

# ETA ENTERTAINMENT TECHNOLOGY ASIA

For The Technical And Production Professionals in Asia

## AYRTON COBRA REACHES INTO NIGHT TO DEPICT DARK MATTER



**FEBRUARY 2023**

### **NEWS:**

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### **ENNOVATION:**

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It is with sadness that we mourn the passing away of Peter Loh. He was integral to the many successful Singapore National Day Parades and the stages at the Singapore F1. We have created a Memoriam tribute to Peter in this issue. Our Live column covers the Serendipity Arts Festival in India. As the only arts festival in the country whose

programming spans multi-disciplinary fields such as art, theatre, music, literature, dance, food and crafts, the festival has witnessed a steady evolution in its style of programming and presentation over the past several years. Spread across several venues, Reynold's Sound & Lighting Services Pvt Ltd was roped-in to design and equip each venue.

**Thomas Richard Prakasam**

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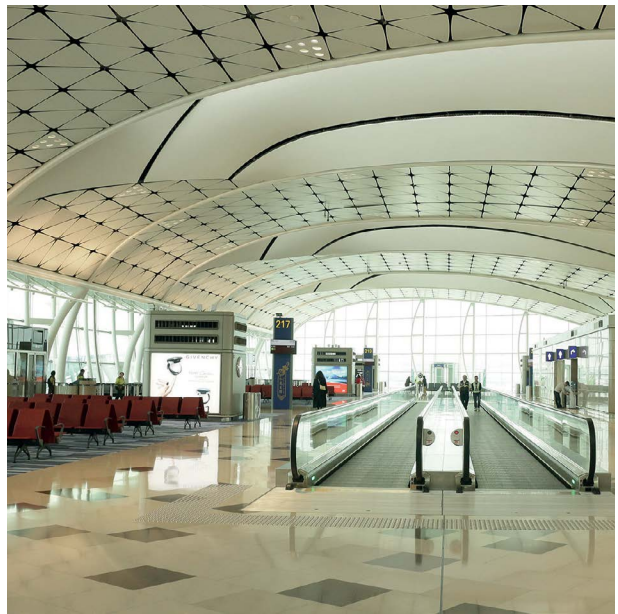
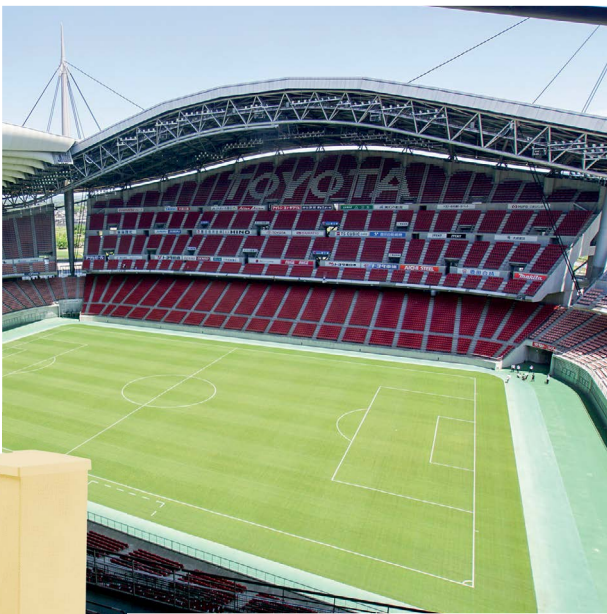
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## IN MEMORIAM OF PETER LOH 1964 - 2023



*On the eve of Chinese New Year, 21 January, the shocking news of the passing away of Peter Loh hit the industry. The news was greeted with disbelief and immense sadness in Singapore and beyond. Peter was renowned as a technical director and a superb show producer. He worked on many of Singapore's National Day Parades and was involved in Singapore's F1. He also worked on numerous concerts and events not just in Singapore but across the globe. The outpouring of comments on social media shows how much he will be missed. He was the picture of professionalism, dosed generously with a caring and motivational attitude.*

*ETA has compiled excerpts of social media posts that sum up the feeling of the industry of a man who has left a massive hole in the industry.*

### **Boo Junfeng**

"Don't worry whether can or not. Just dream first." That's what he'd say when our ideas seemed technically too challenging. Can we make it rain on cue? Can the stage transform into a movie screen? Can the five stars fly so high, they inspire a sense of wonder? He never over-promised what he could deliver, but he always listened to understand what we were after.

I've worked with Peter Loh on 5 National Day Parades. The first time I was asked to be creative director, he was the first person I called. It was daunting, I was inexperienced, but he encouraged me to take the role and assured me that he would be there to support as technical director. The Master of Space, I used to call him. Because anything related to the spatial experience of NDP - the stage, the lights, the sound, the multimedia, the pyrotechnics etc, it was all under his care. And he commanded respect in every one of those departments from his decades of experience and the high standards he set for himself and his team.

### **Benjamin Tan**

We may have varying ideas of how Peter Loh was like, but I think we will agree that he is a doting father & loving husband, he is a leader who goes over and beyond to take care of his team and last but not the least, he is super proud to be Singaporean.

His story is one that never fails to inspire me. He started out in the AVL industry as a crew member laying cables and learning the ropes and eventually worked his way up to establish himself as a leading technical and production director, who trail-blazed the way for local crews and companies to stage mega national & international events.



**Jasper Donat**

Paid last respects to the legend that is Peter Loh, one of the world's finest and most respected show producers. "If Peter isn't producing it, it ain't worth producing"

**Adrian Z-Cheng**

Kenny G together with the band and production bid you farewell. May you rest in peace.

**Roger Veage**

Sorry I don't have a photo with Peter, we didn't have cameras back then, we are the same age 1964 rules you will be missed my friend, I loved Peter he made working all over China ok, great fun and I wish I saw him again before he passed and laughed and had a drink I saw him last when Covid started in Singapore he will be missed and every time I go to Singapore will be sad. R.I.P.

**Sean Sudwikatmono**

Saddened to hear of your unexpected passing. Will always remember your help and guidance when i was starting out in the business. My deepest condolences to your beloved wife and children. Rest in Peace Peter.

**Jaime Welton**

We lost another soul today. Legend in our industry. Peter Loh our good friend and colleague, you will be sorely missed.

**Joel Wilson**

Saddened to learn of the tremendous loss of Peter Loh. Touring Singapore will never be the same. Spent many nights with him over the last 20 years and the memories will last forever. Stole this picture from another post but it is always as I will remember him. RIP, my friend.

**Kimberley Fraser**

Saddened by the tragic news of the loss of one of our industry greats today. Peter Loh was one of a kind. If you did a show in Asia over the past 30 years you would have undoubtedly met the unforgettable Peter Loh. I first worked with Peter almost 20 years ago and was privileged to call him a friend. The man behind Singapore National Day Parade, Singapore Formula 1 and so many concerts in Asia I'm sure he lost count.

**Bobby Grant**

Man, What a kick to the soul to wake up to. This one truly hurts. When you are having a poopy gig day in Asia, especially Singapore, and this face popped up, you knew the day was gonna be alright.

Many a rainy and/or sweltering days I've spent solving problems with my buddy Peter Loh. Just to have a laugh at the end of it all like nothing was wrong or out of place.

**Sunder Nathan**

Shocked, saddened and speechless hearing about the passing of a mentor and show production legend. He always looked out for his team, gave many of us a chance to learn and grow. A huge loss for our industry but will be remembered!

**Kenny Tan**

I'm sadden with the passing of a mentor and friend. Someone who had helped and inspired me in my path in the event industry. RIP Peter Loh, you will always be in the mind and hearts of us.

**Aldric Lee**

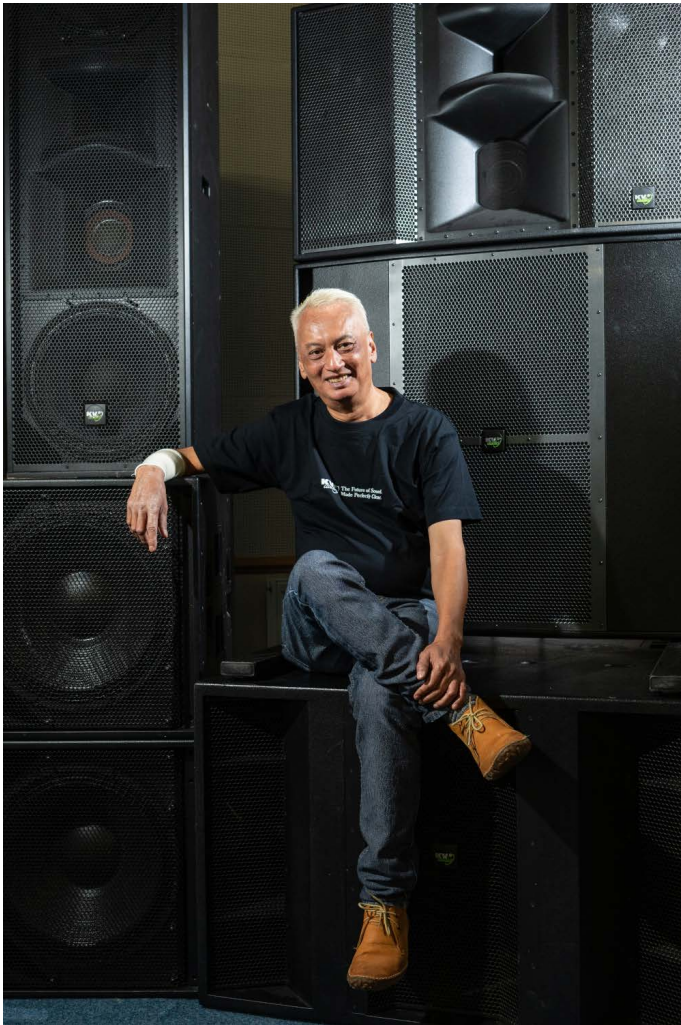
Sad to hear the passing of a international Legend. A Mentor to me and a legend in the international gig.

**Stephen Park**

RIP Peter Loh. Black Eyed Peas family will know who he is of course. And for anyone in Singapore, well the F1 GP and National Day Parade will never be the same again without his expertise on lights and technical and basically setting up the whole show. A lovely guy and a legend in the industry. Will be sorely missed.

*The photo was taken from one of the social media post. ETA does not hold the copyright to the photo. All rights belong to the photographer.*

## KV2 Audio Kicks Off 2023 with New Director of Sales



**ASIA:** KV2 has announced the appointment of seasoned industry veteran Robert Adrian Tan as the company's director of Sales, in Asia. Tan, who is based in Singapore, formerly worked as an AV consultant in the hotel and events industries before transitioning into systems integration. A skilled business manager, he also specialises in designing systems for acoustically difficult situations, be it in the live events or installed sound sector.

"It's an honour to be representing KV2 in the APAC region," said Tan. "I've long admired their technology and their approach to acoustics which, in my view, sets them apart from their competitors. I was introduced to the brand in 2010 and was immediately intrigued with

the clarity of the ES1.0 cabinets. Since then, the product range has continued to develop with more options for a wide variety of applications. I have achieved some of the best results in my career using KV2 equipment although I'm often asked to defend my choice. However, in my experience, once the client has heard a demo, all his questions are answered! I'm delighted to become part of the KV2 family and take an active part in the next chapter of their development in Asia.

"While KV2 has a certain presence in the region, I'm confident that I can continue to elevate the brand to even bigger and better things," he continued. "Opportunities don't just happen - you create them with hard work and passion - and that's exactly what I intend to do for KV2 - create opportunities."

KV2 Audio CEO, George Krampera Jr., is delighted to welcome Tan on board. "It's been over two years since the untimely passing of our friend and colleague, Dave Croxton, and we still miss him every day," said Krampera. "However, David and I had already talked about Robert, and we both felt that he would be a great fit for the KV2 family, both professionally and as a person. Covid slowed everything down of course, but once we were able to start recruiting again, Robert was an obvious choice. His knowledge of the region and his network of contacts are enormous, as are his technical and business skills. Coupled with his adaptability, enthusiasm and passion for the brand, I'm sure that Robert will be able to take KV2 to the next level in Asia."

**KV2 Audio**



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## Shannon Slaton Favours Point Source Audio Dual Element Lavaliers for Sound of Music Cast



**GLOBAL:** Point Source Audio's CONFIDENCE COLLECTION CO2-8WLp has been specified by renowned theatrical sound designer Shannon Slaton for The Sound of Music's International Tour. The multi-year tour began at the Marina Bay Sands Theatre in Singapore before moving on to Kuala Lumpur and Taiwan.

With more than 25 years of experience as a theatrical sound designer and Broadway audio mixer working on some of the biggest musicals in the world, Slaton has a deep understanding of what is needed to make a tour sound great. "Designing for a tour, I have to think about how much time people have to load the show in and out and the equipment has to sit in a certain amount of truck space," he explained. "If you're doing a Broadway show, you have three weeks and you install the equipment where you want it. But with a tour you have 8 to 12 hours, so the equipment and ease of travel become part of the equation."

"I designed the tour of The Sound of Music in the U.S. for three years and this is the same production currently touring Asia," continued Slaton. "The design for the International tour is pretty close to the U.S. sound design."

When it came to microphones, Slaton opted for Point Source Audio's CO2-8WLp dual-element lavaliers for the cast. The lavalier's "one-of-a-kind" design pairs two microphone elements into a single housing to create a form factor that is ultra-low profile. The paired elements are factory matched in frequency and sensitivity so that when a vital backup is initiated, any difference in audio performance is nearly undetectable.

The dual element design is also an important factor in the selection. "Having that built-in redundancy gives you peace of mind," explained Slaton. "My leads wear two mics and it's nice that you can just pull them out of the box and put them on the actor; normally there's a lot of work to get lavaliers to be two mics in one. Most of the cast only has one transmitter, but they have two mics which is great because if there is a problem you just have to switch the connector."

"Over the years I've used Point Source Audio quite a bit and now I'm pretty consistently using their mics," concluded Slaton. "I find that the connectors are very robust, and they don't sweat out as often as other mics. They seem to last longer, and they sound really good. There's not too much more that you care about in a microphone than those things!"

[Point Source Audio/CO2-8WLp](#)



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## Light Craft Invests Heavily in PROLIGHTS Soft Lights for TV and Film Market



**INDIA:** Light Craft & Sound is a multidisciplinary creative studio based in Mumbai that works with leading channels in India like Start TV, Sony, Zee TV, Viacom, and many others, and leading Bollywood productions like Dharma Production, Yash Raj Films, and others. As a leading lighting supplier for the Indian film and TV industry, the company has added 100 x PROLIGHTS EclPanel TWC, 10 x EclPanel TWCXL and 10 x combined Astra Wash19Pix and 37Pix moving lights to their rental fleet.

Arjun Singh, managing director of Light Craft & Sound, explained his decision to invest in PROLIGHTS: "We were impressed with the colour calibration and its colour precision across the entire range of soft lights. These are great key-selling points of PROLIGHTS' fixtures. Their colour and light output are similar to other leading manufacturers of soft lights."

Arjun was also impressed with a few software features: "We liked the built-in effects in particular and the fact that you can tweak their parameters. The colour mixing system and the built-in colour gels are also incredibly useful to the Indian market."

