with the engineers of CM. "At the time they were all on trollies with the motor up, used to pick up boxes and racks and move them from place to place [in a warehouse environment], and they had short chains." For this Tull tour they needed

the chains to be 50' long. But the problem was that the limit switches were affected by gravity and the motors wouldn't work motor-side down. "So we got CM to figure out how to spring-load them and flip them." McManus had built metal brackets to attach to the truss to lift the audio speakers in the air rather than stacking them on stage, which allowed for better sightlines and thus enabled more seats to be sold.



It was a monumental moment in the history of concert touring.

Bickel went out on that tour, and he took two Disney riggers with him, Branam and Grassley. They hung those speakers and hundreds of lights much quicker and more efficiently than had ever been done before. The industry took notice, and Bickel's phone started ringing to work on more concerts.

He was hired for one of the most historic tours in 1975, The Stones' *Tour of the Americas*. Bickel says he went to Clair Brothers [also Parnelli Audio Innovator honorees] and told them they would need

trussing with half-inch steel to hold what the band wanted in the air. "The first batch of steel I got wasn't going to work because it was all greasy—grease is great because it helps make the trussing last a long time outdoors, but it's not good handling it all the time." They went back to a fabricator and got what he wanted. Clair had developed speakers specifically for hanging with straps and hardware fabricated for that tour. More developments ensued. "At that time, we were gravitating away from tying the points by hand or progressing from tying the hand points to a basket hitch or 'choke.""

The biggest artists of the time kept hiring, including Elvis. For the last years of Elvis' life, Bickel, Grassley, and Jim Barnes took turns rigging for him. "I did most of the Elvis tours from 1975 until he passed [Aug. 16, 1977]," he said. (He was working with Parnelli Audio Innovator Bruce Jackson, who was Elvis' sound engineer.) Another groundbreaking trek was Emerson, Lake and Palmer's 1977 tour. It involved a 58-piece orchestra, a choir, and a huge JBL P.A. system originally designed for the 1976 Montreal Olympics. There was a lot on the stage and some of it was moving. It was a tour where the industry took notice of the rigging innovations.

KISS and Tell

The next year, Bickel was part of yet another historic outing when Yes toured in 1978 in-the-round on a circular stage that rotated (which was designed by future Parnelli Awards Visionary Award winner Michael Tait). "The microphones had to be hung above [singer] Jon Anderson's head, and I had to make sure it rotated with the stage in a way that didn't disconnect them." Bickel went on to do in-the-round shows for Kenny Rogers, Neil Diamond, and Billy Joel tours. For Kenny Rogers' tour, he says they played in venues where rigging was especially challenging, and they employed a four-post ground support cable of handling the considerable amount of audio, video, lighting, and dimmers. "Everything was a learning experience in those early days."

In 1979, Bickel was called out for KISS as they climbed to the height of their fame and never left that perch, working with them again through the decades. The 1979 tour, *The Return of KISS*, was the first to feature the famous aerial stunt by Gene Simmons flying out over the crowd. He levitated 30' to the top of the lighting truss. "It started off with a hand crank and he would take off from the stage and land out in front of the house on an elevator turntable." Testing and practice



PARNELLISPOTLIGHT

were involved with Bickel operating it and "a strong carpenter would actually crank it for the travel, and I would make sure that the pulleys didn't come off." There were many other stars he's flown—and he's even flown company executives at corporate shows.

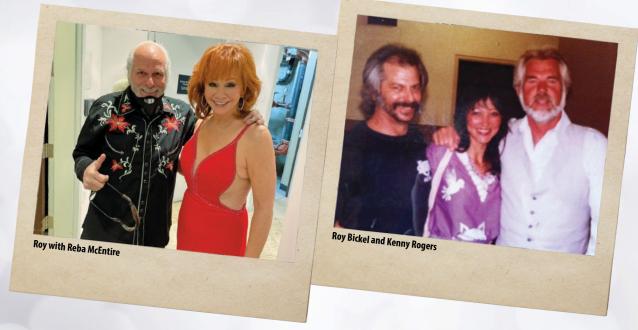
As the Disney Riggers got busier, the rigging pool needed to get bigger. "We would call each other and then gradually we would bring in other house riggers, network, and expand on the list of those we took out on tours with us." Great opportunities outside concert touring kept coming, too, and in 1980 Bickel was the Production Rigger and Stage Manager for the Lake Placid Olympics.

The 1980s came, concert touring became big business, and rigging evolved along with it. Those making their living in concert touring at the time—including riggers—were used to getting paid in cash; but then the IRS started to realize how much money rock 'n' roll was generating. "The accountants got into it, and we had to sign our real names for everything so they could tax us," Bickel says with a wink. The next two decades continued with Bickel continually being called out on the biggest tours of the decade, from Alabama to Fleetwood Mac to Michael Bolton (the opener for him was Lady Gaga). Another was the Eagles, who he'd worked with when they opened for the Rolling Stones in 1975.

Longtime Clients

Another longtime client was Reba McEntire. He first worked with her in 1995, and she came to his current hometown for a Las Vegas residency co-headlining with Brooks & Dunn in 2015. That show featured a lot of moving trusses, but technology had caught up. "Now we've graduated to not just an operator pushing buttons but variable speed motors that takes a computer and a computer guy to operate it." Bickel also served as the crew chief on that, modestly noting that "the automation operator actually operated it because I wasn't a good operator."

Bickel still keeps busy, especially as a Production Rigging Supervisor of the Las Vegas Convention Center for all the con-



ventions. (He generously volunteered as Head Rigger for the Parnelli Awards when they were held in Las Vegas). He also does pop and rock residencies. "I recently did LL Cool J at the MGM here in Vegas, and while we were rigging and hanging audio and lights, the stage was getting put together out of our way, and then rolled into place when we were done." The rolling stage concept was something tried in his early days without much success and is yet another technology he has seen come to fruition.

Many of the shows Bickel does today are reunions. "Thirty years ago, Duran Duran opened for 10,000 Maniacs, and last year, I worked with them again." In the late 1970s, Bickel worked with Jimmy Buffett—("I was even on his baseball team")—and got to work with him again in recent years when he played Las Vegas, shortly before Buffett's untimely death in 2023.

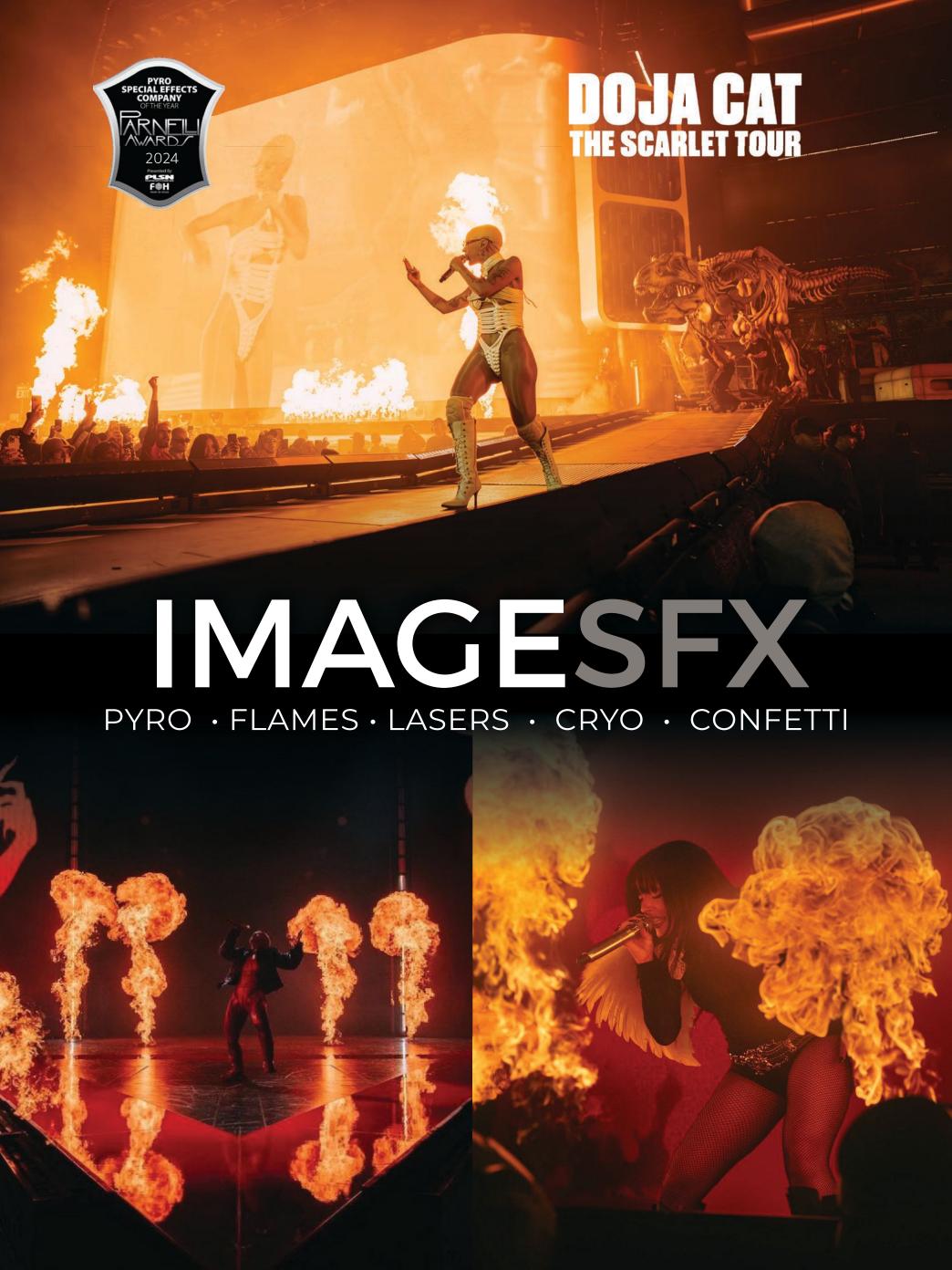
Along the way, Bickel has helped others learn the ropes of rigging on jobs. These protégés include, first and foremost, his son Ben, head rigger for Morgan Wallen. But there are numerous others as well. A big part of Roy's journey has been being a proud member of the IATSE Local 720 for nearly 60

years. Tim Lederer, today 3rd Vice President of that organization, has been a longtime friend of Bickel, going back to the 1990s when they met in Vegas. He says Bickel's vast rock'n' roll road experience immediately enhanced what could be done in Vegas. "His leading role was that he was a rope access guy, and we didn't have many people in town who could propel artists," Lederer explains. "We didn't have access to guys like him, and he was the boss. And he was a training machine. I'm one of the many, many people who he taught. He's been an inspiration."

In 2021, Bickel received the ESTA Lifetime Technical Achievement Award. Today, he and wife Diana live in Las Vegas, and along with his son Ben, he has a daughter, Elizabeth. As to the future, "I'm fortunate because everything got legal with rock 'n' roll. Being a union member for over 50 years, I'm pretty set. But I'm still working because I'd rather do that than not."

Roy Bickel will be presented with the Parnelli Visionary Award at the 23rd annual ceremony, set for January 24, 2025 at the Anaheim Hilton during the NAMM Show. To reserve your ticket (or table), go to www.parnelliawards.com.





By Kevin M. **Mitchell**

n the grounds of the Churchill Park Music Festival held at St. John's on Newfoundland Island in August—which featured headliners Nickelback and Shania Twain—was Ben Czenze, handling video world. He was one of the youngest members of the crew, and certainly the youngest with the most responsibility. There was a joke going around the grounds about how "for every 100 audio people, there was one lighting person." When Czenze heard that, he added that from there the numbers dimmed further: "Then there's one video tech for every five lighting techs."

That he oversaw video at this popular festival was neither a coincidence nor a matter of "luck"—but an instance of this young man being drawn to a career in live events and then analyzing the scene and figuring out his best route. On that he was successful, and he's already made a mark in Eastern Canada as a sought-after unflappable steady hand.

