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FIRST WORDS



Explore the evolving world of digital mixing consoles with top Indian mix engineers Farhad Daruwalla and Lakir Mehta, who share their insights. In the last five years, the live sound industry has has witnessed an astonishing surge in the adoption of cutting-edge live mixing consoles; propelling both sound engineers and audiences into an era of sonic

brilliance. Numbers don't lie. Reports suggest a 15% annual growth in global console sales, rising from 2,500 units in 2018 to over 4,800 in 2022, despite the pandemic. Discover the intersection of innovation and sound engineering in our Feature column. In our Live column read how HOLOPLOT shattered the boundaries of conventional sound technology and language barriers at this year's Auto Shanghai – Shanghai International Automobile Industry Exhibition. In collaboration with renowned event solutions provider Creative Technology (CT) UK and Nordic, HOLOPLOT's flagship X1 Matrix Array took centre stage, revolutionising the way audiences experienced the highly anticipated launch of Polestar, the Swedish electric performance car brand's new model, the Polestar 4 electric SUV coupé.

Thomas Richard Prakasam

Publisher / Editorial Director thomas@spinworkz.com

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71, Bukit Batok Crescent, #06-13 Prestige Centre, Singapore 658071. Tel: (65) 6316 2716 www.spinworkz.com

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Ram Bhavanashi Editor, India And Middle East ram@spinworkz.com



Julie Tan Admin & Circulation admin@spinworkz.com



David Lim
Advisor
Tel: +65 96835275
davidlim@spinworkz.com



Elton Noronha Features Editor elton.s.noronha@hotmail.com



Hazel Gundaya Design / Layout

OUR COLLABORATORS

Rosalind Tan Website Management Wizard

PV Anthony Server and IT Security Guru

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Astera Dreams in the Park



©Chrispian Chan

SINGAPORE: A Midsummer Night's Dream – one of Shakespeare's most enduring, timeless, and intricately cerebral comedies – is always a delight to light, and Singapore-based lighting designer Gabriel Chan relished this task for the 2023 Shakespeare in The Park (SITP).

Gabriel chose 67 X Astera NYX Bulbs to get light sources into some of the more inaccessible parts of Richard Kent's stunning 'cityscape' set design, a cocktail of architectural fantasies that reimagined Athens as a stark industrial landscape that transformed into a dynamic hi-tech playground for the magic parts of the narrative.

The set needed careful lighting from specific places and NYX Bulbs proved a perfect solution. It was the first SITP event for producers, The Singapore Repertory Theatre (SRT), since 2018, and the goal was to return to the popular outdoor theatrical season with an impressive bang, which was spectacularly achieved with this acclaimed production directed by Guy Unsworth and staged at Fort Canning Green within Fort Canning Park.

With the judicious location of the NYX Bulbs, Gabriel was able to colour segments of the set diligently and

in detail and to dramatically shift the mood of the piece according to the narrative, crafting the dynamic array of different atmospheres needed. He did this together with approximately 150 other lights all helping to deliver this masterpiece of human nature, temptation, and folly.

The set worked as two completely contrasting worlds for the two main settings in the play - Athens and the dream world of the fairies explained Gabriel. It was also the initial visual impact of the show that the audience encountered when entering Fort Canning Green and was pivotal throughout the play due to its scale and size.

"For Athens, we referenced the raw industrial environment of oil refineries, docks and factories harshly lit with white floods that created sharp and abrasive lines," he elucidated. With the introduction of several large canvases that were drawn across the set like curtains and plenty of lighting magic, that same set would magically become an entirely different landscape for the dream world of the fairies led by Titania and Oberon. Theirs was a colourful and rave-tastic, partyesque place, a trippy cauldron of fun, chaos, and anarchy.



©Chrispian Chan..

Gabriel's main concern in architecturally lighting the scenic elements was that the fixtures had to last the entire 4-week run outdoors. Having had "less than satisfactory" experiences during previous SITPs – this was his 7th season – using DIY LED products, his pitch to SRT this year was focused on "needing quality manufactured products with IP protection."

Most of the set chimneys were also not load-bearing, so they needed something small and light, and once the chimneys had been installed by a crane with the lights attached inside, access was very limited, so any troubleshooting had to be done wirelessly.

Astera NYX Bulbs are IP44-rated and splash proof so they can survive rain and Singapore's constant humidity. Gabriel and his team also rigorously tested them, including by running the bulb under a tap for "an extended duration" to check the ingress protection which they found to be "very satisfactory".

He added that the NYX Bulb's Bluetooth and CRMX wireless connectivity was "ideal for the troubleshooting requirements and in fact, the greatest utility for this project as we didn't have direct access to the fixtures".

The Singapore Repertory Theatre purchased the 70 x NYX bulbs specially for this production of which 67

were used in the lighting scheme, with three as spares. They were installed in 10 of the 17 set chimneys which created an array of light sources that Gabriel built into a sprinkling effect that evoked magic when that was happening, together with a variety of other narrative references.

Before using NYX Bulbs for this production, Gabriel used Astera's Titan Tubes, AX1 tubes and Hydra Panel products on other smaller shows and previous SITP predictions.

He also utilised 5 x Titan Tubes on AMSND, taking advantage of their individual pixel control for dimmer, colour, and strobe parameters for an extended lighting sequence reenacting Cupid's story. The Tube is a metaphor for Cupid's arrow, with dimmer and colour effects simulating him 'charging' it up before unleashing it on the unsuspecting lovers-to-be.

On Astera generally, Gabriel thinks the products and accessories are "well designed and built," and for projects needing wireless control, some form of IP rating or portability, he regularly takes Astera as a starting point for designing and drawing up a lighting plot.

Astera



Dubai Opera Broadens Artistic Horizons with Adoption of d&b Soundscape



UAE: d&b audiotechnik has announced a major new strategic partnership with Dubai Opera. The new arrangement will see d&b audiotechnik become an Official Technology Partner for the world-class venue, which will adopt the immersive audio technology of d&b Soundscape for its Studio venue.

Opened in 2016, Dubai Opera is a thriving, multi-format performing arts centre, hosting a wide program of performances and events ranging from theatre, opera, and ballet, to concerts, conferences, and exhibitions. This new partnership with d&b audiotechnik, which was unveiled at a Dubai Opera official press conference by Dr. Paolo Petrocelli, head of Dubai Opera, alongside representatives from Dubai's Department of Economy and Tourism, Dubai Culture and UNESCO, is one of several new initiatives designed to ensure the venue's continued role as a cultural hub for the region's arts, entertainment, and creative education.

By embracing technological innovation in this way, Dubai Opera aims to broaden its artistic horizons, ensuring its place as an indispensable performance destination for the Middle East. Its partnership with d&b audiotechnik ensures a cutting-edge auditory experience at Dubai Opera's Studio, delivering an immersive sound experience that will nurture and promote creative expression.

"As we embark on the new season, we are filled with immense pride in the remarkable artistic diversity that characterizes our lineup of performances and productions, catering to the entire community and bringing together prestigious companies and celebrated artists from around the world onto the stage of our exceptional venue," explained Dr Petrocelli.

"d&b audiotechnik is honored and excited to become the Official Technology Partner for Dubai Opera," noted Brad Maiden, VP of Business Development, d&b Middle East. "This partnership elevates Dubai Opera and

d&b audiotechnik as industry leaders when it comes to experiential performance, technical innovation and developing performing arts in the Middle East. The installation of d&b Soundscape into the Dubai Opera Studio provides local and international artists with an exceptional immersive sound system, and the audience with the full aural sensory experience through our signature d&b quality of sound."

Amnon Harman, CEO of d&b audiotechnik, commented, "Our partnership with Dubai Opera is driven by a strong set of mutual goals: Our willingness to explore new technological frontiers to experience a multitude of art forms, our commitment to the development of the Middle East performing arts industry into a sustainable industry that is globally recognized as fostering the very best talent – and, importantly, our combined sense of unity and togetherness, working as one team – at d&b, we call this 'Wir-Gefühl'."

The adoption of the ground-breaking d&b Soundscape in the Dubai Opera Studio will be implemented in time for Dubai Opera's forthcoming 2023/24 season of performances.

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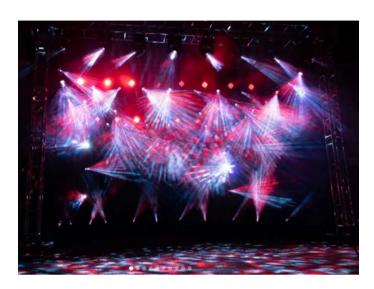








CasAnt Events Shines Bright with Significant Investment in Cutting-Edge Products from LBT



INDIA: In the heart of the vibrant event and entertainment scene in Goa, a name that consistently stands out for its commitment to delivering unforgettable experiences is 'CasAnt Events.' Over the years, the company has managed to successfully capture the essence of delivering world-class live experiences like no other; and has therefore earned a reputation for innovation, precision, and a relentless pursuit of perfection. And a recent move by CasAnt Events that's set to illuminate stages and elevate performances to new heights comes in the form of its strategic investment into expanding their lighting inventory with the latest offerings from the renowned Indian manufacturer, LBT.

CasAnt Events has recently acquired an impressive 60 units of the HULK 311 Beam moving head fixtures, which now perfectly complements their existing arsenal of 85 moving head fixtures; while also adding a whopping 350 units of PIXIWAR MI BAR Lights. This mammoth investment, according to **company director Cassiano**Fernandes, was prompted by a need to further enhance live experiences for audiences while also ensuring that the company stays at the forefront of event technology.

Sharing insights into the rationale behind the strategic move, Cassiano's comment shed light not only on the company's ambitious growth but also on his profound understanding of the technical intricacies that underpin the success of such equipment acquisitions; as he states, "In our line of work, precision, versatility, and reliability are paramount. When we evaluated LBT's HULK 311 Beam moving head fixtures and the PIXIWAR MI bars, we were immediately drawn to their impressive specifications and breath-taking performance value! These products are extremely responsive and dependable, as they provide vibrant colour palettes, precise control and elegant designs – all of which are essential for crafting truly mesmerizing visual experiences for audiences."

Elaborating on the capabilities and features of the HULK 311 moving head beam that caught Cassiano's attention and convinced him of the purchase decision; he informs, "The 1.8-degree beam angle provides us with unparalleled control over light distribution; whereas the extensive pan and tilt range which covers 540 degrees on the X-axis and 270 degrees on the Y-axis. empowers us with the ability to create dynamic and immersive lighting displays that captivate our audiences. Plus, what truly sets the HULK 311 fixtures apart is their ability to automatically correct positioning, eliminating the need for constant manual adjustments during performances. And the choice between 8-bit and 16-bit dual drive operation allows us to fine-tune our lighting cues with unprecedented precision. Furthermore, with 16/20 DMX channels, these fixtures offer granular control, ensuring that our lighting designs are executed flawlessly. Additionally, an array of in-built effects which includes prisms, strobes and hue blends, coupled with the flexibility offered by the master-slave mode, selfpropelled mode, and DMX512 mode - means that we can adapt to any event's requirements seamlessly. Plus, what's really cool is that despite all these amazing features and capabilities, the HULK 311 Beam operates with minimal sound, thereby guaranteeing little to no interference whatsoever with the auditory experience of the event!"

At the same time, Fernandes also shared his views on the capabilities of the PIXIWAR MI BAR Lights that compelled him to invest into procuring a massive inventory of 350 units of the product; as he says, "The PIXIWAR MI BAR Lights are a fantastic addition to our





lighting inventory. With 350 units at our disposal, we can transform any space into a dynamic and immersive environment. These lights deliver remarkable versatility, thanks to their fantastic color mixing capabilities. And with advanced pixel mapping and individual pixel control, we have the freedom to craft intricate and mesmerizing light shows. The PIXIWAR MI BAR Lights' compact design and lightweight construction is another huge positive that makes them an excellent choice for both indoor and outdoor events. Plus, they're said to be

fantastic when it comes to durability and reliability even in challenging environmental conditions."

According to Cassiano, the recent expansion of their lighting inventory with the significant investment into LBT's latest lighting technologies not only elevates CasAnt Events' own capabilities but also promises to elevate the entire event experience in Goa and beyond.

CasAnt Events

Garage One Adds L-Acoustics Kiva II to Inventory



JAPAN: Founded in 1989 by professional event planning and production company Staff Co. Garage One Co. was established to sell musical instruments and rent brand-name music rehearsal studios in the beach city of Fukuoka. A decade later, the growing Garage One stepped into the events segment, providing live audio and lighting solutions for wedding receptions and event banquets across the prefecture's capital on the northern shore of Kyushu Island.

Since then, Garage One's decades-long expertise in providing equipment and technical support for a varied program of events has led the company to position the business to support larger events. Last year, Garage One hosted a technical demonstration in which local

event organisers and decision-makers heard an L-Acoustics Kiva II system. The demo showcased to attendees the capabilities of the variable curvature line source system, and its precision in delivering pristine sounding, concert-level vocal and speech in an ultracompact package. Favourable reviews by guests led Garage One to acquire the long-throw concert sound system for its permanent inventory to bolster its support for mid-to-larger-sized events.

Following the addition, an indoor sporting event in a small gymnasium was the ideal opportunity to introduce the brand-new Kiva II system. Garage One deployed 6 x Kiva II and 2 x SB15m subwoofers per side for the event. The system's swift set-up time, handled by just a lone member of its team, allowed for easy integration for the pop-up event. Garage One can also specify Kara II as the main left/right system for event briefs in larger halls, with the Kiva II boxes deployed as fills. This wide range of event specifications will allow the company to scale operations to each event site, especially with the support of 4 x new L-Acoustics LA4X amplified controllers in its inventory.

"Now, with a variety of potential clients engaging us, we are well positioned to provide system rental and technical operation services to gymnasium-scale sporting event projects and music concert halls," noted a representative from Garage One.

L-Acoustics

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Obsidian Secures PLASA Award for Innovation with NETRON EN6 IP65



GLOBAL: Obsidian Control Systems has fulfilled the need for IP65-rated data distribution products in the entertainment industry and was rewarded for that effort at the recent PLASA tradeshow in London. The NETRON EN6 IP, one of three devices in Obsidian's new IP65 range of signal distribution, won a PLASA Award for Innovation at the 2023 exhibition.

The PLASA Award judges recognized the EN6 IP as a "device that brings lighting control distribution and format conversion to the outdoors at an accessible price point."

The 6-port EN6 IP EtherDMX node, along with a 6-port RDM Splitter (RDM6 IP) and an 8-port managed POE switch (NS8 IP), is a ground-breaking innovation. Despite the tremendous increase in outdoor performances and the immense amount of IP-rated entertainment technology on the market, until now, "there have been no IP data distribution devices to provide the required infrastructure for shows and events."

The NETRON IP65 range blends the proven chassis and connector technology of Elation Professional's market-leading IP65 Proteus range of lighting fixtures

with the NETRON data platform. Utilizing a custom-designed die-cast body, impact-resistant paint, IP ports and touch controls, the NETRON IP65 range provides data distribution for any location that requires dust and moisture protection. No longer does the lighting technician need to add questionable custom enclosures to ensure the integrity of the lighting system in adverse environments.

"I'm incredibly proud of our team's tireless work and relentless pursuit of innovation as we continue to push the boundaries in entertainment controls," stated Matthias Hinrichs, product manager at Obsidian Control Systems and Elation Professional. "The NETRON EN6 IP, along with the entire IP65 range, represents a significant step forward in addressing the needs of the entertainment industry. A rugged IP-rated lighting data node that aligns with our leading Proteus range has been truly missing from the market and now lighting professionals can operate with greater confidence in any environment."

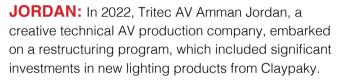
Easy to configure via display, web interface or the NETRON CLU app through simple presets or when required for a detailed configuration of features, the EN6 IP offers up to 6 universes with full support for the industry-standard streaming sACN and Art-Net protocols. It even features up to 99 internal cues that can be set up to play in the event of data loss, ensuring audience and performer safety, or providing a dedicated scene even when the control system is offline. A removable metal cover protects the display from impact, and the boxes are easily stackable via a simple and elegant internal magnetic alignment. M10 or M12 clamp positions round out the chassis, and daisy chaining of power and gigabit Ethernet ensures fast and efficient deployment in the field. For added convenience, the EN 6IP can be powered by POE Ethernet.