The PROLIGHTS' fixtures were supplied by Lotus Cine, the company's newly appointed distributor in the region.

PROLIGHTS

## Robe Changes Up for the Future



**GLOBAL:** Robe lighting starts 2023 with the announcement of two important new roles boosting its international management team, both looking ahead and eyeing the company's expansion over the next several years!

Bram De Clerck adds 'key account manager Europe' to his existing 'business development manager' detail, while Jens Poehlker takes on a new role as regional sales manager for Asia on top of his position as MD for Robe's Singapore office.

Singapore based Jens joined Robe as MD for Robe Asia Pacific in 2016 and has steered that operation diligently and successfully through the many pandemic-related challenges, building a talented and stable team to work alongside him. "It is now time to set the focus on bigger targets!" he stated.

Known for his great organisational skills and inclusive approach to management, with this dedicated team and other resources in place at Robe's Singapore office, Jens is perfectly placed to provide outstanding ad hoc service and support across the region. Pooling these resources will assist partners in other Asian countries to service their Robe customers faster and even more efficiently, offering a real win-win situation.

With the current strong partner network in the region, Jens is optimistic about the future and the potential of managing a vastly bigger territory which he views as a chance to increase flexibility and capitalise on new commercial opportunities. "By leveraging each other's experiences, Asia as a region will become much more robust with the option of working together across companies and borders," he explained, adding that he is "looking forward to collaborating with our partners and continuing the great work that Harry has started over the years."

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## Robert Juliat Lighting Selected for First Foreign Concert Filmed at Historic Kiyomizu Temple



© Courtesy of Sogo Butai

**JAPAN:** Built-in 1633, Kiyomizu is a UNESCO World Heritage Site consisting of several Buddhist temples located in the foothills of Mount Otowa in Japan's Kyoto prefecture. Shortlisted as one of the New Seven Wonders of the World in 2007, Kiyomizu's main building is famous for its unique 36m wide stage, supported by many wooden columns, which juts out over the hillside and to hover spectacularly 13m (43 feet) above the valley. Artists standing on the stage cannot see an audience in front of them but instead, look out over a beautiful tree-filled valley.

It was against this setting that the Italian vocal trio, Il Volo, performed a special charity concert in aid of [Wedu Global](#), an organisation which supports the development of women in leadership roles around the world. The concert was filmed in preparation for a worldwide premiere, in front of an invited VIP audience seated in

the smaller Okunoin Temple located 50m to the left of the main stage.

Robert Juliat products played a vital role in the special lighting for this concert with lighting designers, Yukiteru Hayashi and Michio Tsuchiya, choosing RJ Lancelot 4K HTI 2°-5° followspots and RJ Dalis 862 Footlights, Dalis 860 cyclorama lights and Dalis 861 Washlights to light the set, artists and orchestra.

3 x RJ Lancelot followspots were set up in the three-storey Koyasu Pagoda located an incredible 180m away from the main stage, from where they projected onto the roof of the Kiyomizu stage. The initial plan had been to illuminate the artists and orchestra, but with the Dalis fixtures producing more than enough light for this task, it was decided to change the function of the Lancelots to illuminate the roof which had been newly restored in 2020 for the Tokyo Olympics.





The Robert Juliat Lancelot and Dalis fixtures were supplied to the Kiyomizu Temple by Sogo Butai, Robert Juliat's exclusive distributor for Japan. "Lancelot was the only solution to light the roof of Kiyomizu Temple's main stage," said Michio Tsuchiya of Sogo Butai. "Projecting over such long distances requires subtle and delicate adjustments of the followspot in every plane. Just a little difference in the angle at the fixture makes a huge difference over a 180m throw distance, but it's something we were able to achieve with Lancelot as the stands and the followspot itself are so sturdy and stable and allow for such fine-tuning."

6 x Dalis 862 Footlights were placed in a horseshoe shape at the front of the stage and used to light Il Volo members from the front, while 10 x Dalis 861 Washlight units were rigged overhead and used as top light for the orchestra. Inside the temple's inner sanctuary, 15 x Dalis 860 cyclorama lights were used for very subtle illumination of the background of this holy place which is normally kept hidden, away from brighter light. "We were able to adjust these Dalis fixtures to make it dark enough to respect their sanctuary and at the same time not render it a complete blackout on camera," said Kentaro Tokuhiko of Sogo Butai.

The Sogo Butai team had to consider several logistical challenges during set up and rehearsal times. Not only was the historic site under strict restrictions with regard to protecting its structures and surfaces, but it is a must-see tourist destination, so all rigging, focusing and rehearsals had to take place between 6.30 pm and 6 am when the site was closed to tourists, with all equipment struck and reinstalled outside public opening times. In addition to this, the site lived up to its name meaning 'pure water' with torrential rain in the days leading up to the performance.

"Dalis Footlights proved the best and only solution to light the three performers in the open air without any light from above," stated Yukiteru Hayashi of Sogo Butai. "The fixtures were easy to cover up during the rain and easy to handle, install and de-rig during the many setups and strikes. Best of all, the adjustable colour temperature was stunning for allowing quick adjustments for the cameras in such situations, even in the rain."

"Luckily the rain stopped for the day of the filming and Il Volo and the members of the orchestra performed perfectly, marking the first time in Kiyomizu Temple's history that a full concert by a foreign artist has been filmed."

**Robert Juliat**

## DiGiCo Distributor Hits Significant Milestone with Burgeoning Rental Company



*The Crew behind Bharat Music*

**INDIA:** DiGiCo's distributor for India, Hi-Tech Audio & Image, has achieved another DiGiCo landmark by supplying Udaipur-based rental company, Bharat Music, with its first DiGiCo SD10.

"From small conferences to complex open-air concerts, DiGiCo has been the industry's preferred choice for many years now," said Vicky Sahu, director of Bharat Music. "Looking at technical features and market demand, we felt that DiGiCo definitely fits our work profile."

As an emerging audio-video rental company in Rajasthan, Vicky Sahu and his team are known for providing specialized services for big corporate and grand wedding events. Immediately after purchasing the SD10, Bharat Music supplied the console to various eminent Bollywood artists' live shows including Papon, Guru Randhawa, Mika Singh and Stebin Ben.

"DiGiCo SD10's flexible layout and intuitive operation are greatly appreciated by its users. The SD10 is a rider-friendly console and very much in demand among production managers," noted Satyam Rajvanshi, DiGiCo application engineer at Hi-Tech Audio & Image. "For anyone who has purchased DiGiCo as their first console, I would say that the investment is a very good decision. All DiGiCo consoles are user-friendly, with a fully functional user interface that allows the engineer to mix with ease. Moreover, we are always there to train and support anyone who owns a DiGiCo console."

Akshay Rajput, sales & marketing manager at Hi-Tech Audio & Image is dedicated to promoting DiGiCo amongst existing and prospective clients in the Rajasthan territory. Adding, "As a young entrepreneur, Vicky Sahu is ambitious to upgrade his audio inventory to reach more business prospects. He understood that



owning a DiGiCo console would open up new avenues in live entertainment shows across Rajasthan and we are glad to support and provide Bharat Music with their first DiGiCo console."

There are currently 11 x DiGiCo SD consoles across Rajasthan. That number is anticipated to rise with the growing demand among rental companies. "There is healthy competition among mixing console brands in the Indian market. As DiGiCo's India distributor, we have to come up with effective sales strategies that can turn our prospects into patrons," shared Nirdosh Aggarwal, MD of Hi-Tech Audio & Image. "Regular demos and training are major pre-sales tools for us. We discussed Vicky Sahu's requirements so we could advise on which DiGiCo console would be best suited for his inventory. To ensure the right products are provided, it's very important to work together with clients. We welcome Bharat Music on board with their newly purchased DiGiCo SD10 to join us in our venture."

Rajan Gupta, CEO and founder of Hi-Tech Audio & Image is now leading the company with a progressive business vision for DiGiCo. "I am delighted that Bharat Music has chosen to go with DiGiCo as their first mixing console," he concluded. "The SD10 has just about everything a mixing engineer needs onboard to make an artist's stage sound good. We have been distributing DiGiCo to the Indian market for almost a decade now with professionalism and proficiency. For us, it's a responsibility to establish DiGiCo as the go-to mixing solution for the audio rental market and we are able to achieve that with the support of the DiGiCo team."

**DiGiCo SD10**

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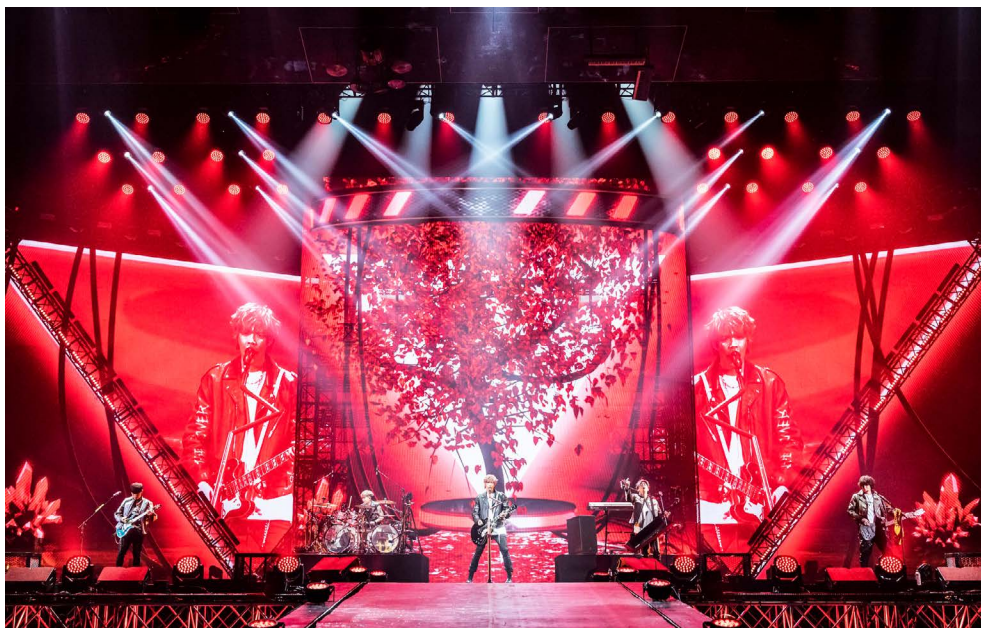
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## Rock Band 831 Returns to the Stage Backed by Sennheiser Digital 6000



@niima316

**TAIWAN:** After a two-year hiatus, Taiwanese rock band 831 returned to the stage with a series of sold-out concerts across Asia. The “Miss you 300” tour saw them performing 21 sold-out shows in major cities in China and a debut show in Singapore before they returned to Taiwan to kickstart their “Upside Down World” tour on home ground in the Taipei Arena.

Sennheiser’s Digital 6000 has always been a mainstay of 831’s touring inventory, which has gradually expanded to include many other Sennheiser and Neumann products such as the SKM 500, MD 435 and MD 445 as well as the Neumann KM 184.

When 831’s front-of-house audio engineer Huang first heard the MD 435 and MD 445 on the snare, he was so impressed that he immediately requested for it to be deployed at the Taipei concert. He also enjoys working with the Digital 6000 series for its low latency, wide dynamic range and superb sound quality.

“Sennheiser’s Digital 6000 is impressive and has been serving the band really well. In fact, it is lead vocalist Up Lee’s only choice of microphone whenever the band goes on tour,” Huang commented.

For vocals, 831 used a two-channel Sennheiser Digital 6000 system. Up Lee used an SKM 6000 handheld transmitter while the rest of the band relied on the SKM 500 handhelds and SK 500 G4 wireless bodypack transmitters. Backing vocals were picked up by cabled e 935 and e 945 mics. “We are very impressed with Digital 6000’s low latency, wide dynamic range and sound quality. From an engineering perspective, D 6000 requires much less calibration and is capable of unreservedly showcasing the band’s stellar

performance. It gives them the freedom and peace of mind to fully focus on their stage performance. There is no doubt why this is the vocalist’s system of choice to work with on tour,” Huang explained.

The guitar and bass were miked with wireless instrument systems from the evolution wireless series, with the drumkit benefitting from a variety of Sennheiser and Neumann microphones. The super-cardioid MD 445 was used on the snare, with its polar pattern helping to eliminate hi-hat bleed. Additionally, the e 901 and e 902 were used on the kick drum, while the toms and snare bottom were picked up by e 904 and MD 421. For the hi-hat and ride, they had chosen the Neumann KM 184.

Band Manager Woods Song spoke highly of the support from the local team: “I would like to thank the Sennheiser team for the great support. Our repertoire of Sennheiser and Neumann gear has grown a lot over the years. To be able to have our concert at the iconic Taipei Arena fully decked with Sennheiser and Neumann gear is a testament to how much the band love and trust the brand’s products. We look forward to continuing our journey with Sennheiser and taking our gear with us to wherever the tour takes us next!”

[Sennheiser](#)



## Martin Audio WPL Kickstarts New Pro Audio Division for Leading Screen Rental Company



(L-R) Jeff Mandot (Vardhaman), Kekul Sheth (Vardhaman), Pratheesh Michal (PXL)

**INDIA:** PXL Media, a leader in India's large format LED screen rental market, has entered the professional touring audio domain by adding Martin Audio's Wavefront Precision (WPL) line array to its inventory. In so doing, they have become India's first WPL users. A production house known across South India for its prowess in LED screens, PXL Media launched SXL—a division centred around providing exceptional touring audio systems to audiences.

"Together with VXL (Video) and LXL (Lights) we can provide a complete solution to our customers," said Pratheesh Michael, PXL Media's CEO. "This purchase also helps Pixel Media make its mark as a significant player in the touring industry in Kerala, one of the fastest-growing events and touring markets in India. We will quickly expand into all of South India soon."

The system inventory for Pixel Media includes the WPL 3-way bi-amp, 2 x 12" large format line-array elements, with the globally renowned dual 18" horn-loaded SXH 218 subwoofers. The system is powered by two racks consisting of Martin Audio's iKON iK42 amplifiers, network switches, signal and power distros.

"PXL Media believes in investing in top-level gear to match international standards. Martin Audio's reputation

in the market is exemplary. We are proud to be associated as their first WPL users. We wanted to invest in a system that delivers top-notch performance, is rider-friendly, ensures efficiency and functionality, while being flexible and scalable," added Sachin Babu, PXL Media's sound engineer. "Martin Audio was perfect for this."

Tony Sawyer, applications manager at Generation AV, Martin Audio's APAC sales representative, conducted the initial software and rigging training at the PXL warehouse in Kochi. "Martin Audio has always prioritised training and support. We ensure that our touring partners are taken care of and that their purchase is protected. The team at PXL are exceptional learners and will soon be a force to reckon with," continued Sawyer.

Prashant Govindan, director of Generation AV India, agreed, "Pixel Media has big plans and has taken a bold first step by launching with the WPL. We are excited by the possibilities that this opens up for them, and all at Martin Audio and Generation AV are here to support and help them with their growth."

