

LIGHTING DESIGN: ED SHEERAN $+ - = \div \times$ TOUR

*PALM Expo Magazine had the privilege of speaking to **Mark Cunniffe**, the critically acclaimed lighting designer behind **Ed Sheeran's** record-breaking $+ - = \div \times$ Tour (Pronounced the Mathematics Tour). Known for his innovative approach to stage design, Cunniffe has crafted unforgettable audience experiences for decades. From tackling the unique challenges of a 360° stage setup to employing cutting-edge technology and navigating logistical hurdles, Cunniffe's journey on this tour exemplifies the art and science of world-class live production. Read on to get invaluable insights into the complexities of designing a show that ensures every member of the audience experiences the magic, no matter their perspective!*



The Mumbai leg of Ed Sheeran's $+ - = \div \times$ Tour was one of Asia's biggest events this year

LIGHTING THE STAGE AT ED SHEERAN'S $+ - = \div \times$ TOUR: MARK CUNNIFFE'S DESIGN GENIUS

Designing a 360° Lighting Challenge

Cunniffe highlighted the unique challenge of designing a concert "in the round," where the stage is surrounded by the audience on all sides. Unlike traditional performances with a clear front-facing design, this setup requires a completely different lighting and staging approach.

"The lighting design then becomes completely different, instead of an end show, it involves more backlighting," Cunniffe explained. "What is a backlight for one member of the audience looking that way is a front light for the audience looking the other way. You have to completely redesign it because otherwise, it becomes very flat. It washes out the artist."

Ensuring balance and visibility for every attendee was paramount. "The most important thing is the audience can see the artist. And when you're doing it in the round, you've got an audience looking at the artist from 360 degrees. You have to change the lighting design to make sure that is the case for everybody," he emphasized.

This commitment to audience experience required reimagining traditional lighting setups and creating innovative solutions to deliver a uniform and dynamic show for every angle.

Adapting to Mumbai and Scaling the Tour for Asia

The Mumbai leg of the $+-\div \times$ Tour was one of Ed Sheeran's largest Indian concerts and presented its own set of challenges. By the time the production reached Asia, many hurdles from earlier shows had been resolved, but logistical constraints required scaling down the setup for some venues.

"We couldn't physically get the full-size show to a lot of the Asian routes," Cunniffe explained. However, these limitations also led to creative problem-solving. "By the time we got to Mumbai, we had ironed out all of the problems."

Adapting the production for regional constraints while maintaining the essence of Sheeran's performance underscored the team's flexibility and ingenuity.

Blending Vision with Execution

The collaboration between Cunniffe and Sheeran was a cornerstone of the tour's success. While Sheeran provided a broad vision, he entrusted Cunniffe with the technical execution. "Ed lets me get on with the nuts and bolts of things. He thinks about broad brushstrokes, The first interaction we had was at the end of *Divide* with him saying, 'I think I'm ready to go in the round'," Cunniffe said, reflecting on their partnership.

A pivotal design moment came when Sheeran insisted on minimising barriers between himself and the audience. "He didn't want a roof that had four posts holding up a roof. He said, 'No, I don't want anything behind me.' And the goal here was to reduce the distance between the audience and him. He didn't want three meters in stage between him and the audience," Cunniffe explained.

This conversation sparked the innovative use of six masts to suspend the roof, a design that eliminated obstructive structures and brought Sheeran closer to his fans.

Technology Meets Creativity

Cunniffe and his team used **Virtual Reality (VR)** to refine the stage and lighting designs, bringing creative concepts to life before construction. "We designed the show, put Ed in a headset and he'll say, 'I like that,' or 'Can we change that?'" This iterative process ensured that the final product aligned perfectly with Sheeran's artistic vision.

The integration of VR bridged creative ideas and practical execution, saving time and resources while enabling Sheeran to visualize his show during the planning stage.

Logistics played a critical role in executing the $+-\div \times$ Tour. Cunniffe discussed the impact of advancements in technology, particularly the transition to lightweight, energy-efficient LED equipment.

"Weight is always a problem. I've been in the industry for 40 years, and the equipment has got lighter, and LED is fabulous in terms of the power requirements," he noted. This technological evolution not only made transporting equipment easier but also allowed for more ambitious designs without compromising safety or efficiency.

Transporting the show across continents presented additional challenges. "As soon as you start moving into Asia and India and Southeast Asia and Taiwan Korea, it gets very expensive. Because the time it takes to move the equipment by boat is a lot longer than flying, but with flying it gets very expensive. That's when you have to start thinking about how things pack down," Cunniffe explained.

The Emotional Connection: Fans and the Artist

Reflecting on the emotional bond between Sheeran and his fans, Cunniffe underscored its significance. "It's always how the audience reacts. And I don't

think he had played such a big show in India. There was a massive emotional response to him as an artist, and he always remembers things like that," he said.

The lighting and stage design were tailored to amplify this connection, ensuring that every fan felt a direct link to Sheeran's performance, regardless of where they were seated in the venue.

Delivering Value with The Sheeran Standard

Cunniffe credited Sheeran's generosity and commitment to delivering value for the success of the tour. "Ed Sheeran and his manager Stuart are one of the most generous in terms of the funds they put into their shows," he said.

"I always think about shows as being value for money. If you're going to spend, I don't know, a hundred pounds, go to see an artist. What do they get back in return? And you look at some of the shows that are out there at the moment, be it **Tennis Roof**, be it **Beyoncé** be it **Coldplay**, I always feel that Ed's shows stand out really well as being a value for money show." This ethos of prioritising audience satisfaction resonated throughout every aspect of the production.