Obsidian Control



Claypaky Investments by Tritec AV Shine at Kadim Al Sahir Concert





The company purchased 40 x Claypaky Xtylos, 42 x Mini Xtylos HPE, 12 x Skylos and 100 x Mini B Aqua fixtures. They were quickly put to use on several projects, including a concert by Iraqi superstar Kadim Al Sahir in Amman Exhibition Park. Al Sahir is one of the Arab world's most popular and successful singers; he has also collaborated with Western artists Sarah Brightman and Lenny Kravitz.

"The event was challenging since the artist is generally considered classical but still comes across as energetic and lively," noted Marwan R. Abujaber, CEO of Tritec AV. "So we focused on depth and dimension using soft washes with an emphasis on the artist. Volumetric beam effects within the stage were used carefully but effectively depending on the music being performed at the moment."

He explained, "I felt that this show needed a larger panoramic presentation than pop music setups. Kadim Al Sahir is an epic artist, so we needed an epic look, extending the stage with the new Skylos hard left and



hard right of the PA wings [giving] a wonderful and powerful moonflower effect."

Abujaber positioned the Mini Xytlos directly downstage centre and above the artist for a crystal chandelier effect. The Xytlos were distributed around the rig in two midstage and upstage semi-circles.

"The Claypaky fixtures were fantastic straight out of the box," he reported. "We had a wonderful and easy time using them. All the new Claypaky fixtures excel in output and colour quality. The Xytlos and Mini Xytlos are powerful with pleasing, vibrant colours."

Abujaber noted that the support received from Claypaky was "immeasurable" and added, "It is a joy to work with products that are rooted in design, quality and innovation. That is the Claypaky heritage."

Tritec AV will next demo Claypaky Arolla Aqua and Tambora Flash fixtures as possible additions to the company's inventory. "We have been very pleased with the introduction of our Claypaky fixtures, which have definitely elevated our output of high-end productions and our position in Jordan and the region," Abujaber concluded.

Claypaky



Pune's Madhav Stage Services Transitions to Cutting-Edge Martin Audio WPC Line Array Technology



INDIA: Madhav Stage Services, a Pune-based event equipment rental service company, has taken a significant step in enhancing their live sound capabilities with a substantial investment in the latest line array technology from renowned global manufacturer Martin Audio; as the strategic move looks to solidify their position as a leading player within the regional live sound market.

The centerpiece of Madhav Stage Services' recent expansion is the acquisition of 16 units of the Martin Audio WPC line array modules; with this investment representing a significant upgrade for the company, as it marks an impressive transition from their previous line array system which comprised the Martin Audio MLA Mini, to now boasting the cutting-edge capabilities of the Martin Audio WPC System. The Martin Audio WPC line array modules are renowned for their exceptional audio quality, versatility, powerful performance, precise coverage, and the capacity to offer a variety of advanced optimization tools, thereby making them suitable for a wide range of applications.

Accompanying the purchase of the WPC line array modules are the acquisition of 12 units of the powerful SXH 218 dual 18" subwoofers. These subwoofers are

known to complement the WPC line array modules brilliantly, while providing a robust low-frequency foundation to the audio setup. The subs are designed to deliver deep, impactful bass that can be felt as well as heard, creating an immersive sonic environment for event attendees.

And finally, to ensure seamless integration and optimal performance, the company has also invested in the accompanying IK 42 amplifier racks and essential accessories which completes the package in total, ensuring that Madhav Stage Services has all the necessary components to set up, configure, and optimize their new Martin Audio system with ease.

Sunil Shendge, director of Madhav Stage Services shares his comment on the acquisition, stating "The Martin Audio WPC System is a game-changer. The clarity, depth, and range it offers are unparalleled. Collaborating with VMT for this upgrade was a seamless experience, and I'm genuinely impressed with the results."

Madhav Stage Services



Clear-Com Enhances Communication and Boosts Productivity for Zenway Productions



SINGAPORE: Zenway Productions, a Singapore-based AV rental company, has recently implemented the Clear-Com FreeSpeak II Wireless Intercom System, revolutionizing its communication infrastructure. The new intercom system has proven to be an invaluable tool, addressing key challenges and significantly improving communication efficiency within the organization.

FreeSpeak II's multichannel capabilities allow flexible structuring of the intercom system according to the show at hand, which was of great interest to Zenway. The 1.9GHz and 2.4GHz options allow for operation in various territories according to the local laws there. The scalability of the system allows Zenway to deploy two smaller systems for independent usage, combine them into one larger system, or even supplement with FreeSpeak II systems from other partners. In this manner, the system will cater for productions of various sizes and requirements.

The clarity of the FreeSpeak II digital transmission has resulted in clearer and more effective communication. The newfound efficiency has translated into increased productivity for the team enabling team members able to remain stationed at their respective positions and

communicate effortlessly with anyone in the organization, eliminating the need for physical signalling or time-consuming hand gestures. The result is a more focused and productive work environment, where seamless communication is at the forefront of operations.

When asked about their likelihood to recommend the system to other businesses, Gelven Neo, senior production engineer at Zenway Productions, believes that recommending the system is akin to endorsing one of the most respected brands of communication. They are confident that other businesses will benefit greatly from implementing this cutting-edge technology, experiencing improved communication, enhanced productivity, and streamlined operations.

"We are delighted to have provided Zenway Productions with the Clear-Com FreeSpeak II Digital Wireless Intercom System, and we are thrilled to hear about the positive impact it has had on their communication infrastructure. The multi-channel communication capability of the system, coupled with its exceptional audio quality, has revolutionized how teams collaborate and coordinate within the organization," stated Gerald Chew, business unit head (Sales and Distribution), Electronics & Engineering Pte Ltd distributor of Clear-Com in Singapore.

"We are thrilled to have Zenway Productions joining the Clear-Com family. FreeSpeak II is the perfect product providing seamless and high-quality wireless communication. Designed to provide clear and instant communication, even across distances, our advanced technology ensures that users are always connected when it matters most," concluded Hans Chia, regional sales manager, South Asia Pacific, Clear-Com

Clear-Com



RCF Allows for Immersion into Aboriginal Culture of Outback Australia



AUSTRALIA: Putting together captivating shows amongst the red dust of outback Australia has become plain sailing for ARDS Aboriginal Corporation. The Northern Territory-based organization has enjoyed a marked improvement in the sound quality of its latest events thanks to a recent investment in RCF's powerhouse HDL 26-A line array system.

Having worked with the Yolngu communities in Northeast Arnhem Land for over 50 years, ARDS is currently helmed by Yolngu leaders from across the region, working determinedly to amplify and empower local Aboriginal voices. Combining their efforts with music and film production company Aris & Grimes, ARDS has driven home three community festivals since acquiring the RCF system, with plenty more on the horizon.

Giving Indigenous communities a platform that unites mainstream providers and Aboriginal people, ARDS maintains many beneficial services, including Yolngu Radio, a key community broadcast. Yolngu Radio serves as a vital conduit for the delivery of entertainment, education, emergency information, and contemporary and traditional indigenous music, to communities and homelands throughout North-East Arnhem Land and Darwin. In addition, the team organizes a number of events centred around celebrating the significance of Aboriginal language and culture, as ARDS's Nhulunbuy station manager, Will Porter explained:

"Yolngu Radio has a long history of facilitating community festivals in the region. These are community-led events that celebrate culture through song and dance. These festivals take place in incredibly remote locations- creating a logistical nightmare until our recent purchase of the new RCF HDL26-A speakers. Due to their compact build, transporting the speakers to these remote locations has become substantially easier. And even more importantly, it was immediately obvious to us that the quality of sound was dramatically better than our previous equipment."

Instrumental in ARDS's implementation of the RCF system, Aris & Grimes has provided audio production services for each of the community festivals. Andrew Grimes and Matt McLean of Aris & Grimes have a history of working closely with Yolngu Radio, delivering various productions across the region. Touching upon their adoption of the HDL 26-A, Andrew recounted:

"Going into 2022 we were tasked with managing the production for the inaugural East Arnhem Live Festival in Nhulunbuy, and wanted to put together a sound system that would beat every other festival in the region to date! I've had experience with RCF technology and have always been impressed. Our festival site is on an escarpment, so we were looking for something that had the throw to cover the whole area and also had the punch so that sound wouldn't get lost in the wind. Our secondary consideration was the size and weight of the speakers and the ease of putting it together. We used 12 HDL 26- A's, hanging 6 per side, coupled with 6 subs that we already had. A lot of the other festivals we do are in extremely remote locations, which is why we settled on the HDL 26-A's. Not only do they do everything we need them to for the East Arnhem Live Festival, but we're also able to load them in the back of a 4x4 Troopy or in the back of single-engine Cessna, and then rig it all up with a two-person team on the other side."

Having been suitably impressed by the capability and power of the HDL 26-A line array system, Andrew goes on to outline the lasting impression RCF technology has made on himself, the crew, performers, and the community at large:





RCF's powerhouse HDL 26-A line array system.

"The improvement to our sound quality with the RCF HDLs has been night and day to what we had before. The clarity of the speakers is immaculate, their output is crazy impressive given their size, their footprint leaves us a lot of additional space for other essentials when we're packing to go out bush, and being so light and easy to assemble it's cut down our set up time noticeably.

These speakers have made a lot of people very happy: the crew, the bands, the crowds! Now that I've had the privilege to use this technology in a range of different environments, I have so much confidence in the speakers. Last year on the bush circuit it was a lot of fun watching the smiles on the bands and the crowds as we cranked them up. We have a lot of great bands here in East Arnhem Land, and they've never sounded as good as they do on the RCF HDLs."

Adding to Andrew's praise, Matt explained that "the RCF system is helping ARDS regularly service Arnhem Land's remote Yolngu communities in a highly professional and portable manner. The amazing sound quality is bringing joy and pride to these areas and their local artists."

Echoing Aris & Grimes's sentiments, Andrew Gurruwiwi, Yolngu Radio's most senior presenter and cultural advisor, gave his thoughts on the speakers and how they contribute to spreading ARDS's fundamental message of togetherness and cultural preservation:

"Communities from all over Arnhem Land loved the sound of the speakers, it was a big sound, it was a clear sound. We are really proud at Yolngu Radio to have this equipment, and to be able to share music across the region."

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MediaPro International Relies on FOR-A for Solid Hardware and Easy SDI Connectivity





FOR-A's HVS-1200 in action and FA-9600 in racks at MediaPro International.

UAE: Video broadcast technology company FOR-A has delivered a flyaway kit to MediaPro International, an event production and technology specialist based in Dubai. The system is designed to meet the demands of live, multimedia events.

MediaPro has a strong presence across the Middle East. Alongside creative design solutions and management services, it provides a comprehensive rental service for all technical needs for events. As a company, it prides itself on having state-of-the-art technology. A key endeavour is to provide high-resolution displays, through a variety of source formats including computers and cameras.

To meet this requirement, the new kit from FOR-A provides 4K capabilities thanks to FOR-A's strengths in 12GSDI connectivity. At the heart of the system is the HVS-1200 compact production switcher, which is perfect for live events, being compact and powerful, but with extensive keying, layering and transitioning thanks to the unique FOR-A MELite technology. To simplify set-up and monitoring, the HVS-1200 has integrated multi-viewer functionality.

To provide seamless inputs for sources with a range of frame rates and colour spaces, the system also includes $8 \times FA-9600$ multi-purpose signal processors. These

are used for frame synchronisation and conversion, and colour space conversion to support wide colour gamut and high dynamic range sources and outputs.

"Our clients are the leading commercial enterprises and government bodies in the region who concentrate on getting their message across through events; by relying on MediaPro to provide impactful technological solutions for creating memorable audience experiences," said Neeraj Pola technical director - Video.

"FOR-A has a strong presence in the Middle East, with a great technical and support team. This gives us a great deal of confidence in choosing and using their equipment," added Neeraj.

Mohammed Abu Ziyadeh, FOR-A regional manager for the Middle East and Africa, added "Live events are now expected to bring a big impact, whether it is a rock concert or a fashion show. Our products are based on solid hardware and convenient SDI connectivity which means the MediaPro International team know they can quickly assemble the system they need, wherever they need it."

FOR-A



Adam Hall Group Welcomes Acoustic & Lighting System to Distribution Network



(L-R) Alessio Foti, Adam Hall's global business development manager; Eugene Yeo, director at Acoustic & Lighting, Ben Lee, country manager at Acoustic & Lighting System Vietnam, and Glenn Lin, Adam Hall's business development manager for Asia.

Vietnam: The Adam Hall Group continues to expand its international sales network with Acoustic & Lighting System. Now, the event technology provider will be able to provide an experienced distribution partner in Vietnam. Acoustic & Lighting System is one of the leading event and AV technology distributors in Southeast Asia and will take over the exclusive distribution for the solutions of the Adam Hall Group brands LD Systems, Cameo, Gravity and Palmer with immediate effect.

In addition to the Vietnam market, Acoustic & Lighting System with its more than 150 employees also covers the sales markets of Malaysia, Singapore, Indonesia and Thailand. The extended range of services offered by the A&L Group includes technical project consulting as well as a comprehensive service and maintenance offer for all sales brands.

"The Vietnamese market is one of the fastest growing regions in Southeast Asia and offers tremendous

opportunities for a broad-based manufacturer like Adam Hall Group," commented Ben Lee, country manager Vietnam of Acoustic & Lighting System

Glenn Lin, business development manager, Asia Pacific, enthused: "The A&L Group has more than 30 years of sales experience in Southeast Asia and extensive expertise in audio and lighting. Given the rapidly growing pace in Vietnam, Acoustic & Lighting System is the perfect partner for Adam Hall Group."

Adam Hall (Vietnam)



Another Double-Innovation Award-Winning PLASA for Robe





©Louise Stickland.

GLOBAL: Robe received two more PLASA Innovation Awards – for its Footsie and iFORTE LTX products – at the 2023 PLASA entertainment technology expo, capping off another busy and brilliant show for the Czech moving light and LED manufacturer.

Power of Imagination

All eyes were on Robe for the launch of its new 9-minute live show featuring three dancers including an aerialist. Ballsy, bold and full of big, bright looks and statements, the narrative was inspired by the rich and diverse performance cultures of illusion, dance, cabaret, and theatre.

Using around 200 lighting fixtures, the 4-part extravaganza was conceived, storyboarded, designed, and produced by Robe's ever-inventive in-house creative team led by Nathan Wan and Andy Webb with Jordan Tinniswood and Tomáš Kohout. This was presented complete with flames, confetti, smoke, and much anticipation ramping up the drama!

"The goal is always to illustrate the versatility of the products and how it is possible to hop from one genre to another using them and also how they can all work together," explained Nathan, who also created all the video content.

Andy, who generated the special soundtrack, added, "We've just launched the most powerful fixture in the LTX, so the show needed to have a massive impact, to be highly visual and have that BANG to ensure that people went away with memorable impressions of what the fixtures can potentially achieve."

Nathan notes that the products assisted in pushing the visual bar higher, particularly in Olympia's Grand Hall which has a massive glass roof! Even with the stand encased on 3 sides by thick red velour drapes, it was a daylight show, especially with the glorious Indian summer weather which reached record highs.

14 x iFORTE LTXs were at the heart of the light show together with the other two new fixtures – FORTE Fresnels and PCs, mostly rigged on the over-booth trusses. The truss design was deliberately styled to bring an architectural look, including some curves and drop bars allowing positioning that added depth and three-dimensionality to the picture as well as creating the illusion of a larger space.

A row of iFORTE LTXs on the upstage edge of the stage blasted through for retinal disruption, while 360-degree rotating TetraXs clad the upper balcony section on vertical bars and provided back-of-shot texturing for the hundreds recording the show. Also dotted around were LEDBeam 350s and PAINTES – fixtures perfect for small-

NEWS



Dave Whitehouse (product manager) with Robe CEO Josef Valchar.

to-medium applications – with PAINTES across the lower sections of the stage together with the Award-winning Footsie – a fully IP-rated lighting concept that replaces traditional 'footlights' with a super-smart cable-tray styled LED foot light batten removing any visual barriers between audience and performers!