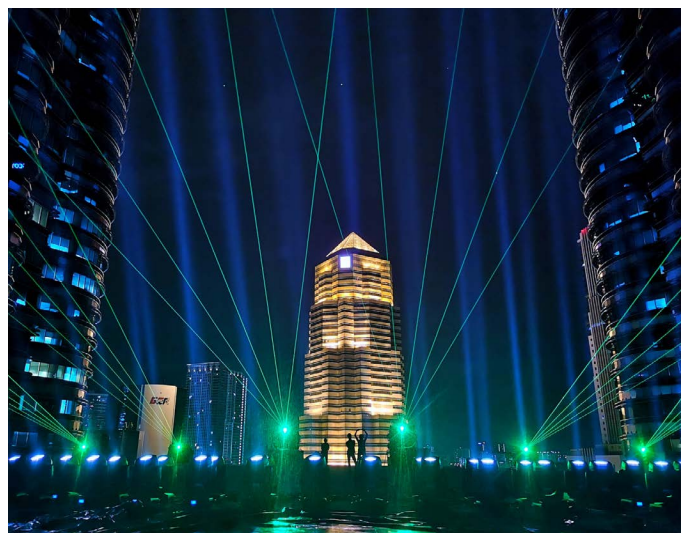
"The team at VMT [Martin Audio's Indian distribution partner] is highly approachable and supportive. They go out of their way to help us, whether industry related or not. Their pricing structure is business friendly and allows us to plan our growth systematically," added Pratheesh.

"It was great working with the PXL team throughout the sale, and we continue to back them with all the support. Pratheesh, Biju, Sachin, Kiran and team have a long way to go and team VMT wishes them all the luck with their current system and the many more systems to come," noted Jeff Mandot, VMT's national sales manager.

"We are very happy to have team PXL onboard with us. With VMT, we are building a strong sales and support network for Martin Audio in India, that will offer the best in the touring and installation sound markets," concluded David McKinney, managing director of Generation AV.

**Martin Audio**

## LD Michael Chan Lights Up Petronas Twin Towers with Claypaky Mythos 2 Fixtures



**MALAYSIA:** A retailer in Kuala Lumpur, Malaysia, held a glam party for its 300 VIP guests at the Petronas Twin Towers which ended with a light and drone show in the middle of the city. To create the event's lights and lasers, LD Michael Chan of Singapore-based Lighting Insomnia used 120 x Claypaky Mythos 2 fixtures mounted on the 6th Floor of Suria KLCC (the rooftop), which is connected to the Twin Towers on both sides. After the party, guests were welcomed into the neighbouring Sky Garden at Permata Sapura to revel in the exhilarating aerial performance.

Aside from being a lighting designer, Michael works on a wide gamut of arts, entertainment and installation projects ranging from musicals, concerts and events to galleries, exhibitions and architainment. "As the first private event to be held at the Petronas Twin Towers, the idea was to have power light beams emit from the towers and create an awe-inspiring light and drone show in the heart of the city," explained Michael. "I believe it was the first time that beams lights were allowed to be placed on the rooftop of Suria KLCC and, if that's true, I am very honoured to be the first person to do a light show there!"

To mark the event, the Petronas Twin Towers were bathed in red by adding filters to its architectural lights. Michael used 6 x 25w RGB lasers and 120 x Claypaky Mythos 2 to create a 12-minute light beam and laser show for the guests 500 meters away at the party venue. The show was completely synchronized via timecode with a musical score and more than 300 drones with RGBW LEDs, which formed various icons and animations along the skyline.

"I chose Mythos 2 because it is the most powerful and reliable beam fixture currently available in the SEA rental market," noted Michael. "The Mythos 2 met my needs for full CMY colour mixing along with the ability to create an incredibly powerful, narrow beam with a 2.5° aperture."

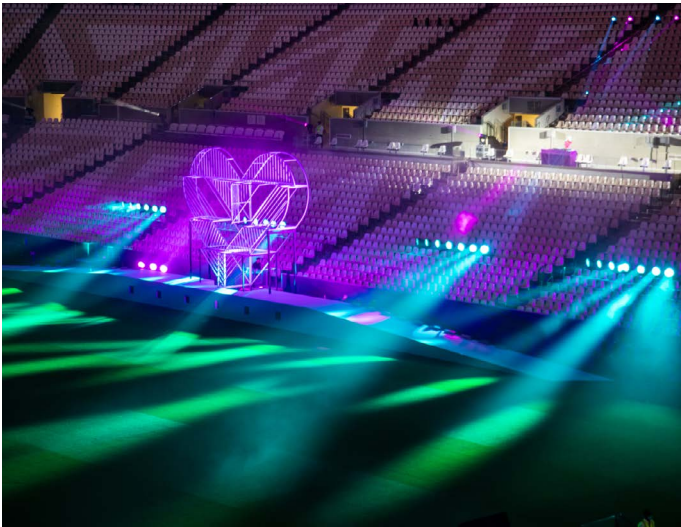
Michael also reported that "the show went amazingly well" despite a wet and stormy night. "We powered the lights on seconds before the show, and the beams lit up even the storm clouds above the Towers creating a stunning effect."

Claypaky distributor Acoustic & Lighting Systems (A&L) sold the Mythos 2 fixtures to rental company Audio Synergy Projects & Concepts Sdn Bhd (ASPC), which provided the equipment and setup for the show.

[Claypaky](#)



## Claypaky Fills Out World Cup Stadium for Special Event



**MIDDLE EAST:** Lighting Designer Matthew Tunchon and Qatar Vision Production Company WLL (QVISION) utilized a large Claypaky rig to light the first test event for FIFA World Cup Qatar 2022 inside the newly built Lusail Stadium in Doha, which hosted the tournament's final match between France and Argentina.

The event marked the official unveiling of the World Cup uniform for staff and volunteers. Since the soccer pitch was being prepared for the final match, the ceremony's attendance was limited to 25,000 people but the event had to feel big in size and scope.

"Executive producer Dan Bolton and creative producer Tom Davies both from Dubai-based BE Experiential, expressed the need to make this event fill out the stadium," said Tunchon of Silver Bullet Projects in Sydney, Australia. "The production designed by Nathan Heverin needed to work around the pitch and be quite compact, so it was up to the lighting to really give the event a big arena look."

To help achieve that, Tunchon assembled a rig featuring 50 x Claypaky Scenius Unicos, 40 x A.leda B-EYE K20s, 25 x Sharpys and 30 x Hepikos.

"We used the B-EYEs in the seating area behind the stage to provide some great effects and to backlight the performance stage," Tunchon explained. "The big face

of these fixtures as well as the huge amount of looks you can get out of them meant they were really great at helping to pull the stage out from its position in front of the seating area."

Along with the B-EYEs, the "real star fixture" at the event were the Hepikos beam-wash lights, he reported. "Their brightness, colours and speed were great, but when this fixture goes into beam mode it's a whole other light. With 30 positioned on either side of the stage as well as in the middle bowl these beams really stood out amongst everything else we had in the rig."

The Scenius Unico spots did the majority of the work when it came to providing key light to the stage as well as to performances that took place on the field of play, according to Tunchon. "Their great output as well as their shuttering capability were really put to good use," he noted.

The complement of Sharpys Plus fixtures was used to create a ring around the upper stadium. "Their punch and fast responsiveness worked well with their ability to zoom into a nice tight beam for some aerial effects then flood out to light lower levels of the audience," Tunchon pointed out. "It was a great fixture to have access to."

Overall, the LD was impressed with the wide array of Claypaky fixtures and their ability to work well together. "It was really good to see how uniform the Claypaky equipment was," said Tunchon. "The colours were very consistent across each fixture type, and they were all very reliable in the extreme weather conditions they operated in at the stadium."

QVISION supplied and installed the lighting equipment to BE Experiential for the orientation event. This included all lighting, rigging and AV control equipment. They also supplied technical crew and operation staff. With Silver Bullet Projects, Clinton Seery was the event's technical director and Aaron Russ was the programmer.

[Claypaky](#)

## The First Edition of the Culturally Diverse KULA Fest Takes Mumbai by Storm



**INDIA:** Mumbai's iconic Nesco Exhibition Centre hosted the path-breaking KULA Fest which took place from January 13 through January 15, 2023; and hosted 150+ artists from over 10 countries, thereby standing tall as a one-of-a-kind gathering of global arts and culture.

As Mumbai's very own multi-disciplinary, genre-bending and the most diverse festival ever; the event witnessed indigenous artists sharing the stage with leading contemporary and modern artists from countries like Australia, Germany, Indonesia, Japan, Malaysia, Nepal, New Zealand, UK, US and Vietnam; showcasing art practices which challenge boundaries and dare to experiment with the unfamiliar and unlikely. And through this event, the city got to experience the wonders of artists all under one roof thanks to the presentation of a global community of artists that represents the various modern art forms and traditional cultural practises. 3 days of live tattooing, live graffiti mural creation, contemporary dance with live animation, dance battles, hip hop face-off, knowledge sharing workshops, and brilliant and daring live music acts kept audiences enthralled all through the festival schedule – making it

an instant classic and a rousing success with demands for next year's KULA fest soaring high. Gracing the performance stage were top names from the world of music like Kiss Nuka, Jatayu, BottleSmoker, Wild Wild Women, Prem Joshua & Band, Ezra Tekola Samuel, David Angu and The Tribe, Mo Styles, Divij and more – all of whom were greeted with great adulation and appreciation by the capacity crowd in attendance.

Considering the unique value proposition of the festival's music experience slated to be delivered through an extraordinary line up of world-class musicians – it became clear that the audio reinforcement would play an extremely crucial role in ensuring an optimum audience experience that would befit the theme of the festival and the objective that it looked to achieve.

A member of KULA Fest's managing committee explained this in detail, as he informed "There are certain understated aspects that play a key role in bringing any type of live performance to life - stage, lights and perhaps the most important – sound. We chose to partner with **PP Sound Lights Production** purely because Prasad and his team have an innate





understanding of the various nuances of all the important technical aspects that goes into pulling off a flawless event. Partnering with PP Sound Lights Productions made our work easier in terms of the kind of approach we needed to take with the sound reinforcement; and thanks to their unmatched level of commitment towards excellence, we were able to ensure a superlative sound experience for the audience. Their inventory is up to date with all the latest equipment; and so, as organizers, we knew that the technical requirements in terms of sound would be well taken care. They did do a fabulous job indeed. The event was flawless – the music experience was impeccable, and everyone was really pleased!"

For the mainstage, the PP Sound Lights team deployed a comprehensive loudspeaker system from d&b Audiotechnik, with the FOH comprising multiple units of the versatile V-series line array modules paired with the powerful B22 subwoofers on either side of the stage; and several units of the Max2 monitor wedges that were placed strategically on stage to act as the floor-monitoring solution for the performing artists. The entire loudspeaker system was powered through multiple units of the ultra-efficient and dependable D80 power amplifiers. To assist artists with their respective music playback requirements; PP Sound Lights team also provided a complete set of the industry standard Nexus 2 DJ'ing system (CDJ2000 players + DJM900 mixers) from Pioneer DJ, which of course was in addition to the expansive microphone inventory that comprised multiple sets of wireless systems which included the acclaimed 6000 series wireless microphone system from Sennheiser as well as the industry-proven Axient Digital

wireless system from Shure. And to enable unparalleled control over the overall quality of the sound experience for the audience at the mainstage, the team offered the leading-edge S6L full-format mixing console from AVID which was used to fulfil FOH mix as well as artist monitor mix exigencies.

The venue also hosted a secondary stage dedicated to hip-hop performances, which the PP Sound Lights team outfitted with a compact yet powerful loudspeaker setup from JBL by Harman that comprised the VRX932LA line array system paired with matching pair subwoofers as the FOH system, along with VRX915 wedges deployed as the on-stage monitoring solution. This stage was once again equipped with a select range of corded and cordless microphones from leading brands like SHURE and Sennheiser; with the PP Sound Lights team also providing the versatile XONE:92 six-channel mixers from Allen & Heath to suffice for impromptu battle-mix programmes. A single unit of the incredibly compact yet versatile AVANTIS 64 channel 42 bus digital mixing console from Allen & Heath was more than enough to allow the mix engineers complete control over the quality of sound playback at the stage.

Along with advancing traditional and modern forms of art and culture, the KULA Fest looked to advance a deeper connection with a wider audience base in Mumbai; and it's safe to note that the several stunning performances which took place across the 3 days of the event, played a vital role in ensuring that the audience went back home with nothing but pleasant memories and a longing for the next edition of this diverse and spiritually awakened festival.

Prasad sums up his experience of being associated with the first edition of the KULA Fest as he comments, "At the end of it all, it is so heartening to receive a flurry of compliments from the artists, organizers and audience members for a job well-done. I'm extremely proud of the efforts that every single member of PP Sound Lights Productions has put into bringing this magnificent event together, and I would like to express my sincerest gratitude to the immensely talented managing team at KULA worldwide for their unwavering support throughout the entire project. This is an event that will hold a special place in our memories for years to come!"

**PP Sound Lights Production**

## Elation Professional Has You Covered with Proteus Rayzor Luminaire Family



The IP-rated fixtures from the Proteus Rayzor line provide an extensive selection of design tools with several lighting effects for a variety of applications. Featured in our Ennovations column this month, the Proteus Rayzor 1960 is the newest addition to the family equipped with Elation's exclusive SparkleLED technology.

## Frida Kahlo Celebrated by TDC at Sydney Festival 2023



Frida Kahlo, a person whose tenacity, disobedience, and brilliance put her centuries ahead of her time, had a special exhibition dedicated to her legacy at the Sydney Festival 2023. The latest, high-powered media servers were used to play back content utilising Barco G62-W11 laser projectors that were set up by a custom TDC system.

## Avolites Tutorial for V16 Titan Software Update



Here's a quick tips tutorial explaining all the new features in the most recent version of Avolites' renowned Titan software, which controls lighting and integrated media. Two new key features in version 16 have been created to help programmers and operators by giving them quick access to the information they require.

## Ayrton is Ready to Create with New Zonda Luminaires



The Zonda 3 Wash and Zonda 3 FX have been added by Ayrton to the Zonda family and are now a part of the Multi Sources 3 Series. The proprietary optical system of Zonda 3 is made up of a special 170mm mono-block cluster in PMMA, which improves beam coherence, and seven glass light guides with an output surface built of an optical microstructure.



## Reading the Data Right. Part Three



In this issue, I want to have a look inside the measurement Software and since we are not talking about brands or software models, I want to discuss what's working behind this and inside the software. Because of space constraints, please accept my apologies for keeping this rather broad. The

interested user will find my email address at the bottom and I will be happy to discuss details outside of those limitations.

What does the measurement software do? The one thing you will always have here is FFT, which stands for Fast Fourier Transformation. You can look cool by saying FFT every other sentence without ever knowing what FFT is, but let me give you an idea. FFT is a mathematical approach to transform a signal from one dimension into another. In our case, from the Time domain into the Frequency domain. With FFT you can take a signal in the time domain, which is what any of our microphones will pick up and after applying the Fast Fourier Transformation, you end up with the frequency spectrum of this time domain signal, which is important for us in learning about the room - loudspeaker system and to make decisions about adjusting Delay and EQ of the system.