Technologically Inclined

Czenze was born and raised in Halifax, Nova Scotia, to a family where the arts in general, and music specifically, were important. "Both my parents were music fans, and I would play drums and bass growing up," he says. At age seven he was volunteering at the annual Halifax Jazz Festival with his parents. By the time he was around 12 he was doing more than just cleaning up and doing menial work at that jazz festival and had graduated to working on the stage crew. Technologically inclined as well as already having a good work ethic, he caught the attention of Technical Director Danny Thomas, who is co-owner of Rockbound Productions. By the time Czenze was 18, he was part of that company's labor crew. "I did a lot of things including stage managing for them at local music festivals, and then learned more during setup and tear down for an event."

Czenze was quick to figure things out as he went along—and on his own. He was home schooled, so "self-directed learning was always interesting to me, and I liked reading about things and learning that way." During this period, he realized that he might be able to build a good career without ever going to school. "I had an opportunity to work doing something I liked without running up any student debt," he says. So, he "fell into" being a contract worker and started hustling for gigs and getting more live event work, mostly setting up and tearing down "as one does starting out."

The Move to Video

The more festivals he worked, the more audio work he did for Rockbound. He also made inroads with another event house, FMAV, which was absorbed into Encore Global. "I was doing freelance work for both companies, and started dipping my toe into video, doing some camera switching for a couple of the smaller festivals and events." Then came the pandemic. Instead of sitting around or getting into an entirely different line of work as so many others in live events, he threw himself into video, deciding to make a career of that.

Reading manuals and watching YouTube tutorials, he got himself up to speed—and just in time. "With Rockbound, we probably did over 100 livestream shows throughout



the pandemic at a local recording studio in downtown Halifax," Czenze says. He was spending most of the time operating PTZ camera systems or handling camera switching. "When operating a PTZ camera, I would also be the livestream tech on the event." While this video work didn't keep him quite as busy as he was pre-pandemic, "I was very grateful for it—and grateful to Danny for giving me some steady work. I was luckier than many folks who didn't have steady work and had to completely change careers."

But again, this was a calculated choice to build a place for himself in live events long-term. Getting back to the joke going around the Churchill Festival, "I saw there weren't a lot of video people around and knew it was something I could get work in. Being in the Atlantic Canada region, you have to pivot when you find where the deficiencies in labor are. I saw what was needed at the time and moved into that. It helped that I had an interest in it." This is where his being technically inclined made him especially fascinated and well-suited to learn the ins and outs of video work.

Self-Taught

"There were so many opportunities to learn—it was like, 'here's the gig, here's the equipment that's being used, if you can learn how to use that equipment, the gig is yours." Time and time again he dived in, learned the gear, and successfully executed the gig. "This is the approach I've taken most of my career."

Even today, absorbing manuals, spending time with YouTube, and scouring online forums has become his schooling. "And knowing how to Google something quickly turned out to be a good skill to have," he says with a laugh. Once the pandemic restrictions were lifted, live concerts came roaring back to life with a vengeance. "Everyone was going all out because after two years of no festivals, people were definitely wanting to gather outside again, so events came back full-force, even in the very beginning when most of

them still had some hybrid [Covid] aspect."

Looking back, he says it's kind of a blur, but he appreciates that he's had many great moments working for acts he's personally a fan of. "Being able to see [rapper] Killer Mike at the Halifax Jazz Festival and being able to camera switch and handle the robo[cam] work on that is a moment that stands out, and that was a really good show." There are many others, but the nature of festivals in general—and those in Canada in particular—is for Czenze to arrive on site without knowing what, exactly, the artists will be performing. Despite that, he adds, "being at St. John's and being able to work video for Shania Twain and Nickelback was really enjoyable. Just to work with artists at that level is a big deal because it's not often [A-listers] come to Atlantic Canada. To help facilitate their show and be part of the house production was a great experience."

At this point Czenze is working for many event/concert companies, including Tour Tech East, which handled the St. John's festival. He's also working other events including a recent Canadian Football League game in Halifax. "That was interesting because we had a 210' long video wall, just one tile high, spaced across the side of the field that was used as an advertising board. That was technically challenging. The aspect ratio and pixel size were

unique as it was over 16,000 pixels wide and 256 pixels tall. The big challenge was having to deal with that many pixels on a non-standard-sized LED wall. But it was a good challenge, and I got to work with Chris Swift who does a lot of freelance work with Tour Tech as well."

Freelance Work

"I freelance with everyone," Czenze says. "Again, it's the unique nature of Atlantic Canada. I enjoy being exposed to different gear, different shows, different companies; like with Encore [Global], where the large majority of what they do is corporate work. There I'm working anything from a two-screen special to an 80'-wide projector blend, for example. It's good to be exposed to all of that, and to all the different workforces I encounter."

He's certainly adaptable. Czenze owns no gear himself outside of what's in his Nanuk 935 case, which he takes to every gig. "It's a carry on-sized hard case, just like a Pelican, but it's made in Canada and has some nice extra features," he notes. In the Nanuk, he has test tools and signal converters. "I always use the gear that's provided, like at Tour Tech, it's been nice to use the new NovaStar Mx40 Pro [LED Display controller]. It's been great to learn on something that new with an updated backend software system. On the Encore side, I've been able to use large format projectors from Panasonic and Christie. I also love being able to learn Barco's platform via their E2 Screen Management System. It's just great to teach myself on these tools and to be constantly exposed to the new industry standards."

Czenze wears a lot of hats: PTZ camera operation, camera directing, graphics switching, LED Technician, and graphics as well. "I've also had the role of being a Technical Producer for all video on a couple of events, like for the televised *East Coast Music Awards* that happens every year. Recently I was also the Camera Director and caller for that show. Being able to direct a nationally broadcast TV award show on Rogers [cable] TV was definitely a highlight of my career."

Constant Learning & The Future

Czenze doesn't name his favorite role because he says he likes them all. "Different jobs keep it fresh. I like being able to do summer festivals and being outside and being exposed to touring acts and being able to interact with them; seeing what [tools] others are using including media servers is really good for me. I'm also seeing the work of other camera directors and I always pick up something watching other people work." He even views the corporate work topics as interesting. "I like medical conferences—there's always something to learn, which is another reason I love this industry."

Working for many different companies might seem complicated, but Czenze makes it simple: "It's about who books me first. I'm a big believer in that. If you're booked, you're booked, no matter what else comes along." Helping fill his schedule are the many recurring gigs he has every year, which are booked far ahead. Otherwise, it all seems to balance itself out. Then, being Canada, January to March is "pretty dead, but I'm okay with that." Czenze is mostly focused on his immediate future. "I would like to just keep learning, keep refining my craft, and keep getting better at the job," he says. "Fostering relationships is important to me; otherwise, I just want to produce even better products. Always." PLSN



VISUAL AWARDS

LIGHTING COMPANY OF THE YEAR

- · 4Wall Entertainment Trilogy (Iglesias, Martin, Pitbull)
- Bandit Lites Creed
- PGP / Premier Global Production Company Jelly Roll
- Solotech Madonna
- Upstaging Billie Eilish
- Volt Lites Imagine Dragons

HOMETOWN HERO LIGHTING COMPANY OF THE YEAR

- BML-Blackbird NortheastEggshell Light Company Southwest
- R90 Lighting Northwest
- RZI Lighting Southeast
- Technical Productions, Inc. (TPI) Midwest
- Tour Tech East Canada

NOOK SCHOENFELD LIGHTING DESIGNER OF THE YEAR

- Ezra Donellan AJR
- · Jamie Fadden Sammy Hagar
- John Featherstone Hans Zimmer Live
- Kyle Kegan Tyler Childers
- Roger Gant Billy Strings
- Terry Cook The Rolling Stones

LIGHTING DIRECTOR OF THE YEAR

- Ben Marx Vampire Weekend
- · Celine Royer Linkin Park
- Cosmo Wilson AC/DC
- Ethan Weber The Rolling Stones
- Fraser MacKeen Noah Kahan
- · Shaheem Litchmore Coldplay

PRODUCTION DESIGNER OF THE YEAR

- Abigail Rosen Holmes Phish @ Sphere
- Anders Rahm & Cort Lawrence Morgan Wallen
- Baz Halpin Justin Timberlake
- Mitchell Schellenger The Killers
- Patrick Woodroffe & STUFISH The Rolling Stones
- Sooner Routhier & Trevor Ahlstrand Megan Thee Stallion

PYRO/SPECIAL EFFECTS COMPANY OF THE YEAR

- ER Productions Def Leppard
- ffp EFFECTS Touring Morgan Wallen
- ImageSFX Doja Cat
- Pyrotek Special Effects Green Day
- ShowLive SFX Styx / Foreigner Tour
- Strictly FX Jelly Roll

INDISPENSABLE TECHNOLOGY - LIGHTING

- · Ayrton Rivale Profile
- CHAUVET COLORado PXL Curve 12
- Elation Proteus Hybrid Max • GLP - impression X5 Bar IP
- Martin MAC Viper XiP
- Robe iFORTE LTX

SOUND AWARDS

SOUND COMPANY OF THE YEAR

- Clair Global Morgan Wallen
- Eighth Day Sound Green Day Solotech – Justin Timberlake
- Sound Image Tyler Childers
- Special Events Services / SES Luke Combs
- Spectrum Sound George Strait

HOMETOWN HERO SOUND COMPANY OF THE YEAR

- Boulevard Carroll Northeast
- Brown Note Productions Southwest
- KiAN Sound Canada
- Mid-America Sound Midwest
- Music Matters Productions Southeast
- Point Source Inc. Northwest

FOH MIXER OF THE YEAR

- Ace Baker Sammy Hagar • Colin Pink – Hans Zimmer Live
- Dave Natale The Rolling Stones
- German Tarazona Grupo Frontera
- Kenny Kaiser The Killers
- · Kevin Lemoine Green Day



MONITOR MIXER OF THE YEAR

- · Chris Daniels Luke Bryan
- Ian Beveridge Foo Fighters
- Matt Napier Madonna
- Myles Hale Stevie Nicks
- Stephen Carter The Rolling Stones
- Ted Bible Def Leppard

AUDIO SYSTEM TECH OF THE YEAR

- · Adam Smith Foo Fighters
- Clark Thomas Green Day
- Matt Van Hook AC/DC
- Paul Jump Karol G
- Ricardo Barragan Bad Bunny
- Thomas Morris Morgan Wallen

INDISPENSABLE TECHNOLOGY - AUDIO

- Adamson VGt Line Array
- Allen & Heath Avantis Solo Digital Console
- DiGiCo Quantum326 Digital Console
- Fourier Audio transform.engine
- Meyer Sound Ultra-X80 Loudspeaker
- Shure Nexadyne Microphones

VIDEO AWARDS

VIDEO PRODUCTION COMPANY OF THE YEAR

- Gateway Studios & Production Services AJR
- Moo TV Chris Stapleton
- Nighthawk Video The Rolling Stones
 Screenworks NEP Jelly Roll
- Solotech Adele in Munich
- Upstaging Queen + Adam Lambert

VIDEO DIRECTOR OF THE YEAR

- Colleen Wittenberg Hozier
- Damien Gravois Childish Gambino
- James George & Stephen Price Megan Thee Stallion
- Mark Haney Whiskey Myers
- Michael Duque & Roland Greil The Rolling Stones
- Stan Kellam AJR

MEDIA CONTENT CREATOR OF THE YEAR

- FRAY Studio Glass Animals
- Lightborne AJR
- Lüz Studio Billy Strings
- Moment Factory Phish @ Sphere
 Raw Cereal Megan Thee Stallion
- Silent Partners Studio Justin Timberlake

INDISPENSABLE TECHNOLOGY - VIDEO

- Absen PL V2 Series LED Panel
- Blackmagic Design URSA Broadcast G2 Camera • INFILED - RS Series LED Panel
- ROE Visual Vanish ST Series LED Panel • Tyler Truss – GTV Video Truss
- YesTech MG9 Series LED Panel