Robe's elegant T1 Profiles were used on a 3-way RoboSpot remote follow system and T11 Profiles, PCs and fresnels were also on the rig for fillers and to highlight the set and scenic elements.

One of the numerous finishing details was the six new MolyPATTs across the downstage edge, based on the casing of Robe's popular PicklePATT, complete with a lamp holder for a 'squirrel' filament bulb. On the back were six HolyPATTs, their slightly larger counterpart, which is based on the PATT 2013 scenic luminaire that has eye-candied a myriad of television shows, live streams, studios, and concerts.

All lights were programmed by and run to timecode via an Avolites D9 console. Robe's stand shows have traditionally been running with Avo consoles illustrating the already excellent synergy between the two brands, both of whom are very excited about the future.

The Robe Village

The Avolites booth was positioned adjacent to the Robe booth along one side, while on the other side of that wall, the 'Robe Village' continued, with the stand of architectural sister brand Anolis; engineering control solutions specialist Artistic Licence, and fog/haze aficionados MDG Fog Generators completing the triumvirate of diverse brands with which Robe collaborates closely.

Robe's architectural and LED lighting brand Anolis had its own space that highlighted its new Calumma, Ambiane and Eminere product ranges. Artistic Licence also had an individual area on the stand showing a selection of lighting control technology products popular across the entertainment industry and a favourite for systems integrators and installers.

Atmosphere engineers and experts MDG were also located in the Robe Village, and as well as all the products being shown there, The Power of Imagination featured theONE and Ice Fog Q in action. Six Robe NRG (Next Robe Generation) students from five associated colleges worked alongside the Robe international team gaining valuable experience, contacts, and insights into the world of production technology. Three of the students operated RoboSpot systems during the live shows.

Avolites - A Robe Business

PLASA 2023 saw the finalisation of a deal announced in June with Robe acquiring the UK-based lighting control manufacturer, Avolites, so this was the first international trade show for the two brands lining up side-by-side, with Avolites on an adjacent booth.

Avolites presented its newest (and smallest footprint) console hardware – the T3 – for the first time in the UK, along with its flagship Diamond 9 (D9). Other hardware presented included classic popular consoles – Arena, Tiger Touch II and Quartz, still loved for their great performance and affordability.

Avo's Q3 media server was showcased demonstrating their Synergy feature set which unites lighting and video offering creative programmers logical and streamlined workflows for all visual elements on their stage.

Avo's software platforms Titan, Ai and the newest media software platform Prism were the main features of this year's PLASA stand, all comprehensively supported by Avo's excellent networking products Titan Net Switch (TNS) and Titan Net Processor (TNP).



The Avolites team reported a significant boost in visitor numbers to the stand this year, and an overwhelmingly positive response to the Robe acquisition, which they are hailing as the next exciting chapter in the company's history.

Innovation Awards

The PLASA Innovation Awards are run in association with LSi (Lighting & Sound International) magazine and honour future-focussed technology that improves safety, efficiency and performance through new methods and materials.

A record number of 40 products were entered this year, whittled down to just seven lucky winners, chosen by a diverse judging panel comprising 12 independent technical specialists, and Robe was delighted to pick up two of these to add to its growing collection.

Commenting on the iFORTE LTX, the judges said, "The full feature set in an IP-rated enclosure allows the light to be used as a long-throw or short-throw follow spot, as well as a good moving light." Coupled with the interchangeable camera, the combination of useful features impressed them.

The Footsie, they reckoned, "will be welcomed by anyone needing to route cables across the front of the stage." They liked the integrated safety marking lights, performer markers, and the integration with Robe's RoboSpot system, coupled with the ability to light actors/performers in a traditional way using new tech.

The two products are very different but equally innovative. The Footsie is a dynamic system with many inbuilt safety features, while the iFORTE LTX is all about power and output with the ability to go down to a piercing narrow beam for stadium and outdoor performance. The Awards were collected by Robe s.r.o. CEO Josef Valchar and theatre and product development specialist Dave Whitehouse.

A smiling Josef enthused, "It's always a great honour to receive a PLASA Innovation Award and especially because you know that it is being judged by your peers and by industry professionals who are not easily impressed. There was stiff competition this year, and of course, we are all delighted to have won. It's a great tribute to the hard work of our R 'n' D team and the

foresight of our product specialists. As a company, we are dedicated to constantly pushing ideas and inventions to create the best solutions!"

New Products

In addition to the award-winning iFORTE LTX, Robe launched two other excellent luminaires, the FORTE Fresnel and FORTE PC.

These also utilise Robe's revolutionary TRANSFERABLE ENGINE technology which maintains super bright light quality over time, combined with an innovation-packed high-output wash luminaire, so both products deliver powerful, intense washes without losing any theatrical subtlety or control.

Featuring either the classically soft fresnel beam or the slightly more defined PC beam, they are both great for any performance space and application.

Also previewed were a couple of brand-new products – the HolyPATT and the MolyPATT – both new additions to Robe's desirable scenic PATT range of luminaires, and these attracted substantial interest. People loved the classic design and the warm incandescent glow of the squirrel bulbs.

Resounding Success

Robe UK's head of Marketing, Theresa Gibson, concluded, "The vibrant atmosphere of PLASA London delivered three exhilarating days of high calibre visitors from a wide cross-section of the industry, giving us the perfect opportunity to reconnect with our existing customers and forge valuable new relationships, whilst providing an excellent platform to showcase Robe's newest technologies.

"We were proud to return as headline sponsor and continue our long-standing relationship with PLASA which saw an increase in visitors from the UK and Europe, also attracting customers and distributors from further afield like South America and Southeast Asia who joined us on the booth.

"PLASA London always delivers lots of magic with the best of our industry all under one roof and 2023 was hugely invigorating and no exception!"

Robe

NEW SERIES 9

TAKE YOUR AUDIO UP A NOTCH

- 🖕 Higher Max SPL
- Higher Sensitivity
- Higher Durability





"Sound's" Sonic Evolution with Adamson and Allen & Heath



INDIA: Nestled in the heart of Pune is an aspirational event equipment rental service company that is confident of establishing themselves as a harbinger of innovation when it comes to live sound technologies. The company, which is simply named 'Sound', is the brain-child of Vishal Waghmare – a seasoned live event professional with several years of invaluable experience when it comes to bringing together impactful live audio productions that have wowed audiences across the region. Vishal affirms that naming is own rental services company 'Sound' is more than a profound statement that encapsulates his dedication to delivering pristine audio experiences.

While the unique choice of name reflects Vishal's belief in the undeniable importance of great quality audio experiences, it is his passion for growth that has prompted him and his team to create waves in the industry with a significant investment in expanding the company's inventory lineup with world-class technologies from industry stalwarts Allen & Heath, and Adamson. Understanding the importance of having a world-class mixing console at the heart of an audio production was one of the key reasons that prompted Vishal to invest in the Allen & Heath dLive S7000 control surface along with the DM64 Rack. Vishal delves into the details of the strategic move, sharing that the S7000's 36 faders, dual 12-inch capacitive touchscreen, and extensive I/O matrix held the promise to offer the company with exceptional flexibility and control. Another aspect that positively impressed the purchase decision

was the exceptional processing power of the XCVI FPGA core which allows for complex audio mixing tasks to be done with ease; and the console's DEEP processing options which allows for specialized processing plugins like the Dyn8 dynamics processor to fine-tune dynamics for each individual channel and deliver a sound that's nothing short of perfection. Additionally, the onboard 96kHz audio processing capability also proved to be a major influencer in the situation.

Furthermore, since the DM64 Rack perfectly complements the S7000 by allowing for expanded I/O capabilities; Vishal was convinced that it would be the perfect addition to bring together a truly comprehensive mixing experience. He explains that while the DM64's expanded range of inputs and outputs provides more than enough channels to accommodate even the most demanding setups; its redundant power supplies and connection options make it a reliable and flexible addition to the system. Additionally, he asserts that the system as a whole is extremely user-friendly; allowing for ease of setup and use, while also affording engineers with unparalleled ease to create custom layouts and save/recall settings. Plus, the possibility of adding a network card would allow the team to easily integrate this new system with their existing infrastructure, and facilitate smooth signal routing and control. Alongside the dLive S7000 Console and DM64 Rack, the company have also enhanced their sound arsenal by adding a state-of-the-art line array system from



Adamson, consisting of 16 units of the S10 two-way, full-range line array cabinets and 12 units of the E119 subwoofers; along with multiple units of the PLM20K44 power amplifiers from Lab Gruppen to power the entire line array system. This strategic acquisition in particular, has garnered considerable attention from peers and clients alike in the region.

Vishal elaborates on the various factors that positively influenced his purchase decision of the newly acquired Adamson line array system, informing that he was particularly impressed with the overall performance value of the Adamson line array system. He affirms that he was very pleased with the remarkable frequency response, and amazing vertical coverage that the S10 modules delivered; plus its capacity to offer the level of precise control over sound distribution and reduce unwanted reflections. The S10's versatile rigging options was noted as another huge positive; with the adjustable vertical and horizontal angles allowing for maximum control over

tailoring the coverage pattern to suit any venue. On the other hand, he praised the E119 subwoofers for their capacity to perfectly complement the S10 modules, while also assuring powerful and precise lowfrequency reproduction. Aspects like the subwoofers impressive frequency response that extends down to a truly impressive 29Hz (-3dB), ease of use in terms of transport, logistics and deployment; were all noted to fill Vishal with the confidence that the Adamson line array system would be the best fit for their company. Vishal shares that the new acquisitions were swiftly put to the test at a series of events that took place soon after the company took delivery of the respective systems. And according to him, the performance of the respective systems. was every bit as impressive as he and his team had imagined it to be; with the company now poised to continue enhancing the standard of their service offerings in an effort to raise the bar for live sound experiences in Pune and beyond.

Sound

Hall Group Expands Distribution Network with Join Venture



PHILIPPINES: With immediate effect, Joint Venture Audio Visual and Lighting Inc. will take over the exclusive distribution of Adam Hall Group's brands LD Systems, Cameo, Gravity and Palmer in the Philippines. The event technology provider thus gains another distribution partner for the important APAC region.

Joint Venture Audio Visual is a corporate merger of several companies, including full-service provider

Systech Lighting and Controls Inc. Under the umbrella of Joint Venture, **Systech** will represent the AVL brands of the Adam Hall Group in the Philippine market.

"We are pleased to add one of the largest event technology manufacturers in the world to our distribution portfolio with the solutions of Adam Hall Group," stated Oliver C. Yulo, president of Joint Venture Audio Visual Lighting Inc. "Since the end of the Covid pandemic, the APAC region has been one of the fastest growing markets ever. Together we will implement numerous interesting projects and further increase the awareness of the Adam Hall Group brands in the Philippines."

Glenn Lin, business development manager, Asia Pacific added, "Joint Venture is the leading distributor for the AVL sector in the Philippines. With separate subsidiaries for MI/Retail, Install and Hospitality, the large team offers ideal conditions to perfectly match our diverse portfolio to the different target groups."

Adam Hall



Phoenix Networks' Quantum Leap in Sound Reinforcement with Significant Inventory Expansion



INDIA: The live event industry in India is witnessing a technical revolution of sorts; with the market being privy to latest in global professional audio technologies – all of which are aimed at elevating event experiences for audiences across the country.

In the realm of live sound and concert production, staying ahead of the technological curve is the name of the game. And Phoenix Networks, one of India's most prominent event equipment rental service providers hailing from Bhopal – has taken a giant stride forward with their recent expansion of inventory.

At the heart of this expansion lies the acquisition of the highly coveted DiGiCo Quantum 338 digital mixing console, coupled with the SD-Rack – which also happens to be the first ever Quantum 338 system in Central India. Alongside, the company has also made a significant addition to their line up of the industry-leading Meyer Sound loudspeaker inventory with the addition of a brand-new comprehensive system comprising the LEOPARD modules complemented by the powerful 900-LFC Low-Frequency Control Elements.

While the investment does exemplify Phoenix Networks' technical finesse; what's important to note is the fact that this strategic move not only underscores their position as an industry leader but also signifies their unwavering commitment to delivering unparalleled audio experiences. "As a company, our vision for success is deeply rooted in our relentless pursuit of audio perfection. And these strategic investments are a key extension of this ever-evolving pursuit!" exclaims Animesh Mishra, Director of Phoenix Networks.

The sheer power and adaptability of the Quantum 338 and SD-Rack setup is believed to have heavily influenced Phoenix Networks' investment in the system; as Animesh explains, The DiGiCo Quantum 338 digital mixing console is technical powerhouse and an absolute marvel of audio engineering. Offering a staggering 128 input channels, 64 busses, and a 24x24 matrix, all operating at a pristine 96kHz sample rate; it boasts unmatched audio quality, versatility, and an array of advanced features like Mustard Processing channel strips, Spice Rack plugin style native FPGA processing options which provides a plethora of effect options, Nodal Processing and True Solo – all of which make it a



top choice in the industry. When paired with the SD-Rack, which incorporates the Optocore 64 +64 I/O for enhanced connectivity, this combination empowers us with an unparalleled capacity to deliver an extraordinary level of audio quality for any event. Leveraging fiberoptic technology, the system as a whole ensures lowlatency, high-channel-count audio transmission; while also facilitating seamless integration with diverse stage configurations and accommodating a wide range of audio sources. Plus, the redundancy options embedded within the system guarantee uninterrupted reliability, thanks to the SD-Rack's harmonious compatibility with the Quantum 338. The system as a whole is absolutely magnificent, and it enables us to handle the most intricate live sound setups with unbelievable grace and precision."

When it comes to delivering a truly wholesome worldclass sound reinforcement solution, achieving pristine audio quality and uniform coverage is paramount. And Phoenix Networks' recent addition of Meyer Sound's LEOPARD line array modules accompanied by the formidable 900-LFC Low-Frequency Control Elements, exemplifies their determination to push the envelope of auditory excellence.

Affording a better insight into the motivations behind this expansion, Animesh shares, "We were the first ones in the entire country to invest into the revolutionary Meyer Sound PANTHER system; and our choice to expand our existing Meyer Sound arsenal with the LEOPARD line array modules and 900-LFC subwoofers emanates from our unwavering commitment to deliver an audio experience that stands unparalleled."

Animesh's profound grasp of the technical intricacies is evident as he notes that the LEOPARD and 900-LFC combination affords remarkable scalability and adaptability thereby empowering the company to efficiently cater to an extensive array of events ranging from intimate gatherings to sprawling concerts. Animesh elaborates on this stating, "The LEOPARD modules are a technological marvel, packing extraordinary power and precision into a compact form. The line array modules offer an amalgamation of power and precision along with intelligent optimization and processing capabilities of the Galileo GALAXY network platform – all of which allows us to fine-tune the system to match the acoustics of any venue flawlessly. Additionally, the 900-LFC subwoofers

provide the essential low-frequency punch required for crafting an immersive audio experience. With their high output and minimal distortion, they perfectly complement the LEOPARD modules. Together, the system's remarkable frequency response, exceptional phase coherence, and expansive horizontal coverage make it the ideal choice for delivering pristine sound across a wide spectrum of venues. This strategic investment aligns seamlessly with our mission to set new benchmarks in the industry by offering audio solutions that redefine excellence."

According to Animesh, the acquisitions of the DiGiCo Quantum 338 console with the SD-Rack and the Meyer Sound LEOPARD line array modules alongside the 900-LFC subwoofers have now opened up a world of possibilities for Phoenix Networks, as he is confident that the company is now even better equipped than before, with the technical prowess to undertake mega productions, not only within India but also on international stages.

