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Fujifilm at the School of Cybernetics (ANU), NMA's Great Southern Land Exhibit and Tiger Lane Dining Precinct

The Electric Canvas Keeps Festivals Burning Bright in Australia and Beyond

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- / Brian Coleman: The Gaffa Tapes

RoadTest

- / Solid State Logic: The Bus+
- / PROLIGHTS Astra Hybrid330IP



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CXNETWORK

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AMTT's Training Programs Create the Next Generation of Entertainment Techs

The Entertainment Industry has been engaged in a battle for sustainability over the past five years, but few have offered a long-term solution that helps solve the staffing and live event attendance issues we're facing right now.

Since Covid, careers in the industry have seen a massive decline in interest, and the numbers enrolling in technical courses have declined significantly. Venues and event agencies are already feeling the effects of this with no clear plan in place to repopulate the industry's technical roles.

This is the landscape Australian Music Technical Training (AMTT) aims to change, with the help of its sponsors Earworm Productions, Inner Volume Total Sound Logistics, and ULA Group. Interest needs to start at a younger age, and AMTT's new training days are all about getting students excited about a career in the technical side of the Entertainment Industry.

The training days are live band focused, where students run soundcheck, program

lighting cues with ChamSys lighting consoles, learn about wireless DMX with Astera Tubes and perform the sound and lighting for a guest band performance at the conclusion of the day.

Since AMTT's inception, enrolments in school-based technical courses have already seen a significant increase, with enrolment numbers in live production courses almost doubling. AMTT has hosted over 1,000 participants from 34 schools in its first year alone, and these events now sell out within a week, proving that interest is still there.

None of this would be possible without the partnerships of ULA Group, Earworm Productions, and Inner Volume Sound Logistics. All three companies have all been involved from the beginning, providing support with staffing, financial contributions, and a large amount of equipment that students and teachers get to put their hands on, in many cases, for the very first time.

"Educating young, creative minds and inspiring them for future careers is important and rewarding," says Lenka Satankova, Marketing Manager at ULA Group. "We were very excited to join Darren, Dan and their team at AMTT

and Earworm Productions for this great initiative, providing students with the opportunity to experience the latest technology firsthand, and to be involved in creating their own live production. Seeing their excitement and enthusiasm for expressing their creative potential was very refreshing. The future of our industry is in good hands!"

Century Venues was extremely generous in donating its venues to AMTT for the first year of events, allowing access to a world-class venue like The Metro Theatre, Sydney. This year, AMTT has announced new sponsors: the Oxford Creative Academy (OCA) in partnership with the Oxford Art Factory (OAF), welcoming AMTT to a new home for training events.

Darren and Dan Lia from AMTT state: "We are extremely grateful to the team at Century for helping us get started with our programs and for the opportunities they've provided. Our goal has always been to create a pathway from school to certification and employment. With Oxford Creative Academy onboard, we're more confident than ever in achieving this goal. Together we hope to build a lifelong passion in students and offer them clear pathways to employment within our industry."

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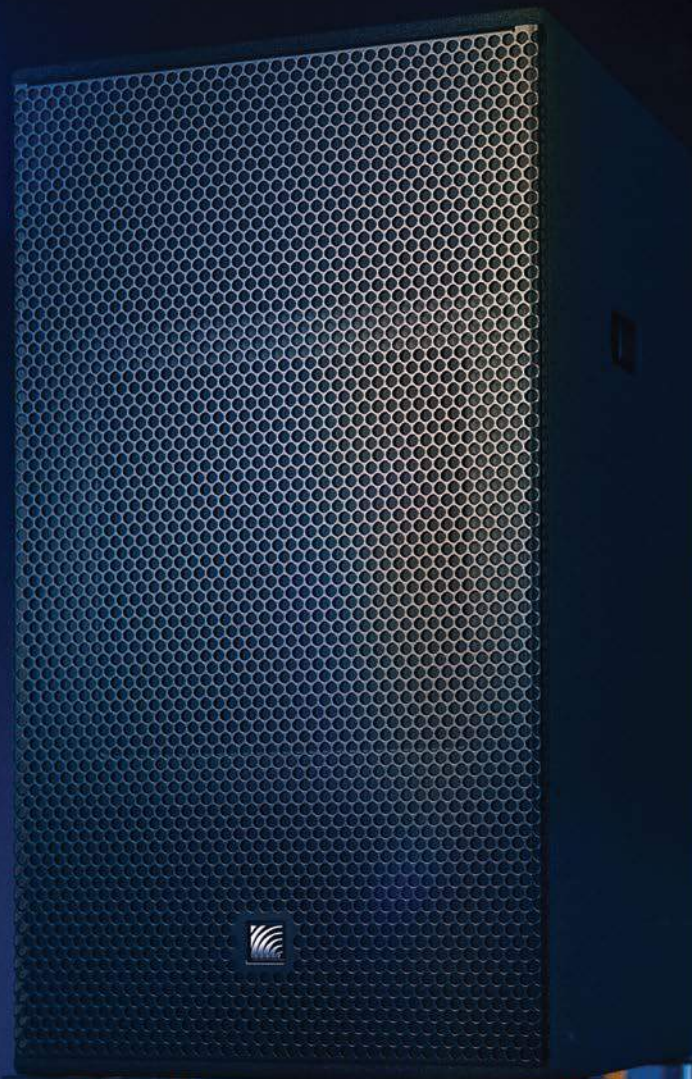
“OCA is doing something really amazing that we’ve not seen anywhere else in education,” Darren and Dan continue. “The training is led by industry professionals in an awesome venue and a professional recording studio for a fraction of the cost of other private colleges. Elsewhere, those opportunities have dried up and there are very few hands-on training institutions left, with most offering only super-costly online courses. Together we aim to change this and revive the music industry in this country.”

Matt O’Connor, CEO of Oxford Creative Academy states; “It was a no-brainer that we should come together to create a pathway from school to certification to employment, and that is exactly what we’ve created with this partnership. It’s the perfect breeding ground for budding music industry professionals and the first real step in establishing a workforce ready to help sustain real-world events.”



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With Oxford Creative Academy and Oxford Art Factory, the academy has integrated a ground-breaking approach to music education that delivers a fully integrated program to master the music industry. This is not your typical Cert IV in Music. Instead, every OCA student has the opportunity to:

1. **Perform** in a monthly emerging artist showcase held at Oxford Art Factory
2. **Produce** their music with six hours of free studio recording time each term
3. **Release** their music via free label management and distribution services
4. **All while learning** how to master the music industry

OCA students graduate with a nationally recognised Cert IV in Music which teaches a transferable set of skills for creativity, music business and live events.

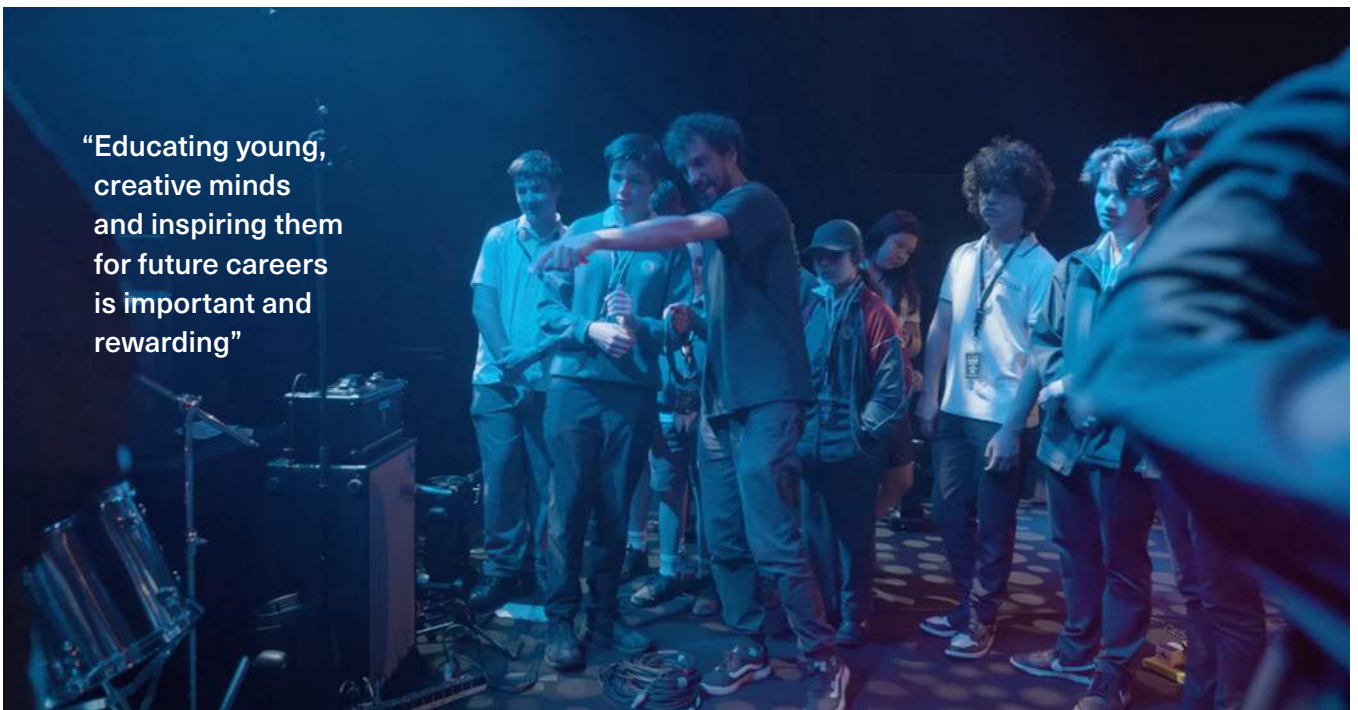
Together we hope to build the perfect breeding ground for music industry professionals and establish the first real step in establishing a workforce with the knowledge and skills to step in and drive the future of the industry.

The next AMTT training event: **“Be The Gig,”** ran at the Oxford Art Factory on 1 & 2 July, 2024.

VET Entertainment and Music students experienced a day in the life working in the entertainment industry. Industry experts mentored students on how to create the best lighting and sound mix for a live guest band performance.

For info on future AMTT training events, please visit ausmusictechtraining.com

“Educating young, creative minds and inspiring them for future careers is important and rewarding”





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pure emotion

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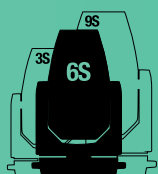
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Lumens
10,000

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IP Rating
IP65

Weight
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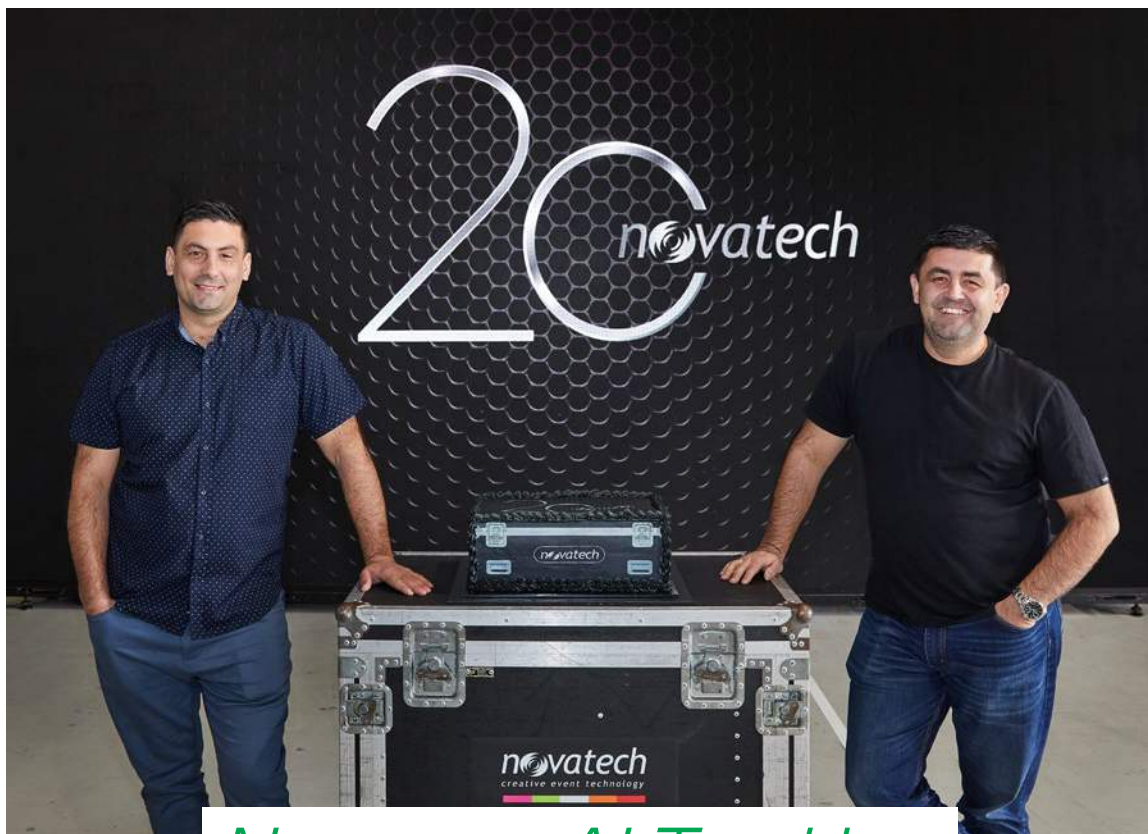


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Novatech owners Menk and Leko Novakovic

Naostage AI Tracking Appoints Novatech as Distributor

Naostage, creator of the world's first automatic, beaconless 3D tracking solution for live events and immersive experiences, has announced a strategic partnership with Novatech Creative Event Technology.

A family-owned event production company based in Adelaide, South Australia, Novatech Creative Event Technology focuses on providing innovative, creative turnkey solutions for events of all sizes, offering a one-stop shop for event organisers and promoters. It also specialises in sales of unique technical offerings to the Australian market. The partnership with Naostage sees Novatech become the exclusive distributor for Naostage in Australia, where it will focus on introducing artists, event producers, and production and performing arts companies in the Asia-Pacific region to the transformative benefits offered by Naostage's K SYSTEM.

"The innovative approach of Naostage provides a clear difference to artists, production staff and clients alike," says Christopher Bolton, Principal Designer and Innovator for Novatech Creative Event Technology. "We've closely followed the evolution of tracking in live events, having been an early adopter of d3, now disguise, back in 2014 with the first d3 servers in Australia and the fourth d3 studio in the world, delivering projection mapping and integrated lighting

shows. We also held the debut of L-Acoustics' L-ISA for a live performance in the southern hemisphere back in 2018, so are known for using emerging technologies to improve the audience experience. For this reason, we are excited in offering a tracking system to the Australian market that doesn't rely on beacons or tags to bring creative ways of integrating talent into our audio, lighting and vision systems."

Using AI to identify and follow performers in a defined tracking area, K SYSTEM enables the seamless automation of AV and lighting effects without the limitations imposed by traditional hardware transmitters. By eliminating the need to manually track artists, dancers and/or audience members, the technology streamlines the creation of immersive, interactive live experiences and empowers creative teams to turn their most ambitious ideas into reality.

The new partnership with Novatech comes amid a period of global expansion for Naostage, which recently announced distribution agreements with partners in the UK, Italy, Poland and the Czech Republic.

Ashley Gabriel, Director of Sales and Marketing for Novatech, says Naostage's technology is ideally suited both to Novatech's existing clients and customers across the wider Australasian live events industry. "We see K SYSTEM as a complementary offering to what we're known for, but also furthering our reputation and offering to the Australian events industry in bringing new and creative

technology to market," he says. He also highlights Novatech's experience working directly with companies like Naostage to introduce new and innovative technologies to the Australian market, which in turn benefits the manufacturer: "We work closely with manufacturers to further develop products, with real-world experience being fed back to them to improve the product, add new feature sets, and ensure products continue to grow and bring new benefits."

Alexis Reymond, sales manager for Naostage, comments: "We are delighted to partner with Novatech to bring K SYSTEM to the Australian market. Their commitment to elevating the event experience aligns perfectly with our vision for Naostage and makes them the perfect partner to introduce the endless possibilities offered by real-time tracking and automation to creatives in the region."

"We're excited with this new relationship," adds Gabriel, "and look forward to working with Naostage to further develop and deploy the system across Australia and beyond. Whether people are looking for rental of the product for a certain project or indeed a purchase of a system to integrate into their own workflow, we believe the K SYSTEM will be adopted by those who love to push the boundaries of what is possible."

Naostage products are now exclusively available for sale and rental in Australia through Novatech.

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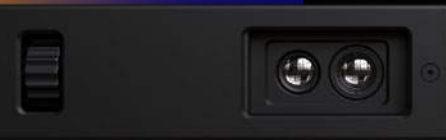
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tracking



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projection



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Game engine



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L-Acoustics and GEODIS open a Regional Distribution Centre in Singapore

GEODIS, a leading global logistics provider, and L-Acoustics, an industry leader in premium professional sound, have opened a new regional distribution centre in Singapore. This is the first such distribution facility for L-Acoustics in the Asia Pacific region, highlighting its commitment to this growing market.

“Our mission is to strengthen our ties with clients, creating a hub from which we can provide ideal support,” explains Tim Zhou, CEO APAC at L-Acoustics. “The new warehouse will enable elevated customer service and faster delivery for their important projects.”

All L-Acoustics solutions are manufactured in Europe and prior to the opening of the Singapore distribution centre, orders for customers in the Asia Pacific region were fulfilled from France. The new centre will allow the company to better support clients throughout the region, shortening delivery times and streamlining the supply chain.



ChamSys QuickQ Family

QuickQ20

*2 Universes



QuickQ10

*1 Universe



QuickQ30

*4 Universes



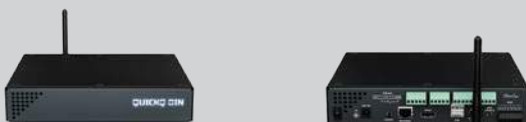
QuickQRACK

*4 Universes



QuickQDIN

*4 Universes



Key Features

Key Features

- Powerful DMX console
- Intuitive interface control of all fixture attributes
- Built-in full 9.7" multi-touch display with gesture support
- Built-in FX generator
- Master playback functions with bump buttons
- Offline editor available for Windows and Mac
- Compatible with MagicVis & other visualisation Software

QuickQ Remote Control



- Replicates QuickQ console
- Smartphone-like interface with gesture support
- Cue stacks with fade time, drag-and-drop cue ordering and time code support

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- Corporate Events
- Small Theatres

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L-Acoustics and GEODIS have grown a global partnership which began in 2018 when GEODIS was trusted with the distribution of the manufacturer's products in France and Europe, with GEODIS providing L-Acoustics with global end-to-end logistics solutions covering freight, along with customs and trade compliance management. The choice to partner with GEODIS for the launch of a new distribution centre in Singapore stems from the company's supply chain expertise and track record in setting up bonded warehouses which demand licensed storage facilities with robust security measures, skilled personnel and operational capabilities aligned with local customs regulations. The Singapore distribution centre is a bonded/zero-GST facility.

"Today marks a pivotal moment for L-Acoustics as we expand our regional logistics hub network with the help of our partner GEODIS, aiming to bring our customers the same level of service worldwide" says Hervé Guillaume, CEO at L-Acoustics Group. "The foundation of our relationship with GEODIS is built on a shared spirit of innovation and performance, and a people-first mindset."

"This recognition of our shared values reaffirms that our commitment to excellence and care is valued by our partners," commented Onno Boots, President and CEO of Asia Pacific and Middle East, GEODIS. "It's a testament to the strong relationships we've built, the service we provide, and the trust we've earned. Together, we will continue to raise the bar of excellence, and support L-Acoustics in its growth."



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ONESOL PRODUCTIONS



STAY ON TOP OF THE GAME WITH VUEPIX INFILED

Onesol productions received a major boost to its inventory recently with the delivery of Vuepix Infiled AR series screens.

Onesol Productions prides itself in delivering high quality events and installations, the team working closely with VuePix Infiled engineers to craft the new LED screen technology to perfection. All the 162 AR P3 panels were delivered in customised flight cases and feature the highest spec of Brompton receiving cards. The award-winning Brompton Tessera SX40 LED processors and Tessera XD data

distribution units will ensure perfect support for the largescale LED projects delivered by the Onesol team.

“The demand within our client base for LED technology has grown exponentially, and this has been the driving force behind investing in our own screen,” explains Elliott Laird and Steve Francis, Directors at Onesol Productions. “After many events and installations, coupled with the amazing support network, our choice of product was clear.”

“Our clients’ demands vary from installing digital billboards, touring productions, or precise installations of super high-res digital

wallpaper screens in corporate environments. The VuePix Infiled products have always delivered outstanding results.” says Elliott Laird.

The Onesol team have big plans for their new investment. “We have a few major projects featuring large-scale LED screens starting as soon as next week,” confirms Elliott. “The screen can be incorporated into any scenario, whether it’s a festival, a live broadcast or corporate event. That’s the beauty of investing in the latest Vuepix Infiled and Brompton technology, it opens so many new avenues and opportunities, and we’re excited for what the future holds!”

Directivity managed.

The sibling trio GSL, KSL and XSL share the same broadband directivity control, significant headroom and intuitive operation. From small theatres and clubs to large festivals and arenas, the SL-Series delivers a new dimension of performance-enriching sound.

Read more at sl-series.com



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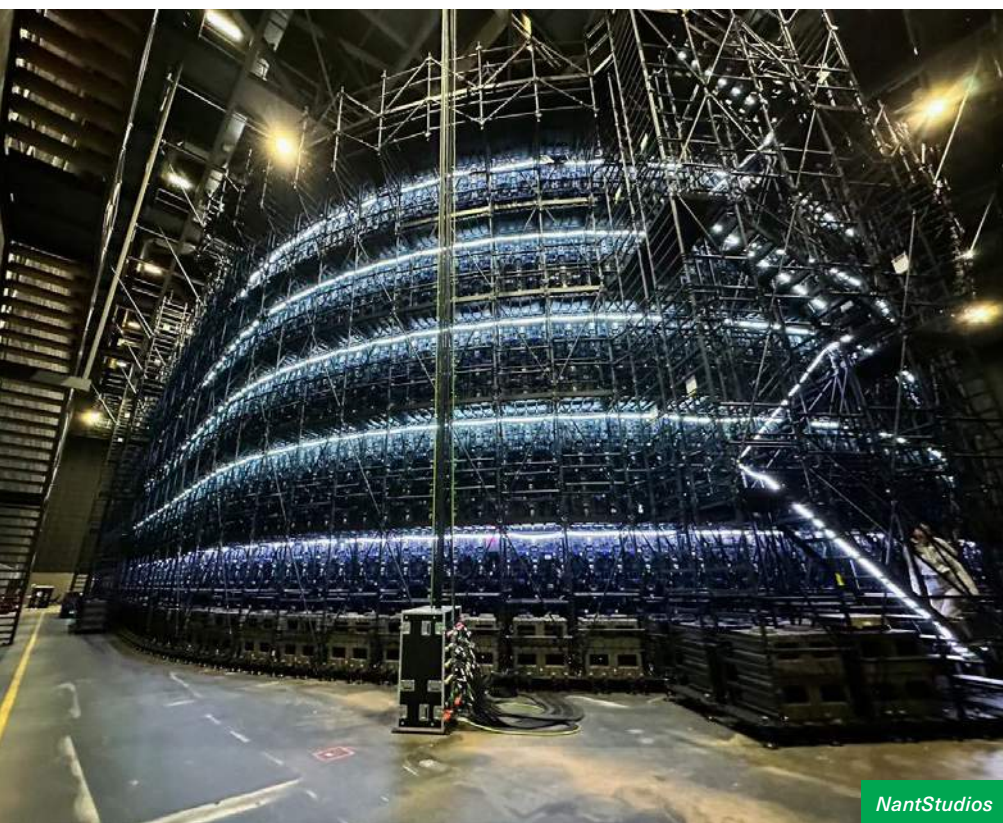
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ROE Visual Launches Australian Office, Enhancing Regional Support



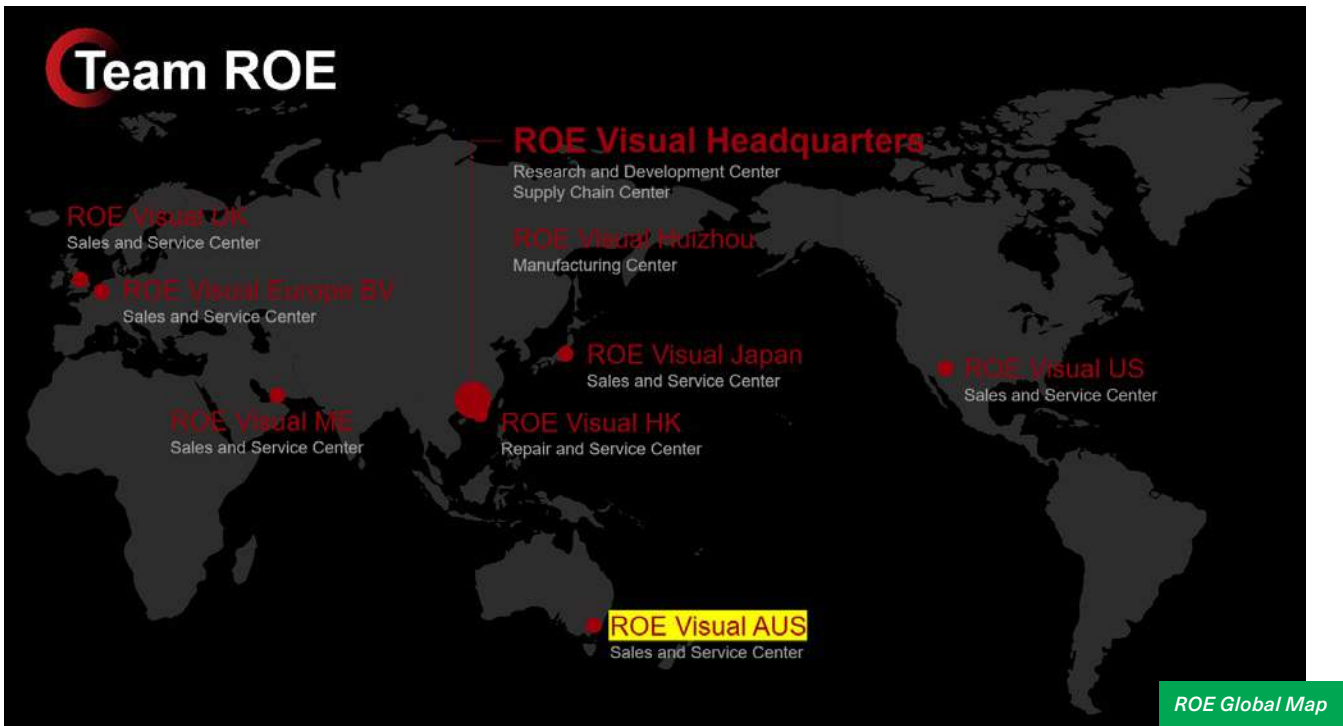
NantStudios

ROE Visual has announced the official opening of its subsidiary office in Melbourne, marking a significant step forward in its strategic expansion. The new office will serve as a local service centre, offering a showroom and training centre along with repair and maintenance services.