PRODUCTION SERVICES AWARDS

STAGING COMPANY OF THE YEAR

- · All Access Twenty One Pilots
- · G2 Structures Morgan Wallen • Gallagher Staging – Cage The Elephant
- · Stageco AC/DC
- Stageline Mobile Stages Festival d'été de Québec (FEQ)
- TAIT Megan Thee Stallion

RIGGING COMPANY OF THE YEAR

- ARS Entertainment Rigging WWE
- Five Points Production Services Bad Bunny
- Gateway Studios & Production Services AJR
- Heavy Hitters Rigging Tyler Childers
- SGPS ShowRig Trans-Siberian Orchestra (TSO)
- Upstaging Noah Kahan

SET CONSTRUCTION COMPANY OF THE YEAR

- All Access Charli XCX / Troye Sivan SWEAT Tour
- Gallagher Staging HARDY
- PRG The Killers
- SGPS ShowRig Imagine Dragons
- Stageco AC/DC
- TAIT Bad Bunny

INDISPENSABLE TECHNOLOGY - STAGING & EFFECTS

- · Look Solutions Unique 2.1 Hazer
- Master FX Mystic 2 Hazer
- Mountain Productions MTN Weather Module
- Stageline HyRig LED Screen Support
- Unity Lasers Elite Pro FB4 IP65
- · X-Laser Triton T Series IP64

PRODUCTION PERSONNEL AWARDS

PATRICK STANSFIELD PRODUCTION MANAGER OF THE YEAR

- Bryan Mengy Jon Batiste
- Chad Guy Morgan Wallen
- Eric "Ski" Piontkowski Foo Fighters John Garriott – Chris Stapleton
- Will Keating AC/DCZito Green Day

PATRICK STANSFIELD TOUR MANAGER OF THE YEAR

- · Allan Tate Stevie Nicks · Christian Coffey - Childish Gambino • Dani Gore – Cage the Elephant
- Keith Albrizzi AJR • Laura Strayer – Alanis Morissette Yvette Uhlmann – BUSH

TRANSPORTATION & LOGISTICS AWARDS

- **COACH COMPANY OF THE YEAR**
- · All Access Coach Leasing · Beat The Street
- · Dreamliner Luxury Coaches
- Florida Coach · Nitetrain Coach Senators Coaches

TRUCKING COMPANY OF THE YEAR

- 46 Logistics
- Egotrips
- Hirschbach • On Tour Logistics / Averitt
- Special Event Transportation (SET)
- · Stage Call
- Upstaging

FREIGHT FORWARDING COMPANY OF THE YEAR

- ACES Cargo
- · EFM Global
- Global Motion • Horizon Entertainment Cargo

Acme Global Logistics, Inc.

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Voting will end December 13, 2024 at Noon (PST).

parnelliawards.com/vote

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AUDIO INNOVATOR Dave Rat

LIFETIME ACHIEVEMENT Malcolm Weldon

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GATEWAY





than Kahn, Look Solutions USA is the North American distributor for Look Solutions, a German manufacturer of fog and haze machines, fluids, and accessories. Since 1997, Look Solutions has been a pioneer and innovator in the fog and haze industry. The inventors behind Germany's Look Solutions—Jorg Pohler and Rudiger Kleinke—designed and built the first battery-powered fog machine—the Tiny Fogger, which was honored with a Technical Academy Award in 2008 for developing a revolutionary process for generating theatrical fog.

Kahn has been in the entertainment technology industry for more than 40 years. He started out running a theatrical equipment and supply store, where he sold stage lighting, costumes, and makeup. He later ran a theatrical effects company, which manufactured pyrotechnics and magician's tools. Kahn served as a member of the ESTA Fog and Smoke Working Group that developed standards for the safe use of fog and smoke. With unique expertise in both the technical and safety sides of entertainment technology, Kahn launched Look Solutions USA in 2004. To this day, he takes a hands-on approach to leading Look Solutions USA. He helps customers choose the right equipment based on their specific goals and answers technical support calls during regular business hours.

These days, Look Solutions manufactures a wide range of fog, haze, and smoke products to make a variety of atmospherics for touring productions, theater, film and television productions. Among their product range is the Unique 2.1 Hazer, which has been nominated by the readers of PLSN magazine for an Indispensable Technology Award at the upcoming Parnelli Awards show that will be held during the NAMM Show in Anaheim, CA on Friday, January 24, 2025.

Look Solutions USA, which keeps all fog and haze machines, parts, fluids, and accessories in stock for same-day shipping in New Jersey, has just celebrated its 20th Anniversary. Kahn took time to speak with PLSN on this milestone, looking back on the past two decades as well as to what comes next.

How did you come to start Look Solutions USA?

At the time, I owned a company called Theatre Effects in Maryland, that sold special effects and pyro. I met the founders of Look Solutions at a PLASA show in London where we were both exhibiting. They had the Tiny Fogger on display at that show and I offered to show it at the upcoming LDI show in the U.S. So, Theatre Effects became a distributor for Look Solutions.

Look Solutions

USA Business Celebrates 20 Years

I ultimately sold Theatre Effects to devote my time just to the Look Solutions line, which has been a lot of fun. In 2004, I officially launched Look Solutions USA in partnership with them to be their distributor in the U.S.

Talk a little bit about the beginnings of Look Solutions, the overall company.

The engineers behind Look Solutions-Jorg Pohler and Rudiger Kleinke—were making fog machines for a company in Germany. They had a workshop in the garage behind one of their mothers' house; a three-person operation. Then they invented the Tiny Fogger, which was the first battery-powered, heat-on-demand fogger as opposed to having a heater block. They decided to go out on their own with essentially one product—the Tiny Fogger. They added one fog machine and one hazer and that was the line. That's how Look Solutions came to be. The Tiny Fogger proved to be hit with end-users and The Academy of Motion Picture Arts and Sciences awarded Jorg and Rudi a Technical Achievement Award in 2008. They have been expanding the product line with a variety of fog, haze, and low-lying fog machines as well as a range of fluids and accessories to create any kind of fog, haze, or smoke effect.

What was a project that helped Look Solutions USA build in the early days?

I remember our first big sale, because I was tempted to put the check on the wall, but I needed to cash it! It was a *Fast and Furious* movie that shot in 2004. Matt Sweeney Special Effects had bought a lot of the Tiny Foggers for the film. Also, the Miami Heat built 25 Tiny Foggers into their scoreboard. At that time, the Tiny Foggers were all kind of handmade. So, when I told Jorg that I needed 25 Tiny Foggers, they had to make all 25 right away. It was funny because of the scale, but those are two projects that I remember from



the beginning. Another show that used our machines was *Breaking Bad*. It was a ground-breaking show, and they had all this smoke from the acids and processes for making the various drugs. For me, that was one of the signs that we had made it when a hugely popular TV show was using our smoke.

So, the Tiny Fogger kicked it all off. Is there another product milestone for Look Solutions?

Another milestone would be the Cryo-Fog machine, which was the first machine that had the chiller and fogger in one enclosure. It was very small—about a 16" cube—and worked with our specially formulated fog fluid along with a tank of liquid CO2 to chill the fog. It's still very popular. The idea behind all the Look Solutions products is to make them smaller and more efficient than other solutions. They are always thinking of new ways to do things that are more efficient, while using less power, and in a smaller package.

Why do you think Look Solutions USA's clients have been so loyal over the 20 years? What makes Look Solutions so valued by them?

It's really the reliability. For years, people didn't really think that a reliable fog machine could exist, and end-users expected to have to clean it. They expected the machine to clog. When Look Solutions made machines that lasted for years and years, and were relatively maintenance free, there was a very positive reaction—it could be done. The reliability of the Look Solutions products earned them a lot of loyalty, especially among people that needed them to work consistently like on a Broadway show or a movie shoot. Where it's really important that it works the first time because downtime is incredibly expensive or embarrassing.

What do you hope the readers of *PLSN* understand about Look Solutions today?

I hope that they understand that Look Solutions makes a quality product that can be relied upon. It's the quality of the products that keeps the customers. We have excellent customer service. We ship orders right away; we answer the phone; we reply to emails right away. All of that is important, but if you don't have a good, reliable product, then the great customer service doesn't really matter. It's the German engineering. While to some it's a joke, or a myth, it's really true that, in Germany, engineering is a higher level of expertise than it seems to be in much of the rest of the world.

What's something that people may not know about Look Solutions?

They probably don't know the scale, or size of the company. We have 30 employees that produce hundreds of machines every week. With a specialty item like a fog machine, many don't really think of it as having such a large market in the world. It certainly started out with three guys in a garage, but now it's a much larger operation, on par with what you would expect from a lighting manufacturer. I think people would be surprised to see the scale of manufacturing for a special effects company.

Do you manufacture your own fluids as well as the machines?

We do. We bring all the fluid over from Germany with the machines by the container load. People might think that it would be cheaper to produce it here in the U.S., but we still import all our fluid from Germany. It actually isn't cheaper to manufacture it here,



and it would certainly not be as good a quality as we currently have. People think that if a fog machine doesn't clog it's because you made a good fog machine, but, it's really both machine and fluid. It's a system where all parts are designed to work together. If the quality of the fluid isn't there, then there would be no point in the quality of the machine. We produce a variety of fluids for a variety of machines, like the battery-powered machines where the fluid is very concentrated and designed to give the greatest amount of fog and the longest lasting fog

for the smallest amount of battery power. So, with something like the Tiny Fogger, we have it optimized to be efficient, whereas with regular foggers and hazers, then there's a variety of fluids that are optimized for different effects.

Having our own specifications for fog and haze fluid is important when it comes to safety, and the safety of our fog fluid. It goes along with a clean fluid that doesn't clog the machine, but especially since Covid, people have become acutely aware of what they're breathing. They really started to think more

about this fog that everybody's asking them to breathe. Until then, they just kind of assumed it was safe and healthy; they never really paid attention to it. Now that's also a boost for our business because people are more concerned about the healthfulness of what they're breathing since the pandemic.

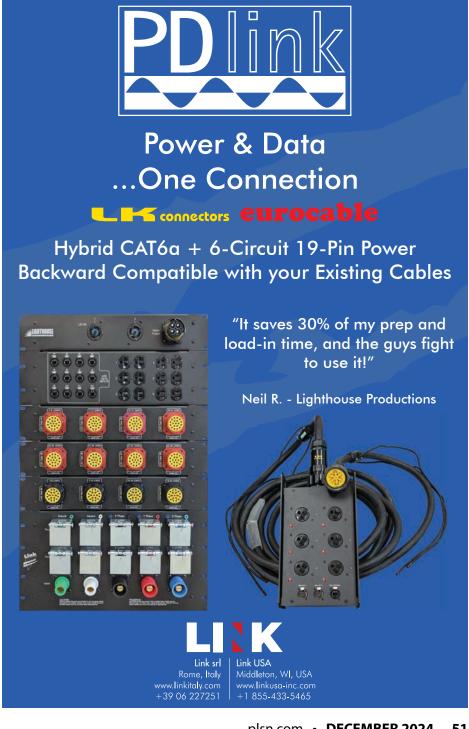
What's coming next for Look Solutions USA?