The actual FFT operation is a very complex mathematical task to solve, but there are quite a few details that help us in simplifying this task to allow a reasonably decent computer to do all those required calculations in real time. Once you have the algorithm clear, you can actually program this into MathLab software (a study and research platform), and it will give you good results. It should be noted that there is no one FFT algorithm, but a wider variety of solutions, based on different mathematicians' approaches. In the process of a FFT calculation the software or algorithm applies a windowing function on the signal and there are various different windowing functions available depending on what specific data you are looking for in the time domain signal. Different windows will provide different resolution

and information and by applying any window you are by default tempering with the data, which you are analyzing. There is nothing you can do about this, but you should be aware about it at least.

One thing to remember is that in this environment all the measurements are relative and relative to the output of your test signal and the received input from your measurement microphone. For as long as a reasonable level of difference is maintained between signal and noise, this works well. If you however want or need absolute measurements, of absolute SPL levels for instance, you will have to make your system of hardware and software a calibrated system. This can be done, by "telling" the software the behavior of your microphone and also your preamplifier and then for as long as this does not change you can make absolute measurements as well.

So at this stage you have a hardware and software system which allows you to make measurements between the output and input and those can be electronics measurements, acoustical measurements and system measurements, where you measure a room and loudspeaker system together. Your software will not tell you how to time align, or set crossover curves, or how to set required system equalization, but it will tell you something about the relationship between the send out test signal and what the microphone picks up as a result. This means that to be able to use your software and hardware system successfully, you will still need to know and understand all the other details of your system under test. This means that your hard earned knowledge is still very valuable

The software will help you to time align your system and to check, how well (in phase) various components of your systems are performing. You just have to set up your microphone and sound system properly and adjust the software so that it will show you what you are looking to see and then you will have to read the data. So after three columns on this topic I expect everybody to be more confused than before, so welcome to my world...

**Join the conversation and share your thoughts with Alex. Alex can be reached at [alex@asaudio.de](mailto:alex@asaudio.de)**

## Elation KL Profile FC Combines High CRI Framing with Versatile Wash Capabilities



Elation Professional is attempting to simplify ellipsoidal lighting with the new, all-in-one KL Profile FC. Designed to achieve the ultimate in flexibility and performance, the KL Profile FC combines “everything a designer needs in one innovative package, eliminating the need for additional lighting accessories and making it the most convenient and cost-effective ellipsoidal lighting solution on the market”.

### RGBMA LED engine

The KL Profile FC offers full-spectrum performance from a 92 CRI engine that utilizes a 305W 5-colour homogenized LED array of Red, Green, Blue, Mint, and Amber (RGBMA) sources. The RGBMA engine, calibrated at a native colour temperature of 6500 Kelvin, emits diffused saturates and soft-field pastels, including tunable white light. The carefully tuned LEDs ensure accurate colour reproduction while delivering a powerful output of 10,600 lumens.

### Colour management

High colour quality and colour manipulation are central to the KL Profile FC. The unit can adjust to light that shifts away from pure white towards green or magenta through a green/magenta shift adjustment and a virtual gel library. Virtual colour correction from 2400K - 8500K plus CMY and RGB emulation give designers access to an LED colour array that includes mixed whites. Capable of matching the white balance for camera, users can easily shift the colour temperature without the use of plus/minus green gels and filters. Additionally, the LED refresh rate is DMX adjustable so there is no flickering when used with high-speed cameras.

The fixture's optical design and lens coatings ensure precise and razor-sharp projections, removing all unwanted colour shifting and aberrations in all zoom, focus or framing positions. Dimming of the LED engine is smooth and stepless with variable 16-bit dimming curve modes available to suit any application.

### Beam control

With an integrated manual zoom range of 7° to 50°, the KL Profile FC requires no additional lens tubes, reducing cost and complexity and providing excellent flexibility for any performance venue or show. The fixture allows for manual rotation of the barrel and the integrated manual iris allows for further beam control. A full blackout manual framing system lets users refine the beam shape as needed and frame around objects to be highlighted.

### Gobo slot / Designer Gobo Set

The fixture includes a 16-bit rotating/indexing gobo slot for versatile imaging and ships with the KL Profile Designer Gobo Set, containing 10 high-resolution glass gobos. The integrated gobo slot is easily accessible from the top of the fixture. The unit includes a 7.5" gel frame and 7.5" front accessory holder, and an optional Fresnel Wash Lens Conversion Kit allows users to utilize the fixture as a framing wash.

The KL Profile FC has also been designed to respect the whisper-quiet requirements of the professional stage and studio. It offers enhanced fan controls down to Elation's Mute Mode, which disables the internal cooling fan.

### Professional grade

A host of other features come standard like multi-channel DMX control with RDM protocol support, 5-pin DMX In/Out, and IP65 locking power In/Out connectors. Operation is simple via a 4-button touch control panel with an easy-to-read 180° reversible LCD menu display that makes navigation through settings uncomplicated. The fixture can also be controlled manually for standalone operation using the included encoders.

The KL Profile FC is now shipping, click the link below to find out more.

[Elation/KL Profile FC](#)



## Cameo P-Series Optimized to Illuminate Theatre, TV and Corporate Events



Cameo has developed the P series of LED profile spotlights to ensure that people and objects are always optimally illuminated, be it in a theatre, TV show or event stage. The LED profile spotlights are available in Tungsten, Daylight and Full-Colour versions. In addition to its light output and flexible handling, the P-series also convinces with its extremely high CRI and TLCI values as well as a lifelike white light and colour rendering. The optionally available Cameo iDMX Stick can control the LED profile spotlights not only via DMX and RDM but also wirelessly via W-DMX.

Overall, the P series includes the P2 T (Tungsten, 3,200 K), P2 D (Daylight, 5,900 K) and P2 FC (Full-Color, RGBAL) models. With a light output of up to 17,000 lm (P2 FC pictured above), the P2 profilers are the perfect replacement for conventional 1kW profiled spotlights. The units can be flexibly adapted to different stage requirements via a variety of optional interchangeable lenses. There is also a choice of interchangeable lenses with fixed beam angles (19°, 26°, 36° and 50°) as well as zoom lenses for the ranges 15°-30° and 25°-50°. Users will also be happy to note that the F and P series harmonise with each other both visually and in terms of their photometric properties, forming a perfectly matched lighting duo for theatres, TV, and corporate events.

[Cameo/P-Series](#)

## SIXTY82 Reinvents Popular M29S Box Truss



By introducing TPM29S, the first in SIXTY82's new TPM Truss Series, Sixty82 has re-invented the industry's "most popular" truss type, the M29S box truss, to deliver a new product with a wealth of added benefits to the end user.

TPM29S is up to 25% stronger than similar box trusses enabling it to withstand the "most demanding" conditions. An improved design of the diagonal braces helps to increase the strength and stability of the truss system, while the new optimised shape and dimensions provide better support to withstand higher forces.

Extruded end frames enable the TPM truss to withstand more load without deforming. The extrusion process ensures a precise and uniform shape that is 100% square with a perfect fit, reducing the risk of failure due to poor connections. The extruded end frame also makes TPM29S bounce- and smash-proof. The removal of the end diagonal support in the new design makes for easy storage and allows easy placement of uplighters within the truss without interfering with the light output. A new truss spigot made of stronger alloy adds a further key improvement to the strength of the TPM Series.

A major feature of the TPM29S is that it is fully compatible/interchangeable with the current M29 Series and can be seamlessly integrated into any M29 Series setup. In cases where both truss types are used, customers can simply use the loading tables of the M29 truss for safe and reliable operation. TPM Series truss is the "perfect solution" for anyone looking to expand their M29 series and take advantage of the latest innovations in truss technology.

[SIXTY82/TPM29S](#)

## Magmatic Atmospheric Effects Magma High-Output Fogger Now Shipping



Magmatic atmospheric effects (Designed, engineered and exclusively distributed by Elation Professional) has launched its first dedicated fog generator in its Magma series of dependable haze and fog machines. Now in stock and shipping is the Magma Fog 1500 IP, a durable, water-based fog machine with advanced technology and an IP65 rating that provides an "exceptionally high output" fog for professional applications of all types.

The Magma Fog 1500 IP is a tough, all-purpose fogger whose powerful output can be used to add atmosphere to stages in busy venues and demanding rental projects alike, indoors or out. A thermally-protected 1500W heat exchanger produces an impressive output of 60,000 CFM (cu ft/min) and when operating at 100%, the unit can shoot a 40-second burst of all-enveloping dense fog.

The unit is hard to break but easy to use with an onboard LCD touchscreen control panel with manual and timer control options, intuitive DMX-512 and RDM control, and optional wired and wireless remote control options. The

Magma Fog 1500 IP comes with IP65 locking power in and IP65 locking 5pin XLR connectors (DMX In/Out) for safe and reliable operation outdoors.

Built to withstand travel and repeated use, the Magma Fog 1500 IP features a durable aluminium housing and robust design for powerful performance that delivers on time, every time. Relatively compact for such a powerful fogger, Magma Fog 1500 IP is easy to set in a corner, position side stage, or hide in a venue. Two convenient carrying handles make handling easy and a hanging bracket for truss mounting is included.

Housing a 5-litre (1.32-gallon) tank, the Magma Fog 1500 IP has a fluid consumption rate of 200 ml/min (6.76 oz). Recommended fluid is Magmatic's Atmosity Extreme Filtered Fog Fluid for a high-quality dense fog with other Atmosity fluids compatible depending on the application.

[Elation/Magma Fog 1500 IP](#)



## Ayrton Grows Zonda Family with Launch of Zonda 3



Ayrton has added the Zonda 3 Wash and Zonda 3 FX to the Zonda family and part of Ayrton's Multi Sources 3 Series.

Zonda 3 is fitted with 7 x high-performance 40W LED sources with RGB+W, Zonda 3's proprietary optical system is made up of a unique 170mm mono-block cluster in PMMA, which enhances beam coherence, and seven glass light guides with an output surface composed of an optical microstructure.

A 50mm truncated transmitting lens with an optical surface equivalent to that of a 70mm round lens enables Zonda 3 to deliver a high-intensity beam with a zoom ratio of 14:1 and a wide zoom range of 4° to 56°. This LED/optical system combination is capable of producing a light output of 5,200 lumens and a perfectly homogeneous mixture of pastel and saturated colours, regardless of the colour combination chosen.

### Zonda 3 Wash

Zonda 3 Wash has been designed to cover an entire live entertainment stage. Its additive colour synthesis can reproduce precise, intense and deep colours, while the careful colour mixing of the sources allows for perfect colour reproduction. The use of a special black honeycomb and perfect separation of the light sources helps to significantly boost the level of contrast. A complete library of pre-programmed colours, created in collaboration with lighting designers, is instantly accessible. A unique ventilation system, exclusively designed for this luminaire, ensures Zonda 3 Wash is as discreet as it is silent.

### Zonda 3 FX

ZONDA 3 FX is a creative, versatile and feature-rich luminaire that borrows from the main attributes of the Wash version. It offers a continuous rotation of the pan and tilt movement I.R.S.TM. while individual control of each LED allows the creation of 3D volumetric effects. The perfect separation between the light sources helps to significantly boost the level of contrast and visual perception of multiple beams.

This exceptional luminaire is equipped with a high-definition Liquid Effect located between its main lenses, which can generate complex graphic effects. It can be used alone or in combination with the main LED matrix. The library of effects in ZONDA 3 FX provides a limitless source of inspiration.

Both Zonda 3 Wash and Zonda 3 FX have a new optimised cooling system, simplified lens guidance systems, and an ever smarter design of the internal structure which have made it possible to reduce the size and weight of the luminaires considerably in keeping with Ayrton's Slim-21 system.

### [Ayrton/Zonda 3 FX](#)

## Elation Professional Proteus Rayzor 1960 Equipped with Exclusive SparkleLED Tech



If you're looking for a workhorse washlight but also want something novel to add to your designs, Elation has released the Proteus Rayzor 1960, a more powerful big brother to their popular LED wash Proteus Rayzor 760. Now available and shipping, the Rayzor 1960 opens up its distinct visual qualities to shows and productions of every scale. With the power to handle long-throw applications, the Proteus Rayzor 1960 is part of Elation's Proteus line of IP65 luminaires for use under adverse conditions and in any environment.

### Creative colour/long-throw power

The Proteus Rayzor 1960 is the "brightest IP65 fixture in its class". Driven by 19 x 60W RGBW LEDs—all independently controllable—the fixture produces an intense and well-defined beam of over 18000 lumens. It can zoom tight to 5° for a very narrow collimated beam or spread wide to 55° for even stage coverage. A unique Zoom Overdrive function allows the zoom to move past the optical system's narrowest point, providing extremely narrow collimated beams for impressive aerial effects and extra punch.

The unit's RGBW colour mixing offers a wide range of saturated colours and pastel shades and several unique colour macros are included for programming convenience. The fixture comes with a selection of linear

colour temperature presets from 2,700-8,000K which combined with the abundance of colour possibilities makes the Proteus Rayzor 1960 an "excellent colour matching unit". Dimming of the LED engine is smooth and stepless with variable 16-bit dimming curve modes available to suit any application.

### Face FX/SparkLED

With its 19 cells and large diameter front lens, designers can use its individual pixel control to create a variety of aesthetically unique eye candy looks, a design element that decorates any stage and looks great on camera. The oversized front lenses create a large surface that is enhanced by Elation's exclusive SparkLED technology, the same SparkLED system you find in Elation's Rayzor 760 and Rayzor Blade ranges.

SparkLED is 76 individual 2W white LEDs embedded in the front lenses which can be animated over internal effects or via DMX. The sparkle effect can also work as a stand-alone effect in its own right, allowing designers to fill idle space with something more inspiring. SparkLED is unique to Elation luminaires and is controllable via the lighting console or driven by a multitude of internal FX patterns.

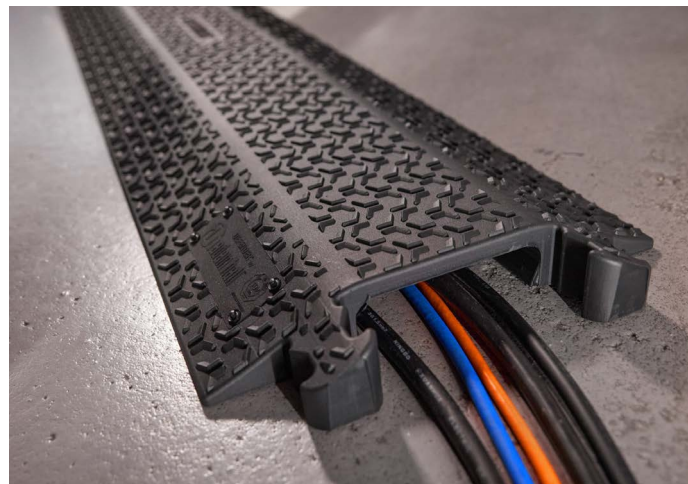
In addition to its powerful wash, stunning mid-air and enhanced effects, and despite being an IP65 fixture, the Proteus Rayzor 1960 offers continuous 360° pan & tilt rotation, another layer of dynamic effect from this versatile fixture. The unit can spin continuously, and at variable speeds, to add an energizing look to any show.