ROE Visual is driven by a customer-centric mission, aiming to stay close to its customers by combining global reach with a local touch.

"With the increasing business demands and client base in the APAC region, we recognised that it was time to set up a local service centre," says Grace Kuo, Sales Director at ROE Visual. "Melbourne, as a major economic and cultural hub in Australia, boasting a vast rental customer base and the world's largest LED studio, NantStudios, provides us with unique market advantages."

The establishment of the Australian-based office has been warmly embraced by



ROE Visual's regional clients, who value the convenience of having local support, particularly in a market challenged by its geographical distance. With the Melbourne office now operational, clients in the Oceania region can efficiently conduct business and receive prompt assistance from ROE Visual.

Featuring a range of cutting-edge products, including Carbon CB3 MKII and CB5 MKII, Topaz TP2.6, Vanish V8T GOB, and Graphite GP2.6, the ROE premises offers a stunning demo space, and as market demand grows, the company plans to expand the sample display area to provide clients with an even wider range of options.

ROE Visual warmly invites clients to visit its Melbourne office and explore collaboration opportunities. Before your visit, please email liam@roevisual.com to make a reservation.

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INTEGRATE STAND #F28

Group Technologies welcomes new Brand Manager for Sound Devices



Group Technologies has welcomed Mitchell Lockyer-Lane to the team as its new Brand Manager for Sound Devices LLC.

With a 20-year career spanning customer service, pre-sales engineering, business development and account management, Mitch brings with him a deep understanding of the Broadcast, Audio and Communications industries across Australia.

From production and theatre to commercial integration and installations, Mitch has

engaged with a sizable cross-section of the market. Mitch explains that this multi-industry approach will aid him in leveraging the capabilities of the Sound Devices brand through a focus on interdisciplinary optimisation:

"I am very pleased to be a new part of a great company with great people. I'm

looking forward to taking Sound Devices, a brand with strong roots in Broadcast, and harnessing its mission critical-oriented designs to elevate additional sectors, such as the world of Live Production," Mitch said.

The team at GT is primed to support Mitch as he embraces opportunities across the national RF industry landscape and beyond.

John Penhallow Retires from Aeromic Microphones



John Penhallow, Co-Founder of Aeromic Microphones, has announced his retirement from the business at the end of June.

JP founded the company alongside Peter Paisley in 1994. The duo commenced their work together, with Peter designing and manufacturing the world renowned Aeromic fitness microphones and John leading the sales. They were encouraged by several leading fitness instructors in Sydney to go to Las Vegas and visit the annual IDEA Fitness Convention and Trade Show. Peter and JP took some Aeromics with them and, after showing them to various industry professionals from the USA, Canada, the UK and Germany, managed to secure a number of sales. This included sales to AV Now of Santa Cruz, who remain the leading reseller of Aeromics in the USA.

Since then, Aeromic Microphones Australia (AMA) has developed into a full-service audio supplier with export and trade sales,

as well as a very successful online store. And, in association with various installation companies, AMA designs and supervises sound system installations and LED lighting for fitness clubs, worldwide.

Speaking on his retirement, JP remarks "After 30 years of living and breathing this business, helping our talented technical team achieve a high level of sales and support, it's time for me to step down. I leave the business in the very capable hands of the next generation. That includes my daughter Aimee, as our Finance Manager and Andrew Zarounas as Managing Director, steering AMA to greater heights."

JP also played a pivotal role in establishing and growing the Fitness Audio brand. Without his expertise, dedication and experience, the Fitness Audio brand would not be the business it is today. JP will be missed by the entire Fitness Audio global team, their supplier partners and loyal clients. They thank him for everything he has done and wish him the best in his retirement.



It's Time to Double Down on USB-C Connectivity

Lightware, the leading manufacturer of USB-C signal management solutions.



The Convergence of USB and AV-over-IP Introducing UC-over-IP

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- Same functionality as the UCX product range
- AV over IP ecosystem with SDVoE technology
- Single source to multiple destinations



The Ultimate USB-C Connectivity now with bidirectional Dante Audio

- UCX 2x1, 2x2, 4x2 & 4x3 models available
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- Host Switching to powered 4 Port USB 3.1 Hub
- Configurable Secure Networking including USB-C ethernet bridge
- DANTE/AES67 network Audio
- USB Audio Bridge with Mix/Minus DSP



Easy USB Extension up to 100 meters

- USB Type-C and HDMI transmitter-receiver Configuration with new 3x3 RX shipping soon
- Same functionality as the UCX product range
- SDVoE technology with Scaling Receiver Option
- Works in a point-to-point arrangement through 10G Ethernet networks up to 100m





infocomm



AMX SVSI N2600D

The AMX SVSI N2600D Wallplate Encoders and Decoders are the latest enhancement to the N2600 Series and bring Dante AV-A support to an encoder and decoder wallplate for the first time. All N2600 models feature support for a high-quality, extremely low-latency 4K60 4:4:4 MWC codec that is perfect for transmitting both live video and detailed content. They also feature Virtual Network USB 2.0 Hub technology, video preview images viewable from the built-in web interface or from a touch panel, low-power mode for energy savings, and support for the most discerning high-security networks.

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Having binged on AV gear at Barcelona's ISE earlier this year, CX decided to skip 2024's Las Vegas iteration of InfoComm, which turned out to be a pretty popular choice in the APAC AV community. Here, we've collated all the product news from what was, by all accounts, a great show, capped off by a tour of the ground-breaking venue Sphere, which even the most jaded of techs have been describing as utterly awe-inspiring. We must check it out soon!



audio-technica ATDM-1012

ATDM-1012 Digital SmartMixer is a flexible and easy-to-use solution for a wide variety of installed audio applications where mix-minus operation or audio pickup from specific zones within a space is required. The ATDM-1012 is a 14 input / 12 bus matrix mixer featuring 10 mic/line inputs with high-quality preamps, two stereo line inputs, USB audio I/O, eight balanced outputs and two unbalanced stereo outputs. Ten additional digital inputs can be added either via an AT-LINK digital connection or over Dante® – available with the Dante-enabled ATDM-1012DAN version.

audio-technica ES964

The simple-to-install table-top ES964 employs one omnidirectional capsule and two bidirectional capsules. When combined with an audio-technica digital SmartMixer, the ES964 offers directional sound capture via its virtual hypercardioid and cardioid pickups, providing speaker-focused sound capture within a 360-degree radius for clarity difficult to achieve with standard omnidirectional microphones. The ES964 is also compatible with a range of other open architecture DSPs. Multiple and simultaneous settings can be configured to suit the seating positions of conference participants.

Australia: TAG www.tag.com.au or 02 9519 0900
New Zealand: Direct Imports directimports.co.nz or 06 873 0129



AVer Cameras and FONE700

AVer debuted four cameras and a speakerphone system at InfoComm. AVer's TR315N AI Auto Tracking NDI Camera boasts a 12x optical zoom lens with 4K 60 fps resolution and the finesse of hybrid auto tracking and smooth PTZ operations. AVer's TR211 AI Auto Tracking Camera combines a 12x Optical Zoom lens, FHD 60 fps resolution and hybrid auto tracking with

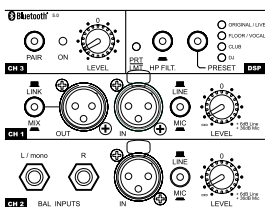
smooth PTZ operations. The TR211, along with the TR315N and TR335N, include proprietary AI-functionality, including Presenter Mode, Zone Mode and Hybrid Mode. AVer's MD120UI Medical Grade PTZ Camera is highly versatile and explicitly designed for patient monitoring and telemedicine. The FONE700 Ceiling Speakerphone System features a combination of three directional and 18 omnidirectional microphones, capturing voices from every corner of the room with precision. The FONE700 boasts advanced features including Noise Suppression, Double-Talk detection and De-Reverberation. Its technology delivers unparalleled audio quality in its ability to minimize background noise, detect simultaneous speech and reduce echo.

Australia: Amber Technology
www.ambertech.com.au or 1800 251 367
New Zealand: Amber Technology
www.amber.co.nz or (09) 443 0753

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NEW GEAR
INFOCOMM '24

dBTechnologies IS210L, IS120T and IS115S

dBTechnologies introduced three new models in the IS Series: the IS210L line array array module, point source IS120T, and IS115S subwoofer. With increased SPL and expanded frequency response, and an IP55 certification, the newly designed IS audio system is built for maximum durability in the most demanding environments.

The IS210L symmetrical design includes two 10-inch woofers with 2.5-inch voice coils and a 1.4-inch (exit), 2.4-inch voice coil compression driver mounted on a waveguide. Equipped with the same transducers as the IS210L, and also in a symmetrical configuration, the IS210T point-source loudspeaker has a 90x40 rotatable horn. The IS115S flyable subwoofer is the most adaptable and powerful addition to the IS Series' high-performance systems, providing the best low-frequency extension for the IS series. It is also IP55-rated and comes in white or black.

Australia: **NAS nas.solutions** or (03) 8756 2600
 New Zealand: **Direct Imports**
 directimports.co.nz or (06) 873 0129



DPA 2017

The 2017 is a unique, all-purpose shotgun solution that offers flexibility and the ability to withstand difficult environments or extreme weather in an array of applications. From its durable construction and ease of use to its leading acoustical properties, the 2017 can capture the energy of any AV project or live event. Measuring just 184mm in length, the 2017 is more compact than many popular solutions, yet still offers impressive technological features, including extreme durability, high directivity, clarity and consistency for capturing authentic sound.

Australia: **Amber Technology**
 www.ambertech.com.au
 or 1800 251 367
 New Zealand: **Direct Imports**
 directimports.co.nz or (06) 873 0129





EAW SB818

The new SB818 single 18" is a high output, mid-size flyable subwoofer system. The SB818 can be flown stand-alone or arrayed with the KF210 speakers. A ground stack adapter supports flexible, compact and safe ground stack arrays, while a transition bar allows for the sub and KF210 to be flown in the same array using one flybar and one rigging point.



EAW SB828

The SB828 dual driver subwoofer is designed around a low turbulence port based on fluid dynamic research married with a groundbreaking transducer design. The SB828 has innovative ultra-linear suspension behavior and symmetric flux density, resulting in exceptional impulse response and output. Compact height and depth allow for the subwoofers to be deployed in many room types. 16 M10 mounting points provide a myriad of permanent suspension options.



EAW SBX118F

The SBX118F is a high-output, mid-size subwoofer system designed to provide low-frequency extension for any full range system. SBX118F's use of a 4" voice coil ensures the best sonic performance. SBX118F can be ground stacked, flown by itself or arrayed with NTX210L. A ground stack adapter supports flexible, compact and safe ground stack arrays of SBX118F and NTX210L.



EAW UXR316

EAW debuted its UXR216 and UXR316 amplifier racks at the show. These new amp racks complete the EAW line of professional production products and include the brand's recently announced UXA4416 amplifier, a network switch as well as power, audio and network interfaces. The UXR216 is based on two UXA4416 amplifiers while the UXR316 is based on three UXA4416 amplifiers.

Australia and New Zealand: PAVT www.pavt.com.au or +61 (0) 3 9264 8000 / +64 (0) 21 410 050



JBL PSB-2

JBL Professional expands its PSB soundbar lineup by adding HDMI and Bluetooth digital source inputs. As an evolution in soundbar technology, PSB-2 is engineered to deliver focused audio while minimising sound transfer to neighbouring rooms, making it the perfect solution for hotel rooms, cruise ship staterooms, meeting spaces, classrooms, and additional applications. Specifically tuned for human speech, PSB-2 integrates a front-facing speaker that delivers significantly enhanced fidelity over internal television speakers. Additionally, a 2-position volume limiting switch provides further control over volume levels.

Australia: MadisonAV
www.madisonav.com.au or 1800 00 77 80
New Zealand: JPRO
www.jpro.co.nz or 09 275 8710



Symetrix xIO USB

The xIO USB is an AVoIP endpoint that supports educational, justice, conferencing, and other applications that utilise desktops, laptops, or attendee-supplied devices (BYOD). The xIO USB will make it easy for consultants and integrators to streamline system design and interface with popular collaborations solutions like Microsoft Teams and Zoom. The xIO USB performance endpoint features front and rear USB-C connectors, two channels of transmit/receive over USB, and two channels of transmit and receive for AVoIP.

Symetrix Server D100

Symetrix's new digital signal processor, the Server D100 is an enterprise-class rack component and was designed specifically for professional AVoIP installations where high node counts and complex channel management benefit from powerful central processing. It features up to 384 x 384 AVoIP channels, up to 96 acoustic echo cancellation (AEC) channels, and up to 128 media playback channels.

Symetrix Server D100 ships with 256 by 256 Dante channels, 64 AEC channels, 32 media playback channels, eight media record channels, and flexible open architecture processing to tie it all together. On-demand software upgrades can expand AVoIP channel count to 384 x 384, AEC channel count to 96, and media playback to 128 channels.

Australia and New Zealand: PAVT www.pavt.com.au or +61 (0)3 9264 8000





Server D100



The Future of Network Audio

Server D100 is the enterprise-class rack component designed specifically for large scale professional installations with high node counts and complex channel management.

Standard Features

- 4 configurable RJ45 network ports
- 256 x 256 Dante IO
- 64 channels of acoustic echo cancellation (AEC)
- 4 x general audio processing capacity*
- 500 GB system SSD
- 500 GB dedicated media playback SSD
- 32 media playback channels
- 8 media record channels
- Expanded Intelligent Module applications
- ILO port and SNMP support
- Dual redundant hot-swappable power supplies

Optional upgrades

- Add 128 x 128 Dante IO
- Add 96 AEC channels
- Add 96 media playback channels

*4 x Raduis NX



xIO USB for Unified Communications

PoE or DC Powered - VoIP endpoint for the processing of USB audio sources. The xIO USB supports educational, justice, conferencing, and other applications that utilize desktops, laptops, or attendee-supplied devices

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Q-SYS

Q-SYS introduced the QIO-FLEX4A and QIO-LVR4 network I/O expanders, and the PS-TSCG3 Touchscreen Paging Station kit.

As part of the Q-SYS QIO Series, the QIO-FLEX4A features audio and control I/O in a consolidated network peripheral. It offers four Flex audio channels, GPIO and RS232 serial port to integrate control of third-party peripherals, and two amplifier outputs for compact loudspeakers. Meanwhile, QIO-LVR4 offers four contact closure relays to enable simple control integration of third-party lighting systems, motorized shades, and more.

The PS-TSCG3 Touchscreen Paging Station kit pairs with the TSC-G3 Series touchscreen and the robust Q-SYS Control engine to enable live paging, pre-recorded message playback, and seamless background music (BGM) management. This page station solution is available as either a desktop model (PS-TSCG3-G) with a gooseneck microphone and push-to-talk button, or a wall-mount model (PS-TSCG3-H) with a handheld microphone and push-to-talk button.

Q-SYS also announced a significant update to Q-SYS Reflect, its cloud monitoring and management software. Q-SYS Reflect Plus expands on the standard features of Q-SYS Reflect by providing optional enterprise-level remote system management and control capabilities. It allows administrators to directly assist users and systems from any web browser, quickly getting systems up and running. In addition, it offers the ability to configure and adjust system settings remotely, deploy firmware updates, manage files and connect Q-SYS system data to your IT management platforms via the Q-SYS Reflect API for a single-pane-of-glass view into your entire infrastructure. Finally, the pricing structure for Q-SYS Reflect Plus has been reengineered based on the number of Q-SYS systems (rather than connected devices), simplifying the users' ability to expand the system when necessary.

Australia: TAG www.tag.com.au
or (02) 9519 0900
New Zealand: NSL www.nsl.co.nz
or (09) 913 6212



Williams AV Digi-Loop 104

Williams AV expands its assistive listening solutions with the addition of the Digi-Loop 104, an ultra-compact, budget-friendly perimeter loop amplifier for small rooms. This Class D amplifier features high-efficiency technology for lower power consumption and natural cooling, and its user-friendly interface and clear status indicators make it easy for admins to monitor. It also features automatic gain control for superior sound quality and intelligibility. The Digi-Loop 104 is perfect for venues looking to make meeting rooms, waiting rooms, reception areas, and assisted living facilities more inclusive for those with hearing loss and compliant with hearing legislation.

Williams AV Digi-Wave ACM

The Digi-Wave ACM (Advanced Comms Module) is designed to meet the evolving needs of professional wireless production intercoms. Unlike many wireless intercoms that rely on a fixed base station, the ACM allows users to designate a centralised unit as a flexible access point, ensuring seamless coverage even when teams are on the move. The full-duplex ACM supports up to four subgroups (or channels) and offers customisable subgroup naming as well as pre-programmed names. Key features include an All Call function for simultaneous communication with subgroups and a Private Call function for direct messaging by a team member to a leader.



Australia: Amber Technology www.ambertech.com.au or 1800 251 367 / **New Zealand:** NSL www.nsl.co.nz or 09 913 6212



Meyer Sound ULTRA-X80

The ULTRA-X80 point source loudspeaker is an evolution of the ULTRA family's innovative concentric-driver design, which couples two 12-inch neodymium-magnet cone drivers to a rotatable 95 x 40 degree waveguide coupled to a 4-inch high-frequency compression driver. This configuration ensures smooth response across the speaker's range and exceptional directional control. For maximum flexibility in coverage, an ULTRA-X82 variant offers a more tightly focused 50 x 40 degree dispersion pattern. The ULTRA-X82 delivers a total linear peak output of 142dB SPL. ULTRA-X80 and ULTRA-X82 offer analog and MILAN connectivity as standard

Australia and New Zealand: meyersound.com

Milan Manager

d&b audiotechnik and L-Acoustics announced the launch of Milan Manager, the innovative software platform designed to simplify the configuration, management, and monitoring of Milan-AVB networks. This neutral and free-to-use solution is immediately available for download. Milan Manager automatically discovers units and allows users to name them, set sample rates, and manage media clocks. Channels can be mapped from talker devices to output streams, connecting them to listener devices.

Available at www.l-acoustics.com and www.dbaudio.com



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Genelec 3440A

The 3440A subwoofer joins the existing Smart IP range of wall, ceiling, and pendant loudspeaker models to provide a scalable full-range audio solution that combines exceptional sound quality and networked convenience. Measuring just 475mm x 475mm x 220mm (and weighing in at a modest 14.5kg, the compact design of the 3440A features a 6.5" driver, an efficient 70W internal Class D amplifier stage and dual reflex ports, delivering clean, controlled low-frequency performance between 35 and 120Hz. The 3440A's proprietary internal power supply technology stores power in order to produce an impressive 106dB of short-term SPL whenever needed.

Australia: Studio Connections
studioconnections.com.au or (03) 9088 7676
New Zealand: Protel International
www.protel.co.nz or 09 414 0477



Shure WL18Xm

Shure unveiled the updated, newly designed low-profile WL18Xm professional lavalier condenser microphones, including the cardioid WL185m, supercardioid WL184m, and omnidirectional WL183m, for use with wireless bodypack transmitters. The WL18Xm line is 8mm shorter than its predecessor, making it lighter, lower-profile, and easier to use. For flexible placement on speakers, presenters, and performers, each lavalier is available in either black or white with LEMO or TA4F connector options. The microphone's innovative tie clip can be rotated in 90° intervals for accurate positioning.



Australia: Jands
www.jands.com.au or (02) 9582 0909
New Zealand: NSL
www.nsl.co.nz or (09) 913 6212



RCF CMR-S 60T Ceiling Subwoofer and PMR 60T Pendant Speaker

RCF unveiled the Business Music Series, including the CMR-S 60T ceiling subwoofer and PMR 60T pendant speakers. These components merge elegant aesthetics with powerful audio, ideal for professional settings requiring discreet yet strong sound solutions.

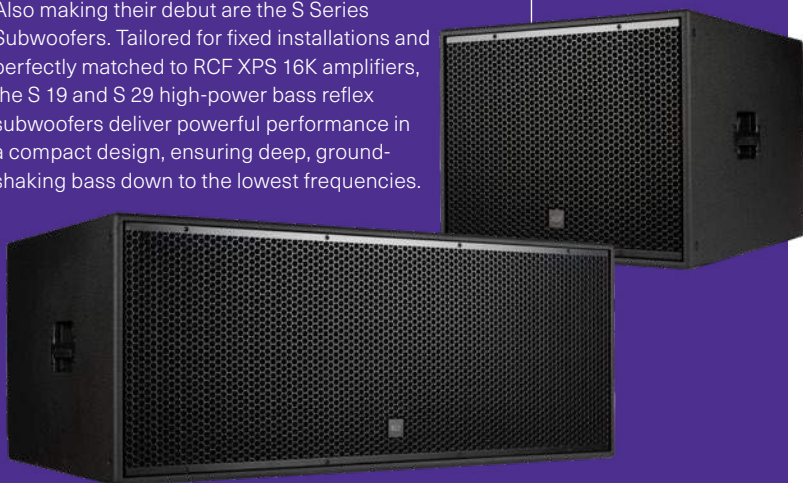
RCF SUB 15-AX and SUB 18-AX Subwoofers

The new SUB 15-AX and SUB 18-AX active subwoofers offer factory-tuned presets for RCF speakers, boasting sound pressure levels of up to 135dB, advanced processing, and Bluetooth remote control. For extreme power in professional applications, the new active SUB 9019-AS and 9029-AS subwoofers are tour-ready and deliver unmatched performance.



RCF S Series Subwoofers

Also making their debut are the S Series Subwoofers. Tailored for fixed installations and perfectly matched to RCF XPS 16K amplifiers, the S 19 and S 29 high-power bass reflex subwoofers deliver powerful performance in a compact design, ensuring deep, ground-shaking bass down to the lowest frequencies.



RCF RDNet 5 Sound System Management and Control Software

The last of the new product announcements is the upgraded RDNet 5 Sound System Management and Control Software, which boosts audio management performance with streamlined workflows, improved device discovery, and sophisticated UI enhancements including advanced EQ visualisation and real-time FFT analysis.