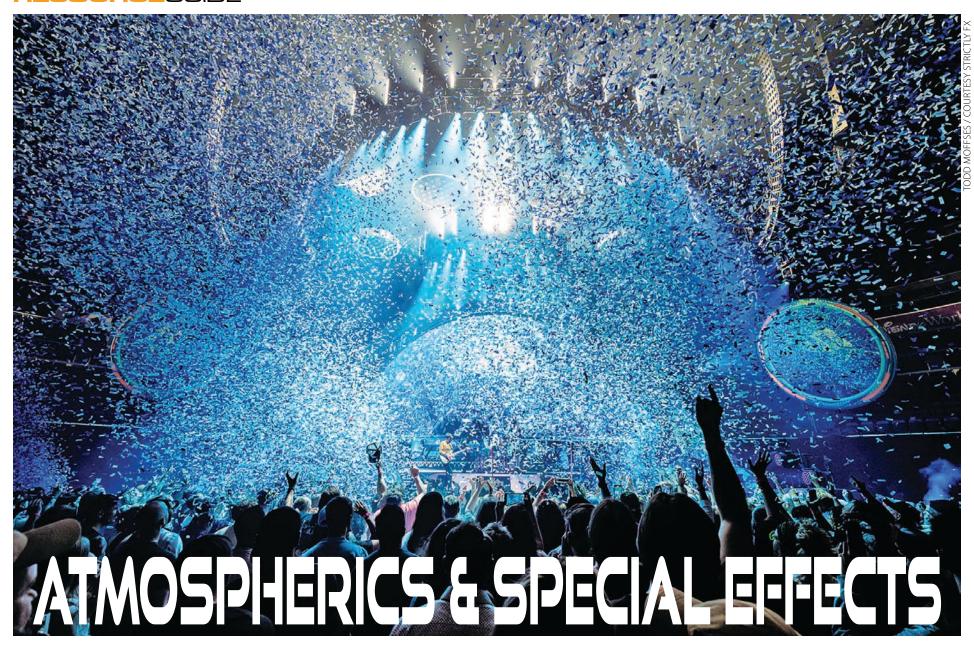
We are moving to a new, larger facility in New Jersey. It's in the same complex, so the address will be the same, just a different building and unit. We are expanding to

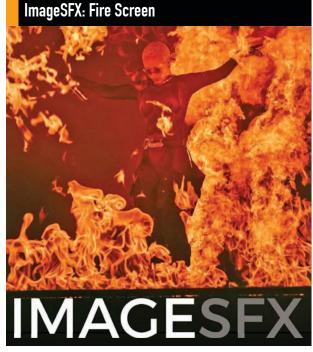
twice as much space and we're really looking forward to that. We'll be moving in January 2025 to get more room for products.

We at PLSN magazine congratulate Kahn and the entire team at Look Solutions USA on the occasion of their 20th Anniversary. There success is of little suprise considering they offer trusted solutions to Super Bowl Halftime Shows; tours; Broadway; TV; Film; and Theme Parks.. For further information from Look Solutions USA, go to: www.looksolutionsusa.com



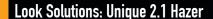






ImageSFX is changing the landscape of what it means to use special effects in the touring industry. The ImageSFX Fire Screen is a modular flame effect system capable of generating flame effects of varying heights via proportionally controlled valves, each with independent pan movement accomplished by motor actuation. Introduced in 2019, this flame bar allows complete creative styling of the flame by varying the height and angle of trajectory via DMX. Integrating the Fire Screen into ImageSFX's proprietary line of touring accumulators makes this system truly plug and play. The accumulator senses each device and allows the operator to set operating parameters from the accumulator's control panel, along with providing real time status updates from each individual bar. ImageSFX's propensity to constantly push the boundaries of design and custom fabrication is reimagining how technology can be used which make the seemingly impossible, possible.

www.imagesfx.com





Look Solutions

Fog machines made in Germany

The Unique 2.1 is a 1,500W water-based hazer, manufactured in Germany by Look Solutions. It can continuously create a thick or thin hazy atmosphere, with output adjustable via the machine's control panel, an optional remote, or any DMX controller. The Unique 2.1 does not require any regular maintenance or cleaning. It has a built-in digital timer and a programmable HDCS (Haze Density Control System). The Unique 2.1 is a very flexible machine—the density and the fan are independently adjustable—allowing you to achieve a fast haze-in, then maintain the haze for the desired length of time, and also clear the haze faster than most other machines in this category.

www.looksolutionsusa.com



Strictly FX is a live special effects company founded in 1996 by industry veterans Mark Grega and Ted Maccabee. The company was started on the principles of utmost client satisfaction and the creation of the most entertaining shows



possible. Utilizing a full team of special effects designers and an inhouse art department, They've captured numerous industry awards, including the Parnelli Awards' Pvro Company of the Year various times from 2007 through 2023.

Strictly FX specializes in Pyrotechnics, Flames, Cryogenics, Lasers, Confetti, and other mischief. They're continuously looking for new units and products to add to their catalog to provide their clients with. They pride themselves in pushing boundaries with their clients and programmers, as well as with design and fabrication, all while still adhering to local safety laws across the globe. Safety with innovation is their main objective at Strictly FX. With over 1,000+ live shows performed a year, if you've been to a concert or caught a sporting event, there's a good chance you've seen some of their exciting work.

www.strictlyfx.com



Antari Lighting & Effects: M-12 Stage Fogger

The Antari M-12 is a high-output fog machine featuring universal voltage technology, setting the industry standard in atmospheric effects. From 100V to 240V, the machine seamlessly integrates into any global power grid. Featuring dual output nozzles, pumps, and heater cores for superior output and performance. The TFT-LCD touchscreen is a user-friendly interface that lets the user choose between manual, timer, or wired & wireless DMX control modes, and select from an assortment of fluid types. The M-12 is rated at 2,000W and has an approximate heat-up time of 13 minutes. At maximum output, it consumes 400 milliliters of fluid per minute. The fluid tank capacity is 10 liters. The M-12 is 25.43″ long x 11.02″ wide x 11.14″ high and weighs just under 60 lbs.

www.antari.com

CITC FX: Maniac 3D Fog Machine

The Maniac 3D moving head LED fog machine is specifically tailored to infuse energy into live music events, nightclubs, and sporting events of any scale. This unit seamlessly merges a powerful fog machine with 120W of vibrant, saturated LEDs housed in an exceptionally compact moving head. Paired with CITC's quick dissipating fog fluid, the Maniac 3D blasts jets of multi-colored fog up to 20', creating a true alternative to cryogenic and pyrotechnic-style effects without the need for large tanks, fire marshal inspections,



or permits. Enjoy the same impact without the added cost. Incorporating the Maniac 3D into your live event offers a unique ambiance and sensory immersion that will captivate both you and your attendees for years to come.

www.citcfx.com

Club Cannon: The Button

The Button is a standalone DMX Controller used to trigger special effects products of all kinds. The Button provides a simple, intuitive interface with vast capabilities. A custom array of 48 RGB LEDs is contained inside, allowing endless color and animation possibilities. DMX can be configured to out-



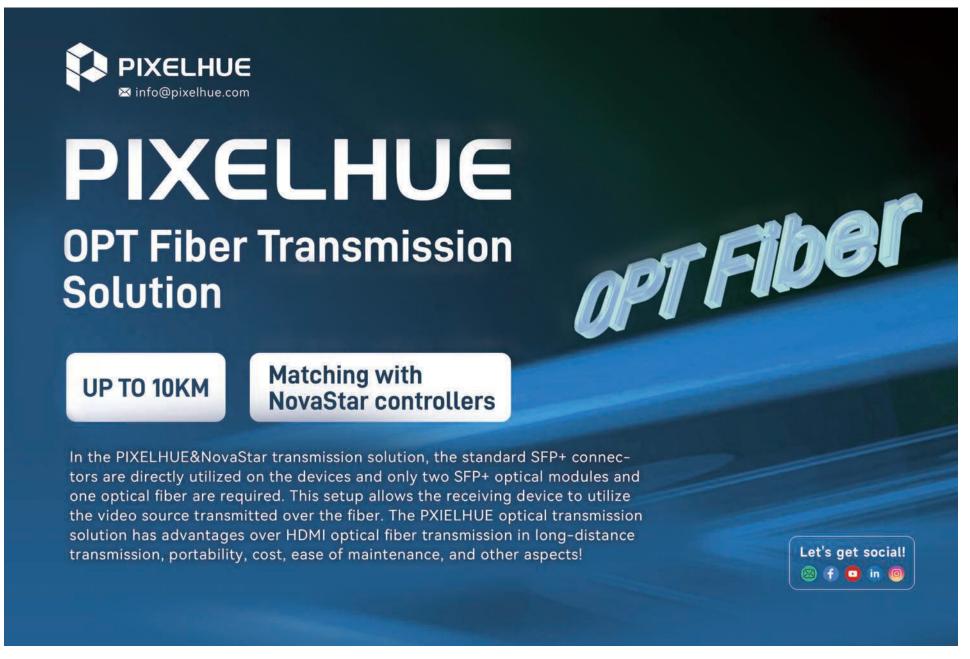
put any range of channels, 001-512. Another handy feature is the ability to assign a DMX channel to the key switch. This simplifies control of products with heaters or safety channels. The Button is a popular choice for controlling CO2 jets, confetti blowers, streamers, fog, haze, sparks, and everything in between.

www.clubcannon.com



CrowdSync Technology: UltraBand

This LED wristband includes 12 LEDs and has a battery life of 6-8 hours. It's made from recyclable materials and allows for full-color customization for branding or sponsorship. It



RESOURCEGUIDE

supports NFC and QR code compatibility and has a haptic motor. The wristband features a recycled PVC face with a matte finish and an adjustable silicone strap. It offers full DMX control, allowing for strobe, flash, sparkle, and color adjustments, with additional programmable macros for further customization. It is reusable, rechargeable, and recyclable.

www.crowdsynctechnology.com



Elation: Magmatic Prime Tour Fazer

The Magmatic Prime Tour Fazer is a powerful 1,500W fog machine, ready in under 20 seconds. Its five-liter tank supports long-lasting performance for demanding events. Housed in a durable road case, it's built to endure the rigors of touring. The sleek design ensures a professional look, with neatly organized cabling for a clutter-free setup. Precision control over fog and fan output is easy via the intuitive Magmatic LCD touch screen, featuring timer and output customization options. Safety is assured with Over Voltage Protection (OVP), keeping the unit reliable even at 220V. It's ideal for professionals seeking top-tier performance and reliability in atmospheric effects.

www.elationlighting.com/magmatic



ER Productions: Flameber

Flameber is the new array flame fixture directly from ER Productions' R&D department. With Flameber it's possible to create any shape flame wall, connecting an endless array of fixtures thanks to its flexible and versatile rigging. With a 3.2" touchscreen display, Flameber is also incredibly easy to configure. It features a dual side controllable ignition allowing for flame chases in either direction, a double solenoid fuel delivery system ensuring fail-safe operation, and an incredibly precise proportional control over both fuel inputs for variable flame height adjustment via DMX.

www.er-productions.com

hazebase America: Base Touring2

The Base Touring2 is available in single or double Highpower2 configurations and is the machine for ultimate output and control. The high-output unit features a built-in 450W fan, allowing the dense output to be pushed further and quicker than previously. Utilizing the air diverter positioned at the front of the unit, it now becomes a huge haze effect filling stadiums in a fraction of the time. The Base Tour-



ing2 reaches operation in less than 14 minutes and can be controlled via DMX using only one channel or a built-in onboard timer. Wired and wireless controllers are also available. hazebase water-based fluid is designed for any environment. From a quick dissipation to a dense fog that hangs in the air. The unit can run continuously at 50%.

www.hazebaseamerica.com



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Master FX: Genesis

Master FX is proud to unveil the Genesis—a game-changer in low fog innovation, delivering powerful low-lying fog effects without the need for CO_2 , dry ice, or water. For the first time, users can precisely adjust the density, height, and speed of their low fog effects. To manage the wide range of effects efficiently, the proprietary FrostFlow Cooling System

continuously monitors and automatically adjusts internal components to maintain the ideal temperature, regardless of fog density or volume. Another standout feature of the Genesis is its automated condensation drain system, which keeps internal components dry, ensuring flawless fog effects. Additionally, customers can enjoy peace of mind with the Genesis's comprehensive five-year warranty.