"One of the most exciting aspects that comes with these purchases is our ability to seamlessly adapt to diverse venues and event scales. The Quantum 338's expansive channel count and its remarkable processing capabilities, paired with our newly expanded Meyer Sound inventory complete with comprehensive LEOPARD and PANTHER systems, now allows us to cater to intricate productions with ease. This means that whether it's a massive outdoor music festival or an intimate corporate event, we have the tools to deliver flawless sound. Moreover, the compatibility and scalability of these systems enable us to extend our services beyond borders. We're now capable of providing truly world-class sound reinforcement solutions for events outside of India as well; thereby enhancing our presence in the global live sound industry. Our teams are thrilled to take on new challenges and showcase our technical expertise on a broader stage; and we're excited to move closer to our vision of being at the forefront of audio innovation - not just in India, but on a global scale. We're excited about the doors these acquisitions have opened, and we look forward to setting new benchmarks in live sound, both at home and abroad!" concludes a visibly optimistic and confident Animesh.

Phoenix Networks

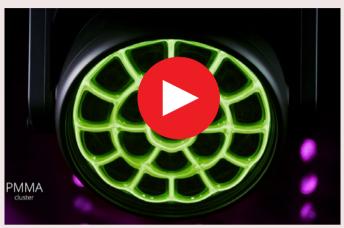


Naostage's First-of-its-kind Tracking System Deployed for Pink Floyd Tribute Band



After seeing the technology in the flesh, PAN POT has high hopes for Naostage's K SYSTEM which quickened not only their setup but also worked without a tracker.

Feel the Freedom with Ayrton Argo 6



Ayrton is releasing a weather-sealed effects luminaire with as many creative possibilities indoors as outdoors. Argo 6 offers a clean aesthetic with features for complete weather protection and easier internal access.

Mercy Road Trailer Brings Virtual Production Possibilities to the Limits of Sanity



Get uncomfortable with the theatrical trailer for an Australian psychological thriller that was shot entirely using virtual production within the TDC studios.

Tensor Solo All-in-one Column PA Draws from 50 Years of Audio Experience



HH Electronics' Tensor Solo is designed for applications where crystal clear audio is required to cover 100+ audience members and consists of a potent 8" subwoofer and 6×2.75 " drivers. It is aimed towards small gigs, houses of worship, as well as the education sector.

ALEX COLUMN

TANSTAAFL-3 (There Ain't No Such Thing As A Free Lunch)



In this issue, I want to share my view on Mono, Stereo, and Immersive (again) in the Live Sound arena. After this, you might say: we have heard all this, but my perception is that people are being sold on the upside of immersive audio for live sound without being told what all the downsides are.

Please allow me a small attempt at myth-busting here. The DSP platforms have developed very well, and there are currently quite a few systems around that can do the calculations behind any of the commonly suggested Object-based Audio systems. That is not the problem, but the timing and speed of sound are.

Mono is still widely used across Asia-Pacific, especially in places where a second sound system for a Stereo setup would already be out of budget. The upside here is that it is just one sound source, and there won't be too much interference other than those due to reflections. Still, the downside is that everything is localized to where this sound system is physically placed, no matter where the original source is located physically. Stereo has proven to be a giant leap forward since it allowed the creation of "phantom sources" in between a two loudspeaker setup. However, stereo always has a sweet spot of where it works, and in this regard, scaling stereo up to large and into concert arenas has a limited value. If your listening position is right in front of either left or right, then all you will hear is that left or right system, adios stereo.

The problem with the physical position of the two left and right sound systems in a large-scale stereo setup is that the sweet spot will limit the experience for the audience. As a compromise, live sound FOH mixers typically apply stereo panning very limited in the consciousness that you only create this for a small portion of your audience in any given location. Outside of the sweet spot, you end up with all kinds of challenges in mixing, starting with Comb filtering due to two different arrival times and interference and localization that needs to be corrected

and off for almost all sources. Does anyone feel like a reminder of what this column is called?

So now we are all being told that immersive audio is the holy grail to resolve all those problems, so that is what we will need to learn and what we will need to apply to our shows to be cool and up to speed. For a start, all good immersive audio demos will be in smaller venues under very controlled acoustical circumstances. Is that scalable to a more extensive system and arena audio system setup? If you think this is rhetorical and not a real question, you must not have followed this column at all. Then, on top of all this, literally, all live stage presentations are happening in a frontal way, so anything outside of a 120-degree to 180-degree angle at best will be somewhat irrelevant in a live sound environment since you want to hear any source, ideally from where you see it.

If you read up on all the theories behind all of the immersive solutions and offerings out there, you will learn that the better the localization (higher order playback system) is, the smaller the sweet spot becomes, almost like a direct inverted relationship. This is such a drastic example of TANSTAAFL, amazing. What works in a controlled small room environment will not work when scaled up to arena-level size. Immersive Audio setups will not solve all the currently existing challenges for large-scale concert events. You might get a better localization, and you pay for it with impulse degeneration. Of course, the upside for anyone selling you an immersive sound system is that they get to sell you a ton of loudspeakers.

In conclusion, I want to be clear. All these different solutions should be one more tool in your toolbox for getting the best result for what show and event you are tasked to mix or present. Just because you "can" do something does not necessarily mean you "should" do it. The laws of physics are bigger and more dominating than any marketing budget will ever be. End of rant.

Join the conversation and share your thoughts with Alex. Alex can be reached at alex@asaudio.de



Clear-Com's Arcadia Update Positions Platform as Top Contender in 1RU Intercom Systems

Clear-Com has announced new features for Arcadia Central Station with the addition of I.V. Direct, an IP interfacing feature that connects Arcadia and the LQ Series of IP Interfaces, Eclipse HX Digital Matrix System

(via E-IPA card), and other Arcadia systems over LAN, WAN, or Internet.

The update will also provide a substantial increase in capacity for FreeSpeak beltpacks, transceivers, and HelixNet endpoints, making Arcadia the "most powerful 1RU intercom device on the market" with support for 285 input/output connections on a single system.

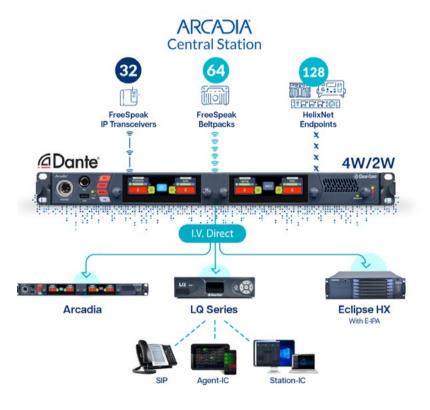
The I.V. Direct connections will allow intercom audio, logic controls, and

call signals to be passed between separately managed Clear-Com systems and assigned to channels, groups, and keys in the individual systems. Notably, this can be done with easy setup for various levels of network quality of service and internet-friendly security features.

Interfacing with LQ will allow Arcadia users to expand their analogue connections using 2-wire, 4-wire and GPIO ports and support Clear-Com's Agent-IC and Station-IC virtual clients, two-way radios, and SIP telephony, without the need for multiple audio and

control cables allowing for full integration of all team members who need to communicate.

In addition to local Dante-based connection capabilities, I.V. Direct connections will allow Arcadia's network



interfacing to extend globally, making it ideal for large, multi-site live events, remote broadcasting, or even multi-country productions where professionals are concurrently operating multiple systems and requiring audio communication over large distances. Arcadia will support up to 16 x I.V. Direct connections.

The capabilities of the Arcadia platform have been steadily expanding

since its launch, and this latest update delivers a notable increase in capacity, with support for up to 32 x IP transceivers, 64 x wireless FreeSpeak beltpacks, and 128 x HelixNet endpoints. By offering users the ability to connect a staggering 192 digital beltpacks in a 1RU package, Arcadia hopes to break the boundaries of what users can expect from modern-day intercom systems.

These new features will be available for Arcadia starting in Q4 2023.

Clear-Com



Ayrton Adds to Multi Sources Series with IP65-rated Argo 6



For the first time in its history, Ayrton has launched a weather-sealed effects luminaire that offers as much creative potential indoors as outdoors. Argo 6 presents a minimalist design incorporating features for total protection against harsh weather with easier internal access.

A new composite alloy, reduction in thickness of the parts, an optimised cooling system, simplified lens guidance, and integration of low-density optical components, mean Ayrton has been able to reduce overall weight by 20%. Meanwhile, the placement of pan & tilt motors in the base and head of the luminaire avoids the constraint of weatherproofing the yoke arms. A new submersible ventilation system in a non-waterproof compartment allows for optimal cooling.

Available as Wash or FX versions, Argo 6 is equipped with 19 x LEDs of 40W with RGB+W additive colour synthesis that can deliver a light output of 13,000 lumens. Its 280mm anti-reflective treated glass front

window is designed to ensure optimal visuals and offer increased performance. Argo 6 can obtain a highly intense beam with a zoom ratio of 14:1 and a wide zoom range from 4° to 56°.

Argo 6 FX

Argo 6 FX is a versatile fully-equipped luminaire designed for a multitude of applications. It borrows from the main features of the Wash version and offers a continuous rotation of the pan and tilt movement I.R.S.TM. Argo 6 FX is equipped with a high-definition liquid effect system enhanced by a translucent honeycomb that can generate complex graphic effects LiquidEffectTM.

Argo 6 Wash

For the first time, Ayrton has provided individual control of the LEDs on the Argo 6 Wash version and added a virtually infinite library of effects. Argo 6 Wash is a precise machine that can obtain perfect colour reproduction. A complete library of pre-programmed colours allows quick creation of subtle, dense and contrasting swaths of light. Its black honeycomb and perfect separation of the light sources help to significantly boost the level of contrast.

Argo 6 Wash and Argo 6 FX can be used alone or in combination with the main LED matrix.

Ayrton



NEXO Expands P+ Series Point Source Speaker Range with New P18 and L20



Building on the company's acclaimed expertise in compact, high-output, point-source loudspeakers, NEXO's P+ Series proved an instant hit following the launch of the P12 back in 2019.

Widely installed in theatres, halls, sports stadiums and hospitality settings, the P+ Series now expands with the launch of the new **P18** and L20 sub. Joining a range that already includes P8, P10, P12 and P15 models, the new P18 employs a long-excursion, Neodymium 18" LF / 4" diaphragm HF coaxial driver in a curvilinear enclosure of custom birch and poplar plywood.

The cabinet footprint is relatively compact, measuring 680mm x 579mm x 446mm. The frequency response is 50Hz-20kHz, and the SPL is 140dB Peak (passive mode) / 142dB Peak (active mode).

Like other speakers in the P+ Series, the versatility of the P18 is enhanced by an ingenious system for varying HF coverage patterns. Horn flanges can be interchanged to deliver a choice of directivities - from the 60°x 60° that is provided as standard, to a 90°x 40° or an asymmetrical 50°- 90°x 40°. Switching between different directivities can be accomplished in just 15 seconds, easily removing the steel grille with a coin and replacing the flare, which uses a magnetic fixing.

The new P18 is available in Touring, Installation (passive only) and hybrid TIS versions. In the Touring version, two large handles on each side hold a 35mm pole stand adaptor and Speakon connector for discrete connection when the cabinet is used on pole stands or in wedge monitor applications. Two other Speakon connectors are included on the back plate. In the Installation version, a cable gland with a 2-core cable for audio input ensures IP54 protection when it is used outdoors.

Joining existing L15 and L18 sub-bass cabinets in the P+ Series, the new L20 uses a 20" long-excursion driver, achieving an SPL of 141dB Peak and extending LF response down to 28Hz.

NEXO NXAMPMK2 or DTD/ DTDAMP deliver tailored power and processing solutions, combining multichannel, high-powered, networkable amplification with sophisticated loudspeaker control and protection. Linear phase presets included for P+ cabinets in both vertical and horizontal configuration – and the full range of NEXO cabinets – make it quick and easy to configure a 'Plug & Play' solution for any system.

The new P18 and L20 are accompanied by a comprehensive range of accessories, enabling them to be used in a wide variety of touring and installed applications.

NEXO/P+ Series



Martin Audio Announces THS Super-Compact High-Output Loudspeaker



Capable of 135dB peak, Martin Audio's latest announcement, THS, is an extremely powerful point source loudspeaker which combines very high output with extended frequency response. It joins the wider TH series and is ideally suited to medium-scale DJ club applications and installations which call for exceptionally high sound levels from a compact, standalone loudspeaker system.

Packing three high-technology drivers into a relatively small trapezoid enclosure, its innovative three-way triaxial configuration delivers enhanced output for its size and gives it the edge over comparable two-way systems in terms of superior mid- and high-frequency performance. Adding a compact Martin Audio SX subwoofer to extend low-frequency output creates a dynamic, four-way set-up with a small footprint.

To ensure the most effective use of amplifier count, THS is designed to be bi-amplified, with an internal passive network performing the mid/high crossover function. The THS triaxial driver is a "state-of-the-art device". Its LF section comprises a reflex-loaded, high-specification 15" LF driver with a 4" coil, waterproof cone and neodymium magnet structure. A 4" midrange ring radiator and a 2.5" HF ring radiator, both with high-temperature polymer diaphragms, are arranged coaxially at the rear of the LF driver and integrated into a 1.4" exit. This transitions through the magnet structure of the LF driver into an 85° x 50° horn. The horn itself is user-rotatable, with a large mouth to maintain pattern control down through the midrange.

The durable birch plywood enclosure is finished in hard-wearing textured paint and incorporates multiple threaded inserts to facilitate a variety of portrait and landscape mounting options—including eyebolt, yoke, pole and truss mounting. Twin handles assist installation and deployment, while a steel grille, with triple-layer polyester backing, protects the drivers and resists dust and water ingress.

Martin Audio/THS







THS Driver Coupled expanded side profile.



ADJ Encore LP12Z IP Zooms In with Lime-infused LED Versatility



The Encore LP12Z IP is powered by 12 x 20 W quad colour RGBL LEDs, which deliver a combined output of up to 4400 lumens. 16-bit precision dimming control of the red, green, blue and lime LED chips allow for the creation of a huge gamut of output colours, while an easy selection of popular options is facilitated via 64 preset macros. The fixture can also be used to output white light with colour temperature variable between 2700K and 6500K. Five additional white light macros allow an easy selection of popular choices, however, any desired temperature within the range can also be selected using the Linear Color Temperature Control feature.

The inclusion of the Lime LED element boosts CRI and perceived brightness as well as filling in gaps in the colour spectrum. The unit's overall CRI is 84.4, while its CRI R9 measures at 77. This increased CRI renders colours more accurately when the fixture is used as a wash to illuminate scenery, décor, or performers, which is particularly important to ensure natural skin tones and enhanced depth.

The fixture's motorized zoom function allows its beam angle to be adjusted remotely between 5 and 30° (9 to 50° field angle). This allows the same fixture to be used to create a wide wash or narrow pool of light without the

need for additional lenses or accessories, making it ideal for use by production companies working on a wide variety of shows and events. It also means that the beam angle can be adjusted remotely during a performance, allowing the same fixture to spotlight a narrow area or provide a wide wash for different scenes in the same production. Linear Zoom control allows the selection of precise beam angles while six presets aid quick programming.

With an all-aluminium construction, the Encore LP12Z IP is ready to face the rigours of the road. It has an IP65-rated sealed casing design, which allows it to be safely and reliably used outdoors in any weather conditions, including heavy rain, snow, dust, and wind. It is also protected with a C3 marine-grade coating, which provides corrosion resistance even in coastal areas with high salinity. Its heavy-duty scissor yoke locks into place securely using a pair of bar handles and can be used as a variable angle floor stand or hanging bracket when attached to a standard omega clamp.

A 32-character backlit LCD on the rear panel of the fixture provides access to an intuitive menu-driven interface for mode selection and DMX addressing, which is navigated using four touch buttons. In addition to DMX control, with a choice of six modes (6, 9, 10, 12,

ENNOVATION

15 & 18-channel), the unit also offers three standalone options. Static Color Mode allows quick and easy selection of one of the pre-programmed colour macros, RGBL Dimmer Mode allows custom colours to be mixed directly from the menu interface, and Program Mode provides access to seven internal chase patterns, which can be configured with custom speed and fade times.

The LP12Z IP can be easily adapted to a user's personal preferences, or the specific requirements of a particular application, using a wide variety of customizable options. These include six selectable dimming modes (Standard, Stage, TV, Architectural, Theatre & Stage 2), four selectable Dimming Curves (Square, Linear, Inverse Square & S-Curve) and adjustable Dimming Speed (between 0.1 and 10 seconds). In addition, the LED Refresh Rate can also be adjusted using 14 presets (ranging from 900Hz to 25,000Hz) to eliminate flicker for broadcast or video capture applications. All these customizable parameters can be altered via DMX as well as directly from the LCD menu interface.