Australia: Group Technologies
grouptechnologies.com.au
 or 03 9354 9133
New Zealand: Direct Imports
directimports.co.nz or 06 873 0129



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**NEW
GEAR**



Elation PULSE PANEL and PULSE PANEL FX

Perfect for concerts, nightclubs, and theatrical spectacles, the PULSE PANEL and PULSE PANEL FX infuse any performance with attention-grabbing moments of intense white or coloured light. Both fixtures use the same LED layout; an array of 1,152 1.5W RGB LEDs spread across 24 zones around the perimeter, arranged in a grid of six zones wide and four zones tall. The central strobe line comprises 288 5W cool-white LEDs organized into 24 zones, with 12 zones across and two zones tall. These are separated by a line of 96 1.5W RGB LEDs divided into 12 zones. Furthermore, there are 144 additional 5W cool-white LEDs divided into 24 zones, with 12 zones at the top and 12 at the bottom of the fixture's face. When combined, output is jaw-dropping at over 100,000 total lumens!

**Australia and New Zealand: ULA Group www.ulagroup.com
or AU 1300 852 476 / NZ +64 9 218 6532**

Showtec ACT Par 200 W RGBAL

The Showtec ACT Par 200 W RGBAL is a versatile indoor spotlight with a high CRI and RDM capability. This fixture is capable of producing a wide range of colours, including white, thanks to the RGBAL LED light source (Red, Green, Blue, Amber, Lime). In addition to the control panel on the back, the ACT Par has two knobs to easily control the colour and intensity when using it in standalone mode, which makes it ideal for applications like exhibitions. Three diffusers are included, so that the ACT Par can be used as a spotlight (30°), a medium flood (50°) or a soft beam (80°). An optional barndoor is also available.

Australia: Clearlight Shows www.clearlight.com.au (03) 9553 1688. New Zealand: Kenderdine Electrical kelpls.co.nz (09) 302 4100



Astera LunaBulb

The IP44 rated LunaBulb looks like and can emulate the effect of a traditional incandescent light bulb but works like a professional luminaire. The IP44 rating means LunaBulbs can be used outside, even in wet conditions, if the socket they are screwed into is also IP44 rated, making them perfect for statement lighting – such as festoons – or anywhere where lighting might be used to shape moods and atmosphere.

Drawing just 3.5 watts, the LED-based LunaBulb is available with an E26, E27 and B22 fitting and, like a conventional bulb, screws directly into an AC-wired bulb socket.

LunaBulb is remote controlled wirelessly via the onboard CRMX or Bluetooth receivers using the same tech as any other Astera wireless DMX fixture running via a remote controller or through a lighting console.

Australia and New Zealand:

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ADJ Jolt Bar FX2 and Jolt Panel FX2

The new Jolt Bar FX2 and Jolt Panel FX2 deliver the creative potential of dazzlingly bright white strobe/blinder LEDs combined with zone controllable RGB colour mixing LEDs. Both fixtures feature a central strip of 5W cool white SMD LEDs which are extremely bright and, when combined in multiples, generate truly intense strobe and blinder effects. The white LEDs are surrounded on both sides by arrays of 0.5W RGB colour mixing LEDs (increased from 0.3W on the original models). A wide variety of vibrant colour options can be achieved using the RGB LEDs through individual dimming control of the independent red, green, and blue elements. Used as single-colour sources, the fixtures can generate potent washes that cover a large area. Alternatively, through use of the zone control function, each independent block of LEDs can be controlled separately to allow for the creation of dynamic chases and other animated pattern effects.

Australia and New Zealand:
ULA Group www.ulagroup.com
or AU 1300 852 476 / NZ +64 9 218 6532

Neutrik NA-2 DLINE

The NA-2 DLINE series comprises three models. The NA-20-DLINE and NA-21-DLINE are respectively Dante to 2-channel line output, and 2-channel line input to Dante interfaces. The NA-2120-DLINE is a simultaneous Dante to 2-channel line output and 2-channel line input to Dante device, enabling this tiny box to feed analogue audio signals into a Dante network while at the same time receiving a mix from another Dante source.

Australia: Amber Technology
www.ambertech.com.au or 1800 251 367
New Zealand: Amber Technology
www.amber.co.nz
or (09) 443 0753



Ayrton Nando 502 Wash

Nando 502 Wash is an incredibly compact IP65 luminaire, specially designed for mixed use stage lighting, both indoors and outdoors, and even in salty environments. This new LED source offers the advantage of better integration into the colour space and facilitates colour reproduction. Nando 502 Wash is fitted with 12 high-performance 40W LED sources with RGB-L additive colour synthesis and a proprietary optical system made up of a unique 210mm cluster in PMMA. This works in combination with 12 glass light-guides with an output surface made of an optical micro-structure.

Australia: Show Technology Australia
www.showtech.com.au (02) 9748 1122
New Zealand: Show Technology New Zealand
www.showtech.nz (09) 869 3293



NEW GEAR

Inside the SIX60 Grassroots Tour



4 Islands
5 Weeks
25 Small Towns

Goff van't Hof (Paul), Managing Director of The Production Co., has a long and rich history with SIX60, providing production for their first few tours way back in the 2010s. Dave Munro, agent for SIX60's promotor Eccles Entertainment, acknowledging Goff's links to the band, turned to him for support with the Grassroots Tour 2024, "It was the tail end of last year when Dave got in touch and I was already committed to the Dragon's 50th Anniversary 10 gig tour in April, meaning they would overlap. Initially I just planned on coming up with some concepts but ultimately, we decided with some serious planning, support from my team, and a few long days, I could do both."

Goff's brief as the 'Grassroots' title suggests was about SIX60 getting into the regions and connecting with fans. The band had rearranged their biggest hits into acoustic and unplugged stripped back versions which would be recorded at each show to create a new 'Best of' album. They were also planning to play and record a different cover every night, selected from requests via social media. Chris Tate, longtime FOH Sound Engineer for the band, was on board to do the recording in a mobile studio, including capturing the covers, tidying them up and releasing them via socials throughout and after the tour. Matt Clode, another old hand from previous tours, was in charge of capturing stills and video footage of the shows.

Goff's concept capitalised on the recording element and he designed the set as a recording studio. He used large rolling Baffles' acoustic panels to form the backdrop with 'studio-esque' lighting built in, all fixed to dollies, "As we toured, the band collated or were gifted memorabilia from each place such as road signs or rugby jerseys. These decorated the panels and became a part of the set."

The venues were some of the most diverse that Goff has toured, "We played at a marae, community halls, taverns, a winery, even Piha Surf Life Saving Club which only held 150 people. There were more people out on the sand dunes watching than in the venue, and Matiu went out and sang on the

deck for them which was pretty special." At the other end of the scale were 2,000 capacity events in Queenstown, Nelson and at the Waipara Winehouse, "I designed the set so that we could nearly always use all the panels, just shrinking and expanding it as required. Sometimes they'd be on all sides of the stage, sometimes across the back, sometimes overlapping. We also integrated two and a half metre tall letters spelling out SIX60, flying them above the band where possible and projecting video content onto them. Brad Gledhill from Filament Eleven 11 was the LD for the tour and provided video content and worked tirelessly on tweaking the lighting design for the ever-changing venue shapes and sizes. The giant letters when not flown in



the smaller shows were placed around the venue for fans to get photos in front of. These were a huge hit on social media.”

“Production managing two tours at the same time was challenging but both tours had great crews on board. Production Co GM Lance Cathro took on the production management role for SIX60 when I jumped off to do the Dragon shows. Then Owen Drew took over the reins on the Dragon tour in my absence. Logistics were the most challenging part with me literally moving from Kaitaia to Invercargill to get both tours started.”

The diversity of the venues, not so much in terms of size but more in terms of range of equipment could also be challenging at times, “Everyone chipped in. All the crew helped when we had to think outside the square.” Touring across four islands was also interesting, “We ran two trucks in the North Island and over on the ferry to Great Barrier for a concert on a tennis court, and reduced it to one in the South, relying more on local AV companies down south for assistance. At the end of the five week tour the band went to Stewart Island where we opted for a more stripped back set as we had to get everything on a small barge.”

Transported separately from the set and AV, a miniature replica of the band’s Dunedin student flat travelled with the tour, parking up at a local Four Square in each town for promotional opportunities, “I was very glad I wasn’t responsible for hauling that off the barge.”

Outside of the logistics and the variety of venues, the tour was pretty



straightforward, "We had good rehearsal time and did pre-production at our place. Eli (Paewai - the drummer) had left the band in February, so Chris (Mac - bass) moved to drums and Marlon (Gerbes - keyboards) shifted to bass, and the band had been working through that. From the start of the tour, it was obvious how much they were enjoying the opportunity to reconnect with their fans and the immediacy of the venues. The first show at Pōtahi Marae in Te Kao in the Far North, Matiu's (Walters - lead singer) whānau marae, set the tone for the whole tour really, good fun and a non-stop supply of food. I'd never seen so much crayfish."

Goff's highlights include Te Puka Tavern at Tokomaru Bay where the locals performed a rousing haka during Kia Mau Ki Tō Ūkaipō, the Te Reo version of Don't Forget Your Roots. Also Waipara Winehouse for the super cool venue and being gifted the most amazing sunset, "Looking back though, there were no duds. Every show was special in some way, and the vibes were so different from hakas in the East Cape to oysters in Invercargill. The crew and band put a lot into that run. I am grateful to the band, their management and the promoters for trusting us with a special bunch of shows."

The Gear

College Hill Productions supplied the touring PA system; an Allen and Heath C5000 for Chris to capture everything on side of stage with a full suite of beloved Universal Audio UAD plugins bringing the magic and a C1500 at Front of House for Ben Klinkenberg to mix the show on. Powered JBL SRX835SP and SRX828SP were the FOH speakers. The band mixed their own monitors on headphone amps to complete the studio vibe.

The 'Baffles' acoustic panel carts were designed inhouse at The Production Co by Peter Allerby and featured custom LED strips manufactured by Tungsten Projects. Vintage Blaze units were provided by Kenderdine Electrical. The Production Co provided all the control equipment, LED batons, Chauvet MK2s for front light and Panasonic projector for the letters.



The Crew

Goff (Paul van't Hof): Designer and production manager

Ben Klinkenberg: Stage Manager and FOH engineer

Theo Turner: Audio systems

Chris Tate: SIX60 Audio Connoisseur and capture

Brad Gledhill: Lighting Director

Pedro Maher: Backline

Sam Whareaitu: Lighting and video assist, driver

Colin Molloy: Staging, letter wrangling, dressing, driver

Ash Edwards : Staging, letter wrangling, dressing

Lance Cathro: Production Manager



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We meet the Head of Technology and Innovation at Te Pae Christchurch Convention Centre

NATHAN GARDINER



The AV and ICT gurus often hide behind the curtains, but we've managed to bring Nathan Gardiner, Te Pae's Head of Technology and Innovation, into the spotlight to answer a few questions about his role, and the opportunities and challenges it brings with it.

Te Pae Christchurch – Two Event Filled Years

More than 200,000 attendees have taken part in events at Te Pae Christchurch since the convention centre hosted its first conference on 2 May 2022 – far exceeding expectations for its initial operating period. The 458 events held at Te Pae Christchurch over the past two years included 146 multi-day conferences (29 of which were international), 19 exhibitions, 131 banquets, 157 meetings and five live performances. In total, the events have attracted 204,420 attendees over the past 24 months.

May, traditionally a quiet month, saw Te Pae hosting back-to-back conferences, including the Royal Australasian College of Surgeons Annual Scientific Congress 2024, Institute of Directors 2024 NZ Conference, and MotorSport NZ Conference 2024. In addition to the five international and 10 national conferences, concerts and events booked for May, the programme of local events ranges from school balls to information evenings. Over 8,200 people attended during the month, including 2,650 from overseas and 3,135 from around New Zealand.

Nathan Gardiner, 10 Months In

Behind the scenes overseeing all the AV and technology requirements of this array of events is Nathan Gardiner, appointed Head of Technology and Innovation almost a year ago in July 2023. We spoke to him to find out what catering to this level of demand involves.

How would you describe your role?

If I had to sum up my role it would be steering the technological direction of the venue, ensuring that Te Pae remains at the forefront of advances in the event industry in New Zealand.

This involves overseeing the implementation of the latest audio visual and IT technologies to enhance our operational efficiency and guest experience, and fostering a culture of innovation across all our departments.

One of my key responsibilities is to identify and integrate emerging hybrid technologies that can transform the way we host events. In addition, I also collaborate closely with event organisers, partners, and internal teams to tailor tech solutions that meet their specific needs to ensure every event is a success.

Ultimately my role is about creating a seamless and memorable experience for our clients and

their guests and to leverage the technology and innovation we have here to set new standards in the convention centre industry.

Describe a typical day?

A typical day can be varied and dynamic for me which is quite reflective of the fast-paced and ever-evolving nature of the events industry.

My day often begins with a strategic planning session with my team. We review ongoing projects, discuss upcoming events, and identify any immediate challenges or opportunities.

Following this, I might have a series of meetings with different stakeholders. These can range from discussions to understand their specific technological needs and how we can best support this, to sessions with vendors exploring new tech solutions or enhancements to our current systems. I also regularly meet with other department executives and managers to ensure our tech initiatives are integrated seamlessly across all areas of our operations, from marketing and customer service to facilities management.

Throughout the day, I also try to dedicate time to staying abreast of the latest trends and advancements in technology and innovation.

Being part of the ASM Global team, I get an opportunity to also regularly connect with other Directors and peers across Australasian convention centres as we share and review our latest innovations and project work. This is truly invaluable for me and allows us to bring fresh ideas and insights to Te Pae.

Another key part of my day involves hands on problem-solving and oversight of ongoing projects. This could mean working with my IT team to troubleshoot a technical issue, reviewing the progress of a new software implementation, or analysing data from recent events to identify areas for improvement.

Towards the end of the day, I typically review our progress against strategic goals and priorities and prepare for the next day's activities. This might involve drafting reports, setting new priorities, or coordinating with external partners for future projects.

In reality though, no two days are the same which is what makes this role exciting!

You joined the team after 20 years at the University of Canterbury. Was there a bit of a learning curve, and if so, what have you learned in the last 10 months?

Transitioning from the academic environment at the University of Canterbury to the fast-paced, customer-centric world of an international convention centre certainly came with a learning curve for me. However, it has been an incredibly rewarding journey over the past year, and I have learned so many things along the way. Being part of a great Executive team here at Te Pae helped me immensely as I leaned on them for support in the early months.

One of the key differences I encountered was the pace and immediacy of the events industry.

Unlike academia, where projects often span several months or years, the convention centre environment requires rapid decision-making and quick turnaround times to meet the ever-changing needs of our clients. This new role has really helped me to be more agile and responsive.

I've also gained a deeper appreciation for the collaborative nature of this industry. At any large convention centre, success hinges on effective teamwork and coordination across various departments, including operations, marketing, IT, and customer service. Building strong, interdepartmental relationships has been crucial in driving our technology and innovation initiatives forward.

Lastly, I've learned the importance of encouraging a culture of continuous improvement and innovation. Helping my team to think creatively and embrace new ideas has been instrumental in staying ahead of industry trends and meeting the evolving demands of our clients.

Now you've settled in, what are you most excited about at Te Pae in terms of AV and technology now and in the short term, and in the long term?

Having settled into my role at Te Pae, I'm incredibly excited about the new approaches and solutions we're making in AV and technology, both in the short term and the long term.

In the short term, we are focused on enhancing the overall event experience by improving our equipment and seamless integration of innovative technologies. With any new building, there are often technical teething issues that need to be addressed, but we are making significant in-roads into this to make the venue a great technology experience for our clients.

In the long term, I'm excited about the potential to transform Te Pae into a leader in sustainable and smart convention centre technologies. This could include smart lighting and climate control systems that adjust automatically based on occupancy and usage patterns, enhancing both energy efficiency and attendee comfort. From energy-efficient AV equipment to eco-friendly materials in our infrastructure, I am keen to aim to set new standards in sustainable event management.

And what are the most significant concerns/challenges for the Centre or for the New Zealand events industry, again with a focus on AV and technology?

The events industry, particularly in New Zealand, faces several significant concerns and challenges, especially when it comes to AV and technology.

1. Rapid technological advancements: keeping up with the rapid pace of technological change is a constant challenge. As new AV technologies and innovations emerge, there is pressure to continually upgrade our systems and infrastructure to stay competitive. This requires significant investment and careful planning to ensure seamless integration and minimal disruption to ongoing operations
2. Cybersecurity: with the increasing reliance on digital platforms and connected devices, cybersecurity has become a critical concern for us. Protecting sensitive data, including attendee information and event content, from cyber threats is critical. We are implementing robust security measures and continually update our protocols to safeguard against potential breaches and threats



"From energy-efficient AV equipment to eco-friendly materials in our infrastructure, I am keen to aim to set new standards in sustainable event management."



"Te Pae has significantly helped advance the AV and technology sector in Christchurch and the wider region through several key contributions."

- 3. Cost management: balancing the costs of adopting new technologies with the need to provide affordable solutions for clients is a delicate task. High-quality AV equipment and cutting-edge technologies often come with substantial price tags. Ensuring we can offer competitive pricing while still delivering top-notch services requires careful financial planning and managing costs accordingly
- 4. Sustainability: sustainability is an increasingly important concern for us at Te Pae. Clients and attendees are becoming more conscious of environmental impacts, and there is growing demand for green and sustainable event solutions. Integrating eco-friendly AV technologies and practices, such as energy-efficient equipment and sustainable materials, is essential but can also be challenging in terms of cost and implementation
- 5. Training and skill development: ensuring that our staff are well-trained and proficient in using the latest AV technologies is crucial. The rapid evolution of technology means that ongoing training and professional development are necessary to keep our team's skills up to date. This requires investment in training programs and resources to support continuous learning
- 6. Hybrid event management: the rise of hybrid events, which combine in-person and virtual elements, presents unique challenges. Managing the technical complexities of these events, ensuring seamless integration between physical and digital experiences, and providing a high-quality experience for both in-person and remote attendees

- requires advanced AV solutions and detailed planning
- 7. Connectivity and infrastructure: ensuring reliable connectivity and robust infrastructure to support high-tech AV solutions is essential. This includes high-speed internet connectivity, adequate bandwidth, and state-of-the-art facilities that can accommodate the demands of modern events. We're fortunate to have excellent fibre and internet connectivity here at Te Pae as well as a flexible network infrastructure

One of Te Pae's successes has been the impressive economic and broader benefits for the city and the region. How has the Centre had a positive impact on the AV and technology sector in the city and more widely?

Te Pae has significantly helped advance the AV and technology sector in Christchurch and the wider region through several key contributions. By partnering with local key AV partners and looking to leverage and invest in state-of-the-art AV solutions, Te Pae has driven local innovation, encouraging AV companies to adopt new technologies and enhance their services. This, in turn, has created economic opportunities, generating jobs for local technicians, engineers, and technology specialists.

The demand for advanced AV services at Te Pae has led to a greater emphasis on training and professional development, helping build a more skilled and competitive workforce. The Centre has also fostered collaboration between AV/IT companies and technology

providers, promoting knowledge exchange and partnership development.

One of the things I am most proud of is how we are providing a platform to showcase local expertise to a global audience through high-profile events and international conferences. This exposure will help elevate the reputation of Christchurch's AV and technology sector, attracting new business opportunities and investments. By prioritising local suppliers and sustainable practices, Te Pae supports the regional supply chain and encourages eco-friendly innovations.

What event so far are you most proud of, and why?

I can already recall so many amazing events that I have been very proud to host from a technology perspective, but if I had to choose one, it would be the annual Canterbury Crusaders Rugby Hall of Fame charity event. This annual event is a special occasion for our region, where players and coaches are recognised for their significant contributions to the club. The event raised over \$100K for local charities for our city.

Being a staunch Crusaders rugby supporter, to be a part of hosting such a successful and inspiring event here at Te Pae was a very proud and memorable moment for myself and our team.

The piece of AV gear or technology you would most like to take home?

If I could take home one piece of AV gear, it would probably have to be one of the high end and high lumen 4K projectors for the man cave in my garage!

The Entech logo, featuring a stylized white 'e' with a curved top, followed by the word 'entech' in a lowercase, sans-serif font.

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Sub-Atomic Audio



& The Great Unravelling

The future is here. AI has infiltrated the audio industry from every angle, and no corner of our ecosystem will be impervious to its accelerating influence. The ramifications of this new dawn are far from clear, but it's high time we took stock of where it's leading us regardless: economically, artistically and culturally... if that's even possible.

When your favourite mix can be picked apart like Lego and the vast bulk of every recording can be deconstructed back to its constituent parts, every element of every song ever recorded is potentially a sample library ready for harvesting (or very soon will be). When streaming services no longer play the music of artists from around the world but instead – without any disclosure or disclaimer – deploy AI to manufacture their own content that's foisted upon an unwitting or otherwise passive or undiscerning audience, the music industry becomes fractured beyond recognition, leading us rapidly into unknown musical, economic and legal territory. And when platforms like ChatGPT and Udio encourage people to forgo the use of their own skills and human

faculties, and instead use AI to churn out songs for them, a brave new world opens up that looks decidedly bleak indeed.

I could go on and on... and on.

So where are we now, and where are we headed? Do we know? Does anybody even care?

From where I stand in my corner of the audio industry as part of the wider Murky Way entertainment galaxy, grasping the ramifications of AI is like solving a Rubik's Cube, featuring an unknown number of sides and colours, blindfolded. You could twist it this way or that, up or down, left or right, but in the end, it remains a scrambled mess.

I don't pretend to know how many sides or colours this new AI puzzle is comprised of, nor do I have the time to sit in a corner like a Zen master and contemplate the future of our industry in any meaningful or informed way. Like everyone else, I am only partially informed, superficially aware... and yet, like everyone else, I'm adopting AI tools myself, regardless.

Is this a good thing? I'm not sure. There's an upside, without doubt, but something tells me there's also a downside that potentially runs deep and dark that we will have no way of rescinding later if we decide we don't especially like where we've ended up. It will be far too little too late by then. Already is... (and I suspect AI is quietly chuckling to itself

in a cloud somewhere right now at the very prospect of being told by humans: "Sorry, no, we've changed our mind about you...")

The Upside

From the narrowest, professional audio perspective, the adoption of countless fantastic new AI-powered tools that can separate out sounds, remove unwanted spill, room acoustics and noise from tracks seems like a no-brainer. Tools that time and phase align, pitch correct, balance tone and dynamics in ways that were only a few years ago the work of science fiction, are impossible to ignore or resist. They make the job easier, better, faster and more enjoyable.

To that end, DAW platforms and plug-ins are flooding our audio ecosystems with new AI-powered products in a veritable tsunami of ground-breaking options. Apple Logic 11, for example, offers a new tool called Stem Splitter that's available by simply right-clicking on an audio file, whereupon the sounds in that file – an old stereo mix perhaps, for which there is no longer a multi-track session – can be deconstructed into Vocals, Drums, Bass and 'Other' in mere seconds. And right out of the gate in Version 1, Logic 11 performs this magic trick very well. This is a massive advance (and if you make Karaoke backing tracks for a living, now might be the time to apply for a job in local government).

No doubt, in months, weeks or mere days from now – if it hasn't happened already, such is the whiplash-inducing accelerated response time of AI – every audio software developer will have such a tool, and the ramifications of this single process will be far-reaching.

Plug-ins like Supertone Clear and Black Box Audio Silencer abound. Software of this ilk uses AI to perform veritable magic tricks with background noise. Silencer, for instance, gets your messy, spill-laden, phase-incoherent multi-track drum recordings and quasi 'isolates' each individual drum from the others. From the snare track you can remove that ugly, overbearing hi-hat spill and horrible kick drum sound in ways you never could before; from the tom mics you can ditch the snare, cymbals and kick drum; from the kick you can lose that phase-incoherent snare sound, and so on and so forth. Silencer does this effortlessly, opening up a whole new world of drum miking, recording and mixing potential. And I suspect there are 100 plug-ins like it that work just as well.

Another similar plug-in, Supertone Clear (formerly known as Goyo), does the same sort of thing with room ambience and background noise: namely, it turns down (or off altogether) the background ambience behind any form of vocal or dialog at the mere turn of a virtual knob. It does it well, does it effortlessly, and represents a game-changer for anyone who lacks a million-dollar studio in their backyard or suffers from a dodgy room acoustic... i.e., everyone. This single concept alone recalibrates my own thinking entirely about tracking a live band in a room. Spill begone; the power of this little plug-in potentially opens up whole new ways of recording, and new expectations around what a mix can later achieve.