www.masterfx.com



MDG: theONE

The $\ensuremath{\mathsf{ONE}}^{\ensuremath{\mathsf{TM}}}$ is a versatile, dual-mode atmospheric generator that seamlessly transitions between haze and fog with a 100% duty cycle. Featuring the Automatic Purging System (APS™), it prevents clogging by purging the heating module after each emission. With advanced networking capabilities, it supports DMX/RDM, Pathport, ACN, and other protocols for control and updates. The Automatic Refill System (ARS™) enables continuous operation by drawing fluid from a 20L external reservoir. Its integral touring fan, adjustable for precise directional flow, travels securely within the touring cradle, which is rig-ready and compatible with standard trucks. theONE™ operates on a universal voltage (100-250 VAC), making it a robust, global solution for haze and fog effects in demanding tour environments.

www.mdgfog.com



PyrotecnicoFX: Special Effects

With over 135 years of expertise, Pyrotecnico captivates audiences through innovative special effects, fireworks, and drone shows. Driven by a team whose passion fuels every project and whose precision is grounded in the science behind the magic, they deliver intense flames, pyrotechnics, lasers, atmospheric effects, vibrant confetti, and streamers that transform events into unforgettable experiences. As part of their high-level service, they offer a unique advantage: their Ultra-HD simulation technology, providing clients with a detailed digital preview of their event before the show. Recently, they brought the heat to major tours like Post Malone's F-1 Trillion and Porter Robinson's Smile!: D, elevating each set with flames, pyrotechnics, and confetti bursts that enhanced the artists' unique creative visions. Pyrotecnico's team is dedicated to delivering awe-inspiring moments.

www.pyrotecnicofx.com



Zach Bryan's The Quittin' Time Tour '24

By Michael S. **Eddy**

vle Lovan was most recently the Lighting Director supporting Production/Lighting Designer Rob Sinclair's design for Zach Bryan's The Quittin' Time Tour '24 working alongside friend and mentor, Associate Lighting Designer/Programmer André Petrus. He has also worked on Sabrina Carpenter's The Short N' Sweet Tour with a See You Later lighting design and STUFISH set design. He has programmed numerous shows, including serving as part of the proarammina team for Paramore's Paramore in North America Tour with a production design by Sooner Routhier and Trevor Ahlstrand of the Creative Playground. Lovan took some time to speak with PLSN about how he left behind the dark side of being an audio tech for the brighter side of the lighting world, his mentors, and advice he has relied on and gives to early career touring people.

How did you get into the industry?

I started out as an audio guy working in bars and nightclubs, working with local companies trying to do my own thing in South Georgia. A lot of people didn't have lighting in South Georgia, so I was just trying to be an audio guy that knew how to plug in lights, basically. I started out at that level and then grew into touring; finding friends that knew me and could recommend me when they needed lighting techs. I started out touring with the band Chicago, and then for country bands in Nashville. There I went out on an Eric Church tour as a Lighting Tech, where I made friends with Gavin Lake who has been the Lighting Director on Eric Church's tours for many years. Jokingly, Gavin got tired of hearing my voice on COMs and recommended me for a Lighting Director position on another tour. That's where I first met Lighting Programmer/Director, André Petrus. So, it has kind of just snowballed from there.

André Petrus was the Programmer for Zach Bryan's The Quittin' Time '24 tour, right?

André and I are close friends, and I love working with him. This is probably the fourth show I've worked with him, so following behind him is always an easier task. You know what you're going to get. You don't have any kind of surprises. On Zach's tour, nothing is timecoded, and changes to songs will happen depending on the night. Luckily André's programming had set us up pretty well with a flexible, bulletproof show file, so I could change on the fly if I needed.

Were there moments, or particular jobs that set you on the course of your career?

LIGHTING DIRECTO

Honestly, I think just having a good attitude as a lighting tech, and always willing to learn. Luckily, people started to know me from my work ethic, then I started getting recommendations as a Front of House Tech. I knew how to work with consoles. That's where I was on the Eric Church tour with Gavin Lake. I feel that that was the pivotal moment of my career. Meeting Gavin and being able to make the jump into the lighting director seat.

What do you enjoy most about your career?

This might sound weird, but I enjoy the stress and the challenges. If I'm not challenged in any role, I get bored and I want to move on. I like the constant changes and being able to adapt. The puzzle of production is what helps me keep focused on my

Who have some of your mentors been?

André Petrus has been a great friend and definitely one of my mentors. Even though he's younger than me, his years of programming experience far exceeds that of my own. Every show I work with him on, I learn something new. Rob Sinclair has been great to work with as well; he has a unique style to make sure his shows are elegant and different than everything else that is touring currently. I've also worked a ton with Travis Shirley of Blank Wall Creative on many of his designs. What I've learned from Travis is the passion and dedication he has for his projects is always there no matter what the size of the show. From his small amphitheater shows to his largest stadium show he will always leave his impact. I try to learn from all the designers I've worked with. It helps out a ton for me just to know what other people are looking for in the future.

Besides designers and programmers, there are a few other people who have truly helped mentor me in my career. 4Wall vendor rep, RA Roth, gave me my first touring lighting tech position on Chicago. We have worked extensively together since then and he personally helped me and many other lighting techs through the tough times of 2020. Another person who comes to mind is my current Production Manager, Steve Drymalski. Career or personal advice, I can always get a straight answer from Steve. I'm sure he's tired of me coming into his office at this point but I couldn't be more grateful for his experience and knowledge.

Is there a piece of advice you get at the beginning of your career that you still find applicable today?

The best piece of advice I've ever had—in life or career—was actually to own up to mistakes of yours. You'll never learn if you blame your mistakes on something else. You'll keep repeating the same mistakes. But if you admit to a mistake and make a sincere effort to never let it happen again, people will respect that more and you will grow more as a person. That was the biggest piece of advice that someone gave me; I really took it to heart and ran with it.

What's a piece of advice you'd give to someone starting out in the concert touring industry?

Never be too proud to ask for help because if you don't ask for help, you won't know the correct way to do something and then you might be screwed in the end.

What's been a unique or memorable experience you've had over the course of working in the industry that stands out to you?

I've had a ton of memorable experiences of chaotic days, horrible load-outs or load-ins that would probably bore most of us roadies. But being able to make memories with my wife around the world by far is my most treasured experience. And for that, I will forever be grateful.

What's next for you?

Currently, I will be touring with Sabrina Carpenter in 2025. Along with those dates, I'll be working out of my home in Nashville on designs with my new design company, Emerald Taurus Designs. PLSN

STRICE DIRECTIONS

The only thing worth writing about is the human heart in conflict with itself." William Faulker said this when accepting the Nobel Prize for Literature. Playwright Max Wolf Friedlich explores two such hearts in the play Job, which recently made its Broadway debut at The Helen Haves Theater. In the play. Jane, a former high tech company employee, who lost her job after exhibiting bizarre behavior, and Lloyd, her therapist, are figuratively trapped in his office for the entire show. Both carry dark, troubling pasts with them. Confined to a narrow space that seems to grow tighter as the play unfolds, these two conflicted hearts collide, setting off a chain reaction of powerful emotions.

Reflecting the very real human drama that defines Job is a starkly beautiful, emotionally unsettling Mextly Couzin lighting design that encompasses the play's complex world. "There are two realities this play works in, the therapist's room and the inside of Jane's mind, populated with panic attacks and the internet world," said Couzin. "For me, that means essentially two different approaches to design. On one hand, my intent and goal was to light a room that was lit in the most essential manner. On the other hand, it was to light the world of the internet and panic attacks, we needed to create tension and designed chaos."

Helping Couzin achieve this vision is a collection of 48 Chauvet Professional on Air Panel fixtures supplied by PRG. "I've designed this play three times now, at the SoHo Playhouse,



The Connelly Theater, and finally at the Hayes," said Couzin, "At the Haves, we have the best plot I have ever had a chance to design with – and the Chauvet OnAirs are fundamental to that." Couzin has 27 on Air Panel 1 IP fixtures and 21 onAir Panel 2 fixtures in her rig. "Thanks to Tom Smith and PRG for getting as many as we could get in such a short turn around," she said. Positioned at different heights on the set's backdrop, the onAir units helped Couzin convey the remote impersonal nature that often pervades our experience on the internet. This was particularly relevant to supporting the drama, since Jane's former job was as a social media content manager.

"The idea of panels of light—as in rectangular or square as opposed to circular—was essential and integral in the creation of, not just the lighting design, but the visual language of the play" explained Couzin, "I wanted the internet world to feel like you, the audience, was engulfed by light. We arranged the on Airs in an IMAX sort of way, so the image as a whole is on a curve. Within that image, I wanted it to feel like a collage of videos, memories and moments. So, the panels needed to seem, but also to be able to work together as whole—solo or singular as multiple compositions." Elaborating on the play's setting, Couzin noted, "For the therapist room, it's not realism or naturalism, it is just a room suspended in time. There are no windows, so it wasn't about the sunlight coming through filling the room. Even though we have desk lamps and pendants, it wasn't about what the lamps did to the room. It is more about how these people interact with each other in rela-

Couzin artfully used changes in the angle, intensity, and color of light to convey the personalities of her two characters. For example, when the focus is on the therapist, Lloyd, the room loses its warmth and the lighting becomes low and cold.

Darkness itself plays a key role in Couzin's design. "It was instrumental to have plenty of negative space between the platform of the therapist's office and the upstage world of the lighting," she explained. "We have a curved scrim hiding the structure of the onAir panels so that we could reveal the lighting by design. The general lighting had to be very tight and specific so not to bleed too far off the platform." Couzin and her team including associate LD Kirk Fitzgerald; associate LD Aaron Tacy; programmer Manuel Da Silva; and production electrician Mia Roy, created a finely crafted show that reflected the infinitely complex space inside the human heart. Learn more about Chauvet Professional. who shared this insightful content, at www.chauvetprofessional.com

Don Holder Appointed Head of Lighting Design at Yale

wo-time Tony Award-winning Lighting Designer Don Holder will join the faculty of David Geffen School of Drama at Yale as Professor in the Practice and will serve as Head of the Lighting Design Concentration at the Geffen School and Lighting Design Advisor at Yale Repertory Theatre, effective July 1, 2025. He will join the leadership of the Design Program which includes Co-Chairs Riccardo Hernández and Toni-Leslie James, who serve as Heads of the Set Design and Costume Design Concentrations respectively; Jill Du Boff, Head of the Sound Design Concentration; and Wendall K. Harrington, Head of the Projection Design Con-

"I am delighted to welcome back Donald Holder, a 1986 graduate of David Geffen School of Drama, to our community in this new role," said James Bundy, Elizabeth Parker Ware Dean of the Geffen School and Artistic Director of Yale Repertory Theatre. "We are fortunate to have such a distinguished practicing artist joining our faculty, as he combines imaginative and technical prowess with a profound commitment to preparing new generations of practitioners for a lifetime of work in the field."

"I am thrilled beyond words to be joining the faculty at David Geffen School of Drama and to



follow in the footsteps of my mentor Jennifer Tipton and long-time colleague Stephen Strawbridge as Head of the Lighting Design Concentration," said Holder, "There is no question that my education at Yale has served as the foundation and sustaining force for everything that has followed in my artistic and professional life, and I hope I have the same impact on future generations of emerging artists. I look forward to carrying on the traditions and principles that have defined our program since its inception and am equally excited about forging a path into the future that embraces the ever-changing dynamics of our world and our industry."

A global leader in his field, Holder numbers among his credits more than 60 Broadway productions, as well as hundreds of others at every major American regional theater, eminent international venues, and opera companies including Metropolitan Opera, English National Opera, Dutch National Opera, Kirov Opera, Houston Grand Opera, Chicago Lyric, and the Berlin Staatsoper.