Combining the powerful LED output with SparkLED while utilizing the 360° movement opens up a multitude of design possibilities from wide stage washes or mid-air beams to more subtle effects for mood generation, both off and on camera, indoors or out. Housing professional control and IP-rated connection features, the Proteus Rayzor 1960 not only takes stage and production designs to a new level, but it also does it in a low profile form as it measures only (LxWxH) 14.6 x 18.4 x 22.9 in (370 x 468 x 582mm).

[Elation/Proteus Rayzor 1960](#)



## DEFENDER Presents the XPRESS Series – its Fastest Cable Protector



DEFENDER is proud to present its new XPRESS Series. These drop-over cable protectors, which feature a cable duct, are available in two versions (XPRESS 40 and XPRESS 100) with 40 mm and 100 mm wide cable ducts, and can be quickly and easily placed over cables and hoses that have already been laid. This makes XPRESS cable protectors suitable for a variety of outdoor and indoor uses at events, festivals, Christmas markets, trade fairs, shopping centres, studios, or offices. In addition, the XPRESS models have the DEFENDER 3D LaserGrip surface for particularly high slip and tread resistance, even when driven over with trolleys, wheelbarrows or bicycles.



The XPRESS 40 (1005 x 125 x 20 mm; L x W x H) and XPRESS 100 (1005 x 250 x 40 mm; L x W x H) cable protectors offer the fastest handling of all DEFENDER models. The lack of a base is a major factor in this, making the cable protector particularly easy to install in existing cable routes. While a simple cable protection mat is often used in similar cases, the XPRESS cable protectors provide a much more robust and safe solution for people and materials. Despite their low weight, the XPRESS cable protectors have a high load-bearing capacity of 0.5 tonnes per 20 x 20 cm area laid, which means that even cars can drive over them without any problems.

As with the tried-and-tested Micro and MIDI 5 2D Series, the innovative 3D LaserGrip surface also provides XPRESS cable protectors with special slip and step

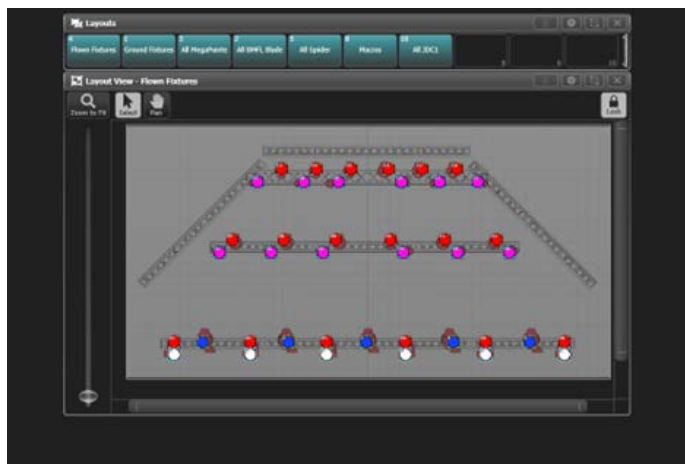
resistance. With its special shape and surface structure, it also minimises the risk of accidentally moving an entire cable protector line.

DEFENDER cable protectors do not contain toxic, environmentally harmful PVC, and they are produced sustainably. The XPRESS Series uses an extremely stable, break-proof TPU (thermoplastic polyurethane), which is mainly made from recycled plastics and gives the cable protectors a high durability according to the TÜV SÜD standard.

The DEFENDER XPRESS Series is 100% manufactured in Germany and comes with a 5-year warranty.

**DEFENDER EXPRESS**

## Avolites Titan v16.0 Developed with Programmers and Operators in Mind



Avolites has unveiled a major new release of its renowned lighting and integrated media control Titan software. Version 16 has two new main features developed to assist programmers and operators by providing fast access to the data they need.

Freeform Layout view, for example, provides the ability to arrange and select fixtures in a 2D layout either manually, or automatically from the integrated Capture visualiser, streamlining the workflow from design to programming. It provides a visual representation of the current state of the fixtures and is accessed from a new 'Layouts' window and 'Layout' handle type. With this new function, group handles can be included in layouts to further assist fixture selection. Multiple layouts can also be created providing the ability to have more than one arrangement of fixtures or to separate fixtures into specific layouts. The view supports multi-touch gesture controls for zoom and pan.

A new window called Cue List Tracking View provides a way to view and edit the values and tracking of individual fixtures/attributes in a cue list. A 'View Tracking' button has also been added to the Playback View context menu. Selecting this will open the Tracking View window with the associated playback cues. Selecting the 'Select Cue List' option from the Tracking View context menu will open a menu where you can select other cue lists (either

via the softkeys or by a cue list handle). The window will remember the last selected cue list when opened and if it is opened without a cue list it will prompt you to select one.

The upgrade also comes with a raft of new bug fixes (see the [release notes](#) for more details) and improvements to the software operating performance.

The speed of various software functions including update, selection and clear has also been significantly improved. This is particularly relevant for large numbers of fixtures. Populating the Attribute Editor for instance is now much faster for multi-celled fixtures with large layouts when set to show cells. Assigning masters for the first time is now faster, as is adjusting group layout position by wheel.

Other new or improved features in Titan v16 include key profile buttons which now dynamically change their size to ensure the name and actions are all fully visible. Synergy feature set now re-establishes NDI streams when the Synergy Multiview window is moved between console screens, taking only a few seconds. As well as a new demo show file that showcases all the new features from recent releases.

Important information to note: Not all Avolites consoles are compatible with every version of new software released. Features and capabilities of the current Titan version may not be available in previous versions of the program which means the latest versions of your Titan show files are not backwards compatible. Click [here](#) to read more information regarding Titan V16.0 and incompatible hardware versions.

Titan v16.0 can be downloaded by registered users for free by clicking on the link below.

[Avolites/Titan v16.0](#)



## LD Systems Caters to DJs and Musicians with DAVE G4X Series



DAVE – a name that, at LD Systems, stands for active 2.1 PA systems that bring everything DJs and musicians need: a powerful and universally applicable sound, sophisticated features, and compact dimensions.

All of the DAVE G4X versions now feature an integrated 6-channel mixer with all of the important input options for a wide variety of setups consisting of microphones, instruments, line-level signals and auxiliary players – wired and wireless, thanks to integrated Bluetooth for easy streaming via a smartphone or tablet. The mixer's first two channels are designed as channel strips, allowing for the optional connection of a microphone, a high-impedance instrument – guitar and/or bass, for example – and line-level sources. Stereo line inputs 3 + 4 are suitable for keyboards, synthesizers, drum machines, or small e-drum kits. Making the DAVE G4X Series even more versatile is the digital SPDIF stereo input, and the Bluetooth connectivity. This way, the setup can be expanded with a media player, computer or smartphone to play backing tracks, sound effects, intermission music, or to use the DAVE G4X as a karaoke system.

In addition to the enhanced functionality, LD Systems has redesigned and developed the DAVE G4X Series from the ground up. This benefits not only instruments and music but also speech intelligibility when the PA is used for speech reinforcement. The acoustic concepts include new compression drivers and waveguides for homogeneous and directional dispersion, as well as FIR filters and state-of-the-art DSP technology for transparent, colouration-free sound. In addition, the subwoofer has been equipped with a larger voice coil and an optimised bass reflex system to reduce ventilation noise to a minimum.

The DAVE G4X Series is a compact PA for use on the road and wins fans wherever it goes with its robust housing design (including polyurea coating) in all configurations. Last but not least, the selectable mode presets for classic stereo use or a setup with two closely spaced satellites on a T-stand above the subwoofer contribute to this – the DAVE G4X convinces sonically in all configurations. This latter preset, for example, allows for the interference-free clustering of two satellites through a special M/S division and reproduction of the stereo signal for more headroom and directivity.

LD Systems has also thought of all common applications when it comes to accessories. The range extends from custom-fit bags to a roller board and the aforementioned T-stand. A pole mount stand and a wall mount for the satellites are also available, especially for the DAVE 10 G4X sound system.

The models available are the DAVE 10 G4X (2 x double 4" satellites + 10" subwoofer, 680 W), the DAVE 12 G4X (2 x 6.5" satellites + 12" subwoofer, 1,460 W), the DAVE 15 G4X (2 x 8" satellites + 15" subwoofer, 2,060 W), and the DAVE 18 G4X (2 x 8" satellites + 18" subwoofer, 4,000 W). The three bigger models of the series DAVE 12 G4X, 15 G4X and 18 G4X are available now.

**LD Systems/DAVE G4X Series**

## ISRAEL

# Robe Keeps up with Israel's Ninja Warriors

*Nearly 80 Robe lighting fixtures were chosen by lighting designer Ofer Jacobi to illuminate the highly competitive Ninja Warriors TV Series*



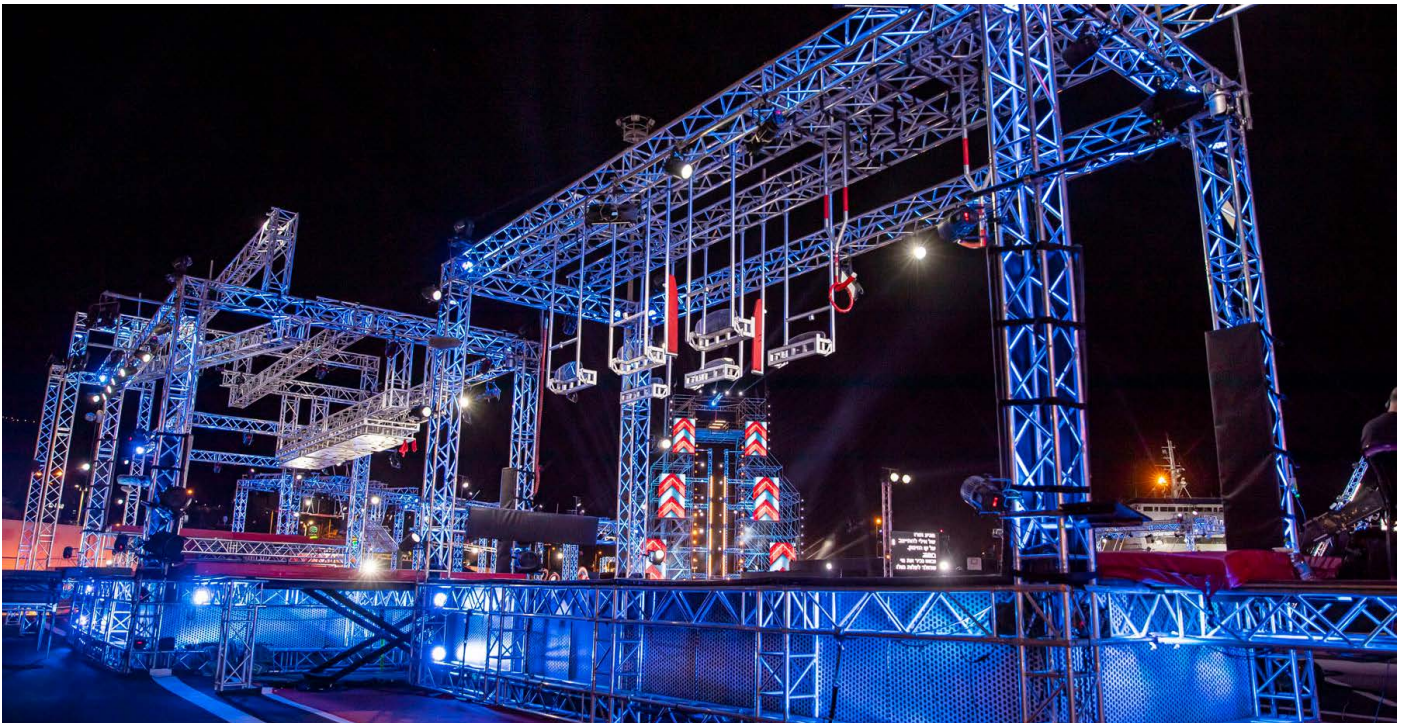
The fifth season of Ninja Warrior Israel, the hugely popular endurance sports competition TV series, was recorded on the waterfront of the highly atmospheric Haifa port, overlooked by giant cranes and massive container ships unloading at the adjacent docks.

All the action – as competitors negotiated a series of increasingly difficult obstacles against each other and the clock – was filmed overnight due to the extreme heat, and expertly lit by lighting designer/director Ofer Jacobi working in close collaboration with director Oren Levi. The site was a 20,000 sqm outdoor arena-like space, so Ofer needed powerful moving lights and chose Robe products to help light vital elements of the show.

The Robes included 14 x BMFL Blades, 30 x Spider LED wash beams, 23 x Pointes and 12 x LEDBeam 150s, supplied by leading Israeli rental company Argaman Systems Ltd., along with approximately 1500 or so other fixtures on the rig.

14 substantial constructions/games were designed and built by the Ninja Warriors international team ATS. The concept originally started as a Japanese video game in 1994 and then became a popular reality TV show Sa-suke, which was the inspiration for the first US American Ninja Warrior (ANW) in 2009, with the UK version starting in 2015. It is now a worldwide phenomenon!





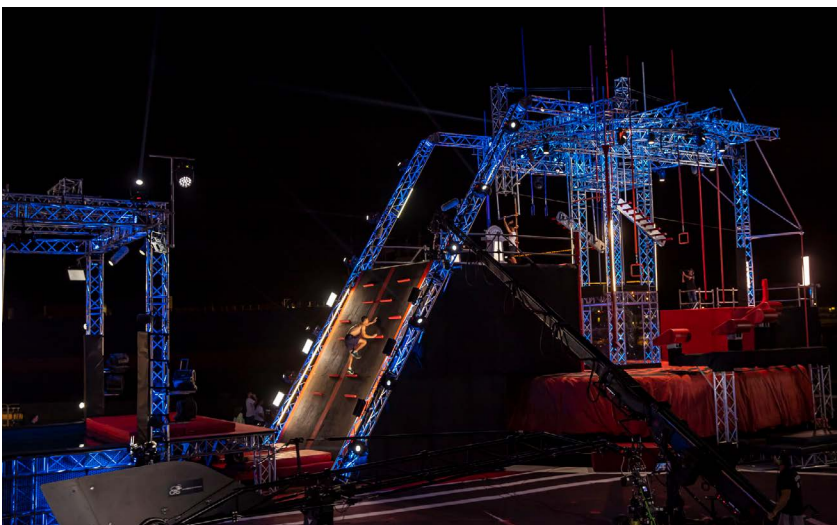
The games/obstacles, which consume several kilometres of trussing, change each season, with one constant factor across the whole Ninja Warrior franchise and that is Mount Midoriyama, a punishing final challenge that contestants must conquer to win the large cash prizes and the ultimate title of Ninja Warrior!

Ofer chose all these Robe fixtures for their power, functionality, and reliability. These factors were “key considerations” for a job like this which entailed an exterior environment with high humidity and heavy usage. Apart from that, naturally, “they all look great on camera,” he stated.

Whilst obviously a TV show, this site requires a stadium lighting approach in so many ways to capture the scale, complexity, and rawness at the essence of all that adrenalized excitement!

Ofer also “likes Robe as a brand”, so he normally uses some Robe products in his television work which also includes Who Wants to Be a Millionaire, Master Chef, Hamerdaf (The Chase), and The Next Restaurant.