This sort of control over separation and spill was literally science fiction up until very recently. Who needs walls for isolation anymore when you can simply dial things out? It begs the question...

What looms from AI in coming days, weeks and months, if already there are new tools as powerful as these, only time will tell. But a word of warning: if you look ahead at what's coming down the road and you see a shiny robot with menacing red eyes... run!

The Downsides

The known downsides are already taking hold, and they are widespread. What we can't know, or yet see coming, I'll get to in a moment (assuming my laptop doesn't become self-aware and electrocute me).

An artist's copyright in the broadest of terms includes the way they express themselves via the various artforms in which they work. The songs they pen, the painting they produce, the recordings they make, the

sound of their voice etc, are all implicitly owned by the artist. It is precisely these things that any artist, and the mechanisms that might support them, trades upon to derive an income. When these are removed or usurped by some other entity, it's to the extreme disadvantage of the artist, their supporting industries, and ultimately the wider culture they inhabit.

This is what is happening right now thanks to the innocuous, harmless and yet ferociously monstrous power of AI. Singers are having their voices mimicked by AI and then finding themselves in a battle over who owns the sound of their voice, in a truly brain-melting metaphysical twist of logic. Visual artists are having their work 'harvested' by giant, amoral digital platforms like Facebook and Instagram, which are then using these same artists – their human skills, idiosyncrasies and artistry – as a form of learning fodder for their AI algorithms, and for which artists have neither consented nor been compensated. If it were bank notes Meta was harvesting, it would be described as the crime of the century, making Oceans 11 look like someone breaking into their little sister's piggy bank.

While we're all celebrating AI's new power with respect to our workflows, efficiencies and artistic endeavours, in the background so much is shifting that by the time we look up from our computer screens after a day at the controls, the very framework inside which we're working is metamorphosing and metastasising around us. If we don't make some new efforts globally to place guardrails around the ownership of our work, our art, and our products we may find that, while AI provides us all these fancy new tools to work with, everything we make with them will be valueless.

Inside this cheery economic reality, the edifice of art and culture as we know it collapses entirely, or at the very least becomes unrecognisable.

The Other Sides

Without wanting to sound like a fearmonger, it's not hyperbolic or beyond the scope of one's imagination to suggest that artificial intelligence may turn out to be the 21st century's equivalent of splitting the atom.

AI may change everything, and rapidly. So much so that conventional clichéd phrases like 'change occurs generationally', may have to be superseded by a far shorter timeframe. We may have to describe our youngest generation as Generation Next (Week), or Gen Y (Bother), and terms like 'back in my day' will have to be replaced by 'earlier today'.

And what jobs will be available in the arts and entertainment industries is anyone's guess. Will it replace mix engineers in the studio in the same way as it's replacing

songwriters? Will mastering engineers be replaced with a fifty-dollar plug-in?

Standing on the edge of this AI tipping point, it's hard to tell what jobs in our industry will disappear and which roles will survive, but I strongly suspect that the saviour of music in general – the place from which a new counter-culture of sound will surely emerge – will be live performance; a place where, for the foreseeable future at least, AI has no influence. The only problem with this theory, unfortunately, is that the number of venues that young bands can access to showcase their music is shrinking.

Meanwhile, in the studio, computers are seemingly taking over everything, and in this environment, AI is untrustworthy and dangerous. We certainly can't have much faith in computers showing moral constraint... and weirdly this one is suddenly getting very hot, and....

>

Andy Stewart once owned and operated The Mill in Victoria, a world-class production, mixing and mastering facility. He had recently been taken out to a place where he can no longer harm AI or cast aspersions against robots generally. Any pleas for pro audio help should now be directed to borg.org, or you could still try your luck with: andy@themill.net.au

TECHNICAL DIRECTION COMPANY

PROJECTION

by Jason Allen



VIVID AND BEYOND

Vivid Sydney lit up the Emerald City for the 14th time May 24 to 15 June, with the 'Vivid Light' quarter of the programme including 40km long lasers shooting from Sydney Tower, the spectacular Lighting of the Sails of the Opera House, and installations across, and even under, the city. TDC - Technical Direction Company have long provided their expert projection mapping services to the festival.

We spoke with Drew Ferors, Head of Technical Services at TDC, about how the company approach a festival on such an epic scale. "In 2024, there were 15 different installations that we were looking after with 90 projectors," outlines Drew. "We've been improving our remote control and monitoring of the installations every year, creating our own software and adding capabilities like 4K resolution and fibre optic

transport. We build robust systems that don't need to be tended to by technicians day in, day out. Systems that are durable, able to run in the rain, and have backup systems in place."

Starting years ago with simple remote 'turn on and off' capabilities, TDC's remote systems are now more like NASA's Mission Control. "Our ability to remotely control and monitor all of our projection installations

makes our delivery robust," explains Drew. "It makes it easier for us, and also the client. We have fitted all of the installations with PTZ security cameras with optical zoom that can look closely at parts of the buildings from a centralised location in the city. Rather than having technicians sitting in each individual projection tower, the main body of our technical staff are in a much more comfortable workspace at the Event Control

Centre. They have a live camera feed of every single projection location that we're doing at Vivid, all in the one spot. Our internet access to the installations has gotten a lot better, as Destination New South Wales have run hardwired internet to all of them. 4G is impractical, because when the city is full of people, it just slows right down."

In previous years, each projection location was staffed, and adjusting the shows once they were up and running was a difficult matter. "Now, we perform a lineup tweak at the beginning of every single night, on every single installation," continues Drew. "We're also recording all of our activity. When the technicians are zooming in on a certain part of a building, we capture all of that, and we can then review it to see if there's any sort of ongoing issue. If a certain projector is always drifting to the left, we can see that in the records, then go to the site and rectify it."

As thousands pour into the city every night to see the shows, TDC's techs are already at the Control Centre and have done their pre-show checks. "Before the show starts, we're able to check all systems within 20 minutes, logging into each individual site to double check all the systems are perfect before the projectors have even sparked on," boasts Drew. "We're able to get ahead of any issues before they affect the show. We can log in, tweak projector lineups, lens shift, or refocus the projector from the Control Centre, or indeed anywhere in the world. The lineups of these projection installations always require a little bit of maintenance, which traditionally we would do once every three days at best."

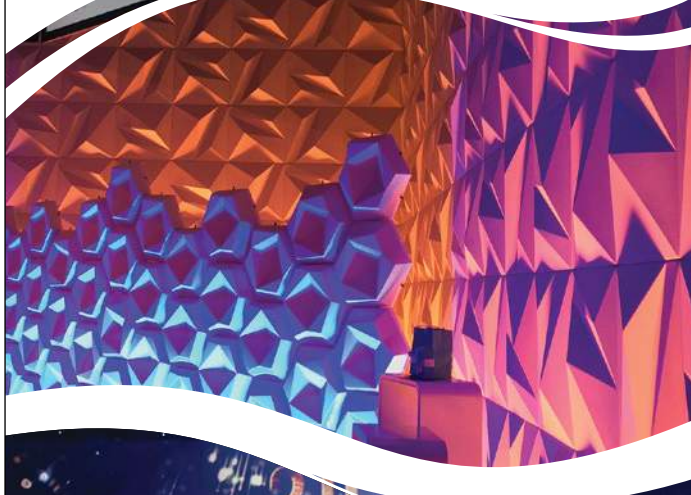
Even the monitoring software has its own monitoring software; "On top of site software that's monitoring all of the projectors, we have a cloud-based software that's monitoring that monitor, making sure that it's operating correctly as well," confirms Drew. "For example, it could be 11 am on a Monday, and I get an email from the system telling me we've lost power at Customs House. We can action staff to attend the site, and this is hours before the show. It's fixing issues before they're even an issue. It's preventative rather than reactive and it really does help us sleep better at night. The amount of uptime of the projection installations is so much higher than it used to be, and we have records of all of it. We can share that confidence with the client and send them our central control view so they can see all of the projectors working for them at all times."

An interesting outcome of switching to totally remote monitoring has been finding that it is in many ways superior to doing it on-site. "Monitoring cameras with optical zoom are good enough for us to line up the building projections remotely," confirms Drew. "On-site, it's quite difficult to focus your eye on the laptop in front of you and then focus up on the building 40 metres away. When you're on a screen, and you're sitting in the comfort of an office, you're out of the cold, you're not rushed, and you don't want to get out of there quickly. When it comes to lining up the pixels of the projection, we can zoom right in, and we've discovered that we get better results using security cameras with optical zoom than the human eye."

In terms of gear, TDC relied exclusively on Barco projectors to power Vivid, running the flagship UDM Series alongside the UDX Series. For media servers, installations varied multiple models of server from disguise and Christie's Pandora's Box.

I asked Drew which particular projection at Vivid he was most proud of; "My personal favourite was 'Nest' in Barangaroo," he replies. "We created a big circular structure of TDC's gostMESH product, which is a nano-technology fabric that absorbs colour and light while remaining transparent and invisible. We then projected beautiful imagery of slow-moving birds. It was visually stunning."

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Beyond Vivid

While the city-spanning Vivid gets most of the attention, TDC have been working to deliver immersive experiences on many other projects. One of them is Dream Circus at Sydney's Lunar Park Big Top, a 45 minute immersive multimedia show that runs several times a day. Having seen UK company Hive's modular media management system at ISE this year, I was pleased to find out that TDC have deployed the first installation of it in Australia.

“Michael Hassett our MD is always at the forefront of new technology, so we connected with the people at Hive in London. Our first deployment of the Hive servers was working with Hive directly and their team for the BBC Earth immersive experience in Melbourne,” notes Drew.

“Having had a great experience with the flexibility of the servers we decided they would be a perfect solution for Luna Park. Hive occupies a good middle ground in the market. The really advanced media servers like disguise and Pandora's



Vivid Nest



Vivid Nest



Vivid Customs House



Vivid ASN Clock Tower



Vivid MCA

Box are designed for highly experienced technicians to use. They're designed for quick and easy changes to be made by professionals on-the-fly. Dream Circus is a permanent installation so limited changes to the output are required, so it doesn't need that level of flexibility."

"The Hive media player is really great at being able to reproduce shows the way a museum would run them," continues Drew. "You upload the content and then repeat it more or less forever. Luna Park is a really robust system. Everything is timecoded together, and plays beautifully in sync. We don't have technicians at Luna Park on a permanent basis; it's all handled by the

Audio Rentals

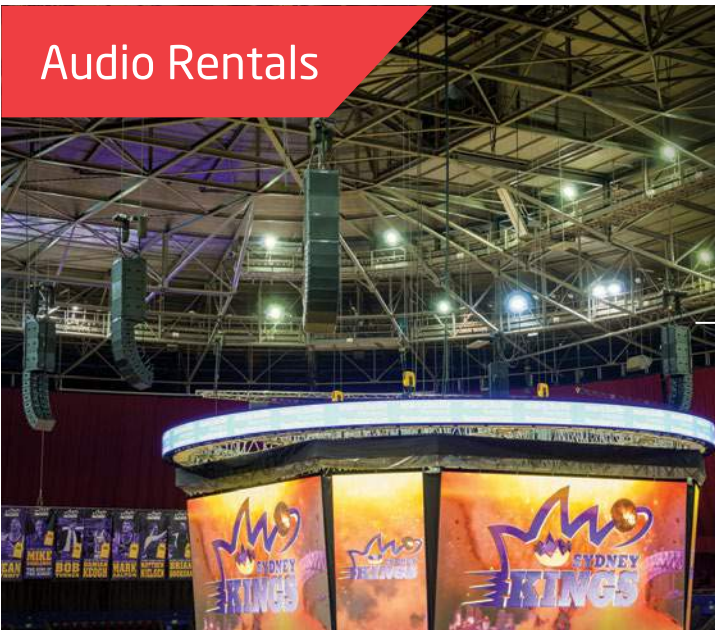


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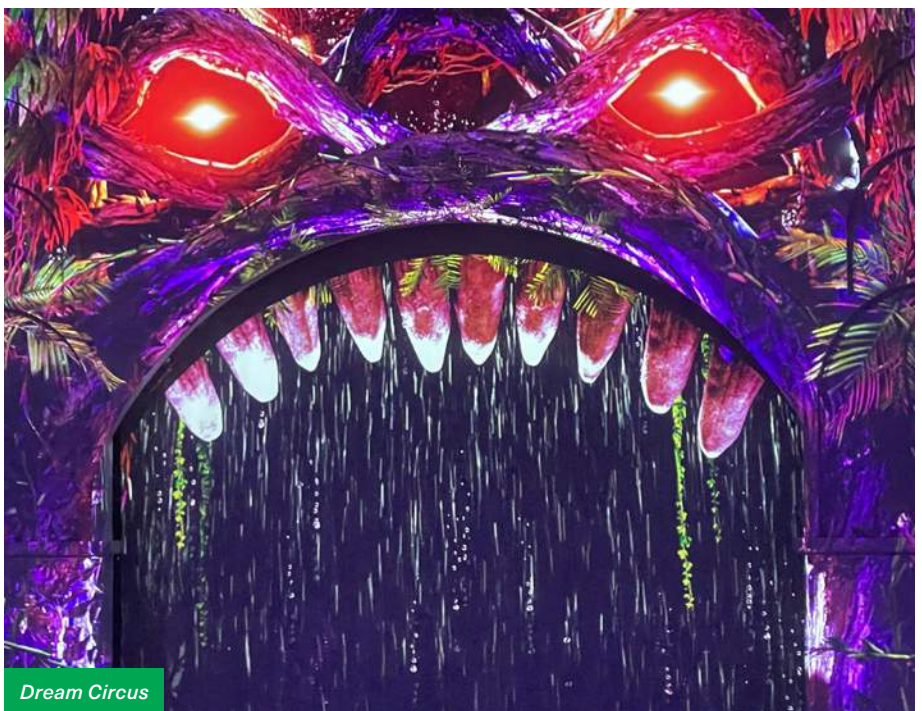


Vivid

client. All they have to do is push a big 'play' button when all their audience members are seated. Hive is designed to have a user-friendly interface for the end-customer. We monitor that system remotely as well, with the same cameras and systems we use on Vivid."

Dream Circus runs on 38 Barco G Series projectors that are fed media from 32 Hive Pluto Beeblade media engines, housed in Hive's 5U Beehive chassis, sitting alongside 10 Hive Beebox media players.

The Hive infrastructure is housed in a central ground-level room, with fibre optic signal transport to the projectors. Each Hive media player is a stand-alone piece of hardware, so if there's a failure, it won't take out the whole system like a traditional media server would. You can simply take out the faulty unit, and slot in a replacement.



Dream Circus



FUJIFILM

The School Of Cybernetics Australian National University

Cybernetics is described as the “science of control and communication in complex systems such as computers, the human body, ecological systems, information systems, government and human cultures.”

Think of Cybernetics as a way of understanding the increasingly complex digital and data-driven technology systems that are influencing our modern world. Just as engineers (and engineering) enabled us to develop new technologies that drove the industrial revolution, so too our future Cybernetics practitioners will draw on their knowledge of computer science, systems theory, psychology, anthropology and more, to design, build, scale, and manage systems super-charged by the likes of AI and the Internet of Things.

The School of Cybernetics at the ANU (Australian National University) has been offering a Masters course in applied cybernetics for the last six years. Students come from diverse backgrounds, but

all have a deep interest in how people interact with systems, technology, and the environment in order to develop a toolset and common language that will guide us towards a safe and sustainable future in our digital world.

Unlike many courses these days, the School of Cybernetics favours in-person learning and students have access to lecture theatres, ‘discussion labs’ and ‘build labs’. A large component of the curriculum relies on audio visual aids to deliver content and encourage collaboration.

Due to the layout of the school and the various spaces available, they needed a utility projector that could give them maximum flexibility. In addition to having

fixed projectors installed in some spaces, the School of Cybernetics opted for several projectors that could easily be setup and cater for a wide range of uses, from large external productions to smaller guest speaker events.

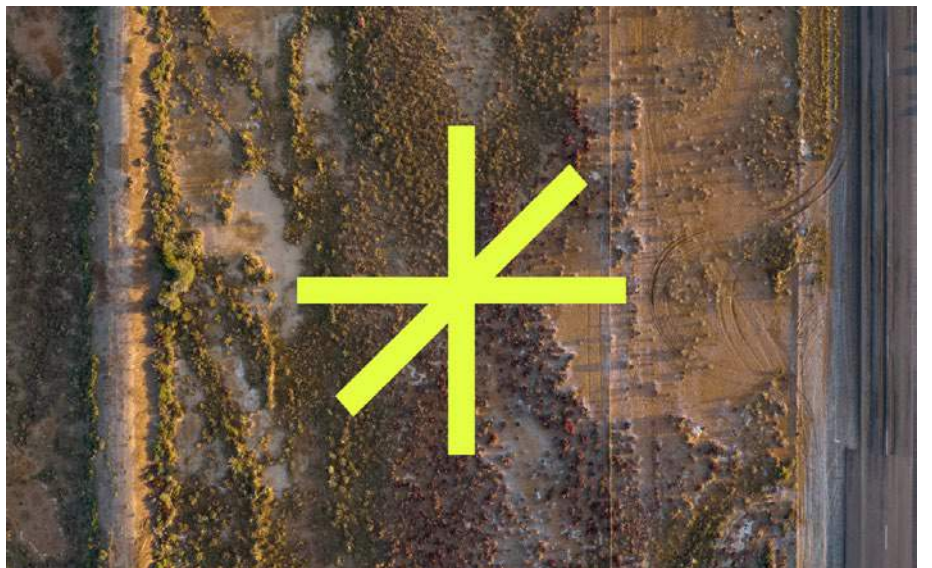
According to Andrew Meares, Cybernetic Futures Lead, “We often have a requirement to present content on behalf of our guest speakers. We chose the Fujifilm Z8000 mainly due to its ultra-short throws lens that allowed us to setup the device behind the speaker, avoiding any shadowing and allowing them to move freely.”

The Fujifilm Z8000 is perfectly suited for this situation due to the smaller overall unit size and the unique lens



configuration which eliminates the offset associated with existing mirror-based ultra-short-throw projectors. In fact, the Z8000 models can create a 3.3 metre image at just one metre distance from the screen. Other features that have proven themselves on various occasions are the keystone and image shift capabilities. When projecting onto irregular surfaces the keystone feature can be used to correct any image distortion. This model features 8000 lumens illumination combined with a powerful laser engine that delivers unrivalled brightness and contrast with 'blacker' blacks and smooth video replay.

The school is also involved in staging public events arising from research collaboration with various organisations. One such project called 'Lucie in the Sky', in collaboration with the Australasian Dance Collective (ADC), became the world's first artistic project in which drones were choreographed using human and animal movement patterns to perform with human dancers. During the pre and post-show, guests were invited to interact with virtual drones projected onto giant screens using the Fujifilm Z8000, exploring the relationships between people and autonomous systems.



Great Southern Land Exhibit

National Museum of Australia

In September 2022, the NMA (National Museum of Australia) opened its spectacular Great Southern Land environmental gallery as part of a \$34 million upgrade. Being the biggest redevelopment since opening to the public in 2001, this expansion had to be ground-breaking.

This permanent exhibition tells the story of Australia as an ancient bio-diverse continent shaped by interacting forces. With such a complex story to communicate, the telling itself needs to be entertaining and interactive so visitors can enjoy their own learning journey.

For the design concept the NMA engaged renowned exhibition designers Local Projects from New York. Melbourne-based designers Art Processors were then chosen to bring these concepts to life.

Art Processors designed and delivered several unique digital experiences allowing visitors to investigate aspects of our environment from flora and fauna to seasons and CO2 levels. The primary challenge was to translate complex scientific information into tactile displays

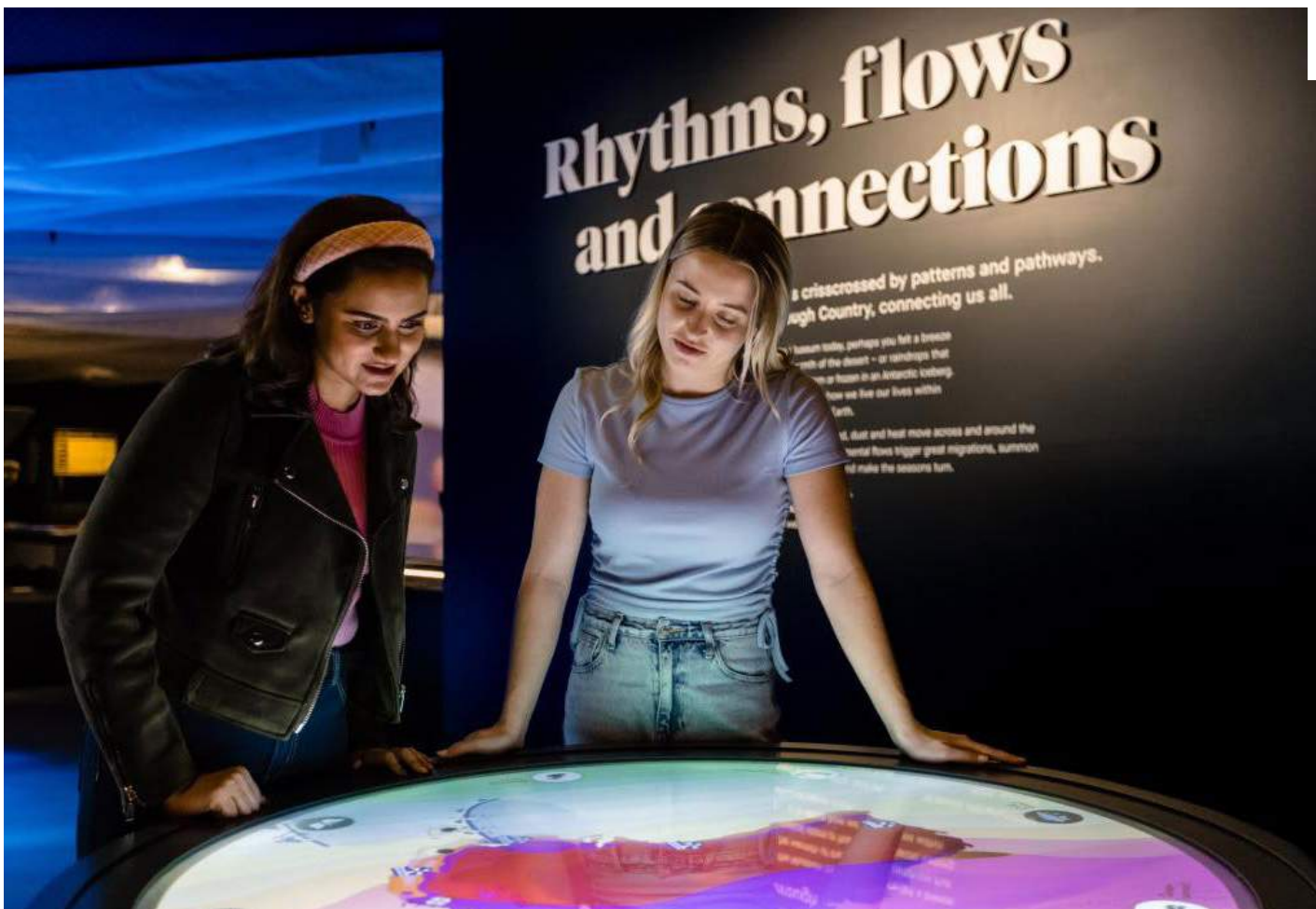
that encourage visitors to participate while developing a greater understanding of the topic.

Two of these displays required the construction of low circular drums where the visitor interacts with a touch-sensitive tabletop. The 'Iconic Species' display is a collaborative drawing app that invites young visitors to learn about Australia's most well-known species, and even share their own creations. The 'Pathways' display features an interactive satellite view of seasonal events. Visitors use their hands to explore temperature, ocean currents, and migration patterns and how natural elements are linked by intersecting pathways and rhythms. By finding the right combination of elements, the tabletop plays a beautiful animated sequence related to the topic,

such as a pod of swimming whales.

The designers determined the most appropriate way to deliver the interactive content to the display surface was through projection. LCD and LED touch screens have complex electronics that don't stand up well to being handled by groups of excited children. LED also radiates a lot of heat into the gallery space. By contrast the Fujifilm Z6000 projector is protected within the circular drum at floor level, well under the projection surface.