A partial list of his notable Broadway productions includes South Pacific, McNeal, Mv Fair Lady, Oslo, Kiss Me Kate, Anastasia, M Butterfly, Ragtime, The King and I, Gem of the Ocean, A Streetcar Named Desire, and The Lion King. Don has been recognized with two Tony Awards, twelve additional Tony nominations, the OBIE Award, and the Lucille Lortel Award, among many others. His work in film and television includes Spirited (Apple Studios), Oceans 8 (Warner Brothers Pictures), Smash (NBC), The Marvelous Mrs. Maisel (Amazon), and Gossip Girl (HBO

Holder has been a lighting educator for nearly 20 years, most recently at Cal Arts and then Rutgers University, where he is Head of the Lighting Design Program and Professor of Professional Practice. A graduate of the University of Maine at Orono, he earned his MFA in Technical Design and Production in 1986 at Yale, where he studied with Jennifer Tipton; and he has designed nine productions at Yale Rep, including Maurice Sendak and Tony Kushner's Comedy on the Bridge and Brundibar, August Wilson's Radio Golf, and The Importance of Being Earnest by Oscar Wilde.

Prior to his full-time appointment, Holder will join the admissions committee for the lighting design concentration. In his new roles, he succeeds Stephen Strawbridge, who will begin his phased retirement on July 1 and will continue teaching half time through June 30, 2027. Strawbridge, who received his MFA from Yale in 1983, joined the faculty in 1993. He served as Co-Chair of the Design Program, first with Ming Cho Lee and then with Michael Yeargan, 1996–2021. He has designed 28 productions at Yale Rep, more than any other artist in the theater's history.

"Throughout his tenure, Stephen Strawbridge has tracked and supported students' progress with a keen and compassionate eye, while navigating the complicated interdepartmental relationships with his customary clarity and calming presence," James Bundy said. "Steve's impending retirement from Yale will be a loss to our community, but it is a joy to contemplate his having more time to spend with his wife Ruth and their family, sailing on their boat, and illuminating truth and beauty in many productions to come."



enneth Branagh recently brought a new production of William Shakespeare's King Lear, set in the barbarous landscape of Ancient Britain to New York City. The fast-paced production is staged in The Shed's Griffin Theater having transferred from London's West End. Marc Warren, Production Head Consultant at The Shed, worked closely with The Shed's Production Manager Ben Young and Jim Leaver, the UK Production Manager, to ensure the vision of the creative team was transferred as well. Warren spoke with PLSN about some of the technology solutions they found to realize this ambitious production.

Was there a solution you particularly think worked well for this production?

There were a couple of things that I thought were real highlights. One I would mention is that we had a projection screen ceiling, and the height of the screen changed at a variety of times throughout the production. The downstage points were static, and the upstage points tilted up and down. We raised and lowered them, and it became a big pivot point. The challenge for the lighting department was being able to manage that screen movement, especially as most of the lighting was either back or side light. There was almost no front light, so it was critical for them to be able to change the height of some of the lighting positions to shoot under the ceiling. The good thing was that The Shed owns a TAIT Navigator automation controller in the main space, and we have a variety of different variable speed chain motors that we were able to bring to bear on this project. So, we created five automated lighting positions that had moving lights on them that were able to raise and lower throughout the production to allow the lighting design the proper shot underneath the ceiling. That was a solution that worked out well, and it gave the lighting team a huge amount of flexibility to light the show with a minimal amount of equipment.

How was collaborating with the design team: Set and Costume Designer Jon Bausor, Lighting Designer Paul Keogan, and Projection Designer Nina Dunn?

They had done this show at the Wyndham's in London, which is a sort of Victorian picture box-type of theater with a proscenium arch. The original thought was that there would be a straight transfer and that we would try to recreate what happened at the Wyndham's. However. The Griffin Theater at The Shed is a flexible black box and it's a good space, but it doesn't really lend itself to creating a proscenium arch type of environment. So, Ken [Branagh], Jon Bausor, and Paul Keogan came over and we talked a lot about how to position the show in this space. Jon was very open to the idea that we think of this piece not as a set in space, but more as a piece of sculpture that would allow itself to be placed in an environment where it was more immersive with the audience.

From that point on it became less of a straight transfer and more of a new approach. And we started to think about it being more immersive, more audience and performer interaction. We brought the audience very close to the performance. Then a decision was made that we would start to stage scenes off the stage and in around the audience. Jon was a great collaborator, and he's got a huge attention for detail. It was a very cohesive design, especially as Jon also did the costumes as well as the set.

Then for the lighting Paul worked around

KING LEAR



the screen, and through it. See the projection screen is elliptical in shape and there's an elliptical opening in the center of it. So, we put some lights through there, which gave Jon some very beautiful dramatic downlight positions. There were also moving lights on the side and moving lights upstage, but there's really no front light. The lighting is very dramatic, like it was a painting. It's more like they're painting pictures with light than just lighting the space. There are some moving walls and the shadows that are created onto the moving walls are just stunning. And I think that the whole creative team did an amazing job of painting beautiful pictures within the environment of the Griffin Theater.

Was it rear or front projection?

It was really down, I guess it would be rear projection, but it was a straight down shot, because of the hole in the center of the screen. It was a single projector, and it was tricky finding the sweet spot where the projector would land in terms of position. Because you really wanted to put it in a place where you are not blinding all the people in the first few rows through the opening in the screen. So, it was very precise about where the projector had to go. And then of course, there was a lot of mapping because the screen would change positions. We actually linked d3 [Disguise] media servers to the automation to the TAIT Navigator system, so we were able to track where the screen was and adjust the video based on the position of the screen. Again, that worked really well having the Navigator.

So, there was a fair amount of automation in the show. Can tell us a little more about how that was handled?

Yes as I mentioned we used 10 of our TAIT Nav Hoists to create the five automated lighting positions. And we had the two hoists lifting the upstage edge of the screen. Plus, we had a turntable, and within that turntable there was a ramp that was driven by a Serapid chain, which was a very elegant solution to be able to lift that ramp without a lot of mechanization. And we had scenic stones that tracked upstage downstage so that they could really close in at times. It was very much like Stonehenge. There were these rocks in a sort of circular formation that moved upstage / downstage, so they could track all the way downstage to create a very enclosed environment, or they could track upstage to create a very open space.

How was the vendor support?

TAIT was good, it was interesting because it was a transfer from London, so it was between both the UK TAIT and Lititz TAIT teams working on this together. I will say we always felt like they were taking care of us. And PRG, we used a lot of house gear but got some lighting from them for things we don't own. PRG were very helpful. Most of the scenery was built in the UK. There were some modifications after the original run. We lengthened the tracks that the

stones ran on, and we added these very large ramps that were stage left and right that went up onto the stage. And again, that is because the staging was changed a lot after the UK proscenium run to bring the performance more out into the audience here. Also, the RP ellipse screen ceiling is significantly bigger now than it was in the UK production.

Anything else you would like to mention?

The British approach and the U.S. approach are sometimes different; there are a lot of subtleties and assumptions you need to be aware of that are different. So, we all worked very hard, both the British team and the U.S. team, to be really working together to pull this off. There were times where the British team wasn't used to working in a traditional U.S. unionized type of facility, so that was new to them. Here we worked hard to try and help them bring this production to life as they wanted it. We were aware of the subtleties of our different approaches so that in the stress of technical rehearsals we didn't let them really derail the process, or the forward momentum. We worked together to understand and appreciate everyone's ways of working and we all found solutions to what would otherwise be considered obstacles. I think everyone was very happy with how it came out and how successful the collaboration by the U.S. and British teams really was on this production. \$\sides\$

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Navigating the Winter Slowdown

By Rachael **Bronstein**



reathe in. Breathe out. And stretch it out. That's how we started our day at the Jump Global Summit, an unconventional gath-

ering focused on the human elements of the music industry rather than professional accolades. In a setting where attendees were encouraged to introduce themselves with just first and last names, the emphasis was on self-care and building genuine connections beyond job titles.

This environment of open, personal interaction is especially meaningful as many at the summit have felt the impact of industry-wide layoffs. Similarly, touring professionals face job insecurity as the season slows down, with tours wrapping up and few with clear prospects for 2025. Additionally, the holiday season often drives up spending and intensifies feelings of loneliness. This overlap of factors makes this period a crucial time for reflection, renewal, and preparation.

As we navigate these quieter months, how can we approach this time with intention? Let's explore ways to use this natural pause not just to reflect on the past year, but to actively prepare for the challenges and opportunities of the coming year.

IIII Reflection

December is a bit of a breather for many in the live events world, a chance to step back from the non-stop rush of gigs and long days. It's the perfect time to look at vour financial health: what worked, what didn't, and how we can set ourselves up for a smoother ride next year. Embracing this time can transform anxiety into action and preparation.

- · Get Caught Up with Your Bookkeeping: If you've neglected your books, now is the time to catch up. Whether you keep detailed business books or just track income and expenses informally, reconcile your accounts as year-end approaches. Download bank statements, categorize deposits, and check if your tax payments are up to date to avoid any surprises come tax season. (Reminder: If you pay estimated quarterly taxes, 4th quarter taxes are due by January 15th.)
- Review Your Year: Reflect on your highs and lows. Set aside time to review what went well and what didn't. This is also an excellent opportunity to assess your wins and losses—both financially and in your career. Keeping a "Smile Folder" of positive moments and impact can provide comfort and motivation on tougher days. It's particularly useful for salary negotiations, serving as an ongoing list of your accomplishments. This way, you don't have to rely solely on memory, which often doesn't recall everything we think it will.





IIII Renewal

The quieter months present an invaluable opportunity for self-reflection and personal development. While this period may bring uncertainty, it's a powerful time to focus on what we can control.

Personal and Professional Growth: Have you neglected a hobby or wanted to enhance a skill, perhaps learn a new language or pursue a professional certification to advance your career? Now is the perfect time to tap into the wealth of online courses and resources available. Enhancing your earning power is one of the most effective ways to grow your wealth. Investing in building your skills can provide returns many times over, empowering you to elevate your career and financial trajectory.

When planning your next career move or skill enhancement, think about what your ideal workday looks like. Do you prefer solo tasks or collaborative environments? Are you more productive indoors or outdoors, during the morning or the night? Understanding these preferences can guide you toward a career or side gig that fits your personal strengths and lifestyle.

For example, if you're drawn to becoming a real estate agent and go through the certification process, but later discover most work happens during evenings and weekends, times you want to spend with family, that role might not suit you. Have you discovered a side hustle or skill that boosted your income? I'd love to hear how it's working out for you!

• Reconnect and Recharge: Use this slower pace time to reconnect with friends and family. Networking isn't just for career advancement—it's about building a support system. Consider attending industry events like THE Conference: Live at Lititz. With scholarships and shared housing options available, these events are made accessible to more people, facilitating both professional relationships and personal renewal.

This kind of engagement not only keeps you top of mind for hiring folks but helps maintain a sense of purpose, connection, and direction during times of uncertainty.

IIII Preparation

As we embrace the new year, let's establish habits that bolster both our personal and professional lives in the music industry.

· Share an Update: Scrolling through LinkedIn recently, I've noticed many posts from touring professionals updating their networks about their past year and future

availability. It's heartening to see the community's support and the spontaneous testimonials that emerge, such as comments like, "Amy is the best! Someone will snatch her up." These updates not only boost morale but can also aid in your job search. Regularly engaging with your network, sharing achievements, and offering gratitude can keep you connected and top of mind. This is crucial, especially during off-peak times. And if you haven't fully utilized LinkedIn, now might be the time to start. It's become a vital tool for many in our field. For tips on enhancing your profile, check out resources like Kim Kaupe's videos on Optimizing Your LinkedIn Profile.

· Set Financial Goals: Understanding what financial stability looks like for you is key, particularly when it's easy to sabotage our own efforts. It's vital to establish clear. achievable goals that reflect your personal priorities, which can guide you through the unpredictable nature of the gig economy. Start by envisioning what you want the upcoming year to hold. Are there specific things you wish to save for, like special trips or significant purchases? It's easy to get lost in daily routines and forget to set intentions for the things that truly matter.