2 x BMFL Blades were positioned on either side of the landmark Midoriyama Mountain and were used for following the action, with the other 12 on a circular central stage in the middle of all the games which had a video floor. From there, the BMFL Blades could beam around, searchlight style, and pick up contestants on all the surrounding games.



The Spiiders were dotted all over the site, rigged on various trusses and used for general washing and TV lighting. The entire central area could be illuminated with spiders – they produced a rich and colourful light carpet which looked amazing on the overhead drone shots – and they were rigged in positions where they could quickly swap between the different games’ sets,





effectively replacing the need for substantial numbers of static Lekos and LED panels.

Ofer liked the Spiider's colour mixing and range of colours which include CT whites, although they were mainly used in the show's signature electric blue. Some lighting cues were coordinated with the game's action as everything flipped red when a contestant crashed out or hit the water pools underneath the games. "The Spiiders were a fantastic and a highly flexible option for these tasks and for this show," he noted.

The Pointes were distributed around the set and the various games. "The beams look great and very dynamic on TV," said Ofer, and "they were also ideal for creating big victorious looks for the winners".

The LEDBeam 150s were deployed in two vertical lines ascending the mountain and used for making geometric beams in the air and filling the arena with effects as well as augmenting the Pointe beams in some looks.

The crew were on site for 3 weeks including the build and rehearsals, followed by 8 nights of overnight shoot-

ing with a crew recovery/sleep day in between each recording session. The production company was Keshet, and the show will be broadcast on their Keshet12 channel.

Having all these Robes at his disposal gave Ofer "multiple options" to achieve the drama they wanted and follow the action, ensuring that all 29 cameras could get fantastic shots. He worked closely with his regular programmer Ronen Ben Harosh who operated the 2 x Compulite Vector consoles (one for effects lighting and one for 'conventional' TV lighting) running a total of 24 x DMX universes of control. Before getting to the site, the pair worked through everything in WYSIWYG which give them the optimal lighting positions so they and the riggers could spend their time efficiently.

The lighting challenge was to make the action thrilling for TV audiences while lighting for a demanding multi-camera environment. The exacting nature of projects and tough scheduling are what Ofer thrives on as he enjoys creating new ambience and vibes every time.

**Robe**



## SAUDI ARABIA

# Ayrton Cobra Reaches Into Night to Depict Dark Matter

*Artist Christopher Bauder relied on Ayrton's Cobra luminaires for visibility and customisation in a massive lighting display within a desert setting*

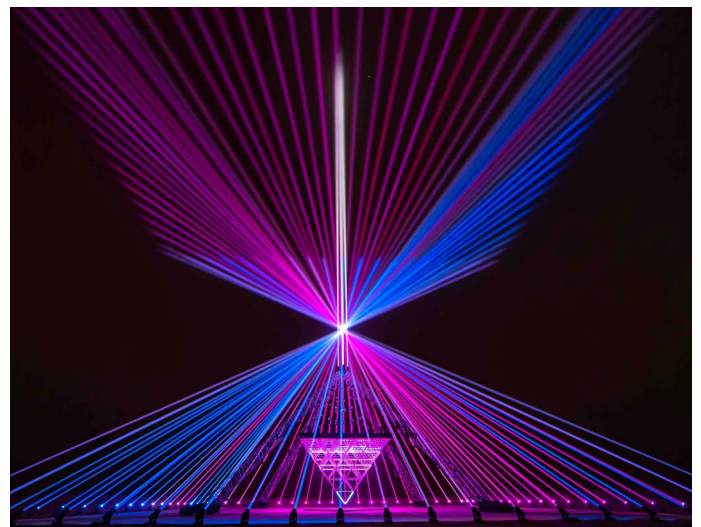


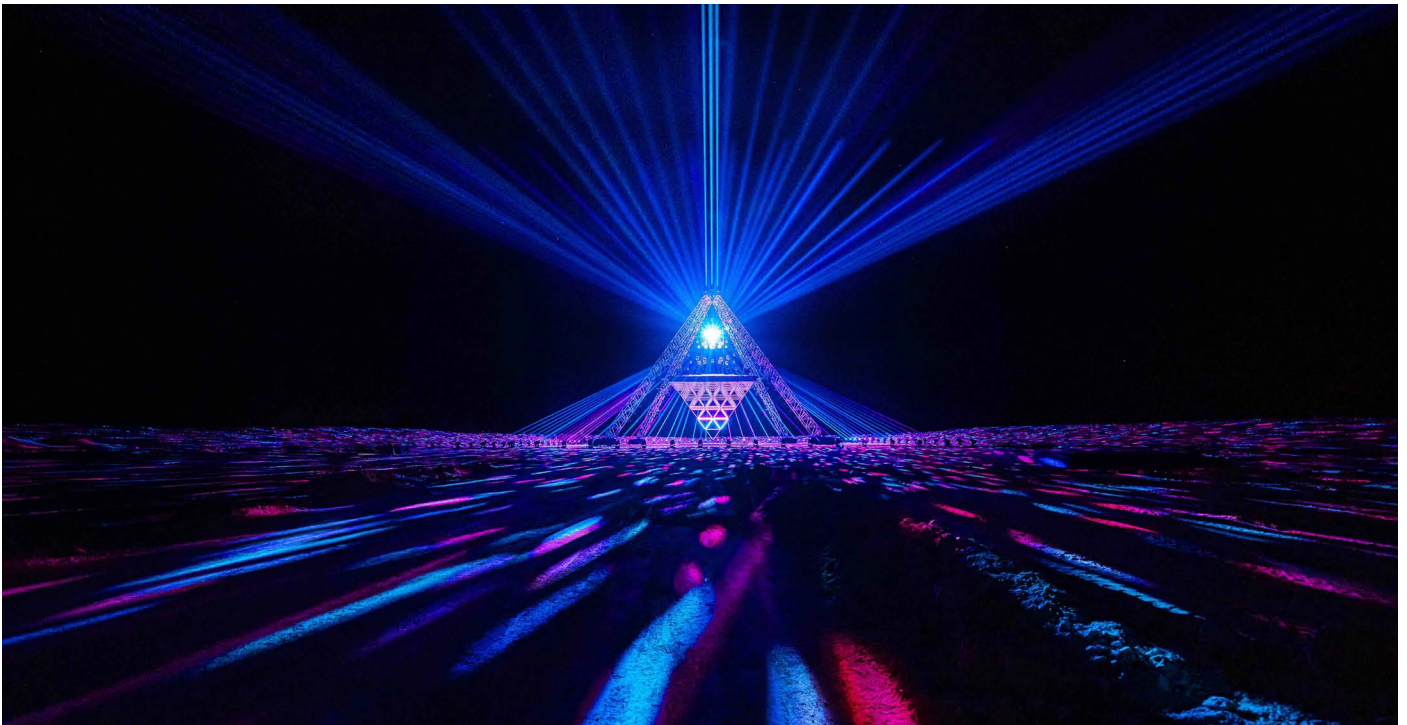
Christopher Bauder, founder and creative director of WHITEvoid GmbH, Berlin collaborated with musician and composer, Strahil Velchev, of KINK to produce a truly spectacular original art installation of light and sound at the NOOR Riyadh Festival 2022.

AXION is a temporary large-scale light art piece inspired by a hypothetical elementary particle. If AXION is proven to exist, it might be a component of dark matter which cosmologists believe makes up 95% of the universe. The dark matter theory describes how the universe went from a smooth initial state to the uneven distribution of galaxies and the clusters we see today.

Such an ambitious work called for a light with a big personality to achieve the necessary impact the design required, and Bauder chose 80 x Ayrton Cobra fixtures, supplied by Kaiser Showtechnik of Augsburg, Germany,

to define the parameters of his visuals and project its presence far into the air, making it visible for miles around.





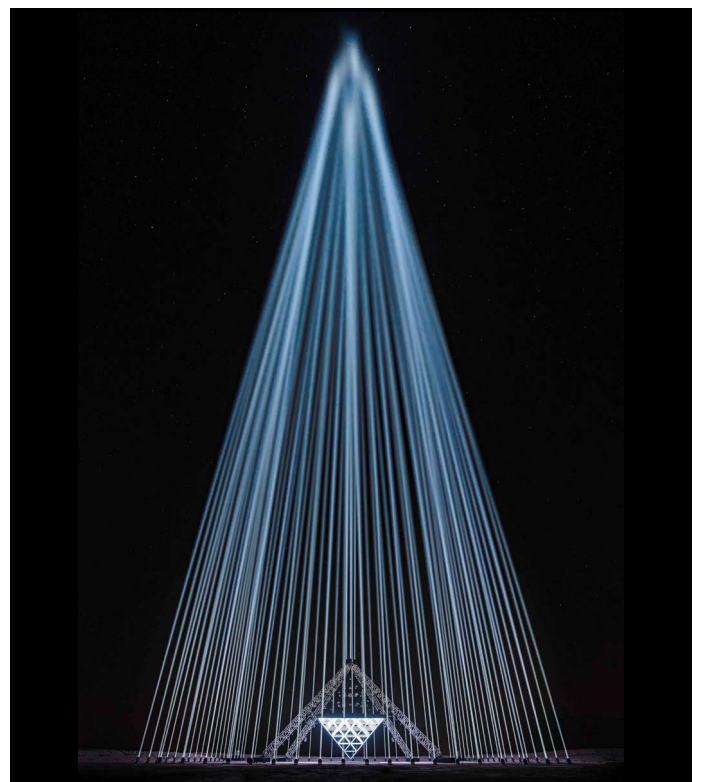
Bauder explained the idea behind the lighting concept: "With AXION we explore the ultimate horizon: Outer Space. With its grid-like array of light tubes and mile-long skylights, the installation resembles a giant scientific device for space exploration, particle detection or interstellar communication. But once you step inside it is a reflection on the potential of axions, dark matter and the idea of the unknown.

"Within the installation, we have 3 layers of lights that allow a totally different experience of the piece depending on the visitors' proximity. The core of the installation is made up of 360 LED tubes arranged in the shape of an inverted pyramid which the visitors can lay underneath and experience up close. The next layer of lights is rigged on an 18m high pyramidal truss that carries the LED pyramid and which illuminates the space beneath the truss and 32 mirror balls above the roof of the pyramid. This layer can be explored and experienced by walking inside and outside the truss pyramid.

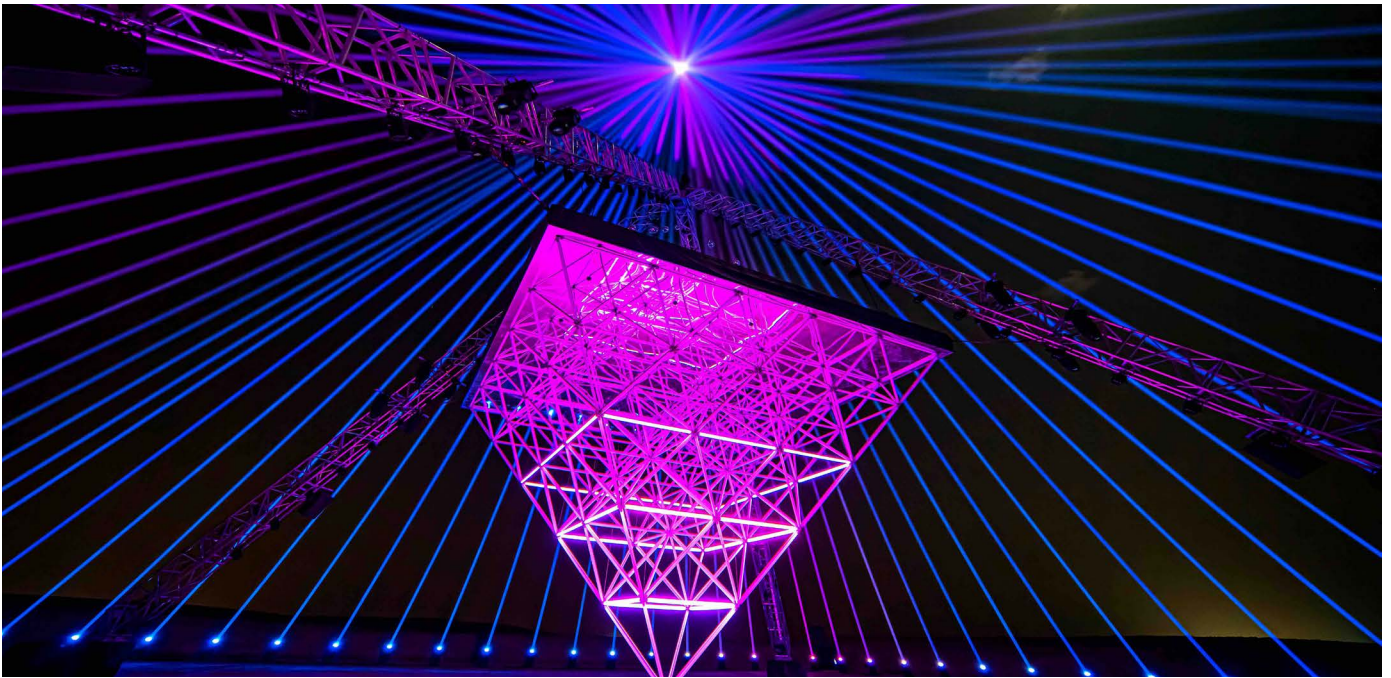
"The last and final layer is a 40m square arrangement of 76 x Cobra fixtures on the ground, plus an additional 4 Cobra lights positioned on the top of the pyramid. This makes the whole installation visible from miles away and extends the light art installation to a superhuman scale

when seen from the outside. When stepping inside the array of Cobras it feels like stepping into a cathedral constructed of lights!"

For optical reasons and partly because it would have been difficult to maintain their cleanliness and







transparency in the incredibly dusty atmosphere of the desert setting, indoor lights with protective domes were not an option, according to Bauder. Therefore, the only moving lights suitable for this exceptionally severe environment were those that were entirely enclosed and IP65-rated.

For beam strength, beam uniformity and sharpness, consistency, and colour rendering, Bauder's team examined various outdoor IP65 moving lights. Additionally, they were looking for lights that appeared to be lasers from a distance and had a straight, seemingly unending beam with no discernible convergence point. They also wanted the light to offer the customary gobos, beam reducers, and seamless colour mixing.

"This was especially important since we wanted to use very subtle pastel colour schemes with soft, almost invisible, transitions inside large arrays of parallel beams," said Bauder. "In the end, the Cobra was, by far, the most convincing light for the job, and we were excited to see how well it performed over the 4-week course of installation and exhibition. It needed an absolute minimum of maintenance and was extremely precise in its positioning and colour rendering." When asked which features of the Cobra did he find particularly useful, Bauder answered honestly, "we almost exclusively used the solid, sharp, thick and yet super parallel beam to realize the extremely geometric

architectural sky constructions of the light show. Otherwise, we just used a rotating hole gobo for the disco balls, which produced a fantastic reflection effect in the desert sand over many hundreds of meters, and a small slit gobo with variable focus and a clever roll animation for pixel-mapping effects on the ground."