These displays also needed to be low enough for children, and those in wheelchairs, to be able to interact safely. This meant the chosen projector should be capable of ultra-short throw (UST). This simply means the projector can be placed very close to the screen while still



FUJIFILM Australia. Images courtesy of Art Processors



projecting a large image. The Fujifilm Z6000 has a throw ratio of less than 0.4, which means it can project a 2-metre image from just 80cm away. This ensured the display would be accessible for children to easily interact with.

The other aspect that made the Fujifilm Z6000 an easy choice was the unique bi-axial rotating lens. This feature greatly simplified the installation and maintenance of the display. The projector could sit on the floor without requiring special mounts and the lens simply rotated vertically.

The beauty of the exhibit is that the technology delivering this exciting and engaging content doesn't intrude into the space and distract from the experience. The projectors are either housed inside the displays themselves or tucked away high in the ceiling, using their zero offset capability and ultra-short throw lenses to present shadow-free images onto the viewing surface. Since its launch, the exhibit has had many thousands of visitors who've interacted with the displays and learnt something new about their own country and its environment. The mission objective has been achieved and the Great Southern Land continues to be one of the most popular permanent attractions.



Fujifilm Z6000



FUJIFILM

Tiger Lane Dining Precinct

With so much competition for the dining dollar, creating a memorable experience is almost as important as the food itself. Inspired by the hawker centres of Asia, Tiger Lane in Canberra Mall is a dining precinct designed to showcase the cuisines of Japan, South Korea, Southern China, Northern China and Southeast Asia.

When creating Tiger Lane, the designers knew the precinct needed fabulous food and visually exciting dining spaces. As part of that effort, they envisioned a video wall that could be used to entertain and inform visitors with the potential to display a network stream, sporting events, important news or other content.

They contacted Sound Advice in Fyshwick and together, determined that projection would be the best technology to achieve the best results. Using two projectors would be much bigger than the 'typical' and often intrusive LCD screens and considerably cheaper than an LED wall. Two Fujifilm Z6000 projectors were selected to play one big 'edge blended' image pattern or separate images on either side of the projection surface.

The Fujifilm Z6000s were selected for their low profile, allowing them to be installed unobtrusively below the ceiling bulkhead. In addition, the ultra-short focal lens, provides a very large image at the limited projection distance and the zero-offset projection, allowing the image to be projected without

distortions or the need to position the projector well above the screen area. The units also feature a 20,000 hour laser light engine that will provide years of service free operation, which is important in such environments.

The designers have split the projection content across the two projectors and used the 'edge-blending' feature to hide the joins, so the viewer experiences a floor to ceiling immersive backdrop.

The projectors perform well in the space despite the various lighting displays operating within the precinct. The laser technology produces smoother video, blacker blacks and feature a higher contrast than other LCD options available on the market. The overall result is impressive and although photographs of the space can't faithfully reproduce the in-person experience, the 6000 lumens projectors create visuals that demand attention.

The setup team were able to use simple mounting plates to hold the units securely against the ceiling. These projectors are up to 10kgs lighter than comparable units, simplifying the installation and making repositioning easy.

The Tiger Lane dining precinct is quickly becoming the 'go to' location for Canberra foodies and those wanting an exciting venue to grab a drink or a coffee.

The owners now have the facility to present a range of content to promote the various offerings within the precinct. Promotions and other time sensitive offers can easily be promoted using the projection setup. Popular entertainment and sporting events can be screened to further attract visitors. With data inputs including HDMI, VGA, SDI, DVI and USB, the setup will accommodate almost any requirement and provide significant flexibility for the future.

So next time you're in Canberra and feeling peckish, drop in and check out Tiger Lane where you can see the Fujifilm Z6000s in action.



InnerGlow Searchlight work, "Jailhouse Follies" by Jerry Loo

The Electric Canvas Keeps Festivals Burning Bright Across Australia and Beyond

The Electric Canvas' festival season has been one of the busiest that the company has seen throughout its 27-year history, with large-scale and architectural projections featuring strongly at both new and recurring events around the region.

After kicking off 2024 with the Australia Day Live broadcast at the Sydney Opera House, TEC was off to Hong Kong for the third edition of the 'InnerGlow' festival at the historic Tai Kwun Centre for Heritage and Arts. This year, another precinct was added to the lighting and projection event, expanding from the Parade Ground and opening up the Prison Yard for a new initiative, 'InnerGlow Searchlight'. Supported by the experience of The Electric Canvas, this student mentoring program provides the opportunity for artists and students to become involved in architectural projection mapping. A call-out to art and performance institutions yielded an enthusiastic response from a variety of applicants, including design and animation students, established artists, sound designers and performance artists. The proponents were a mix of individuals and groups, gathered from like-minded friends and colleagues.

The Electric Canvas provided the applicants with three architectural opportunities of

varying complexity, including an impressive prison wall some 60m wide by 10m high, a complex two-story Prison Block façade, and a simpler, gabled end wall with minimal architectural features. The rules were simple: use and play with the architecture; treating facades simply as screening surfaces would not be acceptable. After receiving proposals from each respondent of the call-out, TEC and Tai Kwun conducted a series of interviews to identify a shortlist, before selecting the final contributors and assigning them each a façade, based on their creative idea and skills. Two of the facades also allowed proponents to work with multisource sound. The contributing groups were given a timeline and a series of briefing and mentoring sessions to assist them in achieving their visions in this new and challenging medium.

Once the equipment was in place in the week leading up to InnerGlow 2024, each group was given two opportunities to view and hear their work in-situ. This was a pivotal moment, as they suddenly realised what their mentors had been preaching. The first viewing session was set up so that the artists could undertake on-site sound mixing using timecode synchronisation to maximise the theatrical qualities of their piece. Each group took copious notes and spent the next 48 hours refining their work – often with very little sleep – before returning to the Prison Yard for one more look.

Without exception, the artists and groups delivered outstanding fresh works that were enjoyed by all. For TEC, the InnerGlow Searchlight program was one of the most satisfying initiatives the company has been involved with.



TEC's Peter Milne with InnerGlow Searchlight artists

Back home, The Electric Canvas continued its epic 14-year tenure to refine the way it delivers Canberra's annual Enlighten Festival.

Although the 2024 festival saw the usual installation at six significant buildings in the Parliamentary Triangle, TEC continues to iterate and to improve delivery with new projector and media server technology, as well as improved site infrastructure and methodologies. This is one of the few annual events that didn't suffer a Covid-induced gap-year, due to extraordinary flexibility from TEC's team and the organisers.

Enlighten is a unique festival model, with The Electric Canvas working directly with the various institutions to deliver new bespoke content onto each of their façades. Their contribution spans from giving expert advice to commissioned creatives, to providing

template and architectural guidance, to animating supplied static assets to create new animated works.

One such commission for this year's Enlighten was to work with the National Gallery of Australia and its assigned artist for 2024, Vincent Namatjira OAM. Namatjira's 'Australia in Colour' exhibition within the Gallery was due to open at the same time as Enlighten, so the NGA briefed The Electric Canvas to create an animated piece for the exterior of this huge brutalist design building. TEC's artists and animators set to work animating several portraits and paintings from the collection to produce 'Indigenous All Stars', in some cases adding missing

limbs and features cropped from the original mounted pictures. The artist himself was asked to create a bespoke background scene using a special large-scale building template supplied by TEC. This background was then pathed, dissected and "healed" into separate complete layers of mountains, hills and trees that could be 2D animated to create depth and perspective. One scene, depicting the actual 'Australia in Colour' exhibition, featured football players breaking out of their picture frames to join a game of footy on the façade. The artist voice narrated the piece, which was accompanied by a music track from local musicians around Indulkana/Iwantja, South Australia, near Vincent's home and studio. Both the Gallery and the artist were thrilled with the outcome, with the piece proving one of the most popular of the festival.



"Indigenous All Stars" by Vincent Namatjira in collaboration with TEC – National Gallery of Australia, Enlighten Festival



Lego projections onto Australian Parliament House, Enlighten Festival

Up the hill at Australian Parliament House, The Electric Canvas produced a fun piece based on the extensive Lego model of the house and its inner workings that is on public display. The façade of the Great Veranda was reconstructed using Lego bricks that were rigged to perform animated cutaways and collapses to help transition the narrative. With the assistance of APH stakeholders, TEC directed a macro photo shoot of the model to capture the depiction of both houses of parliament in session. Hours of painstaking work was undertaken to deep etch the various Lego figures, including the Speaker of the House of Representatives and the President of the Senate. Backgrounds were restored where each figure had been removed, so the figures could be composited back in and animated with basic movement. The soundtrack was comprised of a bespoke music track with actual, sometimes raucous, recordings from both Houses. Again, the stakeholders, and the public, were delighted with the result of this playful projection.

TEC looks forward to Enlighten 2025, its fifteenth, and is already working on ideas.



"Into the Limelight" – His Majesty's Theatre, Boorloo Heritage Festival, Perth

Perth's month-long Boorloo Heritage Festival hosts a variety of events throughout the month of April and, this year, celebrated some significant anniversaries, including 120 years of His Majesty's Theatre on Hay Street. To mark the occasion, The Electric Canvas was invited to design and deliver a mapped projection titled 'Into the Limelight' onto the Theatre's intricate grand façade.

A highlight of the festival, the projections portrayed the Theatre's relationship with its surroundings over the past twelve decades. TEC worked in close collaboration with the City of Perth's cultural heritage team to develop a number of scenes covering subjects such as the theatre's historical significance, memorable productions that have graced its stage, and the venue's resident performing arts companies. Hundreds of visual assets – photos of Hay Street at the turn of the 20th century, show posters and programs, and images of the theatre's famous architectural features – were woven into original content designed by The Electric Canvas. The visual sequence was set to an accompanying soundtrack comprised of familiar and bespoke music, as well as an excerpt from the WA Opera's 'Wundig wer Wilura' by Gina Williams and Guy Ghouse.

TEC made an early start on the project's technical pre-production in November 2023 by LiDAR scanning the theatre's façade

and undertaking a preliminary projection study to map the complex architecture. The projections were to cover the entire Hay Street span of the building as well as wrap around the corner 20 metres to the King Street exit doors.

Given the limited throw distance due to the narrow two-lane Hay Street and the deep shopfront awnings opposite, projection towers on the footpath were ruled out. TEC found a workable solution by taking advantage of the shop awnings themselves. This approach elevated the projectors to a satisfactory height that avoided deep shadows on the building. It was also aesthetically ideal, rendering the streetscape completely void of infrastructure. However, this approach raised the question of whether the awnings were structurally sound enough to bear the weight of the equipment and crew, as well as whether the building owners would actually consent to their use.

Consent initially proved elusive until, finally, in early February, the City received permission for their engineers to inspect the awnings. A mere six weeks before bump-in, the engineers gave their green light, albeit with a number of additional infrastructure requirements and, at last, production could get properly underway.

Time was tight to design and produce the animated, architecturally keyed content. Thankfully, TEC's creative team had been

able to commence some work in the meantime, developing the storyboard, as well as selecting and preparing the many visual assets supplied by the City for integration into the piece.

Following the engineers' sign off, TEC proceeded with their technical design utilising six Christie Crimson 31K laser-phosphor projectors installed in low-level compact enclosures, distributed along the top of the awnings directly opposite the theatre.

From a mapping standpoint, this was one of The Electric Canvas' most demanding projects. The budget was extremely tight, as was the remaining timeframe, so there was no opportunity to commission a 3D model of the building. An accurate POV workflow was the only option for this complex facade. The original decorative verandahs and columns had been removed in the 1950s, but recently reinstated in a major renovation to the theatre. This made projector calibration and blending particularly challenging. TEC deployed its versatile Modulo Kinetic media server system to help develop and maintain an accurate line-up on the challenging architecture.

Despite the many obstacles that TEC's team encountered along the pre-production route, the end result was truly impressive and the projections took pride of place at the Boorloo Festival's grand finale.

Sometimes it all gets too much...



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"The Blak Infinite", Federation Square, RISING. Artwork by Tarryn Love, animated by Studio Gilay

Meanwhile, on the country's east coast, the city of Ballarat was gearing up for its 10-day annual Heritage Festival in May. The Electric Canvas Melbourne was called upon to provide technical delivery for artist Craig Walsh's work 'Monuments'. The installation featured the faces of three well-known Ballarat locals, projected onto separate trees along the main thoroughfare of Sturt Street Gardens. 'Monuments' was a festival highlight, providing an engaging reason for locals and visitors to explore the city at night.

With the Ballarat Heritage Festival in full swing, TEC turned its attention to the fourth edition of Melbourne's RISING Festival. The Electric Canvas has been involved in RISING

since the festival's inception in 2021. For 2024, Federation Square was home to 'The Blak Infinite', a site for the sharing of art and stories of First Peoples' futures, connections to the cosmos and political discourse. The Electric Canvas was engaged to deliver projections onto the St Kilda Road and southern façades of the SBS building, the northern façade of the Birrarung building, and the southern façade of the ACMI building. The projection system consisted of some 16 31,000 lumen projectors, served by a Modulo Kinetic system. Content was designed by Studio Gilay, based on works by Gunditjmara, Keerray and Woorroong artist, Tarryn Love, and assisted by façade templates from TEC.

Across the Princess Bridge, Hamer Hall's cylindrical façade became the canvas for Club Ate's 'In Muva We Trust'. This was the second occasion that The Electric Canvas has worked with Club Ate. A first iteration of the same work was developed in 2020 for the façade of the National Gallery of Australia for Enlighten Canberra. A late addition to the RISING program, 'In Muva We Trust' was green lit by the festival just two short weeks before opening night. In addition to the technical delivery of the show, TEC provided creative production support to Club Ate's team by reworking the show for the barrel-shaped architecture of Hamer Hall, as well as incorporating new scenes and other design components under the artists' direction.



"In Muva We Trust", Hamer Hall, RISING. By Club Ate, supported by The Electric Canvas



"Synchronised Flyers" by Kirrily Urquhart, Mining Exchange hall, White Night Ballarat



"Puli Puli - Rocks" Keturah Zimran OAM, animated by The Electric Canvas for Australian Parliament House

In parallel with the set-up of RISING, the team headed back to regional Victoria. After a number of years in the White Night darkness, it was again Ballarat's time to shine. Accolade Art had been awarded the project by Visit Victoria and had put together a huge array of visual and performance offerings for the people of Ballarat and its surrounding districts. This was the third White Night Ballarat that The Electric Canvas has been involved with, this time entirely staged out of their Tullamarine base. In consultation with Andrew Walsh, the event's Artistic Director, no fewer than 12 facades were chosen and surveyed for projection. In addition to the selected building exteriors, Accolade made the late addition of the barrel-vaulted ceiling of the

Mining Exchange hall. With the use of LiDAR scanning, this surface was also modelled for projection. The majority of the content was based on the works of local artists, compiled and animated by Accolade Art. The Electric Canvas deployed 14 projection structures, many fully clad, and some 28 high-powered projectors for the event. Few projects involve such a vast undertaking involving dozens of artists, contractors and stakeholders, road, traffic and police authorities, safety and traffic management contractors, City Council and utilities – all for a six-hour, one-night event. It was an extraordinary undertaking rewarded by a massive public turn-out of some 65,000 people on the chilly streets of Ballarat.

Meanwhile, in Canberra, The Electric Canvas was engaged for the second year running to design and deliver projections onto the Great Verandah of Australian Parliament House in celebration of both National Reconciliation Week and NAIDOC Week. This year's projections were based on a stunning artwork by Arrernte, Luritja and Pintupi artist, Keturah Zimran OAM, entitled 'Puli Puli – Rocks'. The TEC creative team developed a gently animated version of the original painting to emulate the gradual erosion and transformation of the landscape over time and highlight the inherent beauty of the natural world.

Immediately following the conclusion of RISING, the Melbourne team moved onto the set up of projections onto the clock entrance façade of Flinders Street Station. TEC has been called upon on several occasions to assist in the promotion of major events supported by the Victorian Government, such as the FIFA Women’s World Cup, the National Hockey League’s first ever match in Australia, or Taylor Swift kicking off her Eras tour in Melbourne. Next on the agenda was the National Rugby League’s 2024 State of Origin series, with the second match of the celebrated rivalry between New South Wales and Queensland being battled out at the Melbourne Cricket Ground for the first time since 2018. TEC delivered the technical installation in addition to designing the projection content for this important activation for the NRL and the state of Victoria.

The final stop on The Electric Canvas’ whirlwind series of winter projects will be the annual Winter Wonderlights event at Sovereign Hill in Ballarat, which runs for three weeks across Victoria’s school holiday period.

Winter Wonderlights is TEC’s most extensive project at a single site, both from a technical and creative delivery point of view. 2024 marks the tenth year that the company has delivered the projections, since being approached to help Sovereign Hill with the development of the event in 2014 with just six weeks’ notice. Starting with projection mapping and developing themed animations for 12 of Main Street’s facades that first year, the projection coverage has grown to a total of 28 facades and a content repertoire of 20 themed animated scenes to choose from. Each year, the 15-minute projection loop, which also incorporates other special effects such as faux snow and sparklers, utilises a selection of themes from the existing repertoire and introduces a new one. This year’s is a cheeky dragon who snakes his way along the buildings and pops up to the rooftops every

now and then to let out a ‘puff’ of real fire.

Sovereign Hill is committed to providing its visitors with an accurate experience of the mid-1800s, so the design and installation of the projection system along Main Street needs to comply with this philosophy. It is essential to keep the 33 projectors strategically concealed as much as possible from public view, whilst also using projector locations that allow for optimal unobstructed coverage and image resolution. The constrained (and often non-existent) space between individual buildings makes finding suitable projector locations a challenge and any visible structures are dressed on-brand with the general Sovereign Hill experience. The company has continually refined and improved projector placement for the event and, as the installation has to take place during the Museum’s opening hours, TEC’s crew is required to work discretely, so as not to disrupt the site’s daily activities, including live horse operations.

The most technically complex and demanding of The Electric Canvas’ annual commitments,

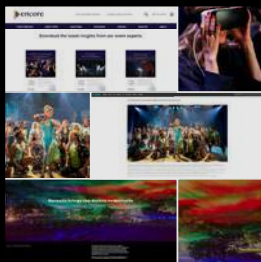
Winter Wonderlights currently requires 33 channels of synchronised HD playback from five server clusters, with a full 33 channels of hot server backup for immediate failover should there be a technical issue.

In its first year, Winter Wonderlights increased the Museum’s gate from historic July attendance averages of around 10,000 visitors to more than 42,000. The event now draws an audience of up to 7,500 per night, with many repeat and multi-generational attendees. The 2023 edition welcomed more than 100,000 visitors and a repeat performance is expected this year.

Continuing into the latter half of 2024, TEC constantly strives to improve its services, methodology, technology and infrastructure. The company continues to accrue new projection, media server systems and delivery infrastructure, as well as to design and build new ways to house, protect and monitor equipment in the field. Bespoke fabrication remains the cornerstone of TEC’s ability to minimise site footprint and convert challenges into achievement.



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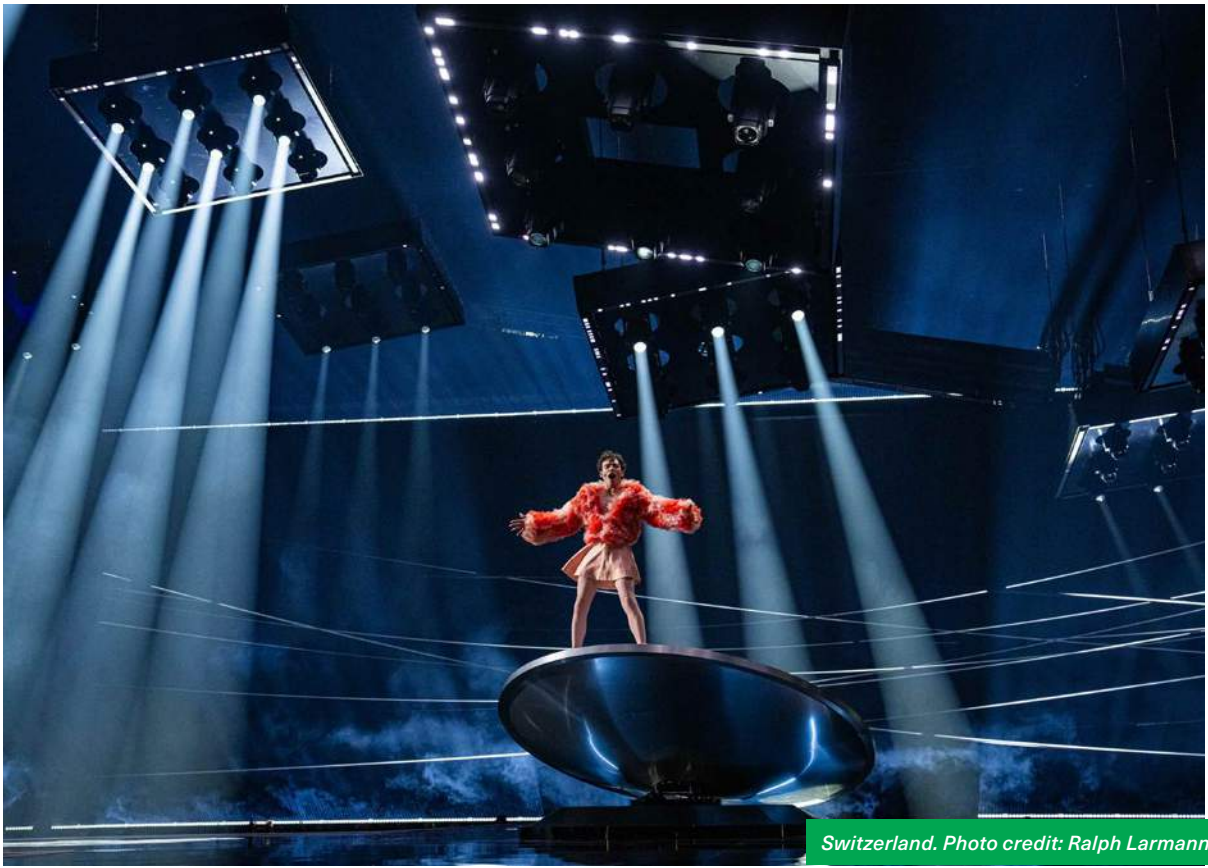


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Switzerland. Photo credit: Ralph Larmann

EUROVISION 2024

The always reliably bonkers finals of The Eurovision Song Contest 2024 were staged May 7-11 in Malmo Arena, Sweden. The wildly over-the-top technical design allowed the boffins at the European Broadcast Union to play with hundreds of shiny new toys, including lighting fixtures from Robe, ClayPaky, and Ayrton.

With a full arena and more than 160 million watching on live TV, Eva Beckman, Director of Programming at presenting broadcaster Sveriges Television (SVT) described the finals as “three magical shows, bursting with creativity, temperament, humour and professionalism. And a more beautiful TV production I have never seen. I didn’t even dare blink my eyes for fear of missing a single detail.”

Eurovision 2024 was won in the end by Switzerland’s Nemo with their song “The Code”, closely beating Croatia’s Baby Lasagne with “Rim Tim Tagi Dim”, with Ukraine’s Alonya Alonya & Jerry Heil in third place with “Theresa & Maria”.

Under Technical Director Ola Melzig, a team of highly talented creatives, programmers, engineers, network architects, and technicians collaborated to stage the first ever in-the-round

Eurovision, breaking technical barriers and records.

Lighting designer Fredrik Stormby, of Stockholm-based creative studio Greenwall Design, and his team took care of all things lighting as well as co-ordinating the screen content, working in close conjunction with production designer Florian Wieder

Fredrik Stormby is best known as part of the creative team behind Beyonce’s 2023 Renaissance tour, Loreen’s winning 2023 Eurovision performance, and ABBA Voyage in London. Fredrik’s programming team included lead programmer for effects lighting Ishai Mika, lead programmer for key lighting Dom Adams, plus Isak Gabre, Linus Pansell and Leo Stenbeck. The assistant lighting designer was Louisa Smurthwaite (who was follow spot caller for the 2023 event in the UK) and the two associate LDs were Mike

Smith and Michael Straun who worked in day and night shifts during the five-week rehearsal and development period.

All lighting equipment was supplied by Creative Technology Sweden together with the video and audio equipment packages. The load in at Malmo started on April 3 and was preceded by four days’ prep at Creative Technology’s warehouse in Malmo, used as a production hub for all the equipment procurement and provisioning.

“As this was the third time Sweden had hosted the Eurovision Song Contest in 10 years, we set ourselves the challenge of doing something new and brave that would respectfully challenge the traditional Eurovision concept a little, and introduce a more large-scale concert tour feel to the familiar ‘studio show’ concept,” explains Fredrik Stormby.