For those with fluctuating incomes, creating monthly financial routines can offer some much-needed stability. (Tip: Begin by calculating your monthly living expenses, including putting funds away for retirement and taxes. Then, routinely transfer any surplus income into a reserve account. This strategy ensures that, despite income variability, your essential spending remains covered and predictable. If you find yourself with extra funds and your emergency savings are robust, you might consider allocating the surplus towards your long-term financial goals.)

• Saving With Intention: At a recent talk, we discussed how proactively saving for a big expense can significantly alter your mood and perception of the experience. Take, for example, a participant who decided to splurge on his wife's milestone birthday. The expenses went on a credit card and couldn't be fully paid off when the billing statement arrived. We explored how setting up a savings account with virtual buckets could enable him to save monthly for significant goals. By building this "savings muscle," he would have had the funds ready before the trip, preventing an amazing experience from turning sour when the credit card bill arrived. Instead, the money would be right there, ready to be used for the trip.

• Financial Spending Checkup: Whether you're confident in your budgeting skills or feel that your spending could use a tighter leash, now is the ideal time for a financial tune-up. Start by examining any recurring payments for services or subscriptions you no longer use or need. You'd be surprised by what might be draining your funds unnoticed! If you're an iPhone user, a quick look under Settings > Your Name > Subscriptions could reveal some shockers. Next, take a moment to scrutinize your insurance, phone, cable, and internet bills. These are often negotiable and could be trimmed with a simple call to the Retention Department. Have you ever attempted to negotiate these bills? Many people have found success and substantial savings this way. Also, monitor your spending on dining out, groceries, and various subscriptions. These expenses add up faster than you might think, and by managing them wisely, you could potentially save hundreds each month. Given the impact of these small changes, this topic deserves a deeper dive, perhaps a full column on savvy savings strategies!

New BOI Reporting Requirement Alert for U.S. Corporations and LLCs: All U.S. corporations, LLCs, and similar entities are now required to report their beneficial ownership information to the Financial Crimes Enforcement Network (FinCEN) under the Corporate Transparency Act. This mandate aims to increase business transparency and combat financial crimes. Most entities formed before January 1, 2024, must submit their reports by January 1, 2025. Newly formed entities will provide this information at the time of formation. Reporting must be done through FinCEN's online portal. Visit www.fincen.gov for more details and to ensure your business complies with these new regulations.

Looking Ahead

As we conclude, remember that managing your finances goes beyond the numbers. It's about making informed choices that align with your career aspirations and personal values. It involves navigating the complexities of life on the road and ensuring that when you return home, you're in a comfortable position to enjoy your downtime and ready to seize the next opportunity that feels right. Here's to a prosperous and fulfilling 2025! PLSN

You can reach Rachael Bronstein at rachael@lifesjam.com



Ringing in Christmas; Lighting Grand Prix, Grey Cup and More



By Debi**Moen**

hristmas has kicked off in a stellar way for **Chris Werner Design**. With the team

at American Christmas and a few other vendors. Werner installed the holiday display and light show on the mansion facade of the ieweler, Cartier, on Fifth Avenue in New York City. "I've got Alex Stevens, Kevan Loney, and Eva Hu with me. It's cold here; California has thinned my blood," he jokes, prior to the Nov. 19 lighting launch. Briefly describing the whimsical design, Werner says, "It's all video pixels on physical scenery. The large warm white circle is a 3.9mm LED screen. The crescent moons are light boxes. And everything else is a mix of direct-view LED products, all pixel-mapped. There's a loop which runs all day long, 8 a.m.-1 a.m., with only seven hours off per day. In the evening, however, the show runs every 30 minutes with audio." Cartier's display is one of the many annual storefront spectacles adding sparkle through the season. To view the show. go to www.plsn.me/Cartier-Xmas

Lighting the F1 Grand Prix

Tom Sutherland and the team at DX7 are again involved with the lighting design for the 2024 Formula 1 Las Vegas Grand Prix. "We're lighting the Paddock Building and all things pre- and post-race on the grid," Sutherland says. The Paddock Building, constructed for the first race in 2023, features four levels of hospitality areas, skyboxes, and views of the pit stops, grandstands and start/finish lines. Drivers completed 50 laps of the 3.85-mile track totaling 192.6 miles, passing by major landmarks, hotels and part of The Strip as its course during the Nov. 21-23 race.

Grey Cup Halftime Show

Robert Sondergaard and the Electric Aura design team reached out about their involvement again, for the 15th time, with the 111th Grey Cup Halftime Show, which



Part of the team lighting Cartier: Gregg Carter, Kent Fritzel, Chris Werner, Kevan Loney, Jeff Collier, Alex Stevens, Tim Neggie. and Eva Hu.

took place Nov. 17 in the BC Place Stadium in Vancouver, Canada. The Grey Cup is both the trophy cup and the championship game for Canada Football League. The Jonas Brothers were this year's headliners, while Canadian country singer Owen Riegling performed the kickoff show. View the full 13-minute Jonas Brothers' Twisted Tea 111th Grey Cup Halftime Show at www.plsn.me/111-Halftime

What's Up Roadie

Noelle Jordan is wrapping up the year as the Lighting Director for the Isley Brothers' U.S. dates, Busta Rhymes in South Africa, and Meek Mill in Finland. Most recently, she's a contractor at The Kennedy Center as a Lighting/Production Designer. Meanwhile, she says she's on the lookout for new guests for her podcast series, *What's Up Roadie*. Past episodes have included topics on equity and mental health amid discussions with entertainers, musicians and production pros. Check out the website www.WhatsUpRoadie. com and on the official YouTube Channel.

Lighting The Conference

Tegan Rehbein reports in as the Lighting Designer for THE Conference: Live at Lititz,

checking in prior to the Dec. 3-5 event in Lititz, PA. "It's the biggest design project I've taken on to date, and I am super excited to be involved. The whole production team has been great to work with and everyone just oozes talent," Rehbein says. Prior to that, she ran a fall tour with Indigo Girls, whose co-headlining runs included Amos Lee—and she gives a shout out to Lee's LD **Kate**Anderson. "I don't have anything on the books for 2025 yet, but I am hoping projects and tours start rolling in. I would love to start doing more design and programming work as opposed to just touring," she adds. "Not that touring's bad!"

Closing Ceremonies & Cro

Roland Greil checked in with a few updates on projects he's working on. "I'm designing the lighting for two big closing ceremonies for the Global Champions Arabians Tour and Longines Global Champions tour in Riyadh, Saudi Arabia together with my two Associates Rob Koenig and Marcus Bossdorf for my client Bona Fide. Both shows are creatively directed by Nikos Lagousakos. I'm also designing an arena tour for Germany's A-list artist Cro, which opens the end of November. I'm also working on another big major event show in Kuwait in December."

Kunttu is En Pointe

Designer Mikki Kunttu tells us he's working on a few ballet productions. "The Nutcracker is being created for the famous Tivoli Gardens in Copenhagen. This production is with the sets and costumes designed by Her Royal Highness Queen Margrethe and lighting design by yours truly." The production opens at the end of November. He's also designing a new production, including sets, lights and video design of The Snow Queen for Wroclaw Opera Ballet in Poland, which opens Dec. 13. Next up is the lighting and projection design for a new production of The Great Gatsby ballet, opening for the World Ballet Company in San Francisco in February

2025. That one will tour across the U.S., he adds, saying, "No rest for the wicked!"

Light Cooking

Rachel Mullen of RFDesigns closes out the year with a corporate gig, and is now promoting her new cookbook, Vegan Flavors of the World. "I wrote it to share my passion for plant-based cuisine and to offer a fresh perspective on global flavors that anyone can enjoy, regardless of dietary preference," she says. Traveling, especially in this industry, has inspired her culinary journey. "I wanted to capture the essence of diverse cultures in one cookbook... to make plant-based cooking approachable, delicious, and vibrant." Find out more at www.plsn.me/VeganBook

New Cues

- Meagan Metcalf will close out the year with Jack White as designer/director in Asia, Australia and New Zealand in December.
- Scott "Scooter" Warner filled in for the LD on a couple of shows with rock band Sleater-Kinney, followed by a few dates with Taylor Dayne. "I'm scheduled for more with her next year," Warner says.

It's All Gravy

Tony Caporale, Production Designer of Infinitus Vox, wrapped up a tour with German DJ and artist Bunt, supported by Lighting Directors Destin Klug and Kirby Naylor, with Will Flavin programming. He also finished The Sublime with Rome and Dirty Heads show at the Kia Forum where he collaborated with Zac Coren, Adam Richard, and Alex Rodgers. Then there was a special Yung Gravy show called Gravy Fest with rappers bbno\$, Waka Flocka Flame, Freddie Dredd, and more. He closes out 2024 by joining forces with Lighting Designer Andrew Goedde for Connecticut jam band Goose's annual Goosemas and New Year's Eve shows.

Happy holidays! Share your design news with Debi Moen at dmoen@plsn.com

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Ayrton	5	ayrton.eu
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Concert Stuff Group	27	concertstuff.com
Doug Fleenor Design Inc.	57	dfd.com
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Florida Coach, Inc.	43	floridacoach.com
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ok Solutions USA LTD.	7	looksolutionsusa.com
rapel LLC	38	luxapel.com
ster FX Inc.	38	masterfx.com
untain Productions	19	shopmtn.com
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MM	31, 32	namm.org
ngolin Laser Systems Inc.	1	pangolinlasers.com
elhue	53	pixelhue.com
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eatre Effects	60	theatrefx.com
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The Double-Edged Sword of Multi-Functionality



By Chris**Lose**

he days of a single fixture with a single profile and a single use are long gone. If you are like me, you can

become frustrated trying to find the perfect profile for each fixture because the number of options becomes overwhelming. Even after scouring several sources to find a functional profile for a modern fixture, we must confirm the correct mode, software version, and even then, we might spend time altering attributes and functionality to our liking. In a world of hybrid fixtures, multiple modes, and ceaseless updates, we need to ask how it got this way? What happened to the days of brand-specific designers who were loyal to a single manufacturer who catered to their needs and produced fixtures just for them?

Multiple Modes

Once a fixture has been developed, it is up to the manufacturer to imagine how it will be used by the industry and how they can best serve their customers. If the fixture has an LED ring around the aperture, the manufacturer must make an educated guess as to how the designers will want to use that ring and how the programmers will want to control that ring. Generally, manufacturers will reach out to a handful of industry leaders and get their input. They will implement their suggestions as far as they see fit and demo that fixture to select groups. Inevitably, different designers will want different degrees of control of the LED ring. Designer 1 will only want RGB control utilizing three DMX channels. Then Designer 2 will want the ring to do a rainbow chase requiring 300 DMX channels. This is the birthplace of multiple modes. Instead of disappointing either designer, they will release a basic mode and an advanced mode. As soon as the fixture is released. Designer 3 will recommend that the ring have some built in chases so that they can have RGB and a rainbow chase but only require five DMX channels. The modes start to multiply from there. This leads to new software releases, aftermarket alterations, and custom profiles built by mega-nerds in their basement laboratories. Each new profile will suit a different programmer and be released to the internet on any number of profile sites. We can have the GDTF discussion in the comments section.

After some time on the market, a designer from an adjacent industry will discover the fixture and want to use it in a brand-new way. Designer 4 will come from the TV world and want to use the same LED ring, but they need the fixture to be absolutely silent in the studio. Designer 4 will reach out to the manufacturer and say, "I want to specify 500 of these fixtures on my upcoming block-





buster, but I want the fans to turn off when needed." The manufacturer can't release a software version just for Designer 4 because those fixtures will need to be put back into rental inventory. The manufacturer now has no choice but to go back and update the software and rerelease a new profile for the fixture. This brings us to our next discussion.