A recessed panel on the rear of the fixture offers protection to the unit's connection sockets, which are all fitted with rubber plugs to provide watertight protection when they are not in use. 5-pin DMX input and output sockets are provided for control, while IP65-rated power input and output sockets allow the electrical supply for multiple units to be 'daisy-chained' from a single outlet. The fixture is also equipped with an in-built ADJ WiFLY EXR extended range wireless transceiver, allowing it to receive a DMX signal wirelessly from a compatible WiFLY transmitter or another WiFLY-equipped fixture over a distance of up to 2500ft. / 700m (line of sight). The fixture also supports the RDM (Remote Device Management) protocol, which allows for remote DMX addressing and the feeding back of fixture operating status information to a compatible DMX control solution.

The Encore LP12Z IP is now available from ADJ USA and, as of October 2023, ADJ Europe.

ADJ/Encore LP12Z IP

DiGiCo Leaps Forward in Large Format Live Consoles with Quantum852



DiGiCo's Quantum852 represents a significant leap forward in processing power and boasts a 1000-nit LCD screen that ensures visibility even in full daylight. Coupled with a newly designed worksurface, users can be confident that, in line with the DiGiCo ethos, Quantum852 has been meticulously engineered not just for now but for the future as well.

Equipped with an array of eco-friendly credentials, Quantum852 also boasts an impressive technical specification. This includes fully redundant processing, with each engine powered by five of the latest 7th-generation FPGAs and the next-generation SHARC DSP processors. The input count for Quantum852 is expanded to 384 mono channels, accompanied by 192 Aux / Sub-Group busses, in addition to the familiar LR / LCR / 5.1 Master busses.

Furthermore, it features a 64 x 64 Processing Matrix, 36 Control Groups, two Solo busses, and 64 FX Rack slots. The console is equipped with 48 Graphic EQs, 384 Nodal Processors, 128 Mustard Processors, and 32 Spice Racks.

DiGiCo/Quantum 852



Integrate LD Systems' MON G3 Series Flexibly into Different Stage Setups



In the development of the new MON G3 Series, LD Systems was guided by the features and functions of high-priced stage monitors that are used at large events and on tours. Thus, the MON G3 models are based on a newly developed combination of woofer and titanium tweeter in a compact coaxial design, which provides a consistent sound even away from the ideal listening axis as well as from a short distance – for example, as stereo monitor speakers on a DJ desk.

In addition, the integrated CD horn, with its optimised dispersion pattern of 50° (h) x 90° (v), ensures a clean and separated sound image as soon as several monitors with different monitor mixes are used on stage.

The active MON G3 Series is driven by a Class D power amplifier with 300 W RMS and up to 1,200 W peak power, which means that the stage monitors can easily assert themselves even on loud stages. Thanks to the integrated heat sink, the MON G3 models operate without a fan and are thus also suitable for noise-sensitive use at lectures, panel discussions or unplugged gigs.

The new second-generation DynX DSP offers users a wide range of customisation options. The sound of the stage monitor can be precisely adjusted to different monitor setups and stage requirements via a 3-band EQ, four EQ presets, a notch filter, and a delay function. On the connection side, there are PowerCon-compatible mains sockets (in/out), two line inputs with XLR jack

combo socket, and two XLR Thru outputs for the loop connection of additional monitors.

The MON G3 Series offers a modern design that has been redesigned from the ground up. All connections, controls and carrying handles are located on the sides of the enclosure, which not only facilitates access on stage but also protects against knocks and accidental adjustments due to the recessed arrangement. The MON G3 Series is rounded off by a robust polyurea coating, a sturdy speaker grille and a 36 mm flange on the side for vertical use as a PA speaker on a speaker stand. For the latter, all MON G3 models offer a standalone full-range mode as a selectable DSP preset.

With their coaxial speaker design, integrated DSP functions and versatile connection options, the MON G3 units can be integrated extremely flexibly into different stage setups – whether it is as a classic monitor at the edge of the stage, as a specific monitoring solution for DJs, entertainers and speakers, or as a PA speaker on a stand. The MON G3 Series includes four models in the sizes 8", 10", 12" and 15".

LD Systems/MON G3 Series

ENNOVATION

Cameo Releases PIXBAR G2 Series for Professionals Looking to Get Creative with Set Designs



The new Cameo PIXBAR G2 series offers a variety of connection and mounting options that allow users to think creatively in all directions to create seamless lighting effects for unique set designs.

For example, the identical PIXBAR G2 LED bars can be quickly and easily connected via the side-mounted magnetic plates. Thanks to the pixel pitch feature, even after connecting different models, the spacing between the LEDs remains consistent to create a symmetrical overall look. An optional STACK KIT is available for vertical stacking of up to three units with mechanical locking.

The combination of VERTI-MOUNT and M20 adapter also allows the PIXBAR G2 to be set up vertically on a base plate. At the same time, the VERTI-MOUNT adapter can be used in conjunction with the OMEGA BRACKET bracket to hang up to three LED bars vertically on a truss. Horizontal truss mounting is also made easier with the innovative adjustable feet of the PIXBAR G2 models. The patented Cameo SPIN16 adapter for the integrated 16mm TV spigots is also included.

Both PIXBAR G2 models feature 16 x individually controllable LEDs. While the **PIXBAR 400 IP G2** is equipped with 4-in-1 RGBW LEDs, the **PIXBAR 600 IP**

G2 with its 6-in-1 RGBAUV LEDs expands the colour space to include amber and UV light. The beam angle of 24° (PIXBAR 600 IP G2) or 25° (PIXBAR 400 IP G2) can be extended up to 70° using optional filters. The filters are mounted quickly, easily, securely and without tools via the insertion mechanism of the filter rail. For noise-sensitive use in theatres or TV studios, the PIXBAR G2 series has a fanless cooling design for low-noise operation.

The new PIXBAR G2 models, PIXBAR 600 IP G2 (RGBWAUV) and PIXBAR 400 IP G2 (RGBW), are available now. Versions with TW (Tunable White) and SMD LEDs have already been announced for October.

Cameo/PIXBAR G2



Smode Tech Empowers Creativity with Free Smode Community



Smode Tech, the company behind the real-time compositing and media server platform SMODE, has proudly announced the release of a free SMODE version, called Smode Community. This exciting development will open up a world of visual art possibilities for everyone, including students and enthusiasts alike. In line with Smode Tech's unwavering commitment to the community, the company is also dedicated to combating climate change and minimising its environmental impact.

Smode Community is a free software license for noncommercial use, designed to give everyone access to SMODE's tools and allow enthusiasts to explore and express their creativity in real time.

Smode Community is the "most advanced free real-time compositing engine on the market" and it is fully usable without any advertisements, no user data tracking, and no obligations of any kind. It also comes without any watermarks and supports up to Full HD resolution (1920 x 1080). The free software license boasts a wide range of visual effects and tools as well as an intuitive and user-friendly layer-based interface.

Smode Tech's free software has Full HD input and output, Full HD content and video export, comprehensive real-time 2D/3D compositing features and extensive real-time 2D/3D video mapping and stage simulation features. Smode Community supports ISD and

ShaderToy shaders, Python scripting, MIDI, OSC and Spout among others, it also has a complete set of linear and non-linear animation features.

The free software caters to a wide range of users, making it accessible and valuable for creatives. For beginners seeking to explore art creation, students can leverage its capabilities to learn and get their start in the live event industry, while VJ's can utilise it for small events, asset creating and live mixing. On the professional side, it will also lead to a major boost for the emergence of new video operators. Motion designers benefit from its ability to avoid rendering time while creating assets and schools can take advantage of Smode Community's features to enrich their educational initiatives.

Smode Tech's commitment to giving back to the community extends beyond this new free software: it also includes dedication to making a positive impact on the artistic community as well as the environment. As part of this commitment, Smode Tech has decided to donate 1% of its turnover to Team for the Planet (TFTP), an initiative dedicated to reducing CO2 emissions by investing in innovative, eco-friendly and open-source solutions that are making a tangible impact on the fight against climate change.

Smode Tech/Smode Community



Cameras Love the New CHAUVET Professional REM Series



The new CHAUVET
Professional REM series
of LED video panels is
the "ultimate in camerafriendliness, both in terms
of the images it displays,
and in the way those
images are picked up by
cameras for broadcast,
livestream, and virtual/
augmented reality
productions.

Featuring two panels, the 1.9mm REM 1, and the 3.9mm pixel pitch REM 3IP, the new series delivers pristine on-camera performances, thanks in

part to its expansive range of rich saturated colours, impressively high level of brightness and contrast, and rapid (7,680 Hz) refresh rate. The high-resolution REM 1 has an output of 800 NITS, while its stable mate, the indoor/outdoor REM 3IP comes in at 4,500 NITs. Both panels feature low latency performance, and thermal calibration capabilities. Both are also driven by a potent Novastar processor that provides access to over 22bit plus grayscale, as well as an intuitive, visual-driven VMP platform. Another feature that makes these standardsetting panels stand out can be found in their black body LEDs, which are sealed in an anti-reflective coating. The REM series of panels both output in the DCI-P3 LED colour space, which offers 26% greater colour possibilities than the typical sRGB/Rec.709 LEDs. Offering top-tier performance and signal processing, the new mappable and scalable REM panels excel in a wide variety of settings. Adding to this versatility: the panels can be hung, ground-stacked, or wall-mounted to support multiple designs and visual environments. The REM series panels feature a modular, one-step magnetic locking system for fast setup and tear down.

CHAUVET Professional/REM 1

ETC Introduces Hyperstar



ETC introduces the High End Systems Hyperstar, a new, sensational companion to the popular Lonestar automated luminaire. A powerful, compact moving light optimized for projection versatility, Hyperstar will help create uniquely beautiful designs for a wide variety of venues. Hyperstar is the same size as Lonestar, and is just as bright, compact, and affordable.

Lonestar is recognized for its projection capabilities and framing; with Hyperstar the framing modules have been removed to provide even more versatility when using patterns and aerials. With nine rotating patterns, 11 fixed patterns, an Animation wheel, dual frosts, and dual prisms, designers have an almost endless choice of breakups, aerials, radial patterns, and gobos specializing in morphing and texture.

And by layering the fixture's effects, a vast collection of custom visuals are available to achieve your desired look.

Market Manager Tania Lesage highlights the Hyperstar, saying, "It's a luminaire tailored for venues of all sizes and aesthetics. Boasting punchy output, extensive effects, and versatile colour capabilities, Hyperstar continues ETC's unwavering commitment to providing unmatched professional quality and impeccable service, all within an accessible size and price range."

ETC Hyperstar



Mixing Up Perfection

Diving into the ever-evolving realm of digital mixing consoles that have redefined live sound mixing capabilities; as two of India's most noted mix engineers – Farhad Daruwalla and Lakir Mehta – share their experiential insights

By Elton Noronha



Mumbai Drum Day features a number of drummers on stage and is mixed by Lakir Mehta. Lakir highlights that having to deal with over 70-75 inputs is exactly where having a modern-day digital console helps in accurately punching in the mix for each specific drum kit along with their own individual components.

The live sound industry, over the past five years in particular, has witnessed an astonishing surge in the adoption of cutting-edge live mixing consoles; propelling both sound engineers and audiences into an era of sonic brilliance.

They say numbers don't lie – and this is certainly the case when we look at the sales data from independent research firms, which report an impressive 15% annual growth rate in the global sales figures for live sound consoles over the course of this time period. Breaking this down into simpler terms – if one were to consider that the year 2018 witnessed the sale of 2,500 units, then this would mean that the figure has skyrocketed to over 4,800 units in 2022, despite the excruciatingly crippling

effects of the pandemic. The data cites Asian countries like India, Vietnam and Indonesia as key focus markets for console manufacturers – and it is believed that globally, the live mixing console market generated sales worth USD \$550 million in 2022; with the figure expected to reach USD \$579 million by the end of 2023, and continue growing at a projected CAGR of at least 7.5% from 2023 to 2033. This numerical surge clearly mirrors the growing demand for advanced audio solutions in the regions' thriving live music and event industry.

But then comes the obvious question – What is it that actually drives this insatiable appetite for live sound consoles?

Beyond the numbers, it's a story of innovation meeting the aspirations of sound engineers and live production professionals. Engineers are no longer content with basic mixing capabilities; they crave consoles that are technological marvels, offering seamless workflows and an array of features to shape and sculpt soundscapes with unprecedented precision. And according to several industry experts, this has been the catalyst behind the industry's leading console manufacturers investing huge portions of their annual budgets into research & development of mixing desks that can allow engineers to 'achieve more by doing less'!

What was once a masterful symphony of knobs, faders. and endless cables - the realm of live sound mixing consoles has seen a seismic shift, with the digital age ushering in a wave of innovation that has presented mix engineers with a dazzling array of tools and technologies - all of which are accessible to them guite literally at the press of a button. Gone are the days when sound engineers were tethered to colossal analog behemoths that demanded navigating a labyrinth of cables and arcane signal paths. Instead, the present-day live sound consoles are sleek, powerful, and remarkably intuitive. The days of wrestling with a myriad of outboard gear, manually patching and repatching, are fading into obscurity. Instead, we find ourselves in an age where a single touch on a high-resolution touchscreen can summon a universe of sonic possibilities. In fact, the consoles that grace the stages of the world's grandest arenas today are no longer mere control centres; they are compact, efficient and complex ecosystems of digital wizardry.

These new-age digital consoles, with their intricate algorithms and processing power, have become more than just tools; they are co-pilots in the journey of sound creation; signifying a story of evolving expectations where sound engineers no longer settle for basic mixing capabilities. In fact, user adoption trends paint a vivid picture of what today's sound engineers are seeking in their consoles; where, in addition to stellar audio quality, engineers now prioritize features such as intuitive touchscreen interfaces, extensive onboard processing capabilities, and seamless integration with digital audio networks. Cutting-edge digital consoles, powered by FPGA processing, empower engineers to craft intricate

audio effects and precise EQ adjustments effortlessly. Plus, in addition to supporting studio grade capabilities like access to a host of plug-ins and on-board effects; it has also been reported that in more recent times, touring engineers for world-class international acts have demanded consoles that can effortlessly handle spatial audio formats and immersive audio capacities – as they aim to offer live concert audiences with the kind of multidimensional soundscapes that captivate moviegoers at cinemas equipped with sound experiences like Dolby Atmos.

From advanced user interfaces to seamless integration of immersive audio – what's apparent is that today's consoles are more than just mere tools or a means to an end. Rather, they are one of the most crucial keystones that have ushered in an era of sonic renaissance within the live sound domain. In fact, many view the dynamic advancement of digital mixing consoles as a revolution that resonates far beyond the stage, where every single new feature is a testament to an industry in progressive flux, where the path to enhanced capabilities is constantly shaped by technology, creativity, and an unwavering pursuit of sonic excellence.



Farhad Daruwalla

As we delve into this dynamic landscape, we explore the intricacies of present-day digital consoles and the kind of transformative impact it has had on live event

experiences for audiences and artists alike; as two of India's most noted live sound engineers – **Farhad Daruwalla** and **Lakir Mehta** – share their candid views on what makes for an ideal live mixing console in today's demanding live music landscape.

As a personal engineer, Farhad has had the distinction of working alongside some of India's leading popular



Lakir Mehta

commercial music artists, with the stellar list of names including music heavyweights like Sachin Jigar, Adnan Sami, Onempire, A Class Apart, Shankar Ehsaan Loy, Amit Trivedi, Salim Sulaiman, Papon, Vishal Shekhar, Shalmali Kholgade, Neeti Mohan, Sanam and more.

On the other hand, Lakir has built an impressive repertoire of working with some of Indian classic music's most renowned artists and maestros, the likes of which include revered personalities such as Ustad Amjad Ali khan, Ustad Taufiq Qureshi, sitar maestro Niladri Kumar, premier flautist Rakesh Chaurasiya and band, Amaan and Ayaan Ali Bangash, Kavita Seth, Prem Joshua and band, The Quavers Chamber Choir and several others.