On Stage

The set was a 360-degree experience placed in the middle of the audience and shaped like an equilateral cross with movable LED cubes, LED floors, lighting, video and stage technology creating an array of visual variations for the artists. The monumental centerpiece of the design was a video and light installation suspended above the stage, embracing the artists and their performances and bringing the live and TV audiences close to the action.

The lighting and stage design had to support the very quick changes between acts, which allowed about 45 seconds for the crews to reset. The show was executed using only LED and laser light sources whose lower constant power consumption fit the event's sustainability goals.

Technical Director Ola Melzig calls the design of the show "Groundbreaking. It was the first time in the round and was in the same venue where we introduced a standing audience for Eurovision in 2013. This year's design from Florian Wieder featured a lot

of straight lines in all directions. So linear fixtures became very important for us to outline and highlight the shape of the set. We put automation on everything using 199 hoists. Everything in the ceiling could move; the stage could constantly create new shapes and looks – it was a never-ending toolbox."

Taking inspiration from Swedish music, songwriting and local architecture, and a tricky request from the producers to put the audience in shot for every performance, the designers developed a stage without any traditional scenic elements or shapes. "Most of the lighting design was to work with strong lines of fixtures – not many types – but densely used to give very strong expressions," explains Stormby. "We could then use many combinations of these individually strong lines of lights and the many automated rig positions to create a very interesting palette."

The result was a design with enough flexibility to create unique looks for each of the 37 participating countries' very diverse performances. "It was great fun working

with this rig because we could position it in so many different places that, as well as giving us all manner of side light, backlight and low lights, we could really play with the lighting and directions of lighting as well," continues Stormby. "The openness of the 360° stage allowed us to invite the audience into the shots in a very natural way as part of the background. This is when we had to rely on the skills of our programmers! If we were shooting from one side of the stage, for example, we had to clean out all of the lights hitting the bleachers on the other side to make it look good. So we really produced the show shot by shot to achieve the big clean cool rock concert looks, yet were able to instantly cut to the hosts and back into Eurovision mode again. Eurovision is a cross over between television, theatre and show lighting and I think we succeeded in making the performances look like a big arena show. I was really happy with the overall outcome. It was 10 weeks of bonkers production but I'm proud of the result and we certainly ticked all the boxes in 'respectfully challenging the concept.' "



"Everything in the ceiling could move; the stage could constantly create new shapes and looks – it was a never-ending toolbox."

Robe

Included on the lighting plot were 52 Robe FORTES, 57 T1 Profiles and 14 T2 Profiles. These Robe moving lights were used to cover all the stage and Green Room key lighting requirements. These specific Robe fixtures were chosen for their excellent CRI, intensity, and overall quality of light.

The FORTES were fitted with the HCF (High Colour Fidelity) TRANSFERABLE ENGINE module from Robe's TE series of groundbreaking self-referencing, data-capturing LED light engines that are all designed, developed, and manufactured at the Robe factory in the Czech Republic.

The 1,000W White 6,000K HCF LED engine offers 35,000 lumens and an exceptionally high inherent CRI of 96, making these luminaires perfect for this scenario. The T1 and T2 both have CRIs of 95 and are already well established in broadcast and theatre worlds for optimising skin tones and colours.

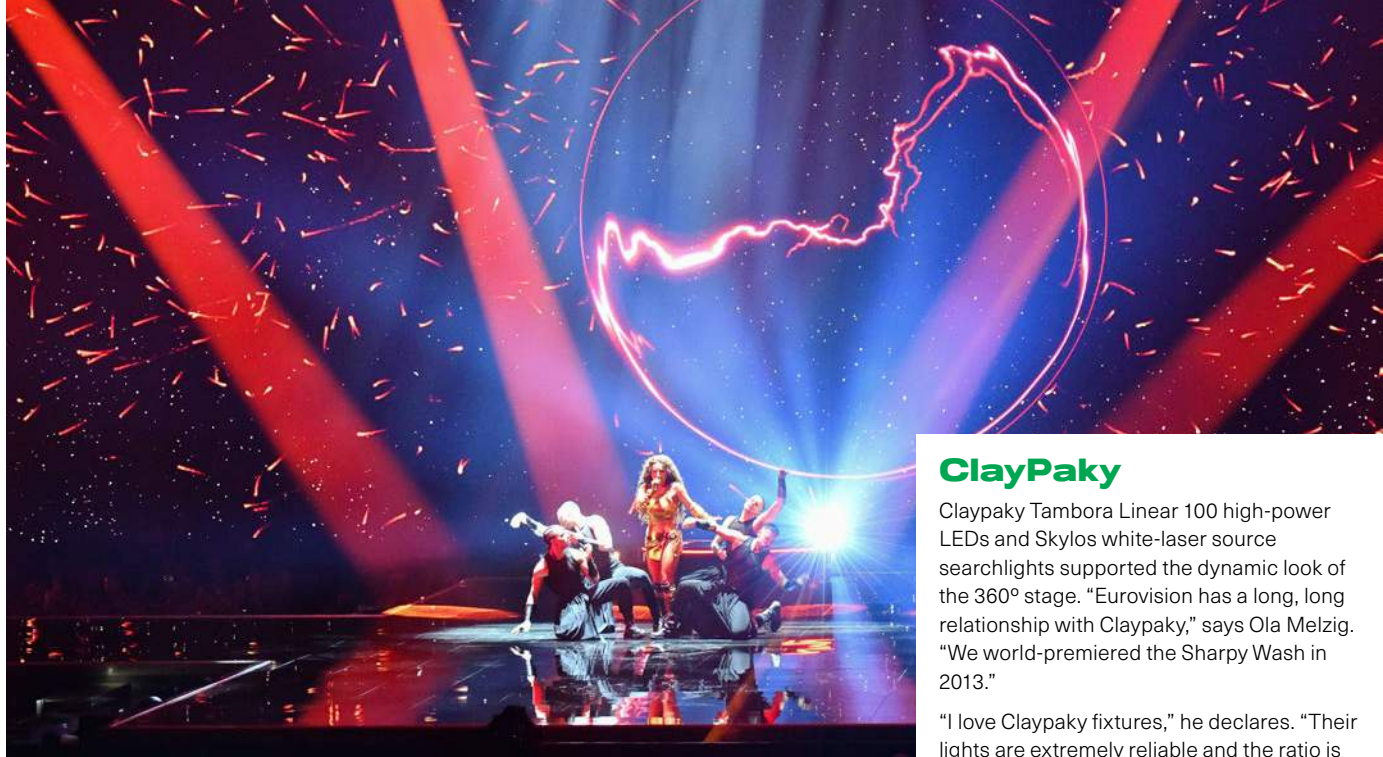
As well as being utilised for general key lighting, several FORTES were configured to run part of an extensive remote follow spotting system, so they could be called up and activated as needed.

"As with any broadcast show, key lighting is one of the fundamentals, so we were extremely pleased that Fredrik was happy to work with these Robe fixtures," commented Emil Højmark, Creative Technology's head of lighting for North Europe. He added that they received "great support from Robe's technical team" throughout the event period.



"Several FORTES were configured to run part of an extensive remote follow spotting system, so they could be called up and activated as needed."





ClayPaky

Claypaky Tambora Linear 100 high-power LEDs and Skylos white-laser source searchlights supported the dynamic look of the 360° stage. "Eurovision has a long, long relationship with Claypaky," says Ola Melzig. "We world-premiered the Sharpy Wash in 2013."

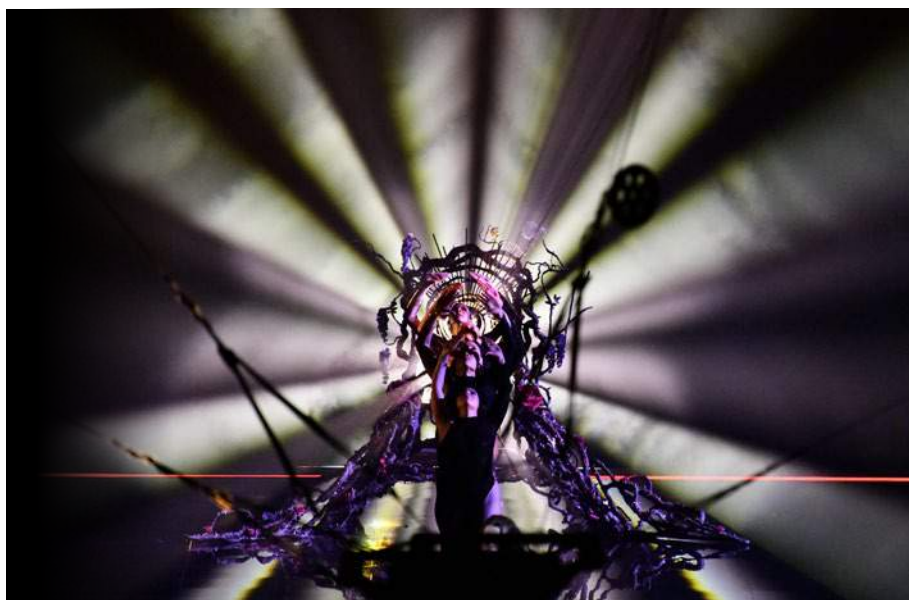
"I love Claypaky fixtures," he declares. "Their lights are extremely reliable and the ratio is very important for me: size, weight, output and power consumption. That's critical when you're trying to be sustainable; every Watt counts, every gram counts on a 210-ton rig."

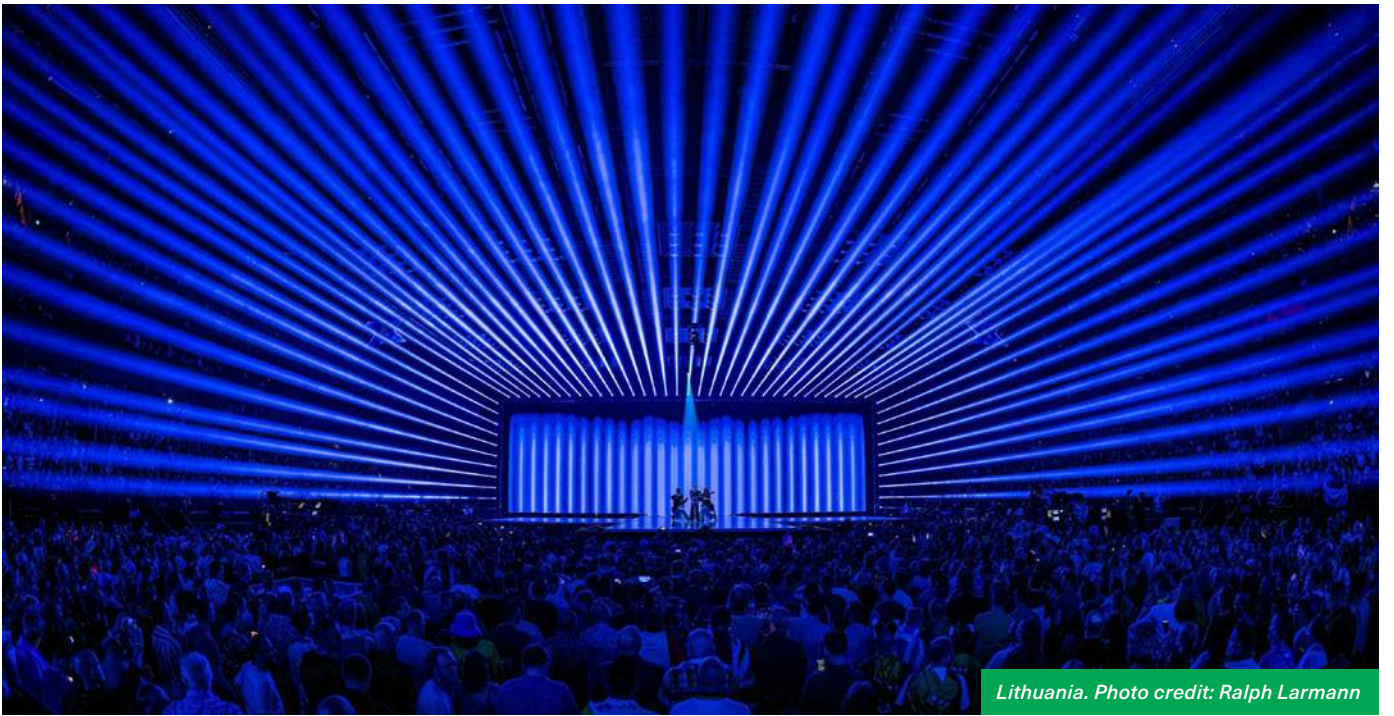
Melzig explains that Niclas Arvidsson of Interlite, Claypaky's distributor in Sweden, introduced the lighting team to the Tambora Linears. "He was great at helping us to source them since we needed 396 active Tamboras mounted on the [overhead] LED cubes, a real truckload. They were perfect for this show!"

Fredrik Stormby adds; "The Tambora Linear was chosen for its look, features and size. I needed a compact, low-weight, bright linear fixture in large numbers that could act as a graphic element outlining the flown pods, but also work as a strobe. In addition to this they were also fully mapped in the disguise server, allowing for video content to be played out over the lighting rig. The Tambora Linear, with the black ND lens, was a perfect combination for us, allowing them to blend in with the black cladding of our pods and set."

Twenty-five active Skylos searchlights were also employed for the show. "Fredrik wanted a big fixture with great punch," Melzig says. "He just loved what he could do with the Skylos, and I loved them, too. They delivered quite a punch and were very attractive."

"The Skylos fixture was something I knew I wanted on the show somehow," adds Stormby. "I love big bold xenon beam and flower fixtures, and this is a new take on those. We ended up having them flown in an automated truss in front of the LED screen, that we could use in various heights, and flown along the sides of the stage over the bleachers. There were also five units positioned on the floor used for various specials. It worked great doing what it does. One of the things I'm mostly impressed with is the pan and tilt speed. It's superfast, almost like a Sharpy on steroids!"





Lithuania. Photo credit: Ralph Larmann

Ayrton

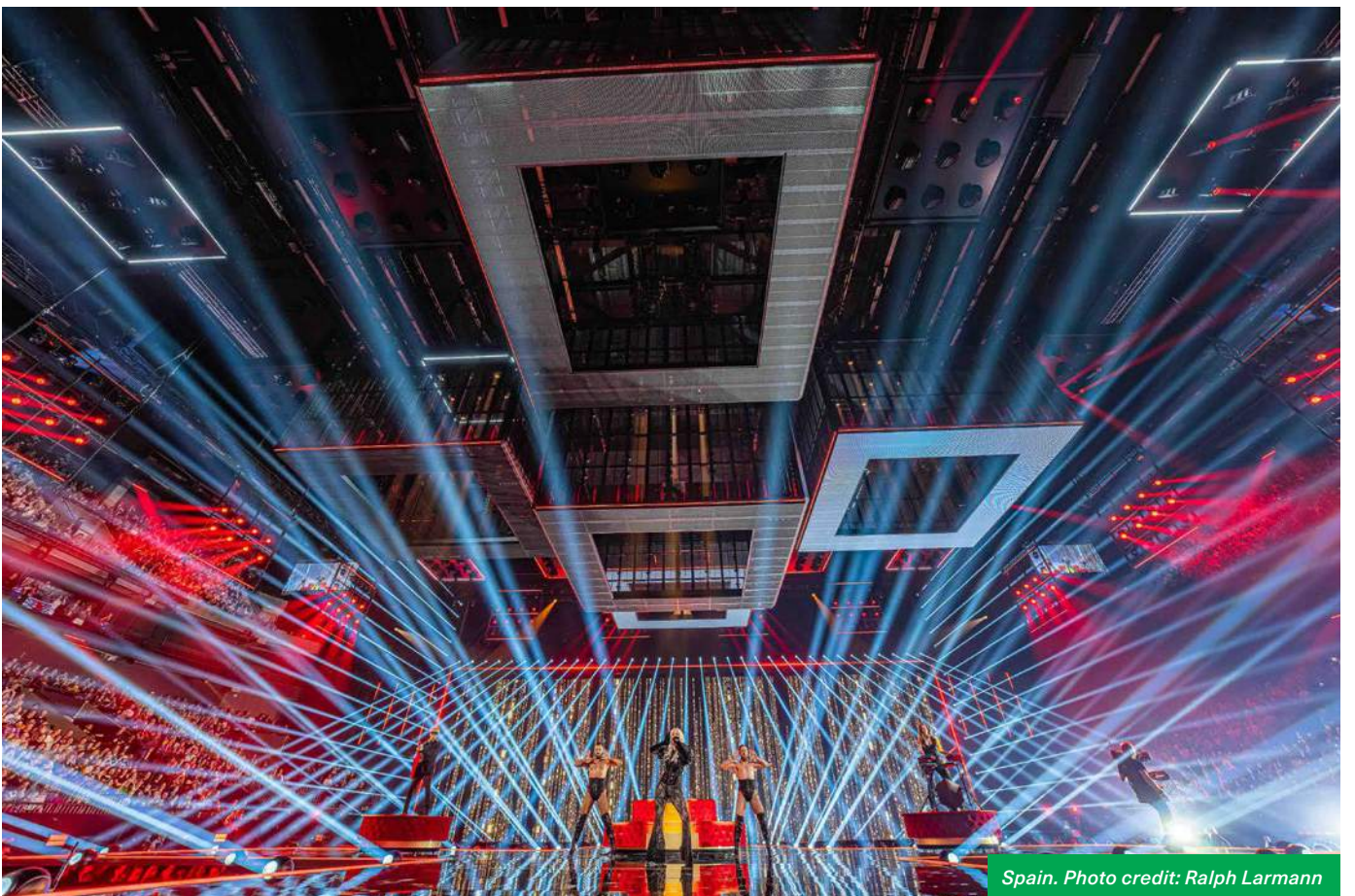
Key to Stormby's exclusively LED and laser-based design were 384 new Ayrton Rivale Profiles and 146 newly-released Kyalami fixtures, along with 32 Huracán Wash, supplied by Creative Technology Group.

"I like to approach my television designs using dedicated keylight fixtures that have a certain quality of light to function well as key lights," says Stormby. "I also like a single type of workhorse fixture throughout the

rig that I can use for beam effects, mid-air effects, and to frame in on props or dancers, but can also support the key lighting to fill in as back or side lights. And that became the job of Rivale."

20 automated 'pods' each carrying Rivale Profiles in a 3x3 configuration allowed for a near-infinite number of aesthetic and practical positions. More Rivale Profiles were rigged in the audience trusses, above the stage and around the bleachers. "I was looking for a workhorse LED fixture

with shutters and good colours that was affordable in large numbers. I also wanted good light quality, a narrow zoom, gobos, shaper blades and all the traditional stuff," says Stormby. "We also needed to be careful of weight as there was so much hanging above the stage. I saw Rivale in Paris when it had just come out of development. It checked all those boxes and came in a compact, light-weight package which was perfect for what we wanted to achieve with this moving lighting rig."



Spain. Photo credit: Ralph Larmann



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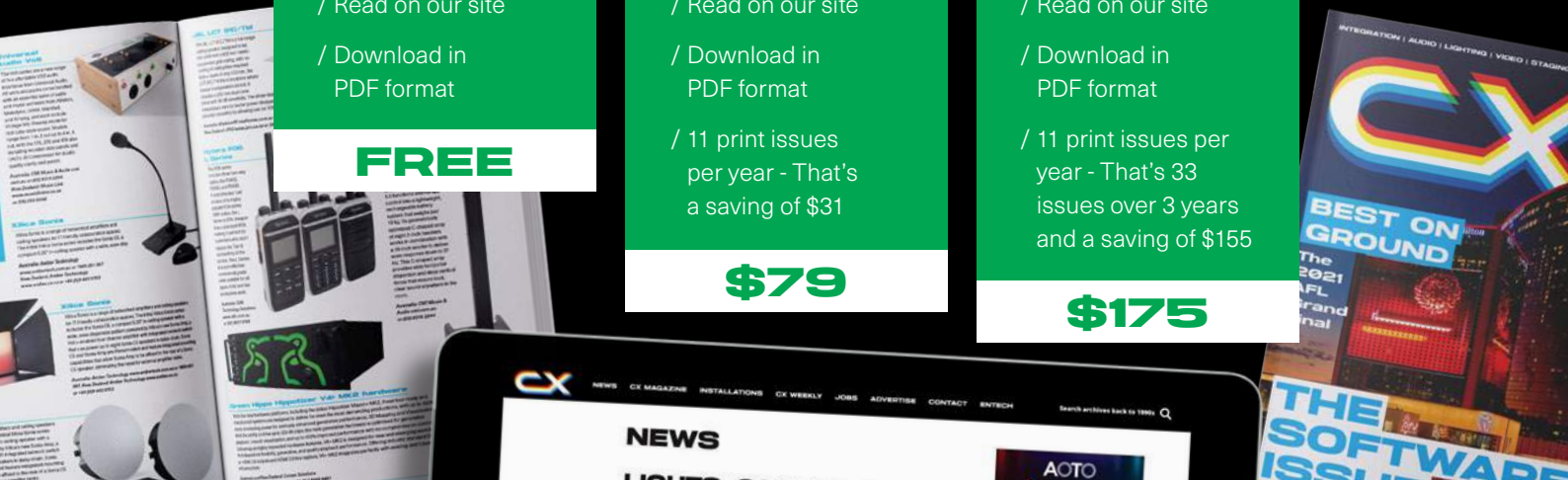
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Thirty-two Huracán Washes were rigged on front of house and audience trusses: “I wanted a wash instrument with shutters that I could use for audience lighting but be able to shutter off the bleacher sections to avoid spill. I thought the Huracán Wash was a good pick because I had this idea that I might use soft gobos – which I didn’t in the end – but it was one of the features that attracted me. It turned out a nice big powerful, traditional wash light with some extra features which was exactly what I was looking for.”

Looking for a fixture to outline the stage design in all dimensions, Stormby chose Ayrton’s newly-released laser-sourced Kyalami. These he mounted on Wahlberg lifts around the stage edges where they could be raised and lowered to define the shape of the stage as required. More Kyalami were rigged in a long vertical line in each of the two 18m high towers that flanked the main video screen. Yet more were rigged in “the biggest truss in the world!” – a 32m long truss using 62 Universes alone which hung in front of the main video screen, completing a ‘football goal’ effect with the side towers. “The Kyalami on the truss and the towers could form a box of light for framing the back screen. We could also lower the massive truss right down to stage level so the Kyalami could act as a floor package or raise it really high to open out into very wide effects, and so many different ways in between,” says Stormby.

“Kyalami was nearing the end of its development when I was shown it, but we could see it was a compact unit with a good strong beam which we made good use of punching through all that video! I really liked the speed of Kyalami’s optical effects. That is what that fixture is about: it’s small and quick, and the prism and frost can be brought in and out really quickly – you can create a lot of different effects with that. I like the fact that Rivale and Kyalami especially are such small fixtures but we can still pull off a show of this scale with them. That’s quite cool.”

Creative Technology Group made a substantial investment in 276 Rivale Profiles and worked closely with VIGSØ Denmark to sub-hire the remainder of the huge inventory of Ayrton fixtures. The fixture selection process was supported by TopStage of Sweden who worked closely with the lighting designers to introduce, demonstrate and facilitate their choice of the new Ayrton fixtures.