Cobra far surpassed Bauders and his team's initial expectations. At first, they were wary about the beam visibility, especially for those standing close to the source or parallel to the beam. Additionally, the strong, continuous desert winds made it impossible to produce artificial haze. Thus, Bauder decided to solely rely on the sheer light output, beam volume and edge sharpness of the Cobra for visibility in the dusty environment.

Bauder concluded, "This worked out great! People could see the beams from miles away when approaching the installation. Also, an unforeseen bonus was that the beams ended abruptly above the lower layers of the dusty desert air. This created the interesting effect of beams that end with a sharp cut - something not possible in our hemisphere or even inside a city or inside a location. All this combined contributed to the unique arrangement and light experience of AXION."

*Photos copyright Ralph Larmann.*

[Ayrton/Cobra](#)



## JORDAN

# KV2 Audio Rocks Jerash Festival with Triad Live Productions

*After a three-year break, the historic city of Jerash hosted one of its most colourful cultural events while live production specialist Triad brought in KV2 and urged the audience to “just listen”*



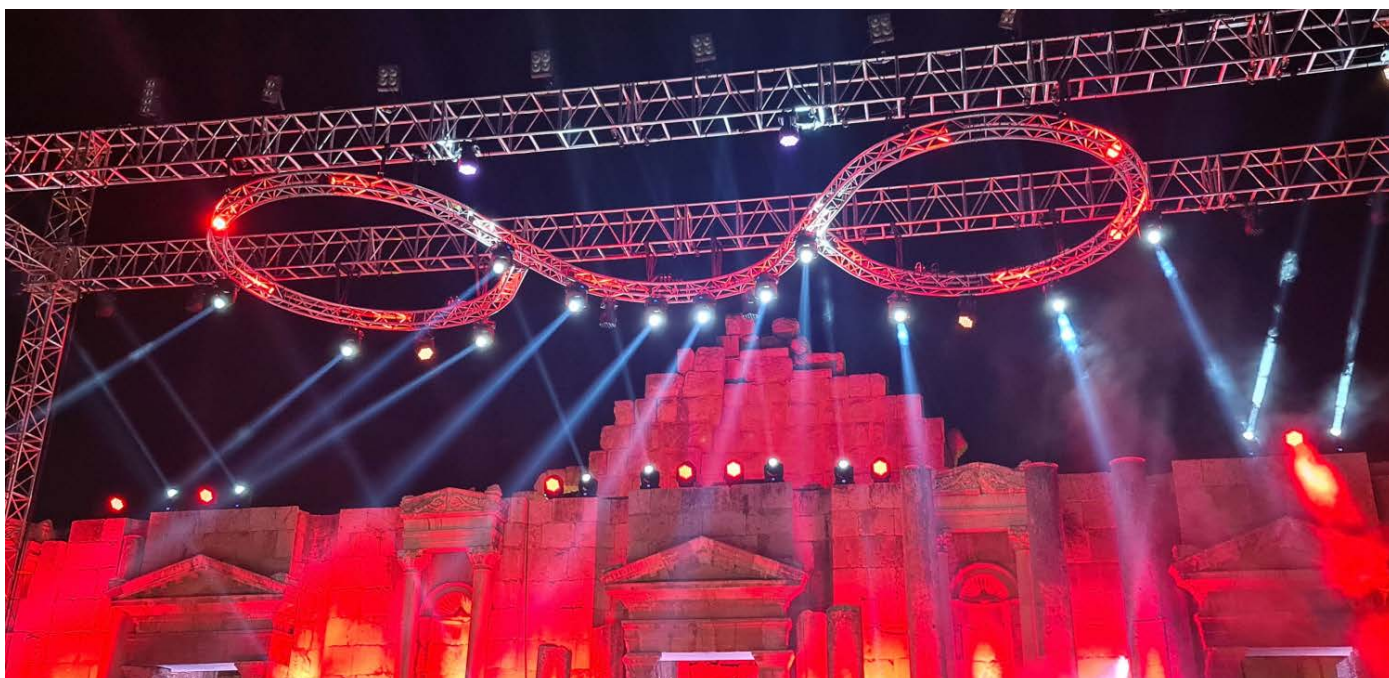
The Jerash Festival for Culture and Arts, traditionally held in July, transforms the ancient city of Jerash into one of the world's liveliest and most spectacular events. Folklore dance performances by regional and international groups, ballet, concerts, dramas, opera, well-known singers, and sales of traditional handicrafts are all part of the festival, which takes place in the dramatic, beautifully floodlit setting of the Jerash ruins.

A fantastic location year-round, Jerash is a stunningly preserved ancient Roman city with ceremonial arches and authentic amphitheatres. However, in December 2022, after a three-year, pandemic-enforced absence, over 100,000 people flooded the Jerash Festival to

experience its impressive line-up of top regional artists including Tamer Husny, Marwan Khoury, Asi Hillani, and Rabeh Saqer.







**Triad Live Productions**, based in Amman, was given the job of producing the event's sound and lighting for the eighth consecutive year. Their sound system of choice was KV2.

"The setup this year was a little different," explained Triad's general manager, Amjad T. Marar.

The main South Theatre, which seats 5,000 people, needed a 16-meter-tall truss structure installed on the stage. That ultimately worked to Triad's advantage as the team flew a VHD2.0 cabinet left and right at 16m to cover the upper-tier seats.

Additionally, because of VHD2.0's 40° vertical dispersion, there was great coverage all the way down to the bottom of the middle seating section. To cover the

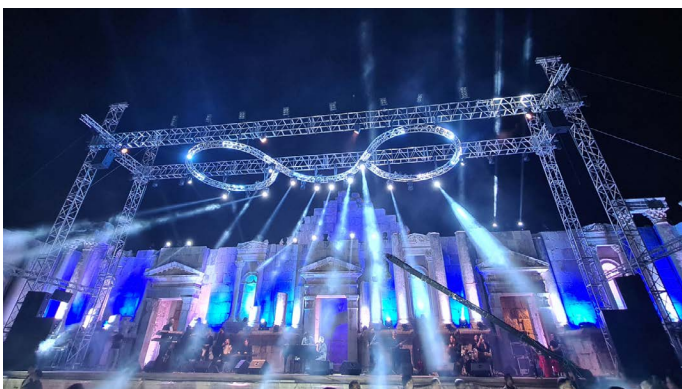
lower sitting areas, Triad set up another pair of VHD2.0s stacked at 6m from the ground (on top of the subs) at the left and right front of the stage. A total of 8 x VHD4.18 and 4 x VHD2.16 ground-stacked subwoofers were deployed on the left and right as well. The system was completed by a pair of ES1.0 systems, 4 x ES2.16 side fills, and 20 x EX12 stage monitors.

For the smaller, 2,000-capacity North Theatre, Triad opted for a double ES1.0 system supplemented by 4 x ES2.16 subwoofers. When combined with another ES1.0 (running two horizontally per side), ES1.0 is an even more potent tool by offering a peak SPL of 139dB and a throw of up to 40m.

"The sound we achieved was incredible, to say the least," affirmed Marar. "Of course, we had the occasional comment from certain sound engineers along the lines of, 'Where are the speakers?' My answer to that is always the same - forget the hanging bananas! Just close your eyes and try to forget your traditional notions of what SHOULD sound good - just listen!"

Concluding, "We've been working with KV2 Audio for 15 years now, and we have not had a single complaint from anyone. For my money, these are the best sound systems on the planet, period!"

**KV2 Audio**



## INDIA

# India's Premier Serendipity Arts Festival Comes Alive

*Reynold's Sound & Lighting Services provides comprehensive tech reinforcement solution*

*by Elton Noronha*



The Serendipity Arts Festival is an annual arts festival held in Panaji, Goa during the month of December. And as the only arts festival in the country whose programming spans multi-disciplinary fields such as art, theater, music, literature, dance, food and crafts; the festival has witnessed a steady evolution in its style of programming and presentation over the past several years.

The 2022 edition of the Serendipity arts festival had a number of locations spread over Panaji, situated near the river Mandovi; wherein the various locations were meticulously selected for their combination of historical significance, picturesque natural scenery, and cultural relevance to the various artforms being presented by their respective artists. These locations included:

1. **The Art Park**, which offered music along with a marketplace that focussed on homegrown, green

products. The venue also hosted an interactive sound project and workshops for kids.

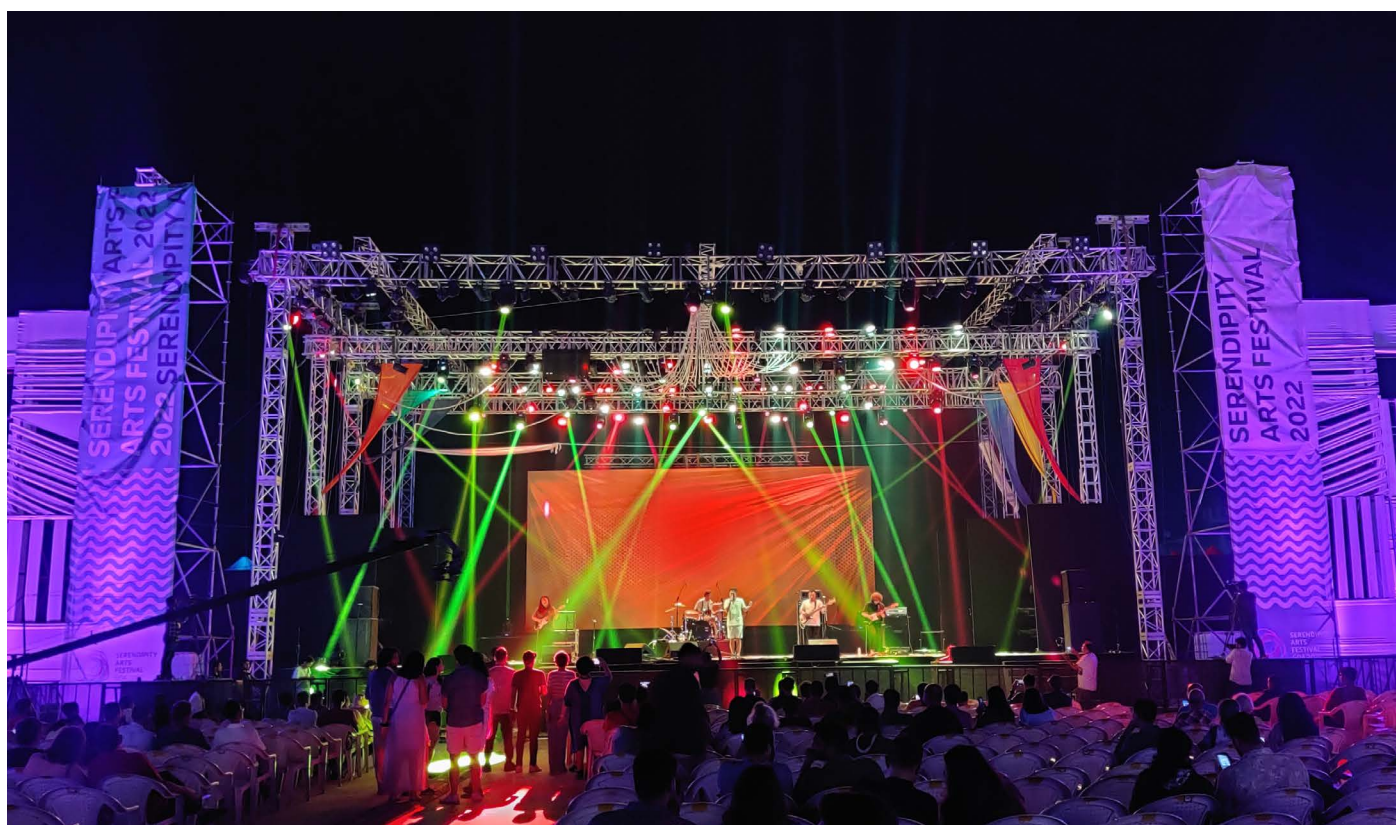
2. **The Excise building**, which acted as the focal point of contemporary visual arts exhibitions with an emphasis on digital and video art.

3. **The Multi-level parking**, which hosted various Hip-hop performances.

4. **The GMC Complex**, which hosted a series of art exhibitions

5. **The Santa Monica Jetty**, wherein the organizers arranged to have a daily ferry ride along the Mandovi river with tranquil music playing in the background while admiring the sunset.





6. **The Municipal Park**, which hosted an extensive showcase of craft heritage through a project on space making, as well as a dedicated section for box camera workshops

#### AND FINALLY,

7. **The Arena At Nagalli Hills Ground**, which hosted a large stage for dance performances and music concerts spanning classical and contemporary genres. With each of the individual venues sporting distinct music requirements; the organizers sought the services of Reynold's Sound & Lighting Services Pvt Ltd to design and equip each venue with its own high-quality and high-performance technical solution. And multiple discussions with the organizers to understand their vision and objective for each venue, coupled with extensive analysis of each individual venue allowed the Reynold's team to devise and execute tailored solutions involving sound, light, video and trussing – that could precisely meet the demands of the respective spaces.

Throwing more light on the process, **Selwyn Remedios**, **director of Reynold's Sound & Lighting Services** shares, "The planning and designing process spanned a few months prior to the festival; and involved numerous

discussions, Zoom calls, and meetings with the client teams to clarify and finalize all details to ensure smooth deployment of equipment, manpower, and logistics while keeping safety a top priority. One of the biggest challenges was ensuring the structural truss designs were accurate and selecting the appropriate equipment for each venue, which involved the arduous task of satisfying each of artists' demands. This entailed multiple tech riders, equivalent sheets, and planning customised sets with artists to showcase their art at the festival. Eventually, we used multiple audio, video, lighting and trussing systems to fit the needs of the various venues, which differed in size and magnitude, while also taking into consideration each of artists' requirements".

Since Reynold's were entrusted with the responsibility of catering to the technicals of 14 different venues across Panjim, the team meticulously deployed audio systems ranging from the mighty KSL coupled with SL-Subs from **d&b Audiotechnik** to **Meyer Sound**, and even smaller systems from **Audio Focus** and **RCF**. Control at most venues was managed by **DiGiCo** and **Allen & Heath** consoles, with audio distribution to speakers/amplifiers utilising the **Dante audio networking protocol**.



The most noticeable difference in the 2022 edition of the Serendipity Arts Festival was the change in the location of the Main Arena, which entailed a new PA design, new lighting scheme and a unique trussing deployment – all of which could come together seamlessly to fit the coverage requirements of the new space.

The main arena at the Nagalli Hills Ground witnessed the bulk of live performances from musicians and performers that represented music styles that pretty much covered the entire spectrum from classical to contemporary. And with an extensive list of artists set to grace the stage, team Reynold's decided to leave no stone unturned in equipping the main arena with an absolutely stellar tech solution.

Selwyn throws more light on the matter as he informs, "To overcome some of the challenges we faced, we relied on new software we had purchased earlier in the year. We used Vectorworks for truss and stage designs, Array Calc to simulate audio dispersion for the main venue, where we deployed the d&b KSL line array system with SL subs, Capture for lighting plots, and a new design for the main venue truss where each beam was made movable with motors to accommodate daily lighting fixture changes which helped speed up the process and changes considerably compared to all the previous years."