The fact that these two experts specialize in crafting unparalleled experiences for two distinctly unique music styles; gives us the unique opportunity to explore the finer nuances of how live mixing consoles enable engineers to shape bespoke experiences for music beyond genres by offering an array of advanced tools and capabilities.

The following pages are excerpts of an exhaustive QnA with Farhad and Lakir, where they share their take on several facets of present-day mixing consoles and how advancements in technology has allowed engineers to achieve levels of precision and efficiency that were once but a fleeting dream.

In recent years, what advancements in audio console technology have had the most significant impact on your work as a sound engineer?

FARHAD: Good Quality Head Amps with better Signal to Noise Ratios, expandable I/O options, signal and power redundancy, customization of the desk to suit an engineers' workflow, ability to control the show file via I-pads and/or laptops, ease of using snapshots – these are just some of the features that have had a significant impact on my work.

LAKIR: Access to a wide number of input and output channels with the ability to produce good sound is definitely one of the biggest positives when we consider the transition from analog console and digital consoles. This singular facet plays a huge role in streamlining work while considering a number of different conditions as well as working with different application segments simultaneously from one environment i.e. live concert multitrack recording – broadcast. Furthermore, higher sampling rate help us to achieve higher resolution audio quality that sounds better and cleaner, while also offering a more dynamic range, lesser floor noise and lesser need for 'hot levels'; thereby reducing chances of clipping and/or distortion given the fact that you've put together a good gain structure. In addition to this, easy pairing with external digital racks offers an added tool to help engineers add nuances and layers in the audio output, thereby adding more depth and mass to the sound experience. Initially when everything was analog, an engineer would've been expected to carry a whole lot of outboard gear and rack components to achieve such a 'fuller' sound experience. However, with present day advanced digital consoles, all you need to do is carry your USB plugins and server. Consoles these days are full equipped to capably handle a wide variety of plugins without any latency – and this has turned out to be such a blessing for engineers who like to fine-tune the sound experience to the minutest of details.

What kind of role do 'plug-ins' play in your current mixing workflow, and what kind of impact has this had on the quality of the work that you've delivered?

FARHAD: 70% of the times I mix 'In the Box', which means that I do not use too many plug-ins since the consoles that I prefer working with give me access to all the processing I need. I only reach out for the plug-in racks when the artist I mix with specifically requests for a particular plug-in or if the console that I'm working on is unable to achieve the kind of sound profile that the performance desires. Having said this; yes, the sheer fact that we as engineers have access to deploy such tools whenever needed – that in itself is a massive positive.

LAKIR: I've kind of tailored this aspect of my work with due consideration to the bands / artists that I'm working with and the preferred consoles that we can expect to have at any given show. My current mixing setup includes a few awesome plug-ins from Waves which are my personal all-time favourites; and this is accompanied by a few compressors and effects such as the C4, C6, vocal rider, H delay and H reverb, and the SSL G channel to name few ... The fact that I have access to use these add-ons within a live setting, and achieve the kind of 'rounded' sound experience that enhances the overall performance magic, is truly something that I'm thankful for as an engineer.

Please also discuss the importance of customizable control surfaces, instant recall of snapshots with on-the-go customizations and other such capabilities on modern audio consoles for achieving your desired mix on stage or at FOH?

FARHAD: Recalling snapshots and presets has made sound checks and running shows much easier. Engineers no longer waste time tweaking settings for each song or each aspect of the performance. All settings and desired changes are stored in the particular snapshot or cue and then we can change parameters with the hit of a button. We can even have crossfade times between snapshots for smooth and subtle changes. All the processing available in the console can be changed or kept the same depending on the need. Gain structure, filters, EQs, dynamics, fader positions, I/O routing and much more can be changed according

to the need of individual songs during a performance. It's a useful way of making sure all the changes are reflected and no cues are missed. Also getting my show files ready on offline editors before I even reach any venue is of utmost importance to me; and the capacity of consoles to accurate read and reproduce these files makes life a whole lot easier.

LAKIR: Honestly, I count this as one of the most important features in current day consoles which makes them even more user-friendly. The ability to tailor every aspect of the console - from the hardware to the software aspects, down to your exact preference is absolutely crucial for mix engineers these days. Making your own custom layers according to the artist that you're working with, and based on the duty you've been called in to fulfil (FOH or monitor), helps us engineers to get have quick access to each aspect of the sound structure - be it the I/Os or racks. When you are working with a multitude of different channels, the ability to quickly create your own custom layers with combinations of I/O. DCA/ VCA groups etc helps engineers to be on point with their mix, without the need to shift more banks to find what you need.

When touring with artists to work at different venues with their own set of acoustical limitations, does the option of working with a particular console with its own unique set of flexibility and adaptability features impact your ability to provide consistent sound quality across all venues / shows? Please do share any specific challenges that you've faced on the road and how features provided by the designated audio console for the show(s) has helped you overcome those challenges?

FARHAD: The biggest challenge and the most fun aspect of live sound is that no two venues sound the same. And since the acoustics of a venue plays a vital role in crafting a performance experience; it is crucial for us as engineers to know how this aspect is going to affect our mix. Here, I believe that before you even get to working with the console; the first step lies in choosing the correct PA for the venue and ensuring that the rigging and tuning of the system is done right. Once this aspect is in place; you can then source the console that you desire. Flexible and customisable matrix mixers, recallable custom presets, multi-band dynamic

processors and snapshots are some of the features in my preferred list of consoles that help me deliver consistent sound across different venues. I am open to using audio consoles from most manufacturers; but if I am on the road with the same artist, I try and stick to one family of consoles. Not only does this help me in getting better acquainted with the consoles and all that they're capable of achieving, but it also helps me troubleshoot better in real-time if the need ever arises. Also, I get to use the same show file in the same format which gets tweaked and fine-tuned with each passing show, thereby enhancing the entire auditory experience every single time.

LAKIR: In this particular scenario I believe you need to trust your ears and your expertise. This is paramount, especially when you're up there taking a call on how well the loudspeaker system is tuned; and whether it needs any adjustments before you begin working on the console. When you do get on the console; aspects like precise EQ processing and other features helps in further tailoring the quality of the sound experience; for the audience as well as the artist. One particular scenario where I believe that present day digital consoles particularly excel in is when you're performing at a venue that has a lot of natural reverb and reflection. While the alignment and tuning of the loudspeaker system can be viewed as the first stage of correction; the fact that we now have digital consoles that allow for a greater amount of output processing, helps to ensure that such issues in particular are resolved to the best possible capacity.

Which features of modern-day audio consoles, according to you, helps to enhance the precision and customization of monitor mixes for artists on stage?

FARHAD: With the ever-increasing dependency on in-ear monitoring, the need for higher output count and processing has also increased. First off, it is always good to have a console that can give you the desired physical outputs. Secondly, I take into account the number of outputs I will need on the desk to make sure I don't fall short. This includes IEM mixes, Fx processing, Dynamic processing, Group and Direct Outs, recording outputs and everything else in between. One very useful feature among modern desks is the ability to send groups to auxiliaries which help in sending multiple channels to an

aux very quickly. Plus, having access to console features on my I-pad running the console software via network helps me dial in my monitor mixes fast especially if I need to step away from the desk for any reason.

LAKIR: A lot of popular bands and musicians these days prefer having 2 or 3 engineers travelling with them; and usually this entails 1 FOH engineer, and 2 monitor mix engineers where one is responsible for the sound structure and output of the musicians while the other looks at the needs of the singer(s). The monitor mix engineer helps to ensure that the artists / musicians get the kind of tailored sound experience that they desire in their personal monitor mixes; and present-day consoles enables monitor mix engineers to keeping different gains / EQ structures and tailor every aspect of the monitor mix output for each performer. This goes a long way in ensuring that the overall performance progresses flawlessly, which is usually the case when each person on stage is able to hear their own mix clearly.

Please share any instances where innovative audio console features helped you in offering a better overall experience for the artist performing on-stage?

FARHAD: In my personal experience, features like Nodal processing and True Solo that one gets to use on DiGiCo's Quantum range of consoles are a game changer for monitor engineers. When used correctly, these features can give the artist a better experience on stage while maintaining the right reference for engineers while monitoring them.

LAKIR: So, I'm a part of this concept by drum maestro Gino banks which takes place in Mumbai each year where we have 7-9 drummers on stage, all playing their individual solos and then culminating in grand finale where usually everyone comes in together. A few aspects of the performance are programmed or pre planned, whereas quite a few times there's a lot of improvisation. In such a situation when you have so many world-class solo acts on-stage, you end up having to deal with over 70-75 inputs; and it is exactly in these kinds of situations where having a modernday digital console helps in accurately punching in the mix for each specific drum kit along with their own individual components. The ability to use different plugins and effects for each performer, allows me to

tailor a unique listening experience for each musician, even though eventually everyone's playing percussions / drums. Managing each individual performer's click, tracks + instrument mix is quite daunting task; and this only becomes easier when you have the advanced capabilities of present-day audio consoles to work with – be it greater processing power, greater I/O, or any other feature among the multitude of capabilities that they provide.

How have the developments in audio console technology influenced your ability to achieve superior sound quality for the audience in the front of house (FOH) position?

FARHAD: Constant improvements in the overall quality of head amps, the introduction of multiple multi-band dynamic processors, enhanced redundancy, better sounding and low latency onboard Fx and plug-in processing – all of these have been considerably important in helping mix engineers deliver pristine sound quality during a mix for the audience.

LAKIR: While mixing FOH, current advanced technologies help us in routing the same signal in different ways to achieve the kind of processing that we desire; all of which can be done through groups, multiple egs or dynamic processing at particular positions, using snapshots for particular delay effects/ tap tempos etc - all of which help to tailor the sound experience to a nearly 'studio-like' quality. Furthermore, when I tour with bands or artists who perform with multiple other musicians on stage, working with snapshots for a key set of effects becomes an essential part of handling individual mixes as well as the overall mix. Many-a-times, I'll need to mix monitors and front of house together – so in such situations, I rely on simply soft patching the same input of a channel for different processing capacities like adding multiple reverb and delays for different kinds of instruments or using the same plugin for different instruments. The capacity to do more by not really having to scamper around to get these tasks completed, helps me to offer a really bespoke experience for the audience as well as the performers.

In your opinion, what emerging trends or features do you anticipate will become essential for live sound engineers in the near future?

FARHAD: I personally feel that for monitor engineers, applications like Klang and features like True Solo and Nodal processing which are only found in a few consoles will eventually become a norm. On the other hand, for FOH engineers, aspects like the available processing power on output busses on consoles has made it easier to control and tune systems. With a plethora of high-quality console options to choose from today, it is important to find the option that works best for you and your artist for any given event, rather than going for the best and the biggest console or the latest trend.

LAKIR: Honestly, I feel that features like Klang and/ or immersive audio is what most artists will demand so that they can experience the same kind of 'studio quality mix' when they're performing on stage. They way it is designed and produced is amazing and now one can't deny that these are the trending topics for sure. Alongside, consoles with the ability to mix 5.1 in live environments like dramas, broadway musicals etc will soon become a norm as it offers a truly amazing experience for the audiences to immerse themselves in the performance in real-time.

Artificial intelligence and automation – Do you think these trends will have an impact on live sound engineering and / or audio console designs in the coming years? Please elaborate

FARHAD: All is here to stay... whether we like it or not. Having said that nothing can replace the judgement of an experienced human ear; especially when it comes to live sound.

LAKIR: I strongly feel that artificial intelligence will surely not have any significant impact on the live sound domain apart from offering a cooler set of features that can help artists and engineers offer a better sound experience. When it comes to live performances, its all about the live interaction between the artist and the crowd – and eventually, such situations need the human touch, which is something that AI cannot replicate, at least for now.



Is there anything else you would like to add regarding the evolution of audio consoles and their impact on the live sound industry?

FARHAD: Modern digital consoles have made crucial aspects such as complex audio routing, programming, multitrack recording and abundant channel processing not just possible but available at our finger tips – something that was a major hinderance during the analog era. So, for mix engineers like me, there's a lot to be thankful for – and a lot of credit goes to the manufacturers that offer these capabilities and the rental companies that invest in such great pieces of technology.

LAKIR: The non-stop development of technology as a whole, coupled with the regular launching of new consoles definitely makes the industry competitive, and demands huge investments from rental companies, which understandably translates into a quite a challenging situation for them to run and sustain their business. In fact, technology is evolving so rapidly these days, that console features run the risk of being outdated or obsolete in a matter of just a few years. So, while on the one hand we'd have access to better features and stronger capabilities, on the other it'll demand a lot from the engineers to get well versed with these aspects, and more importantly, the rental companies to stay on their toes to be ready for the next big investment. In my opinion, this situation is akin to handling a double-edged sword; and as an industry we need to be a bit more mindful of this.

Is there any advice you would like to share with sound rental companies and those aspiring to get into the live sound business? If so, please elaborate

FARHAD: Firstly, to all the sound rental companies I would always say 'Thank you' for your constant support and for providing me and my artists with the best equipment possible. On another note; my advice to all the sales channel partners would be to take all kinds of feedback (positive and negative) from users and forward the same to the manufacturers promptly. There have been many instances of dealers/distributors being



negligent when it comes to providing quality after-sales service and repairs. If such issues continue to persist without any visible efforts to improve the situation; then it should be their duty to connect with the console manufacturers directly and inform them about the same so that an immediate solution can be found. This would inspire confidence for users – be it mix engineers or rental companies – to continue partnering with the brand in the future as well. And finally, my advice to all aspiring audio engineers is simple – always let your ears be the judge... not the screen!

LAKIR: But of course, I'm always thankful to all the rental service companies that I've had the pleasure of working with; and particularly to those who've commissioned our events with world-class equipment and go the extra mile in ensuring they maintain their gear in pristine condition. It is fantastic to see that more and more rental companies have become open to working collaboratively, not just with artists and engineers but also with each other, and I believe it is this same spirit of collaboration that will help propel the live event industry to greater heights in the times to come.

Farhad Daruwalla

Lakir Mehta



AUSTRALIA

TDC Studios Houses First Virtually Produced Australian Thriller

Besides building a bespoke virtual set, TDC also provided production support for Mercy Road which was shot using ground-breaking real-time in-camera compositing techniques



© TDC - Technical Direction Company.

Working from a script by Chris Pelletier and Jesse Heffring and starring Luke Bracey (Point Break; Hacksaw Ridge; Elvis), Mercy Road is a white-knuckle ride about a man who is pushed to the limits of his sanity to protect his beloved daughter. Mercy Road is an unrelentingly tense psychological thriller and the first Australian feature film to be entirely shot using virtual production.

Teaming up with visionary Australian filmmaker Alex Proyas' (The Crow, Dark City) Arclight Films and virtual film production company, Heretic Foundation filmed the in-car and select outdoor scenes for the 85-minute drama using the LED Volume stage at the purpose-built TDC Studios in Sydney, Australia.

To realise his vision, Curran and cinematographer Ross Giardina (Gold) devised the film to be shot using real-time in-camera compositing techniques at TDC Studios with a workflow designed and supervised by Heretic.

TDC supplied and engineered the bespoke virtual set and space for filming including ROE Black Pearl BP2 LED screens, RedSpy by StYpe wireless optical motion tracking and the latest vx 2 disguise Media Server. The LED screen itself was 11m x 4m while the LED ceiling was utilised.



The TDC team deployed the disguise XR workflow using rx II render nodes to render out Unreal Engine scene work live. "Utilising XR for scenes like this becomes very efficient as production staff are able to change out the desired scenery very quickly," explained Harrison Dow, video technician at TDC.

TDC collaborated with Giardina to facilitate the pixel mapping of the film's scenic lighting to make ambient lighting subtle and even more immersive. Two downstage LED trolleys were at the DOP's disposal to further enhance the scenic ambient lighting.

Alex Rendell, technical project manager, TDC Studios gushed: "TDC Studios are at the forefront of immersive virtual production technologies. We were honoured and excited to have worked with Arclight Films and Heretic Foundation to support the production at TDC Studios in seamlessly blending live and virtual worlds and to bring this powerful story to life."