Mark Cunniffe's work on the $+-\div \times$ Tour epitomises the intricate balance of artistry, innovation, and technical precision required to craft a world-class concert experience. From tackling the challenges of 360° stage design to leveraging cutting-edge technology, every detail was meticulously executed to leave audiences mesmerised.

As live music continues to evolve, Cunniffe's vision and expertise set a benchmark for what's possible. His work not only enhances the fan experience but also redefines the possibilities of live event production on a global scale.

The Need for IP-Rated Equipment

"Everything has to be IP-rated," Cunniffe began emphatically, setting the tone for an interview rich in technical detail. "I don't like waterproofing on stage. I think it looks ugly, especially in daylight." This principle guided one of his earliest decisions: to ensure that all equipment, from cameras and lighting to sound and lasers, was completely IP-rated.

Back in 2019, when the tour's planning began, this presented a significant challenge. "At the time, there really wasn't an IP-rated long-throw profile on the market," he explained. While some solutions existed, none met his stringent requirements. "It had to have CTP and CTO wheels, minus green wheels, a full colour range, and a zoom from three degrees to 50 degrees."

This gap in the market led to an innovative collaboration with **Golden Sea**. After issuing a tender document outlining his precise specifications, Cunniffe worked closely with the company to create the **Domino LT**. The custom-designed fixture not only met his requirements but also became an integral part of the $+-\div \times$ Tour.

The Domino LT: A Game-Changer for Stadium Tours

Cunniffe deployed an impressive **150 Domino LT** units across the tour, including 12 specifically dedicated as follow spots for Ed Sheeran. These lights provided exceptional versatility, ensuring Sheeran was always in focus regardless of his position on the stage.

"This was about enhancing the connection between Ed and his fans," Cunniffe revealed. "Depending on where he was, the follow spots ensured that he was always the centre of attention, creating an intimate experience for the audience despite the vast stadiums."

The fixtures' performance exceeded expectations, becoming a cornerstone of the lighting design. "The Domino LT wasn't just about meeting a technical requirement—it transformed how we approached lighting for a global tour of this scale."

A Marvel of Stage Engineering

The tour's stage design was a masterpiece of engineering innovation. "Technology has allowed me to design a show where you can suspend 56 tons above the artist on just steel wire," Cunniffe said, referring to the innovative catenary system.

This suspension system not only eliminated sightline issues but also created a seamless viewing experience for audiences across the stadium. "It's about making sure that everybody feels part of the show," he emphasised. The stage

design allowed for unparalleled audience engagement, ensuring that every seat offered a great view of Sheeran's performance.

A key element of the stage was its revolve mechanism. "It's a 66-metre circumference, and if Ed had to run it every song, he'd be shattered by track five," Cunniffe joked. The revolve allowed the artist to move effortlessly around the stage, ensuring fans in every section had their moment of connection with the performer.

The tour also showcased the potential of modern LED technology. Cunniffe selected the **Rose Vanish 80** for its combination of lightweight design, brightness, and sustainability. "If we were using equipment from 10 years ago, we wouldn't have been able to lift it. Everything's got lighter, more powerful, brighter, more sustainable," he noted.

These advancements allowed Cunniffe to create a lighting design that was not only visually stunning but also logistically feasible for a tour of this magnitude.

The design incorporated cutting-edge video manipulation software like Notch and 4K cameras to deliver real-time visuals. "The audience has come to see him. Everything else is dressing."

Collaboration played a pivotal role in bringing these creative visions to life. Cunniffe praised his long-standing partnerships with **Chris Marsh**, Sheeran's Production Manager, and **Phil Meek**, Video Director. "We've all worked together for 15 years. We know how each other works, and that's invaluable. It's like a shorthand that makes complex productions like this much easier to manage."

Drawing on his experience with artists like **Tom Jones**, he elaborated on how intimate venues allowed for more nuanced designs. "In smaller settings, you can focus on subtle details that might be lost in a large stadium. Both require different approaches, but each is rewarding in its own way."

Reflecting on the differences between lighting for stadium tours and smaller venues, Cunniffe highlighted the unique challenges of each setting. "In a stadium, lighting is generic, broad brushstrokes," he explained. "In a theatre,

every individual light becomes far more important."

Memorable Moments and Global Experiences

Recalling the first night of the tour at Dublin's Croke Park in 2022, Cunniffe described it as unforgettable. "We were just coming out of Covid-19, and it was the first time we saw the entire show come together. I remember thinking, 'That went well.'"

He also reflected on the global nature of the tour, particularly its impact in Asia and India. "When artists like Ed Sheeran play in India, it's a massive undertaking, and I think because of that, it will start to become more and more on the circuit. You'll get more and more artists coming into your territories because of the success of artists like Ed," he observed. "The appreciation from the audience and the crews is incredible. It makes all the difference and leaves a lasting impression."

Advice for Aspiring Designers

For those looking to follow in his footsteps, Cunniffe offered heartfelt advice. "It's a vocation, not a job. I started in theatre at school, and it's all I ever wanted to do. Theatre gives you the best grounding, you learn every discipline. And if a door opens, walk through it."

He emphasised the importance of passion, perseverance, and a willingness to embrace new opportunities. "The industry is constantly evolving. Staying curious and open to learning is key to success."

Mark Cunniffe's work on Ed Sheeran's **+==÷ × Tour** underscores his mastery of balancing artistic vision with technical precision. From cutting-edge lighting fixtures to audience-focused stage design, every element of the production was meticulously crafted to create a memorable experience for fans worldwide.

As the designer concluded, "It's all about the artist. The audience has come to see their name on the ticket, and my job is to make that experience unforgettable."