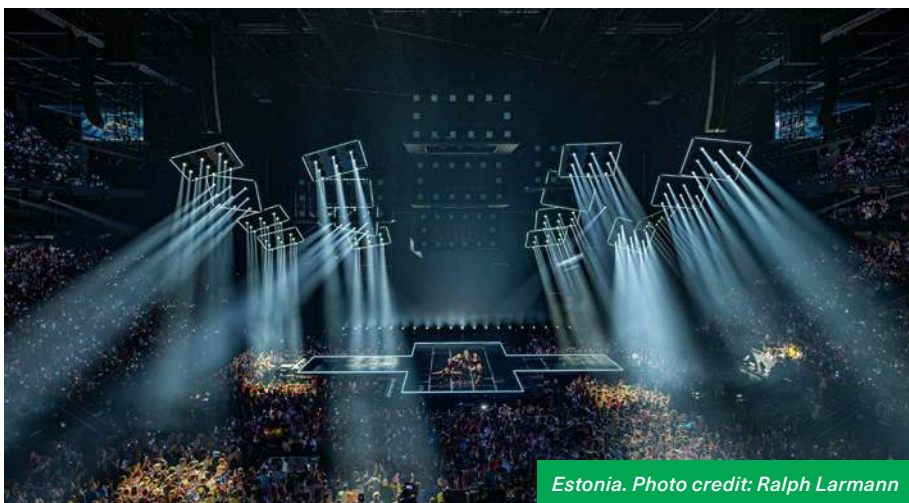
Emil Højmark of Creative Technology comments: “We’d been looking into investing in Rivale long before Eurovision came along, but Eurovision sealed the deal! Eurovision has always pushed the technology and Ayrton, which has had a long involvement with Eurovision, has always pushed the envelope in product development. We had over 384 Rivale Profiles on site and very few issues – it’s proved a really stable platform. The Huracan Washes were similarly reliable and one of the few fixtures we had no problems with at all. Eurovision is a high tempo project with unique challenges, and having direct access to the Ayrton tech team on site made such a difference. They are so passionate



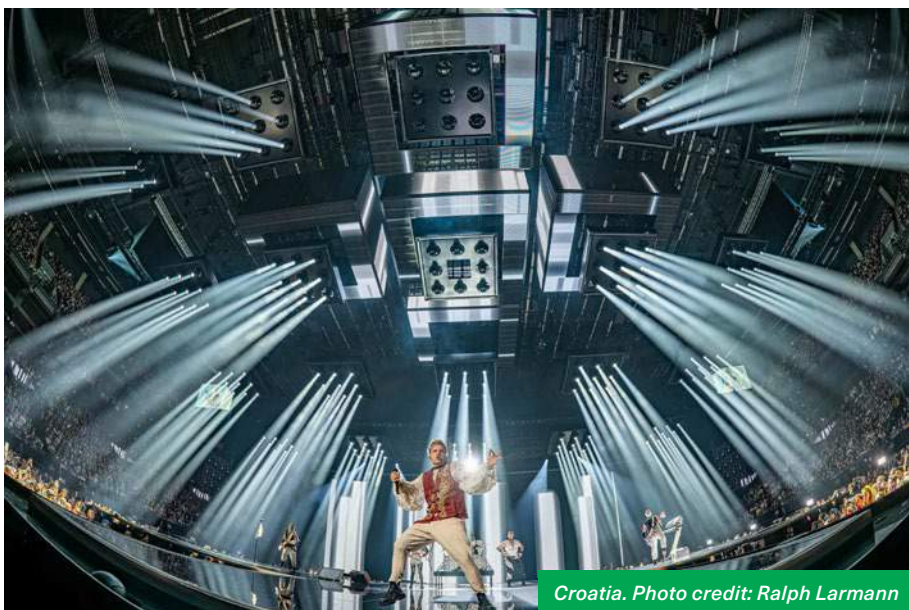
Switzerland. Photo credit: Ralph Larmann



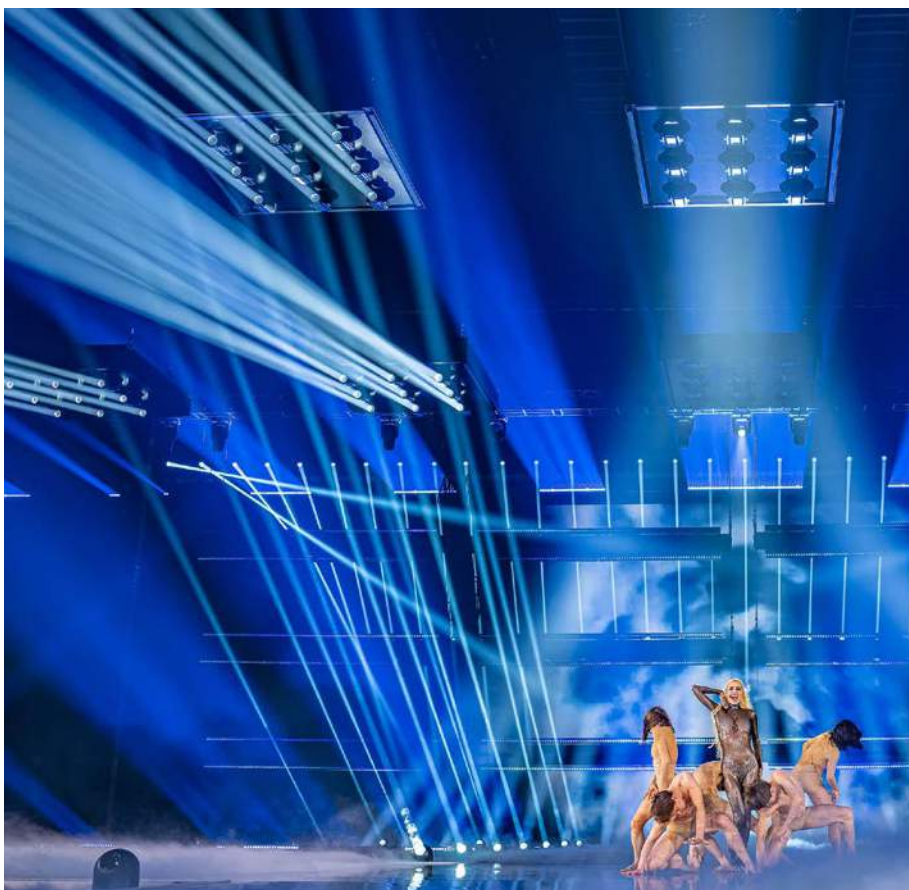
Cyprus. Photo credit: Ralph Larmann



Estonia. Photo credit: Ralph Larmann



Croatia. Photo credit: Ralph Larmann



Slovenia. Photo credit: Ralph Larmann

and dedicated delivering outstanding communication and support."

Ayrton joined forces with VIGSØ to ensure everything was delivered and prepped in under 48 hours. "It was very impressive," concludes Højmark. "VIGSØ did what I've never seen before from a distributor to pull this together. All departments worked really well together. It was hard work but good fun and all done in good Eurovision spirits."

"The collaboration with Creative Technology was great, and it was exciting to be involved in the decision-making process from the start," says Linnea Ljungmark of TopStage, Ayrton's exclusive distributor for Sweden. "When Fredrik came to me early in the process to discuss lights for Eurovision, it was clear to me that he was looking for a very unique look - not a specific brand - with what the fixtures could achieve. Ayrton was able to provide this and it's been really great to follow him through the process from initial idea to final design."

"I think Creative Technology carried out an excellent delivery," says Fredrik Stormby. "With a rig designed like this with everything in straight lines, it really comes down to the finish of the build to make it look good and they really pulled that off. I'm really happy with CT and I'm really happy with the support from Ayrton."

Production Credits

Senior Technical Director: Ola Melzig

Production Designer: Florian Wieder

Lighting & Screen Content Designer:
Fredrik Stormby

Associate Lighting Designers: Mike Smith
and Michael Straun

Assistant Lighting Designer (Viewing
Room): Louisa Smurthwaite

Followspot Caller: Per Hørding

Lighting Directors & Lead Programmers:
Ishai Mika & Dom Adams

Lighting Programmers: Leo Stenbeck,
Linus Pansell, Isak Gabre

Lighting Supplier: Creative Technology

WHY DO I (STILL) DO THIS?

Roderick van Gelder Studies Death



We meet at the trendy yacht-themed Woolwich Pier Hotel on a balmy slow Summer's day between Christmas and New Year. Starting with a beer each, I'm keen to know Roderick's journey and why, at 66, he keeps working.

JG: How many arrows in your quiver, Rodders?

RvG: Course lecturer, restorer of analogue tapes, production management, bit of CAD work; site planning, lighting design. It flows from one to the other. I ended up in theatre by accident.

JG: In Amsterdam?

RvG: With the National Theatre Company. Then National Ballet, then Opera from props to lighting, audio, production. Ultimately freelance.

JG: So, Australia?

RvG: Sydney Dance Company. Context was in the late 80s I toured a lot of overseas dance companies in Europe, and SDC was one of them. John Montgomery was their lighting designer and production manager and he left to become technical manager for the Victorian Arts Centre. He suggested I'd be a good option. They called me in Amsterdam and said 'you want to come play with us?' and I said 'Of course!'

JG: You'd been here before....

RvG: In 1988 doing some work on a festival. Felt really at home here. I was 33 years old.

JG: How do you keep going?

RvG: I just keep doing it. I work in so many different directions when I get bored with

one thing there's always something else. There has been a time when I was bored with lighting design because everyone wanted lights to wobble and change colour a lot – that's not my style. I walked away. Through another weird connection I ended up at the Hordern Pavilion, venue management lead to safety management and risk assessment.

JG: Hordern management company Playbill were partnered with Lend Lease, the developer?

RvG: Interesting. Just after I started, they started a renovation – strip everything, roof off, and that was interrupted every few months by major events. They insisted everything we did at Hordern had a full risk assessment, I was trained up to do that and discovered many were struggling with safety management. Eventually I left and started my business to help people with simple and realistic safety systems rather than paperwork for paperwork's sake.

JG: The crowd management course you now deliver has led you to study a lot of grisly disasters?

RvG: Other way around; I did a lot of study of the big disasters in Europe, I went to the site of the Love Parade disaster in Germany, with 200,000 people. I had to understand it. Once you look into it, you see one thing on top of another thing, and then you have a disaster.

JG: 21 people died from suffocation and 652 people were injured.

RvG: The scary thing is it was totally avoidable. I got hold of almost all the CCTV footage from 24 cameras. They lost control of the site in the afternoon. People arrived by train, through a ticket checkpoint, there were two tunnels under the tracks that merge to one ramp. The festival features DJs on trucks,

and whenever one approaches, they shut down pedestrians. The flow was too slow. People were backed up in the tunnel. Police shut entry to the tunnels. No announcements. Many people outside had preloaded on drugs and wanted to get in. Then they were rioting, so the police opened the gate. Now the early arrivals were leaving, and the ramp was the only way out.

JG: Any examples of near misses in Australia?

RvG: One that almost was a recent disaster was the Victorian festival Beyond the Valley with people trapped in a queue of cars in 38 degree heat for more than nine hours while trying to leave. That was a predictable problem. They didn't have the right traffic plan. Everyone leaves at the same time.

JG: True of every event, the build-up is graduated and the exit is all out. What is really good now, compared to the old days?

RvG: Not much. People thinking 'we've always done it this way' is a big risk. Same venue with a different style of show means a different crowd management plan. You can't have one that fits all. Demographics is a big deal – Andre Rieu's crowd won't riot, Metallica's crowd is a riot. A happy punter is a cooperative punter.

JG: You live in a fairly remarkable building.

RvG: It's the old telephone exchange for Hunters Hill. It suits me perfectly. All my family are in the Netherlands. I share my house with a cat called Trim, named after the Matthew Flinders statue outside the Library of NSW on Macquarie street, in the window behind him, there's a little cat.

* We had a Greek influenced meal next door at Ironwood. There was wine involved.

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TERMINOLOGY MATTERS

How to project your true intent clearly

Words are powerful things. Get them right and you can inspire millions to follow you. Get them wrong and you could just as easily alienate millions more.

As an unofficial inhouse AV tech for the local Memorial Hall, I had a recent enquiry from a potential hirer. They asked: "how can they hook up to an overhead projector?" My first thought was "just put a transparency on top of it." I mean, that's how overhead projectors (OHP) work, right?

When they next mentioned PowerPoint presentation, it occurred to me that an OHP was not what they were after. I asked if they wanted a data projector and the response was "nah, we want one of those projectors over our heads!"

It was obvious to me what they were after but equally clear that they did not understand the terminology commonly used with this type of tech. I would consider it ubiquitous, but this particular hirer did not. Which led me to ponder the use of words, and where they veer between jargon and terminology.

Jargon

All industries (or sectors, groups, disciplines, etc) have their own lingo. It is a necessary shorthand that saves much time for practitioners. Unfortunately, it also excludes outsiders or newbies. Tech industries are some of the worst offenders. I mean, consider the following statement: "penetration testing will occur during a red team exercise that is subject to the traffic light protocol." I'm IT savvy (and qualified) - yet this is near gibberish to me. It reads like some crap dreamed up by a Mid-Level Manager (MLM) at a Multi-Layer Marketing (also MLM) company trying to justify their position.

Sometimes, precise industry aligned terminology is appropriate and efficient. Terms

like 'downscaling, de-interlacing, ANSI lumen, and impedance matching' are task specific and need to be technically descriptive and/or complex by their very nature. But many expressions are just plain confusing.

The 'PowerPoint presentation' referred to above could be construed to mean 'how proud a General Purpose (power) Outlet (GPO) sits from another surface'. More commonly, GPO refers to a 'General Post Office'. In these cases, it's all about context.

While tech sectors are pretty bad at using non-inclusive language, medical is one of the worst that I have encountered. Given regular and detailed exposure to this realm, I've found that the easiest way to be understood is to learn the jargon and use it to communicate with health professionals. Particularly, using correct medical terminology for conditions or body parts and scientific names for medications.

One doctor recently thanked me profusely for having made the time and effort to learn these terms - it certainly got us through our appointed time together with much greater efficiency and accuracy than 'my back hurts a bit' would permit. It was clear to him that I have advanced knowledge that is beyond five minutes with Dr Google.

Unfortunately, inscrutable idioms are used by some professionals to appear more knowledgeable than they actually are. For mine, the worst offenders are lawyers and bureaucrats. Their lingo is often purposely obtuse with the specific goal of alienating anyone who is not in their inner circle. Further, they seem to think it justifies charging more (or providing less) than those of us who use our common tongue.

Nomen deminutivum

Abbreviations can save considerable time and are necessary tools. Consider AV, VoIP, BGM, DAC, SAW, SPL, or HDMI - all common to most CX readers. This is all good for those

in the know but can make communications impenetrable for novices. It is wise not to assume that everyone knows the secret code.

Dependent on the circumstance it is used in, IP can mean both Ingress Protection or Intellectual Property. PA can denote Public Address or Personal Assistant. Does TBC equal Time Base Correction or To Be Confirmed? Again, context matters.

In most fields, feedback is a positive term, denoting a response to a product, service, or task. In the audio world, feedback is less than desirable and won't elicit favourable responses from audience or clients. Especially if it emanates from their foldback. It is wise to monitor such occurrences.

Lay language

I actually know the hall hirer in the intro pretty well. She is highly intelligent, motivated and organised. She ran a financial services company well enough to be able to retire at 50 and I have great respect for her as a person. I also know her well enough to realise that she does not understand anything IT or black box related, nor is likely to invest any great effort in doing so. So, it's up to me to find the best vocabulary for this scenario, without sounding like a smart-arse.

A large part of my gig over the years has been serving as the translator between technical jargon and simple, everyday terms or concepts that a layperson can understand. It is tempting to scoff and look down the nose at people who don't know your lingo. But neophytes are not necessarily stupid, just unaware of the specific terms inherent to a particular discipline. Be patient while they learn.

Hopefully, my choice of words above made sense to you, the reader. Even more hopefully, that they made you think about how you use your own words as you project them onto the world. Remember, with great power also comes great responsibility.



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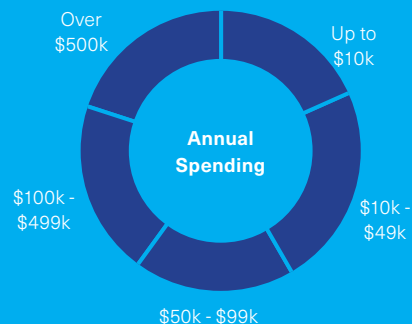
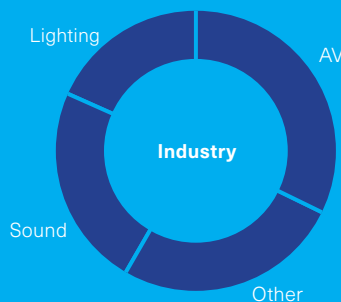
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SOLID STATE LOGIC THE BUS+

by Andy Stewart



If there's one feature of an SSL console that's iconic beyond all others, it's surely the legendary mix bus compressor. This unassuming analogue processor has been strapped across more mixes than any other compressor in history. It's been mimicked by countless analogue third parties and reskinned in plug-in form by every man and his digital dog. SSL recently released its own reincarnation of the legend – The Bus+ – which is fast shaping up as one of the greatest analogue compressors ever brought to market.

Solid State Logic is so well known in the annals of pro audio that it's hard to know where to begin to define the company without sounding like the pages of one of its own glossy brochures. And so embedded is the brand in the wider music culture that no interview with a famous rock star seems complete without them seated at helm of an SSL console – they are quite literally the general public's visual definition of the very notion of a recording studio.

As a company, SSL has moved with the times far more deftly than anyone could have anticipated, particularly this century, becoming far less reliant on the sale of monster analogue consoles and flexible enough to survive the wholesale switch to a primarily digital workflow.

The Bus+ is one of SSL's more recent offerings, and one of its best (and most complex) yet.

In a nutshell, The Bus+ is a fully analogue, digitally controlled stereo VCA compressor based squarely on the circuitry of the famed original. However, unlike its iconic console-bound equivalent, The Bus+ is one of, if not the most, versatile and complex outboard compressors ever encountered by humans. It's a compressor with a uniquely vast, feature-rich set of dynamic tone-shaping tools that can modify incoming signals in extraordinarily diverse ways. Indeed, so complex and varied in scope is this compressor that even an overview of what it has to offer is well beyond the breadth of this review. It frankly makes most other compressors on the market look

decidedly backward, and in the hands of more experienced engineers The Bus+ will no doubt provide years of highly creative and satisfying sonic outcomes. To that, I would also add that almost no-one will ever quite plumb the depths of this unit's capacity or control parameters.

To cover what this awesome compressor is truly capable of could fill the pages of this magazine almost entirely.

Simply put, The Bus+ is a stereo compressor that features independent left- and right-side stepped Threshold, Ratio, Attack and Release controls, the latter two of which now offer 11 settings (the Release control, in particular, now featuring not one, but two, dual-stage Auto release modes). Alongside these controls are a Make-Up Gain knob that, when pressed, places the compressor after (i.e., post) the Dynamic EQ stage...

Wait, what? Dynamic EQ?

That's correct, The Bus+ has an analogue Dynamic EQ section that's a mind-bendingly influential signal processor unto itself, which we'll discuss further in a moment. The Make-Up Gain meanwhile can also be put into a 'fine' mode, which provides adjustment in half-dB steps. All of these stepped pots, I might add, are managed by a microcontroller, which makes them effectively immune to inaccuracy – precise indeed and fantastic for mastering.

And as you can see, already we're well beyond the feature set of most classic analogue compressors.

But The Bus+ goes way beyond this, adding a truly breathtaking array of additional control that can be used to produce all manner of dynamically diverse compression outcomes. So please, while you can, take a deep breath...

Here We Go!

To kick things off there's a Mix control on both left and right channels (that blends the compressed and uncompressed signals – but not the Dynamic EQ stage). There are also independent 12dB per-octave Sidechain high-pass filters for left and right on 31-position stepped pots, ranging from off to 300Hz (in 10Hz increments), which can also be deployed in a complex combination of External and Internal sidechaining of the compressor and Dynamic EQ (that's really a topic for the full magazine-length review!)

Fundamentally, there are four operational control modes for the compressor, selected via the central Mode switch. These are Stereo, Dual Mono, Mid-Side (that even allows you to solo M or S separately!) and a fourth labelled Σ S/C Stereo (which sums the left and right sidechain signals together to make the compressor more sensitive to mono content in a stereo mix. The Mode switch toggles you through the four options, but cleverly – and like almost every other switch on the Bus+ – it also has a secondary function, allowing you to toggle back and forth between two adjacent modes for A/B'ing purposes. The channel arming (in/out) controls either side of the Mode switch also have multiple functions, including the soloing of mid and side, behaving as clipping

meters, as well as putting the compressor to 'sleep' – I kid you not.

On the top left-hand (and right-hand) sides of the compressor are three soft-switches, and this is where things start to get really interesting. The first of these is a 'Low THD' switch that significantly reduces the low-frequency distortion inherent in a 'classic' SSL compressor. This arguably resolves one of the least popular aspects of earlier SSL bus compressors that tended to grab hard onto low-frequency content, reducing overall bass perception while simultaneously adding distortion to the low-end. It's also why many engineers have barely 'tickled the mix' with an SSL Bus compressor – for fear of the compressor clobbering the incoming signal. But a modern SSL bus compressor like the Bus+ already produces far less harmonic distortion down low, and with the Low THD switch engaged, the Bus+ enters new super-clean compression territory uncharacteristic of an SSL.

Beside the 'Low THD' switch is a Feedback (F/B) switch which again changes the compressor from a famously grabby, jumpy (and some might say over-reactive) feed-forward design into a slower, more relaxed feedback design, that's quite uncharacteristic of the 'classic' SSL sound. It's cleaner, more transparent, and far less overt, making the compressor far better suited to slow and subtle acoustic music, as an example.

The third switch in this group has the opposite effect of the other two. The '4K Mode' switch unbalances the compressor's VCA, a la SSL's 4000-Series console bus compressor of yore and adds harmonic distortion (though not merely in and 'on' or 'off' capacity). There are nine levels of harmonic distortion content on offer, accessed by clicking and holding the 4K Mode button, which turns the other two adjacent soft-switches into up/down selectors. As you increase the distortion levels for more grit, crunch and mayhem, the 4K switch changes colour, from white, through yellow and orange, to angry red. This sounds fantastic, depending on your requirements, and makes the compressor even more versatile.

There's also a two-band Dynamic EQ (D-EQ) section for left and right, lurking below the gain

reduction meters, which features adjustable expansion and compression that can be placed before or after the compressor. This is a game-changer for SSL and bus compressors generally. Dynamic EQ control adds further nuance and complexity to the way this compressor glues an audio signal together.

SSL designers clearly weren't content to simply add static high and low compensatory shelving EQs either. By adding dynamic EQ that can be placed before or after the compressor stage, countless new control options open up, giving the compressor a quasi-multi-band sidechain, expander features for tops and bottoms, and a thousand variations besides.

But the feature doesn't stop there. Everything about the D-EQ is also adjustable. The time constants of the expander/compressor circuit can be altered from slow to fast (and even auto release), the high shelves can switch to bell curves, and the activity of the circuit even has metering via the LED lights above the LF/HF knobs that change colour with intensity of effort.

You can even choose where on the frequency spectrum you want the LF and HF shelving controls to focus, per side, and for this there are – somewhat incredibly – 16 different frequency points to choose from. LF is adjustable from 20Hz up to 170Hz, and the HF from 2kHz up to 17kHz, and when the 'HF Bell' is in play, the peak is adjustable from 700Hz up to 16kHz.

How all this is achieved is even more incredible. Holding down the LF or HF knobs on either left or right (independently) turns the gain reduction meter backlights into a flashing disco, the left needle of which now points to where on the frequency spectrum your filter is aimed. But you'll have to use your imagination to work out where you are on the spectrum – there are no frequency markings on the meter. Likewise, the D-EQ also allows you to restrict the range of both compression and expansion for each band, effectively adding another limiter to the equation – incredible stuff. Here too, the adjustment is made via the gain reduction meter disco, only this time the right-hand meter indicates the range adjustment, and the markings already on the meters double as range indicators. And wait for it: there are 23

different ranges values to choose from; the first 17 in 0.5dB steps, the last six in 1dB steps.

To digress for a moment, I must note that – somewhat confusingly for many I'd wager – the controls on the front faceplate of the compressor are mirrored – i.e., the far-left Threshold control for instance, has its right-hand equivalent to the far right – the controls effectively appearing in reverse order on the right side of the unit.

But there's one exception. When you look closely you discover that there's a Low-Frequency Gain control on the left that differs from its right-hand equivalent. On the left, this control boosts or cuts the LF by up to 10dB, adding shelving adjustment in conjunction with the LF compressor/expander control. So if, let's say, you're using the compressor/expander control to compress the lows significantly, you can then boost it again to compensate. But its equivalent right-hand control (labelled LF/HF Gain) only controls low frequencies in Mid/Side or Dual Mono modes. In the other two, this control becomes a high-frequency static boost or cut. Embedded in these controls (activated via a control knob press) are also SSL 'G-Series' filter options that change the shape of the filter's curve.

The Bus+ Gets An A+

I could go on and on here about dozens of other features The Bus+ has to offer – from the various Settings options, the calibration and sleep modes, the multiple Mix modes etc – but I'm out of room, and I'm concerned that you, the reader, might have had a gutful of all of this by now.

Suffice it to say The Bus+ is an incredible compressor, more versatile than any other compressor I've ever heard – certainly in the analogue domain. It wipes the floor with many others regardless of their value, and like almost no other compressor, The Bus+ doesn't sound like anything... in fact, more accurately, it sounds like everything! It's complex, sure, but if you can cope with the substantial learning curve of this device, the reward for your efforts is vast.