Andrew Robinson (The Wolverine, Mad Max: Fury Road), GM and executive producer, Heretic Foundation

added: "The power of virtual production is to enable creative talent to bring anything in their imagination into reality. For Mercy Road, we employed a seamless workflow and the flexibility of Unreal Engine and LED screen tech, to place ultimate control into the hands of John Curran. We are proud to have played a key role in bringing the first Australian feature to be entirely shot using ground-breaking virtual production to the screen."

Filmed during the lockdown in July 2021, TDC supported the production with a distributed system so that anyone in the studio could remotely watch what was being filmed inside the studio. This was vital due to strict COVID regulations. Similarly, TDC was able to facilitate remote control from an external site for the lighting board operator to meet COVID regulations. Producers located in the U.S. unable to be in Australia were able to view dailies during production thanks to TDC's fast fibre optic connectivity.

For a film in which the majority of the action is set in a car driving through the outback, filming on a virtual production stage significantly reduced the total carbon footprint. TDC helped create and construct a roadway





set that was in front of Bracey to help him turn into the corners more realistically and naturally during filming, eliminating all petrol emissions from the process.

"The studio is accessible to bring multiple car props in and out and we have loading dock space to be able to do this," explained Rendell. "The client also used our on-site facilities during filming such as dressing rooms, green rooms, meeting space and kitchens." The film, which co-stars Toby Jones (Berberian Sound Studio) and Susie Porter (Cargo; Ladies in Black), is produced by Arclight Films' chairman Gary Hamilton, Ying Ye and Michelle Krumm. Alex Proyas, Penny Karlin and Daniaile Jarry are also producers.

Michelle Krumm noted: "Mercy Road really pushes the boundaries of new technology and its innovation has delivered. By utilising virtual production in Sydney at TDC Studios, we had 100% control of the filming environment which meant a faster shooting schedule, more dynamic scenery and a safer space for the actors and crew to work in."

Arclight's Gary Hamilton concluded: "Mercy Road is a gripping thriller vividly brought to life by our amazing director, John Curran. The film's star Luke Bracey is such an exceptional talent who simply ignites the screen and brings the audience along for a wild ride. This is a visually stunning and unique film that utilises cuttingedge technology."

TDC



AUSTRALIA/NEW ZEALAND

Zac Coren Lights Morgan Wallen 'One Night at a Time' with Elation Proteus

Sold-out stadiums and larger productions reflect the meteoric rise of country music superstar whose tour relies heavily on the adaptability of Elation's Proteus luminaires



©Danielle Marshall.

Morgan Wallen has become a country music superstar in an unbelievably short time. Just years after debuting, he continues to dominate the country music charts with a pair of albums that remain in the Billboard Top 10. His 2023 release, "One Thing at a Time," topped the chart for an entire 15 weeks. Wallen's current "One Night at a Time" stadium tour reflects his meteoric rise with an expanded production design by Zac Coren that includes Elation Proteus luminaires.

Being an outdoor stadium tour, IP-rated lighting fixtures were a must and Zac turned to three fixtures in the proven Proteus series – Proteus Rayzor Blade linear FX bars, Proteus Hybrid moving heads, and Proteus Rayzor 760 LED wash effects.

Zac Coren has been with Wallen for nearly five years and says the current stadium tour is the biggest the country artist has done to date. "We wanted to create something that feels as big as he is right now," the designer stated. "So we brought in some elements that we've wanted to add for a while but didn't have the opportunity to use until now like more pyro, lasers and a larger lighting rig. We really put together a show the way we have always wanted."

Zac serves as production designer and lighting director with programming by Will Flavin and AJ DiCarlo and creative direction by Cort Lawrence and Anders Rahm. Zac stated that they intentionally steered clear of designing a setup that was overly specific as they didn't





want to be constrained by a certain look. Instead, they aimed for something versatile enough to adapt to the singer-songwriter's growing catalogue of music, which covers everything from down-home country hits and intimate moments to upbeat party songs and more rock-type numbers.

Creative Director Cort Lawrence worked alongside Raw Cereal partner Anders Rahm to oversee the collaboration of various production departments to develop the concert's overall concept and theme and bring the show to life. "Our collective goal is to deliver an engaging and immersive experience, creating a cohesive and visually stunning live performance that reflects Morgan Wallen's brand and deeply connects with the crowd," Cort stated, adding that the show is inspired by the artist's journey, authenticity, and connection with fans. "The main story we wanted to tell was a reflection of Morgan Wallen's growth as an artist, capturing the essence of his music and the emotions behind his songs."

The design is a seamless fusion of contemporary and rustic elements, reflecting both Morgan Wallen's modern artistry and the heartfelt essence of country music. The overall design incorporates a sleek and dynamic linear look with clean lines that visually guide the audience's attention. Patterns and symmetry play a crucial role, adding depth and texture to the stage design and lighting effects.



Overhead are what appear to be four simple sticks of truss but it quickly becomes apparent they are much more than that. "The truss lines are automated which allows us to move them into different positions and create various shapes throughout the show," Coren commented. "We take what looks like a simple setup at the start of the show and then lower it to create different angles and shapes that complement the video and

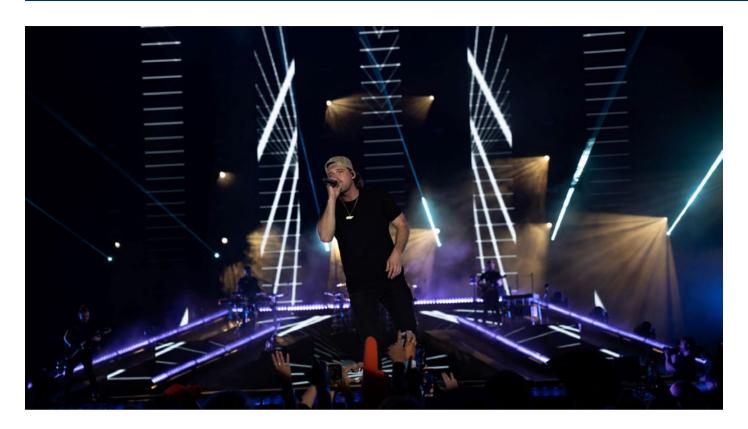


lighting elements. It adds a lot and keeps the rig feeling dynamic."

The innovative use of automation allows the lighting design to evolve throughout the show, adapting to different songs and moments, and creating an everevolving and visually captivating experience for the audience. Not only did the adaptable setup allow Zac to create custom looks for each song, but it also allowed him to make some 11th-hour looks just before the tour launch. He noted, "We were waiting for his new record to come out which it did right before we left for Australia, so we didn't have a lot of time to digest his new music. Having that versatility, being able to create different positions, different moments and looks, was huge."

A key fixture in the setup and an important component in the versatile nature of the automated trusses is the Proteus Rayzor Blade, a multi-functional IP65-rated linear tilt FX bar. "You want a strobe on those trusses but you want something else as well, maybe a linear bar or Mole, and we have it all in this one fixture," Zac said of the linear light, which adds an extra layer of creativity and visual intrigue. "As the truss moves into different formations, we carve out ever-changing shapes and designs with them and can use them for eye candy or





to hit a specific moment in the music if need be. The amount of tricks you get from them is fantastic."

The LED-based Proteus Rayzor Blade, with zoom, combines the traditional batten's form factor with cutting-edge technology, offering an impressive array of lighting features and capabilities. It can function as a wash, strobe or FX light and powers out up to 11,000 lumens. Two high-intensity strobe lines add extra impact and 210° tilt rotation allows them to position dynamically during a show.

They also include Elation's proprietary SparkLED twinkle effect for added design choice. Cort explained, "They produce bright twinkling patterns that can be seen from every seat in the venue, enhancing the overall concert experience." All of the overhead trusses, as well as a second structure on stage, are lined with Proteus Rayzor Blades, which work with several high-output lights in the rig that Zac added they hold up well against.

"There are a lot of looks where the Rayzor Blades complement the other fixtures," he said. "On the song 'I Wrote the Book' for example, where the truss comes in to create an asymmetrical look, the Blades create a diamond shape cut out into the rig. Will Flavin and AJ

DiCarlo did an excellent job in maximizing what every fixture could do and pulling out different tricks with them to make them feel new throughout the show."

Zac selected the Proteus Hybrid moving heads as his preferred beam light for the show, which work from positions on the floor beside IMAG trusses. Additionally, he opted for Proteus Rayzor 760 LED wash effects mounted on an 8-ft truss above the stage, which serve to provide wash effects on the band and create eyecatching visuals for the crowd.

By any measure, Wallen's "One Night at a Time" tour has been a big success with fans treated to an unforgettable performance and mesmerizing production. It plays dates into November with some 2024 show dates already on the schedule.

Elation Professional



AUSTRALIA

GREEN-GO System Helps Chameleon Smash High-Profile Australian Tours

Chameleon's new GREEN-GO system has already gone out on international artist tours in Australia, including The Killers, K-Pop, and the most recent Lizzo tour

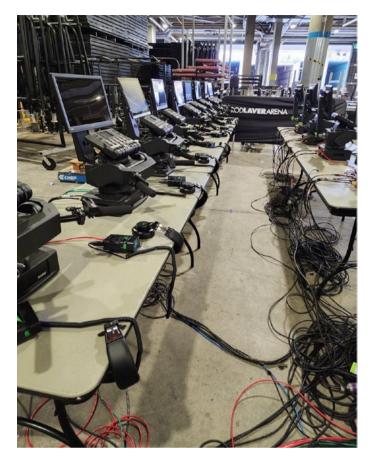


©Chameleon Touring.

Australian live entertainment supplier Chameleon Touring Systems has upgraded its communications solution from an old analogue party line system to a GREEN-GO digital package, to aid reliable communications between lighting teams on tour. GREEN-GO dealer Event Communications Australia masterminded Chameleon Touring's investment, drawing on its extensive experience in digital communications solutions for the live music touring market.

"Chameleon's previous comms systems was based around a basic single channel, analogue party line system which were starting to be less reliable, so it was time to update to current technology," said Event Communications Australia's Rod McKinnon. "We worked closely with Graham Walker at Chameleon Touring to curate a kit list of GREEN-GO products that we knew would offer clear, easy-to-use communications for the lighting crew working on upcoming tours that Chameleon was supplying. Chameleon Touring doesn't supply talkback systems for their end clients, but they find it essential for their lighting teams, so they have reliable and consistent communications between all lighting personnel."

LIVE



The GREEN-GO system has already gone out on international artist tours in Australia, including The Killers, K-Pop, and the most recent Lizzo tour. The GREEN-GO products now in Chameleon's stock include 16 x GREEN-GO BPX wired beltpacks with 16 x GREEN-GO HS200D Dual muff headsets; 2 x GREEN-GO SW8.1 PoE Switches and 1 x GREEN-GO Interface-X.

Chameleon's Graham Walker commented: "The technology, flexibility and simplicity of the system [are] what attracted us to GREEN-GO initially. One of the big draw cards was the fact there is no need for a comms matrix or master station, just a network switch, which means there is not one single point of failure, as the configuration lives on the beltpacks.

"The scalability of the product was also very appealing. It is very quick and easy to configure the system and then make changes when required to adapt to the evolving needs and budget of a show or tour."

The Chameleon team is busy planning to use their GREEN-GO kit on upcoming tours for The Chicks, Sam Smith, II Divo and Def Leppard/Mötley Crüe. "While comms are just a small part of what we provide, we need to continue to invest and improve on all our systems to make sure we are providing a premium service to our clients, and provide our crews with the best possible tools to do this," added Walker. "Of particular note is the audio quality of the system, and the ability to talk to multiple user groups or discretely and directly to individual users, which is particularly useful when trying to resolve issues during a busy show environment."

The Chameleon team note that the beltpacks are also very lightweight, making them less obtrusive on users and less prone to impact damage.

"Also, the GREEN-GO headsets have proven to be very robust, which has been a challenge for us over many years with other brands," enthused Walker. "Overall, we have found GREEN-GO to be a great comms solution, representing good value for money, suitable for all scales of production, which has provided us a high level of flexibility, but with a simple infrastructure and software system sitting behind it."

Rod McKinnon concluded: "GREEN-GO also comes with great local support both from a servicing and technical advice perspective and additional products when required. We're thrilled to have partnered with Chameleon to provide a great system for their touring work here in Australia."

GREEN-GO



CHINA

CODA Audio Space Hub Turns the Outdoors Inwards for Forest Park Concert

Tongbo successfully deployed CODA Audio's Space Hub to provide an immersive 'concert hall' sound for an outdoor orchestral show that left a deep impression on the audience and staff alike



The 2023 Beijing Xishan Forest Park Concert was recently staged in the Chinese capital's Xishan National Forest Park. The Symphony Orchestra of the Chinese Central Ballet Troupe (China's national ballet company) was conducted by the well-known and highly regarded Tan Lihua, who is also the conductor of the Chinese Philharmonic Orchestra. As well as being hotly anticipated, the concert also provided leading production specialist Tongbo with an ideal opportunity to deploy a CODA Audio immersive sound system for the first time.

The system was based around CODA's latest product, the immersive sound processor Space Hub, which Tongbo had spent almost a year trialling at the CODA Audio Beijing Operations Centre. Having carefully examined the practical applications of Space Hub, Tongbo's technical team felt that the Forest Park Concert offered the perfect environment in which to take their achievements with immersive sound out of the rehearsal facility into the real world. The team addressed two principal areas in the studio, firstly in the context of stage monitor mixes for musicians and then to enhance the experience of the audience at concerts.



Following thorough communication with the organisers of the Forest Park Concert, the go-ahead to use the immersive system was granted with their full support. Everyone involved with the project was excited to witness what could be achieved. Essentially, the team wished to provide the audience with an experience similar to sitting in an indoor concert hall while being outdoors. This was to be achieved by combining traditional stereo sound with immersive sound techniques to simulate the acoustic environment of a concert hall.

The main system deployed traditional stereo reinforcement using 8 x CODA Audio AiRAY per side for the mid to far field, supplemented by 6 x ViRAY suspended below for near-field coverage. 3 x SC2 subs per side were arranged in a heart-shaped configuration to ensure that low-frequency signals were kept away as much as possible from the stage area.

In conjunction with the main system, the Space Hub immersive system utilising its built-in acoustic processor, adopted a U-shaped layout, surrounding the audience area on the remaining three sides of the space in a 270° wraparound configuration. A distance of 6.5m separated 6 loudspeaker positions on each of the sides. Each position used 2 x HOPS8 8" full range point source loudspeakers, at heights of 1.5m and 2.5m respectively. A further four speaker positions were located at the back of the audience area, each comprising a single HOPS8 deployed at a height of 3m.



The system worked extremely well. The combination of uniform, realistic and clear musical layers delivered by the main array, enhanced by the supplementary Space Hub-based system successfully recreated the sound environment of an indoor concert hall in the beautiful setting of the Forest Park. More than a thousand people enjoyed the perfect summer night, leaving conductor Tan Lihua to express his excitement after the performance:

"The sound left a deep and lasting impression on me. It allowed every musician and listener to enjoy the fresh air of nature whilst listening to the beautiful and brilliant sounds of the concert hall!"

The concert received great critical acclaim from multiple media outlets, with the Tongbo team especially happy that their preparation and hard work had paid off. CODA Audio's global director of Sales and Marketing, David Webster commented:

"This was a highly successful and meaningful endeavour which we believe marks a new chapter in the field of immersive sound reinforcement for live performances. The Tongbo team were painstaking in their preparations for this hybrid system which had such a positive impact. The possibilities offered by Space Hub are exciting indeed and it's great to see our friends at Tongbo pushing the boundaries with CODA Audio technologies to achieve successes like this!"

CODA Audio



CHINA

HOLOPLOT Breaks Barriers of Sound and Language

Pro audio company HOLOPLOT put Polestar in the fast lane with world's first live simultaneous translation and multi-zone audio experience at Auto Shanghai 2023



HOLOPLOT shattered the boundaries of conventional sound technology and language barriers at this year's Auto Shanghai – Shanghai International Automobile Industry Exhibition. In collaboration with renowned event solutions provider Creative Technology (CT) UK and Nordic, HOLOPLOT's flagship X1 Matrix Array took centre stage, revolutionising the way audiences experienced the highly anticipated launch of Polestar, the Swedish electric performance car brand's new model, the Polestar 4 electric SUV coupé.