At the main stage, team Reynolds deployed an intricately designed formidable trussing structure measuring a

total of 70' x 50' x 32' with 10 pillars and 3 beams in the centre for added reinforcement. Additionally, 8 individual T-trusses were deployed to accommodate ambient stage lighting reinforcement.

Speaking of the lighting reinforcement, the mainstage was adorned by a comprehensive lighting scheme that involved several different fixtures working together in seamless unison to create an absolutely spell-binding visual effect that enhanced the performances on stage.

Team Reynold's deployed several fixtures from reputed manufacturer **PR Lighting** which included 12 units each of the 26D and 36D profile spots, and 10 units of the PR480 sharpies; in addition to 24 units of the X12 super sharpies from **ADJ**. Alongside; over 12 units of LED washes, 12 units of Fresnel spots, 32 units of LED Battens, 8 units of blinders, 4 units of colliders, 2 units of high-performance follow spots, and over 200 units of LED Pars; were distributed between the main performance section and stage periphery – all came together to offer a cohesive lighting extravaganza. The presence of multiple UV lights, Haze machines and Smoke machines added to the visual grandeur; with the complete lighting scheme and design being controlled through a single unit of the industry stalwart **grandMA 3** full format console from MA Lighting.

The stage was also adorned by a captivating architecture put together by team Reynold's, which included a plush 30' x 13' centre-split LED screen that





acted as the primary backdrop; complemented by 2 smaller LED screens measuring 18.5' x 11.5' each which flanked either side of the stage. Additionally, team Reynold's also deployed a total of 374sq.ft of LED tiles to adorn the arch backdrop of the stage. A single unit of Barco's 12k projector equipped with long throw lens was also made available for additional projection needs; with complete visual playback controlled through **Watchout** servers and **PlayBack Pro**.

Finally, the thunderous sound architecture at the main arena put together by Reynold's involved the team taking into consideration several key metrics such as the dimensions of the venue, and the crowd capacity etc. Eventually, they decided to deploy a powerful PA solution from d&b Audiotechnik comprising over 20 units of the compact yet impactful KSL series line array modules paired with over 12 units of the SL subwoofers, which together acted as the FOH System. This was complemented by 4 units of the CQ2 (narrow coverage, self-powered, phase-corrected reinforcement loudspeakers), coupled with 4 units of the 700HP subwoofers from Meyer Sound which together were deployed as side-fills to cover audiences located at the flanks of the stage. Additionally, 8 units of the ARES8 loudspeakers from AudioFocus were deployed as front-fills to cover the audience section located closest to the stage. The availability of world-class reinforcement

extended to technologies on stage as well; with team Reynold's deploying a total of 16 units of the MJF 212A high-power stage monitors that acted as the floor monitoring solution, while personal artist monitoring was fulfilled via over 24 units of the SR2050 In-Ear-Monitoring systems being made available to artists. In addition to an exhaustive inventory of an assortment of world-class wired and wireless microphones that were provided for singers and live musicians, the Reynold's team also provided 2 sets of the industry standard Nexus 2 DJ'ing systems (CDJ2000 players + DJM900 mixers) from **Pioneer DJ** to assist in additional music playback. DiGiCo consoles provided for unparalleled control over the quality of sound and every little nuance of the music reproduction, with a single unit of the 'industry workhorse' SD5 deployed as the FOH console, while a single unit of the 'engineer-favourite' SD10 deployed as the principal Monitor console.

Barring the main arena, Serendipity Arts Festival 2022 total of 14 performance venues mainly spotlighted two theatrical venues in particular that required significant planning on behalf of the Reynold's team in terms of commissioning the AV and trussing solution, mainly because of varied range of performances that the respective spaces were scheduled to host. "These spaces required a significant effort from our technicians and engineers, as they were responsible for coordinating





and executing all lighting changes for the various performers” informs Selwyn as he reveals that each of the venues were outfitted with their own dedicated comprehensive lighting solutions that involved multiple LED Pars, Profile Spots, Fresnel Spots, Sharpies, Haze Machines and lighting consoles; with dedicated teams running the technicals for each of the venues. Both venues were equipped with a strong and formidable roof trussing structure from **Eurotruss** to cover the respective stages; with each of the venues boasting a dedicated sound infrastructure that comprised 6 units of the ARES8 loudspeakers from AudioFocus, complimented by 2 units of the 700HP subwoofers from Meyer Sound as the main FOH system, complete with stage-monitoring and stage mic’ing that included several world-class wired and wireless microphones.

Needless to say, the formidable technical solution deployed by team Reynold’s at the main arena comprised the backbone of a super-successful culmination of the Serendipity Arts Festival 2022, with musicians, artists, audiences and the organizers themselves being treated to a melange of high-quality live performances that have left an indelible mark in everyone’s hearts and minds.

Speaking about the experience of a super-successful outing at the Serendipity Arts Festival 2022; Selwyn exclaims, “We have partnered with the Serendipity Arts

Foundation over 5 years now, and what I can say is that the festival each year has been very unique. It is one of the only festivals in the country that provides great diversity in all forms of art, with each year representing a new evolution in the festival’s programming. The primary challenge has always been to suffice the varied requirements of artists and the festival organisers; and the fact that these are never the same over all the years we have been associated with Serendipity Arts Festival is what makes working on this grand event always a fresh and pleasant experience for us. We run the festival over 9 days in December, and each year it requires meticulous planning and deployment of various systems to ensure that everything is nothing less than perfect, while also making sure that we have a backup plan for any possible eventualities. When planned well, everyone gets to enjoy the festive atmosphere, and 2022 was a shining example of this. This year the challenges and sleepless nights were well worth it when you realize what a massive success the festival turned out to be!”

#### Reynold’s Sound and Lighting

## AUSTRALIA

# TDC Celebrates Sustainability at Sydney Festival 2023

*TDC used the Barco G62-W11 laser projector to create a fantastic immersive experience for guests while consuming “a tenth of the energy needed from its lamp-based competitors”*



The Sydney Festival returned in 2023 with an extraordinary lineup of artists as proof of its uniquely Australian celebration of summer. Sponsored by TDC - Technical Direction Company, an award-winning supplier of event and entertainment technology solutions, the Sydney Festival is a city-wide festival of innovation, culture, and intellectual curiosity.

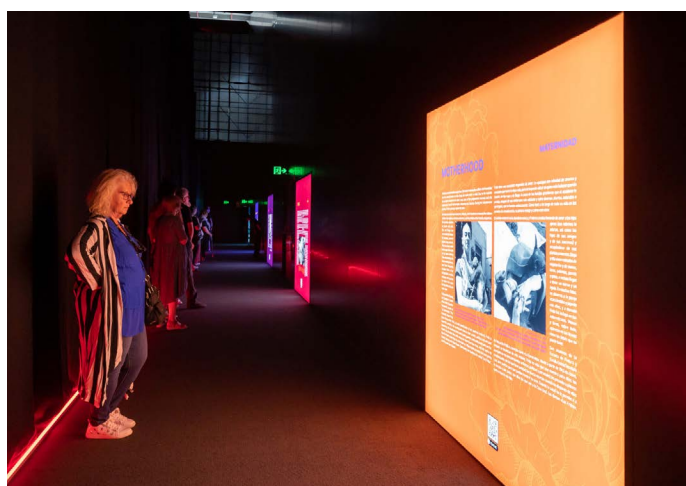
TDC excitedly announced that 2023 was its biggest involvement in the festival yet. Its team of technicians prepared creative design technology to showcase their projection mapping expertise at multiple events across Sydney, including the festival highlights of iconic feminist Frida Kahlo, and the mythic new opera epic Antarctica.

Chris Fitzgerald, TDC technical project manager, enthused: “We are very excited to be a Sydney Festival partner once again in 2023. Organising and coordinating

our sponsorship of Sydney Festival required extensive site surveys, scheduling, dealing with weather changes and attention to detail. It also gave us a unique opportunity...to work in collaboration with some leading artists from all over the world using the latest projection mapping techniques and LED technology. We are proud to be involved and can't wait to see audiences react to the wonderful experience.”

To provide visitors with the most incredible immersive experience and continue TDC's commitment to sustainability, the company deployed the latest addition to its inventory, the [Barco G62-W11 laser projector](#), which operates on a “fraction of the energy used in its lamp-based counterparts”. Michael Hasset, TDC founder and managing director, added: “We worked to a specification and used projectors that were reliable, and gave considerable brightness”.





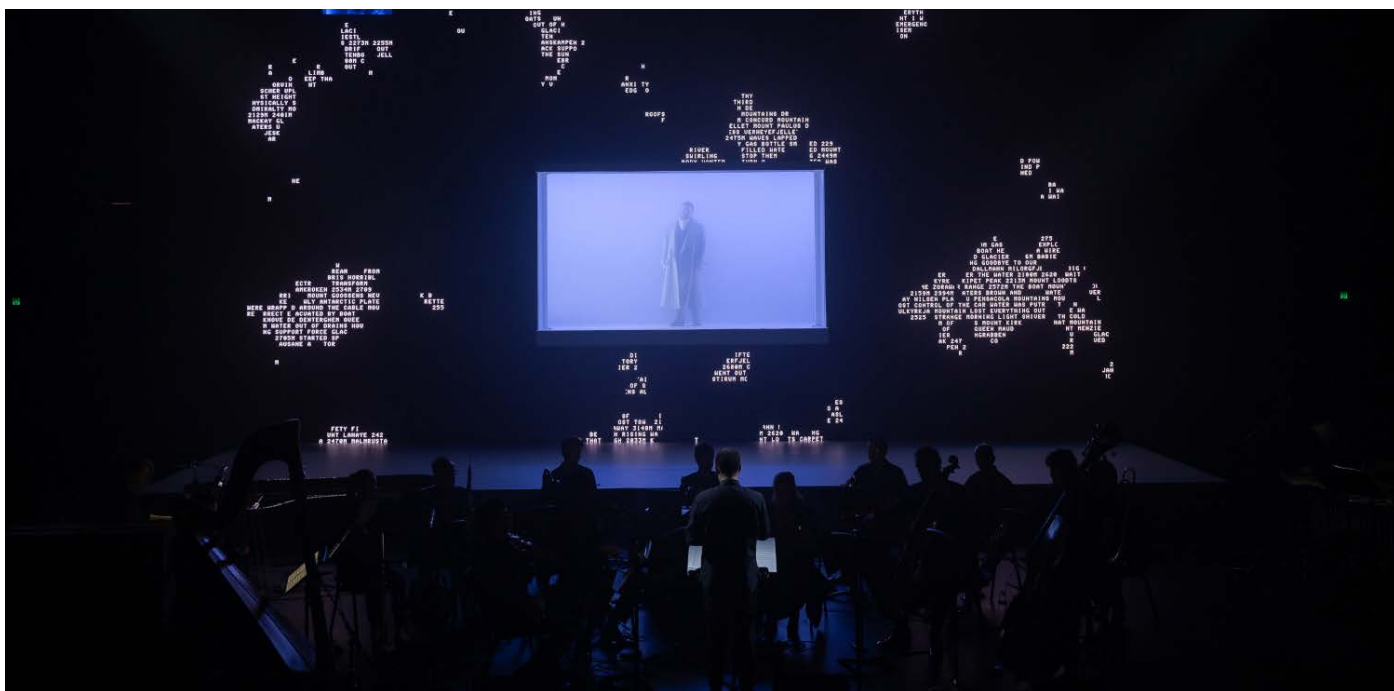
### **Frida Kahlo: The Life of an Icon**

For the first time in Australia, a unique biographical exhibition allows you to better understand Frida Kahlo, the woman whose perseverance, rebellion and talent placed her aeons ahead of her time. Co-created by the Frida Kahlo Corporation and the renowned Spanish digital arts company Layers of Reality, the multi-sensory experience featured nine transformational spaces, from collections of historical photographs and original films, captivating holography, 360° projections and a virtual reality system that transported visitors inside Kahlo's most famous works. Barco G62-W11 laser projectors were rigged by a bespoke TDC system and played back using the latest high-powered media servers.

"...seamless floor and wall projections and unusual projection surfaces...took around a week of installation to set up and install," Fitzgerald explained. "In creating the project, we worked closely with the Frida Kahlo Corporation and Layers of Reality to deliver a quick turnaround in a matter of weeks. We opted for laser because the technology lifts the colour and resolution of the projections and does so with a reduction in energy consumption."

"Our clients are looking for greener, more energy-efficient technology and TDC was able to deliver that for Frida Kahlo. Compared to lamp-based projection, laser projector technology uses much less cooling, they have less moving parts and are a more robust system. Also, the longevity of laser is far greater and the image produced is very uniform and stable," added Drew Ferors, head of technical services at TDC.



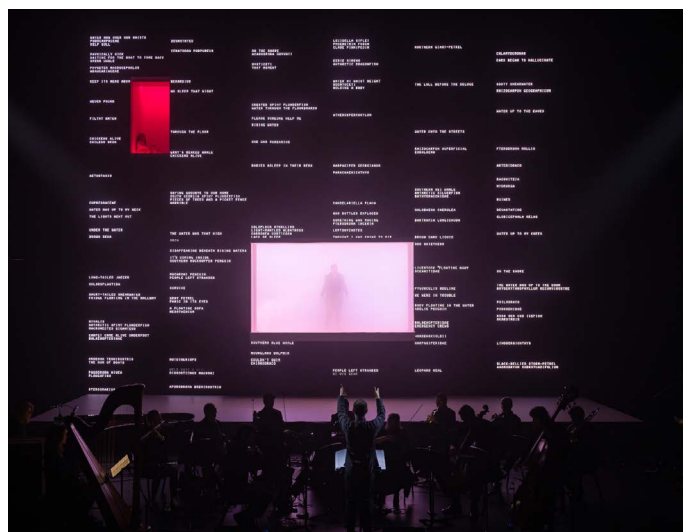


## Antarctica

A magnificent new opera by Australian composer Mary Finsterer and librettist Tom Wright was performed on home soil for the first time during Sydney Festival 2023. Finsterer's intriguing blend of Renaissance-inspired and contemporary music styles were performed on a brilliant, futuristic digital set the backdrop for which is a 12m x 9m Roe BQ4 Black Quartz LED wall specified, supplied and installed by TDC.

The opera's fascinating musical palette is amplified by the sounds of the Southern Ocean and the Antarctic itself. The LED screen is used as a set piece as well as an animated display whereby performers can enter and exit the stage through walkways created within the screen.

Francis Smith, TDC technical project manager, TDC, explained: "Antarctica is a fantastic immersive experience for which we adapted an installation from the debut performance in The Netherlands. The screen sits in front of the scaffolding with elements of the set emerging onto the stage through cutouts. Not only did the screen have to perfectly accommodate the cutouts, the design specified there would be nothing to physically connect the screen to the scaffolding. We elected to design using the new ROE BQ4.6 as it was the strongest and sturdiest for a screen that size and that weight.



Having the vertical bracing built into the LED panels themselves helped with structural integrity, thus keeping everything safe for performers and audience alike."

TDC is also supporting numerous festival experiences including the emotive re-awakening of the spirit in VIRGIL: AWAKEN held looking across the shoreline and at the precious island Me-Mel (Formerly Goat Island), and the projection of Dyin Hura (Women's Place) on the façade of one of the country's oldest surviving public building.

TDC



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