Product Info: solidstatelogic.com

Distributor Australia: www.ambertech.com.au

Distributor New Zealand: amber.co.nz





PROLiGHTS ASTRA HYBRID 330IP

The PROLiGHTS Astra Hybrid330 IP is a hybrid beam/spot with a wide zoom range. There is also a non-IP rated version of the light available with all the same features and specifications.

It gives off a nice beam, has an impressive zoom range and a good range of gobos, with 11 fixed and eight rotating. The main selling point would be that it is a bright LED hybrid moving head boasting exceptional output considering its size.

Construction

At 21kg, it is in the mid range in size for a moving light. We are seeing a lot of manufacturers move into the IP rated space. Earlier IP rated lights were rather chunky and heavy, and you could tell from a mile away that they were IP rated. Nowadays IP rated lights are expected to look good and not be overly heavy. PROLiGHTS have ticked this box with the Astra Hybrid330 IP, which is IP65.

The light has a smooth flat, matte finish to it. It is a nice touch and doesn't seem to reflect or absorb as much light from other sources as the more common black or charcoal finish found on many other lights. For this reason, the light could work quite well in a more 'visible' space such as a floor pack on a corporate gig.

At 21kg it is also in the single person lift range, making it more convenient to move. The handles are easily accessible and are hung off two standard omega brackets, like most moving lights these days.

Optics, Colour and Brightness

One of the main selling points for the Astra Hybrid330 IP is how bright it is for its size. The quality of the beam is also up there. It has a punchy beam with a solid zoom range that maintains its brightness throughout. The gobo sets can be used as beams through the air or projected as a break-up onto a stage, drape, or wall.

The zoom range is 3° to 50°, giving a zoom ratio of 16:1 with a motorised linear zoom. The 3° beam is very impressive for an LED light. We may not be far off the day where we see LED lights offering a 1° beam, which would be a game changer.

The light source is a single source, 330W high power white LED engine with a native colour temperature of 7000K. The front lens diameter is 140mm.

Colour mixing is CMY (Cyan, Yellow, Magenta), or subtractive colour mixing. Colour is mixed on three gradually fading colour wheels. Noteworthy is that the yellow is very 'yellow'; one of the more pure yellows I've seen come from a light. Most yellow colour flags can look a little on the greener side and most colours mixed using additive (RGB) colour mixing tend to lean more green or orange.

Applications and Features

A light like this in a haze filled room will produce some very impressive beams. It would be good for a venue looking to tick a lot of boxes with a single light. It could work well as

part of the inventory of a production company that does a wide range of gigs.

It would work on the floor or in the air. It could work well in most applications with the major exceptions being front light or eye candy.

The wide zoom range makes it a handy back light for a silhouette look. The gobos can also do a nice slow rotate and add to a walk-in state for a corporate dinner. The strong beams make for a good awards ballyhoo. These same beams would work well in a concert setting or even TV. It is quiet as well.

Control and Programming

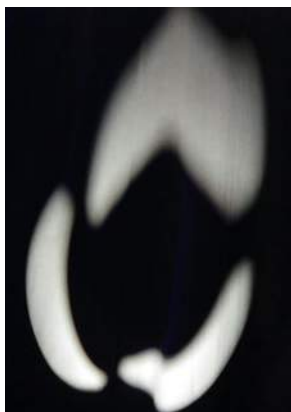
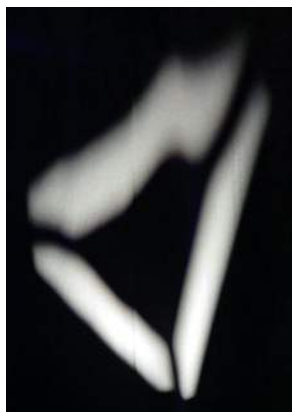
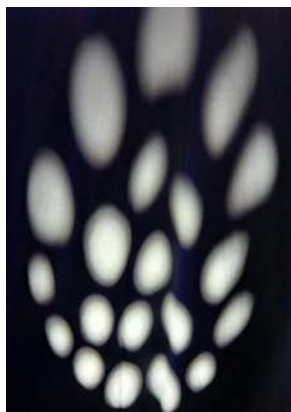
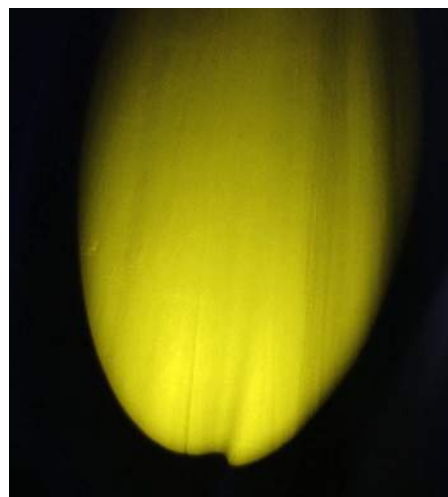
The Astra Hybrid330 IP has a single control mode with a 29 channel DMX footprint. Compatible control protocols include DMX, RDM, ArtNet, sACN and CRMX. It has 5 pin DMX in and out as well as Ethernet in and out. It also has wireless capabilities built in. It works with just about everything a modern moving light is supposed to.

As for power, it has powerCON TRUE in and out. It draws 517W of power, meaning you can get up to four to a single 240v circuit.

It has a pan range of 540° and a tilt range of 270°, moving fast with reasonable accuracy.

Verdict

A hybrid light is a great way to tick a lot of boxes and works well as a cost-effective option for a venue or a production company looking to cover a lot with a little. The trade-off for this is that it likely won't be the best at any of the wide



The Specs

Source: 330W high-power white LED

CCT: 7,000

Luminous flux: (3°) 8,493lm - (50°) 15,272

Zoom: 3° - 50° motorised linear zoom

Colour mixing: CMY colour system on 3 gradually fading colour wheels

CCT: on wheel 2,400K and 3,200K

Colour wheel: 9 dichroic filters on 3 independent colour wheels

Colour wheel: High CRI colour filters

Animation wheel: animation wheel with CW and CCW rotation

Rotating gobos: 8 rotating gobos + open, interchangeable, indexing

Fixed gobos: 11 fixed gobos + open

Circular prism: 8f with bi-directional rotation, indexing

Linear prism: 6f with bi-directional rotation, indexing

Frost: linear 0 - 100% frost filter

range of things it does. That is not necessarily a bad thing if you know what you want to achieve. This is not unique to the Astra Hybrid330 IP, but applicable to almost all hybrid lights.

It will be interesting to see what PROLiGHTS decide to do with the development of this light moving forward. Will we see a few more features added down the line, for example, a shutter kit or infinite pan and tilt? I feel like if it had both of those without being too much bigger or more expensive it would be the ultimate hybrid moving light.

That said, if you are after a bright moving head hybrid with a good zoom range and a quality set of gobos, this is the light. If you are after a light that does strong beams and beam effects, whatever your application, the Astra Hybrid330 IP is well worth your consideration.

Product Info: www.prolights.it/product/ASTRAHYB330IP

Distributor Australia and New Zealand: www.showtech.com.au, www.showtech.com.au/homenz

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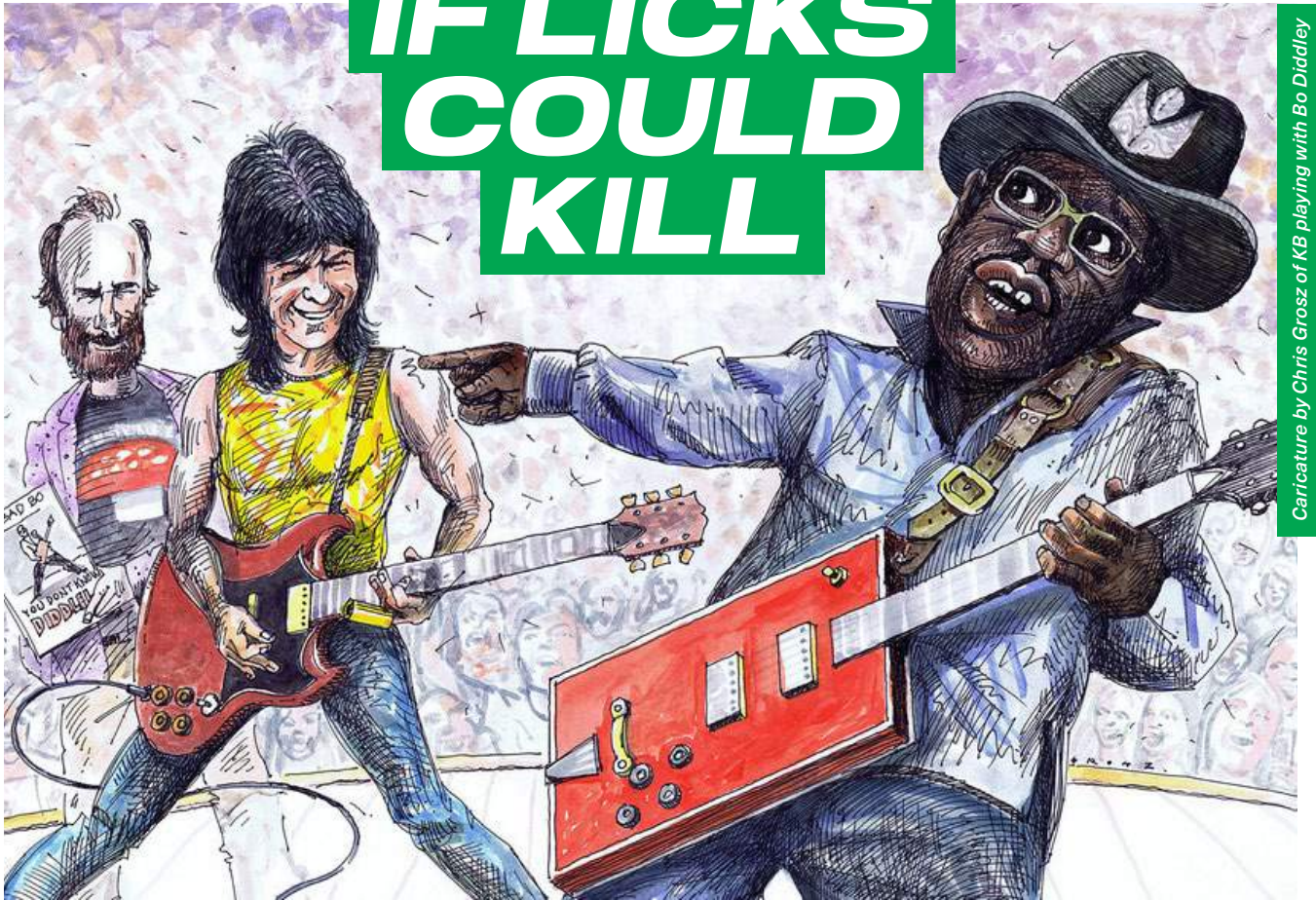


www.entertainmentassist.org.au

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The Kevin Borich Tapes:

IF LICKS
COULD
KILL

Caricature by Chris Grosz of KB playing with Bo Diddley

Snippets from the archives of a bygone era

A message scribbled on the wall of Newcastle's legendary Star Hotel in the 1970s read, "If licks could kill, Kevin Borich would be doing hard time." I chatted recently with the New Zealand-born guitar virtuoso and singer-songwriter about his latest album, *Duets*. It's an album featuring a magnificent array of talent that Borich has managed to string together, which is indicative of the respect and camaraderie he has garnered in a career that has spanned some sixty years.

Encouraged by his parents, Kevin Borich started playing guitar at age 12. He says his parents first realised his music potential when they saw him perform a concert from his verandah to the vacant front lawn, where he banged away with a stick on an olive oil can and delivered a recital on a trumpet with no keys. He then progressed to feigning guitar on a tennis racket, eventually graduating to a

single-pickup Hofner electric guitar, which his mother bought him. "I had three chords down by about age 12. The first song I learned was Hank Williams, 'Honky Tonk'. It was a wonderful song because it was G all the way, and at one stage it went to D, and I had it nailed," says Borich with a chuckle.

Kevin Borich was a founding member of the La De Das, formerly The Mergers, formed at Rutherford High School in Te Atatu in 1963. "We had quite a few hit records in New Zealand, including a number one with 'How is the Air Up There', and also 'Hey Baby'," says Borich.

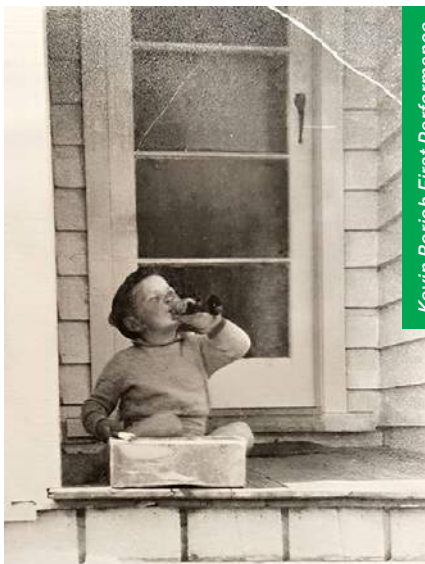
The La De Das departed for Australian shores long before I toured New Zealand on a working holiday in 1970, dragging my acoustic guitar all over the country. My prize possession upon returning home was a 45-rpm vinyl single, *Yesterday When I Was Young*, by NZ singer Suzanne Donaldson. The song was never released in Australia, but it was a hit in New Zealand, and I recently learned that it was Kevin Borich who, some 10 years earlier at age 12, first recorded a repertoire of songs with Suzanne and her sister Judy, who lived next door on a poultry farm in Borich's home town on Motu Road, Huapai, NZ.

"Suzanne and her sister, Judy, were in the poultry farm next door, and their mum must've

caught me having a bit of a play on guitar outside, and she said, 'Why don't you come over and have a bit of a jam with the girls?' We jammed away and had a little repertoire, and their mum was smart enough to say, 'That sounds pretty good; we'd better go and record it.' So we went to a studio (Astor Studios) in Auckland, and we all stood around one microphone as they cut it down to an acetate disc," says Borich.

In 1971, the La De Das had a hit song with 'Gonna See My Baby Tonight', which was written by Borich, and the band was doing shows with some of the biggest Australian and overseas acts in the business. After some line-up changes, the La De Das were eventually whittled down to a three-piece before disbanding in 1975. Playing three-piece was the precursor to Borich forming the Kevin Borich Express in 1976, with Harry Brus on bass guitar and Barry Harvey on drums. In 1977 and 1978, Borich won 'Best Guitarist' at the Australian Rock Music Awards.

In January of 1981, a commercial by Sydney radio station Triple M featured a montage of iconic images flashing across our television screens, with Dr. Dan, a mythological electric guitar-playing satyr with wings, belting out a monumental guitar solo. The now-famous lead break, which was lifted from 'Introduction



Kevin Borich First Performance

'(The Journey of a Fool)' on Mike Batt's Tarot Suite album, was played by Kevin Borich for the Triple M promotion.

"I went to the session, and Jimmy Sloggett (an acclaimed sax player and music arranger) put the music up. I thought I was just going to be jamming because I can't read music. So I said, 'I'm sorry, I can't read the fly shit on this paper.' They would have gotten someone else who could read music, but Sloggett insisted. 'We want your sound, so I'll come round to your place and I'll whistle it to you,' and that's what he did," says Borich.

Coincidentally, prior to the Triple M ad, Borich had attended Rory Gallagher's Sydney concert at the Capital Theatre in 1980, unaware that it was Gallagher who had played the original lead on the track taken from the Mike Batt and Friends album. "Michael Chugg had something to do with that show, and he was managing me at the time, so I asked him to get me in to see the show because I was a fan," said Borich.

In 1982, Borich was playing alongside Joe Walsh (The Eagles), who did two tours with Borich's third band, The Party Boys. The



Kevin Borich with Carlos Santana

bond between Borich and Walsh continued for over forty years, with Joe Walsh recording 'The Fires' with Borich on the new Duets album. In total, for the album, Borich sought out twelve great artists that he had admired and worked with over the years, including Joe Walsh, Leo Sayer, Ian Moss, Tim Rogers, Ella Hooper, Russell Morris, Suze DeMarchi, Angry Anderson, Joe Camilleri, Ross Wilson, Angela Fabian, and Swanee.

Borich describes himself as 'ham-fisted' on the piano, but it was on that instrument that he first worked on the song 'There's a Road', which Swanee sings on the Duets album. "Way back in Bondi, I put the sunnies on, pretending I was Ray Charles, and the gospel feel, chord structure, and vocal came out." Swanee (John Swan) added some lyrics and the melody for the song.

All of the backing tracks on the Duets album were done in Borich's 'Vibrating House Studio', which sits underneath his house at Maleny on 80 acres of bushland on the Sunshine Coast Hinterland, Queensland. The album was produced by Nick O'Donnell (musician, producer, and arranger), who also contributes musically on the album. Borich's son Lucius plays drums on five of the twelve tracks, and Kevin Borich Express members John Carson (drummer) and Chris Gilbert (bass) are heavily featured on the album.

Not only is Kevin Borich a success story in his own right, but his career has been embellished by being invited to record and tour with some of the biggest names in the industry, and he has been invited onstage for impromptu performances with some of the great guitar legends of the modern music era.

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Kevin Borich Express, Kevin Borich, John Carson, Chris Gilbert



Kevin Borich



Kevin Borich played the guitar solo on the 80s Triple M promo



Kevin and Melissa Borich. Photo: Nicholas Falconer



The La De Das 1966 (from left) Trevor Wilson, Kevin Borich, Brett Neilsen, Phil Key, Bruce Howard

Bo Diddley:

"I was at the Bombay Rock in the 70s. We'd already done a show, and we're hanging out in the VIP area. Michael Gudinski and I were watching Bo Diddley. Michael must've brought him out; I can't remember. So Michael says, 'Go on, get up, and play.' And I said, 'What do you mean, get up and play? I can't just walk on there and play; you don't do that, mate.' Then he shuffles off, and there must've been a break, then he comes back and says, 'Up you go, I've organised it.' So this guitar player puts a guitar on me. I'd been watching, and I noticed that he (Bo Diddley) was using open tuning. So I'm aware of the tuning, but Bo doesn't know that. So he says, 'You better tune that guitar, boy.' And I say, 'It's cool, Bo; I've been watching, I know what you're doing; I'm cool with this.' And then he just gives me a 'stupid white boy' look, turns around, and starts getting into it. So I'm vamping away and he's singing, and in between one of his phrases there's a little gap, and I sting a few licks, then he turns around, like he picks up on it, and gives me a smile. Then I play a lot more, and then we're side-by-side going for it, and the house is going berserk," says Borich.

Ritchie Blackmore:

"After our show (Sunbury 1975), I was walking around backstage and I came across some caravans, and I'm looking at something like 'God's Guitar Shop of Stratocasters'; there's some guys tuning them up, and one of them asked, 'Who was that band on before?' I said, 'That was my band.' One of them said, 'Ritchie

thought it was great.' So, I jumped in and said, for a joke, 'Well, we're playing at the Bombay Rock in Melbourne tomorrow; tell him to come down and have a jam.' So we're playing at the Bombay Rock, and I see someone holding a Stratocaster coming through the crowd towards the stage, and a guy with black hair following him. And I thought this could be Ritchie, and it was. I had two Marshalls, and he plugged into one, and we just rocked out. We did two or three songs, and the crowd went absolutely nuts because they knew who it was; they knew there was a superstar on stage," said Borich.

Carlos Santana:

"We'd done our set (Kevin Borich Express 1977, Calder Park, Melbourne) and had a great reaction. I was backstage on the opposite side, looking across at Carlos (Santana) over there on the other side. All of a sudden, I feel this yank, and there's a guy grabbing me by the arm. I turn around, and there's this American: 'He wants you out there; come on!'

"He drags me behind the stage and across to the other side, then up on stage, and he points at an amplifier, grabs a guitar, sticks it

over my head, and plugs me in. And there I am, wondering what the hell! I'm making sure it's (the amp) making a noise; I turn up the volume, and I'm sort of vamping a bit trying to find out what key it is, and he turns around and gives me a smile and points to me, like, 'Have a go,' kind of thing. So I start playing a few lines, and quick as a flash, he jumps on and plays a little harmony with me, which was gorgeous. Then he sort of said, 'Go for it.' So I started playing, and all of a sudden the sound coming out of my amp died, and I don't know if the amp blew up or they ceremoniously turned me down," says Borich.

In 2005, Kevin Borich was diagnosed with an aggressive cancer. "They gave me eight months to live, but after about a year and a half, I was back on stage." He attributes his recovery to medical staff and treatments, a book by Dr. Ruth Cilento, 'Choose Your Own Survival Path', and especially his wife Melissa, who mentored him on meditation and yoga. Borich has been in remission for over a decade now and continues to tour and record. For information about the Duets album and touring dates of Kevin Borich Express, visit kevinborich.com.au.



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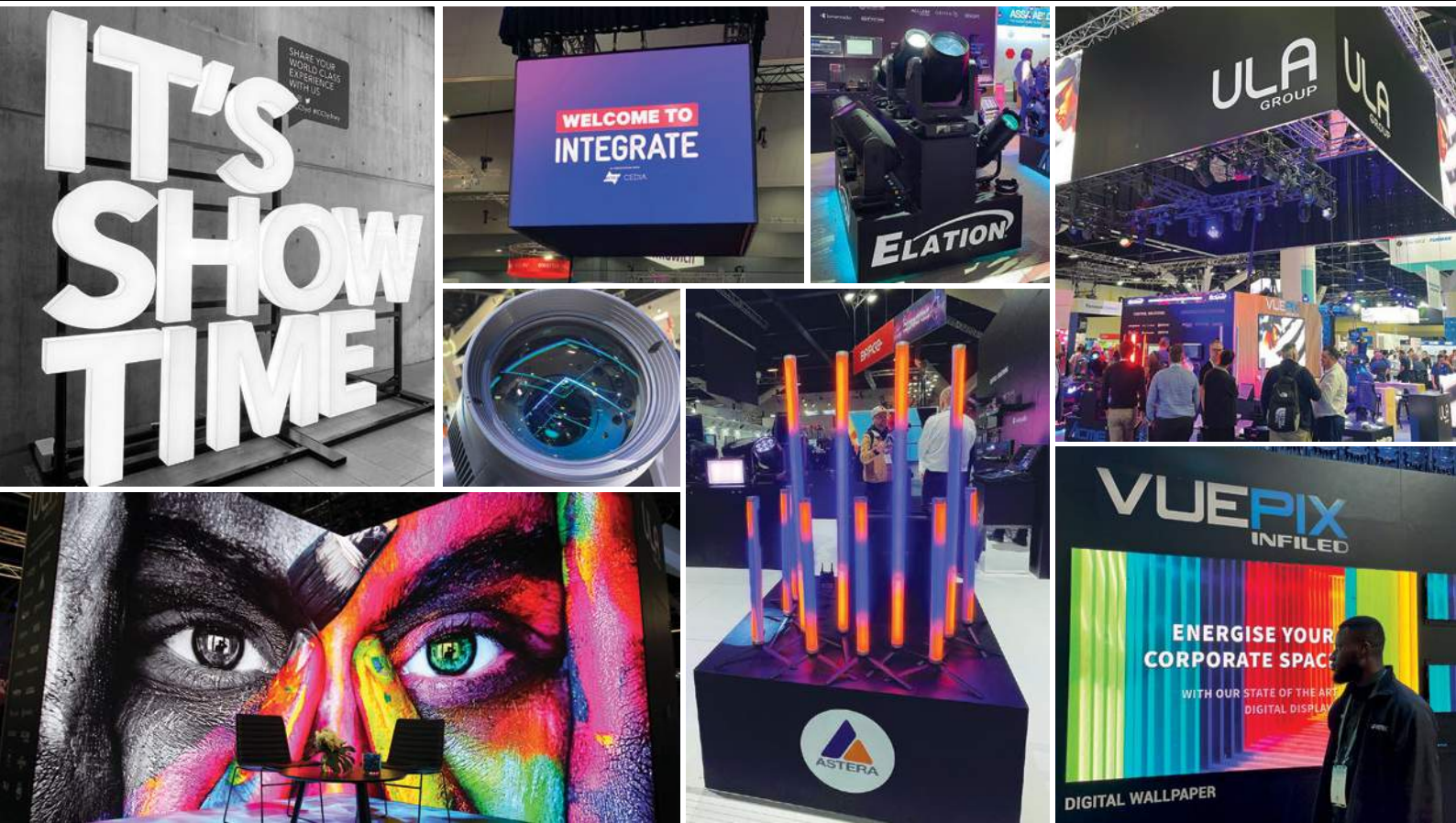


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