By harnessing the power of 3D Audio-Beamforming and Wave Field Synthesis, HOLOPLOT created an inspiring multi-zone audio extravaganza, with show visitors treated to a keynote presentation from Polestar's CEO,





ingeniously delivered via two dedicated listening zones, one for English, one for Mandarin Chinese - the world's first-ever live simultaneous translations without the need for wearables. X1 also played a pivotal role in creating a captivating audio experience throughout the show, enveloping visitors in a discoverable sonic journey.

The HOLOPLOT team worked closely with Polestar, CT UK, and Nordic to create a system design that would fulfil the client's ambitious requirements: to achieve live simultaneous translation between English and Mandarin Chinese, a feat "never before accomplished without the use of headphones or any other aid other than the audio emanating directly from the sound system."

As a Swedish brand, Polestar wanted to maintain a clean and minimalist Scandinavian design, so careful consideration was given to the loudspeaker placement within the space, ensuring the technical infrastructure remained discreet by hiding as much of the technology as possible from view.

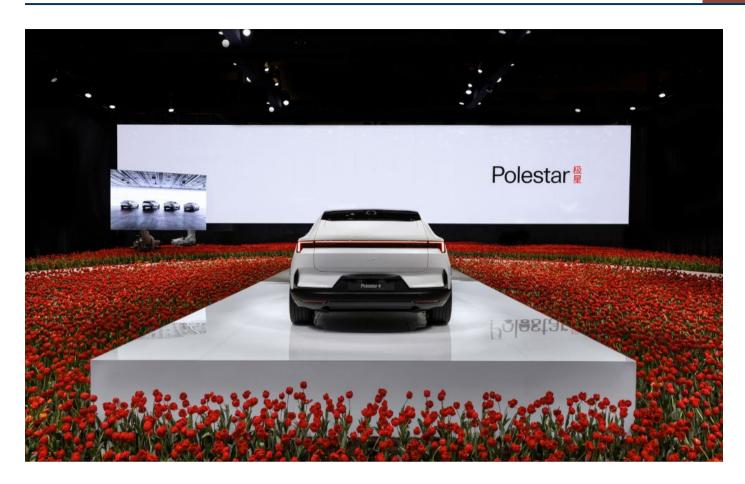
The oval-shaped space where the launch took place was divided into multiple areas. The new Polestar 4 was positioned on a central stage, surrounded by a field of red tulips, while the audience stood around the periphery

of the display. At the rear was a giant LED screen, displaying captivating videos and images of Polestar's exciting new product addition. As the company's CEO, Thomas Ingeniath, and Maximillian Missoni, head of Design at Polestar, took to the stage to deliver their speeches in English, thanks to the clever technology behind HOLOPLOT's innovative X1 Matrix Array, attendees could choose to follow the live presentation in either English or a simultaneous translation in Mandarin Chinese.

The system configuration comprised a main X1 array positioned above the LED screen, covering the area closest to it. Two pairs of X1 suspended at the left and right corners were utilised to project sound towards the opposite audience zones. This involved configuring the stage as a rejection zone, ensuring the cabinets on the left side would reach the audience on the far right of the room while avoiding the middle area. The same principle was applied to the other two cabinets on the right side and allowed the presenters on stage to deliver their speeches in a much more natural way.

X1's exceptional sound control ability ensures minimal spill onto the busy trade show floor. "We were able to contain the audio on the booth within a strict zone, achieving a significant roll off of about two metres from





the aisle, adhering to strict sound level guidelines," explained HOLOPLOT head of Sales Ryan Penny. The precise sound direction also mitigated much of the ingress of external noise, enabling visitors to fully focus on the content presented on stage and disconnect from the surrounding ambient noise outside the stand.

"Polestar is a new car manufacturer that's forward-looking and focussed on the personal experience of its customers," added Lee Dennison, head of Client Services at Creative Technology UK. "They wanted to be able to really touch people with the launch and make it inclusive, ensuring everyone got the same experience and felt part of the activation. Just as Polestar pushes boundaries in innovation, they wanted to work with fellow innovators that could solve this challenge for them by providing a single system that could deliver layers of audio, including multiple languages and immersive audio environments. The only way of accomplishing that was with Holoplot."

Homogeneous coverage for background music was also an integral part of the HOLOPLOT design. This was

a feature of the remainder of the 10-day show, with the booth featuring a dedicated four-zone audio experience, with two squares positioned on the floor on the left side of the stand, delivering information about the new car's technical specifications in both English and Mandarin Chinese. Similarly, two squares on the floor on the right-hand side provided information about the brand and car, again in English and Mandarin Chinese. Each listening spot measured just one square meter and precise energy dispersion minimised spill to the rest of the stand.

"The client developed a deep understanding of the importance of audio and its significance as an integral part of an event of such magnitude," concluded Penny. "Polestar appreciated the seamless listening experience without the need for wearables. With the success of the Polestar 4 launch and the world's first live simultaneous translation, and the multi-zone audio experience HOLOPLOT X1 delivered throughout the show, what was accomplished has truly opened up new possibilities and a natural way of engaging people in events."

HOLOPLOT



INDIA

TiMax SoundHub and Genelec Provide Fluid Zones at Inaugural Fashion Exhibition

Kapil Thirwani utilised TiMax SoundHub and Genelec loudspeakers to deliver compelling soundscapes that flowed between zones at the inaugural India in Fashion exhibition



The Nita Mukesh Ambani Cultural Centre (NMACC) opened its doors in Mumbai and ushered in a new era of creativity in a city renowned for its Bollywood influence. This multidisciplinary arts centre boasts a 2,000-seat theatre, two intimate performance spaces and a four-storey Art House. To mark its grand opening, a three-day celebration blended musicals and international art exhibitions including the inaugural exhibition of "India in Fashion: The Impact of Indian Dress and Textiles on the Fashionable Imagination." The exhibition celebrated

the global influence of Indian design on fashion and was lauded both for the scale of its exhibits and its engagement value.

Overseeing the project was Mumbai-based technology and acoustic consultancy firm, Munro. Their mission was to craft a soothing auditory landscape without compromising audio quality while ensuring the seamless integration of the loudspeakers into the background and their continuous operation for 12 to 14 hours daily.





Kapil Thirwani, director of Munro Acoustics was tasked with fulfilling the audio brief which demanded an array of immersive soundscapes that segued from zone to zone. Calling upon the expertise of distributor, Alphatec, he quickly discovered that only the TiMax SoundHub would meet the complexity of the audio solution in its entirety.

The exhibition was curated by Vogue's global editor, Hamish Bowles and presented a multi-zone exploration into the impact of India on global fashion and vice versa. Thirwani was contracted to deliver the audio solution in an extremely tight timeframe. On advice from Alphatec, who distributes TiMax across India, Thirwani had just enough time to fly to Barcelona to discuss the project in detail with Out Board.

Out Board director, Dave Haydon, explained, "Alphatec showed Kapil various ways TiMax could handle this project, which involved playing spatial music and effects across 15 different zones, starting and stopping it all automatically without anybody having to touch it. He worked out that TiMax was the only thing that could do it all at once."Thirwani's mission was a success and the final installed solution saw 2 x 64 i/o TiMax SoundHub-S64s each handle one half of the exhibition, playing out a mix of stereo and multi-stem spatial music as well as soundscape tracks to 128 x Genelec 4430 IP speakers across 15 zones. Genelec is also distributed by Alphatec.

"Munro is well known for its sonically excellent designs," explains Thirwani. "If we are hired to design, we also

have to keep up [with] the same design sense for sonic aesthetics. This led us to the Smart IP loudspeakers by Genelec. They run seamlessly off a PoE+ switch via a single CAT cable and tick all the boxes. We verified this by comparing electroacoustic modelling simulations of similar IP speakers and analogue speakers, followed by the creation of a mini rig for a singular immersive zone which we measured to verify performance against the theoretical model. Genelec was a clear winner."

Genelec's Smart IP series supports PoE, AoIP and sophisticated loudspeaker management, combining exceptional audio with single cable networked convenience. Launched in 2019, their minimalist aesthetic design allows Smart IP speakers to seamlessly integrate into any project. Featuring Genelec's trademark Minimum Diffraction Enclosure (MDE) and Directivity Control Waveguide (DCW), Smart IP loudspeakers provide clarity, intelligibility and uniform coverage, combined with 24/7 reliability.

"The Smart IP series offers outstanding sonic quality, minimum distortion and an excellent signal-to-noise ratio, all of which [were] important to us," continued Thirwani. "Everything is run over a single CAT cable, which simplifies the installation massively — a crucial advantage when you're working on a big project like this. We have a reputation for providing and designing some of the best audio solutions in India, and using Genelec allows us to maintain that reputation."



Designed to integrate with any Smart IP loudspeaker system, Genelec's Smart IP Manager software allows installers to configure an almost unlimited number of rooms, loudspeakers and audio channels and includes device discovery, room-equalisation tools, system organisation and status monitoring. This enables installers to deploy Smart IP loudspeakers even on complex, acoustically challenging projects. The outputs from the previously mentioned 64-channel TiMAX servers were assigned via Smart IP Manager and Dante Controller. "Time delays and source intercorrelation data were adjusted and stored both on the Genelec and TiMAX software," elaborated Thirwani. "The TiMAX stored the preset for the showreel and tracks and the global level variations between zones, while the Genelec sources stored the individual local information of that source in a particular zone."

The soundscapes for the individual exhibition zones were originated by Goa-based musicians Sandunes. With some multi-channel spatial audio tuition from Haydon in hand, the duo cleverly created audio content in the same key which served to prevent musical clashes from one zone to another. Various show content stems were sent to the UK where OutBoard's Haydon could begin programming the show files, and he subsequently visited Mumbai to help Sandunes bed in the immersive content on-site.

Without walls between the exhibits, overlap was unavoidable but once the audio installation was complete, the team started auditioning the soundscapes over the various zone speaker systems, walking from zone to zone with a Mac to fine-tune them.



Following this process all the settings were saved and the SoundHubs were locked. Set to fade up at 10:00 a.m. and then slowly fade out at the end of the day, simplified client control for the TiMax-controlled system was provided via a TouchOSC iPad for each SoundHub. Changes could be made to master level and individual zone levels for out-of-hours VIP visits, media, and TV interviews without impacting the saved set-up.

Arriving at the completed project shortly before it opened to the public, Haydon enthused, "The integration and design were amazing, and all the equipment was up and running to provide totally automated, hands-free, fully integrated show-in-a-box operation."

Giving testament to the stability of the TiMax system and its ease of use, Thirwani noted, "The entire show ran for two months with no issues at all."

Concluding, "This was a team effort, and solutions like these require meticulous planning and execution, drawing expertise from various fronts. From conceptualization to planning and execution, the project faced challenges on-site that had to be resolved before completion. I'd like to thank the team involved in the design and execution of this project: Utkarsh Naidu, Cyril Thomas, Johan Pais, and Aman Prajapati. Everyone worked incredibly hard, and the exhibition was an undeniable success."

Out Board

Genelec



SINGAPORE

Brompton Creates OMG Moments for Celebration of Entertainment Industry Talent

Oceanus Media Global used Brompton LED processing to create a dazzling VP spectacular for Mediacorp's Star Awards 2023



As the largest content creator and national media network in Singapore, Mediacorp operates a suite of TV channels, radio stations, and multiple digital platforms. Year after year, Mediacorp assumes the role of the central hub for the country's biggest celebration of content and talent in the local entertainment industry.

This year's event, the 28th edition of Star Awards, was themed "Beyond | Celebrations," and was re-imagined as a star-studded concert. It featured an exceptional lineup of Singapore's finest talents and regional superstars, joining forces in electrifying performances for an unforgettable night of glamour, excitement, and celebrations like never before. Oceanus Media Global (OMG) worked with Mediacorp to create the opening

segment and after-credit scene for the award ceremony using their next-generation Futurealistic Studio, with a high-tech LED volume powered by Brompton Technology LED processing.

Founded in 2020, OMG is a unique creative media tech company that represents a new multi-disciplinary intersection point in the industry. It comprises six partner companies: Resolute, AP Media, Anomalyst Studio, AP Academy, Scion Technik, and Grayback Esports, all of which are experts in their respective fields. These companies have joined forces with the primary objective of leading the way in the utilisation of immersive media, virtual production, and creative tech in the media industry of Southeast Asia. The LED setup



at OMG's Futurealistic Studio includes a 4K curved LED screen comprising broadcast standard P2.6 LED panels from ShowHo, measuring 11m long by 6m deep and 4m high. The screen is powered by 4K Tessera SX40 LED processors, offering a wealth of features, including HDR and Dynamic Calibration, as well as Extended Bit Depth, PureTone, ChromaTune, Dark Magic, Genlock, allowing for unrivalled creative and colour management capabilities.

"When we established OMG, we aimed to combine the creative, media, and tech domains in a single space to enable convergence," explained Nick GC Tan, CEO of OMG. "Our team comprises multiple experts such as producers, immersive multimedia tech specialists, studio personnel, audiovisual teams, light specialists, and more. Many people think that the concept of immersive media is just simply an LED volume, but it's so much more than that. It also covers live streaming, e-sports, virtual production, immersive media, the metaverse, and virtual avatars. Our Futurealistic Studio is a one-stop shop for all those disciplines, creating unforgettable XR, MR, and AR experiences."

OMG established a partnership with Mediacorp more than a year ago when Mediacorp commissioned the agency to animate a virtual tiger avatar and allow it to interact with real-life celebrities in front of an LED screen as part of the Lunar New Year celebration. Tan elaborated: "By combining the AR tiger with live performers, we created a whole new dimension to shows, demonstrating that virtual characters and humans can coexist on stage. We were thrilled to provide a fresh virtual spin on the Lunar New Year festivities and seamlessly integrate live broadcast with augmented reality."

According to Tan, the latest project with Mediacorp involved a three-day shoot for the Star Awards 2023 opening and after-credits video, which was a seamless and collaborative process. "It was a lot of fun. The team at Mediacorp had some ideas for the over-arching concept, and then our producer and director came up with the visual concept," he stated.

"We discussed how it would be filmed and how the LED stage would be set up. Mediacorp loved the idea, and we proceeded to shooting, which was stress-free and seamless thanks to the high-quality equipment in our

studio and the expertise of our team."

Tan emphasised that Brompton was the obvious choice for them when it came to selecting LED processing equipment for the project.

"Brompton was the clear choice for us when we opened the studio last year, and it remains our top choice today," he said. "The lifelike and ultra-realistic colour reproduction that Brompton provides is unmatched and exactly what visual effects supervisors are looking for, making Tessera LED processors a gold industry standard for virtual production studios. The straightforward usability of the Tessera software is also a major factor for us, as it streamlines our workflow and enhances our productivity. Ultimately, it's the combination of colour quality innovation and userfriendliness that makes Brompton our go-to brand for LED processing. Thanks to the SX40, we can deliver stunning and professional-looking productions, which gives both us and our clients peace of mind and confidence in the final output."

After the massive success of the Star Awards 2023, Tan revealed that Mediacorp was exploring other forms of projects to be done in a virtual production setting.

"We strongly believe that while immersion can occur in various settings, creating an environment that is hyperimmersive truly captivates the audience, enveloping them in a world of visual wonder," he shared. "We are thrilled that Mediacorp was satisfied with their experience at our studio, and we look forward to collaborating with them on future projects that leverage our technology to create these types of unparalleled experiences."

"OMG is a prime example of how companies can come together to form an alliance that is incredibly powerful, both in terms of resources and expertise," concluded Luke Hurford, business development manager, APAC at Brompton. "We are grateful to the OMG team for placing their trust in Brompton LED processing to create stunning live visual experiences such as the Star Awards 2023 that captivated virtual audiences across the globe. It's truly inspiring to see OMG riding an unstoppable wave of growth, and it's great to join them on this exciting journey!"

Brompton Technology