Designer/Rental Company Preference

In the modern era, rental companies are driving the decision-making process of fixture development more than individual designers. The days of top-level designers being able to create their own specific gobos are long behind us. Rental companies need to make a return on their investments. They can't justify purchasing any sizable amounts of fixtures if they will go out one project and then be relegated to storage. If rental companies can't make a profit, then designer access to these fixtures will be severely limited. Therefore, no matter how inspired the input is from designers, logistics and finances will determine what the rental companies choose to stock. This leads to the development of multi-functional hybrid fixtures. Why buy 10 washes, 10 spots and 10 beam fixtures if you can purchase 30 fixtures that are spots, washes, and beams? Now we have fixtures that have color-mixing, 38 rotating gobos, three animation wheels, eight shutters, a Fresnel lens option, have cameras strapped to the lens, and shoot confetti.

Hybrid Fixtures

The double-edged sword of multi-functionality is best illustrated by hybrid fixtures. These fixtures have become the workhorses of the modern rig. Because they do everything pretty well, they are abundant in rental stock inventories. That makes them easy to come by and easy to specify. But because they don't excel in any one of their features. they start to become homogenous and dull. Each manufacturer will pack these fixtures with what they think will appeal to the largest audiences in a wide array of industries. These fixtures will cater specifically to rock 'n' roll. theater, or the corporate world. They will try to satisfy each of these genres just enough to get the rental companies to purchase them.

When a designer specifies a specific fixture, the rental company will respond with, "We see that you specified fixture X and Y, but would you consider accepting fixture Z for both?" Often, fixture Z will be able to do what X and Y can do, they just won't slice as well. As soon as this fixture swap makes it to the programmers, we will start asking about "clone-ability." As a programmer, I understand why the fixtures were swapped, but I need to know if the features will clone from one to the other. This question has not fallen on deaf ears. Manufacturers are scrambling to understand their competitors' fixtures and attempt to make their fixtures as clone-able as possible.

IP65 Rating

The rental company driven model is leading to some watertight advancements too. The best example of this is the hyperabundance of IP65 rated fixtures. In the last decade, we had a huge problem to solve. In January, a fixture would be released with certain attributes. In October, the same fixture would be rereleased with same attributes but with an IP65 rating. This cut rental companies to their core. They just purchased 50 fixtures that were specified one time, only to be replaced on the next plot with the newest IP65 rated version, making it much harder to get any return on investment from the first 50 fixtures. This has motivated manufacturers to abandon the non-IP65 rated fixtures and move towards an all IP65 rated line of fixtures from the beginning. In general, IP65 rated fixtures are more durable, more efficient, and have a much longer shelf life than their water-prone counterparts. This leads to fewer fixtures ending up in landfills, and a longer period of multi-functionality.

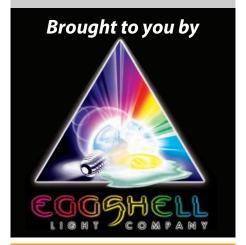
This trend will not slow down anytime soon. More efficient LED/laser sources will only continue to allow manufacturers to affordably pack more features into more compact fixtures. New protocols will find their way into fixtures. It is up to us to stay up to date with release notes, software updates, and keep our multi-tools sharp.

Reach Chris Lose at close@plsn.com



PLSN's LD@Large Chris Lose has been interviewing top live production professionals discussing their careers, telling war stories and giving out advice on their craft. A while back, he spoke with Lighting and Projection Designer Philp Vilar and Product Support Specialist Maegan Wilson about what and how to teach the next generation, compensated internships, how to share our experience with everyone and more. To listen in, go to plsn.me/Vilar-Wilson.

For more from the Podcast archives and LD@Large articles, check this link out: plsn.com/podcasts.



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PRESIDENT

Terry Lowe tlowe@timelesscom.com

PUBLISHER Greg Gallardo gregg@timelesscom.com

EDITOR

Michael S. Eddy

meddy @ timeless com.com

MANAGING FDITOR

Frank Hammel fhammel@timelesscom.com

ART DIRECTOR/PRODUCTION MANAGER

Mike Street mstreet@timelesscom.com

EDITORIAL ASSOCIATE

Kathleen Eddy SENIOR WRITER

Kevin M. Mitchell

kmitchell@timelesscom.com

CONTRIBUTING WRITERS Rachael Bronstein, Wilson Burke, Chris Lose, Debi Moen

EDITOR EMERITUS

Nook Schoenfeld

ILLUSTRATOR John Sauer

WEB DESIGNER **Mike Hoff**

mike@mikehoff.com

SALES MANAGER

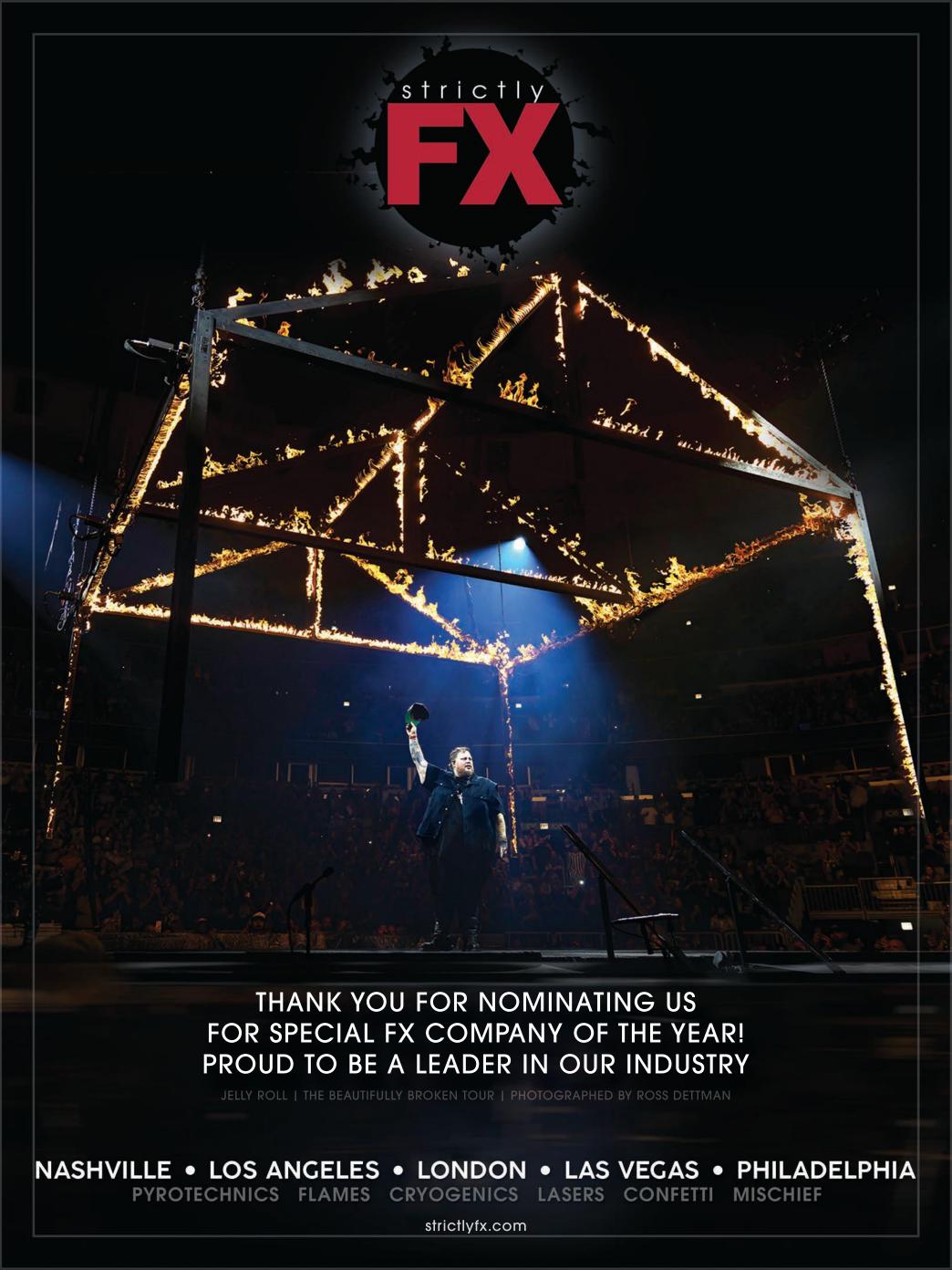
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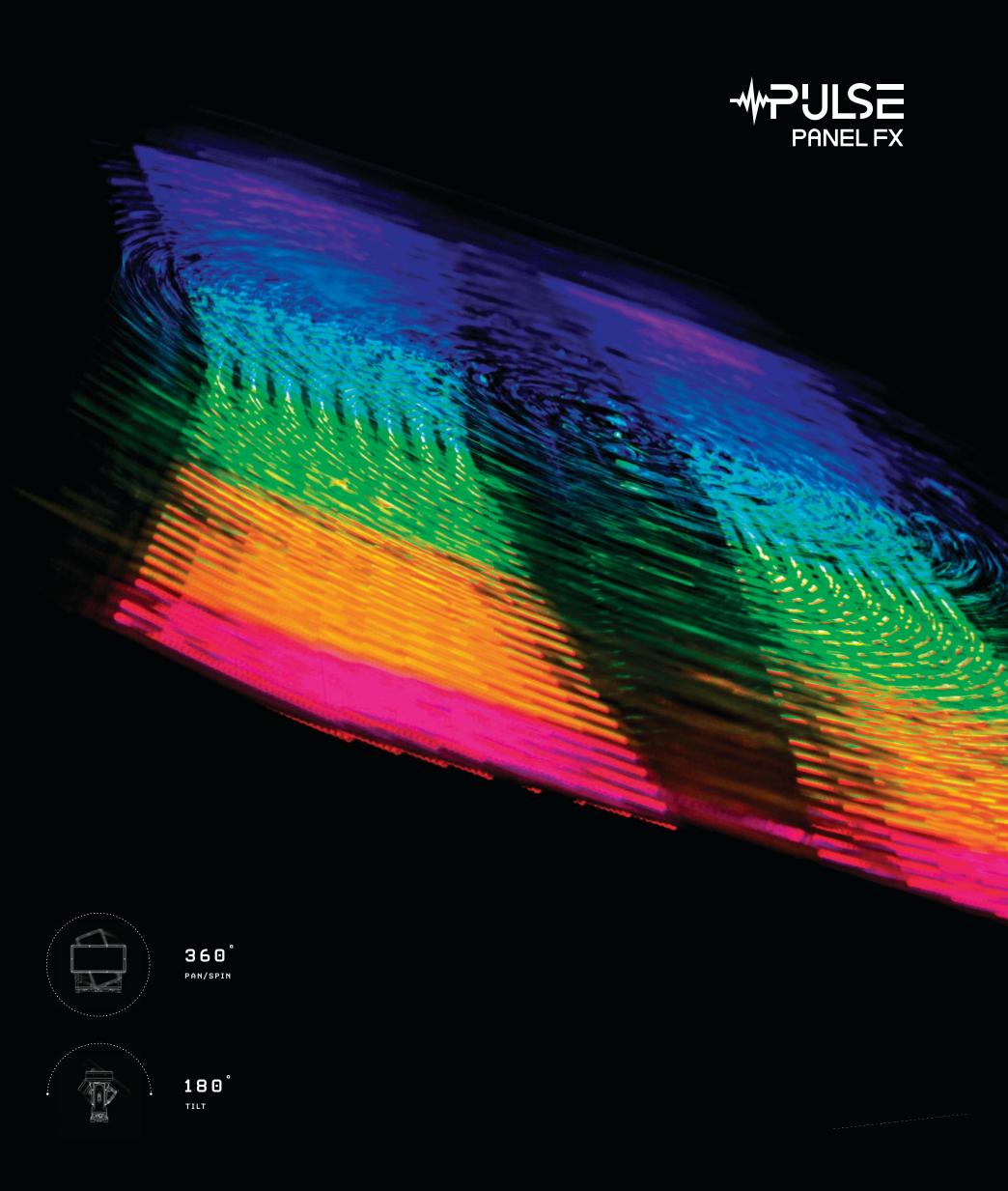
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