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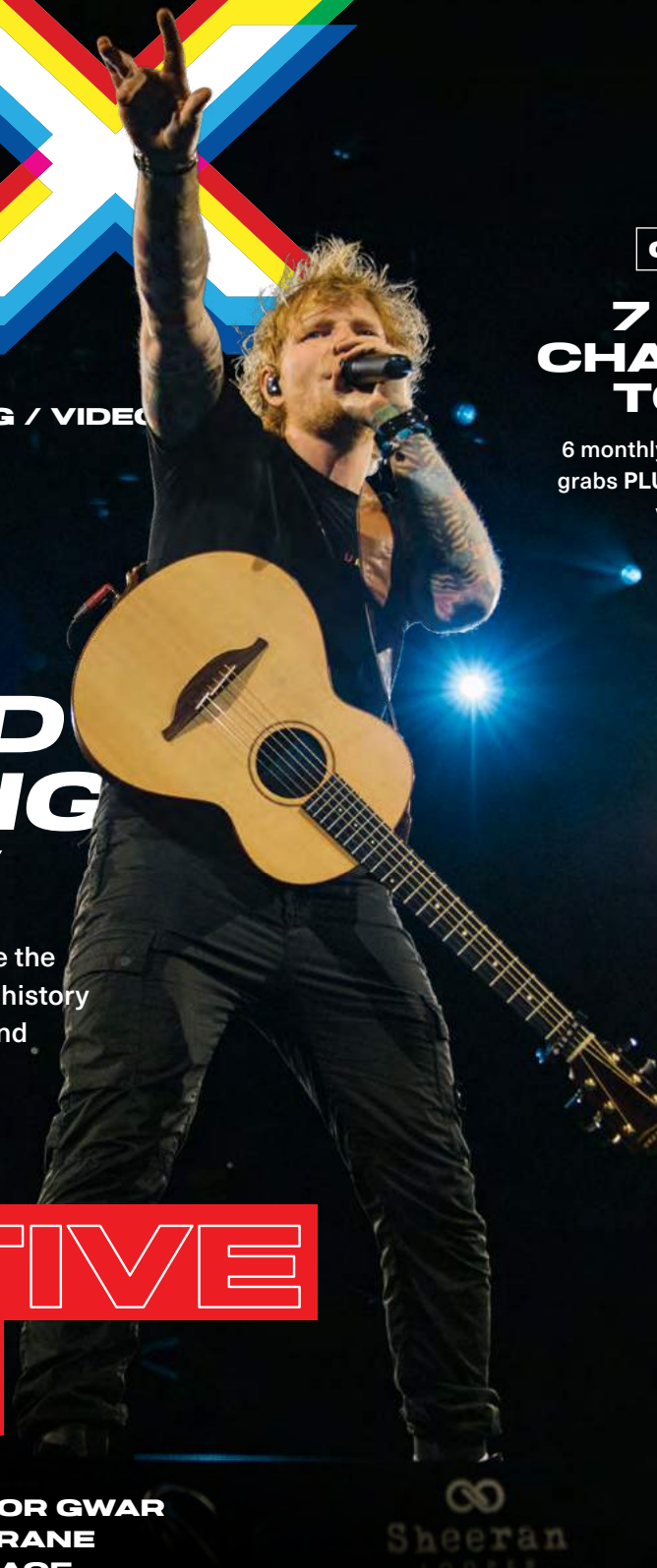
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- / Tech Talk
- / John O'Brien's Backstage
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- / ACME Lighting Lyra

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Contents Photo – DAVID HOCKNEY: BIGGER & CLOSER (not smaller and further away)

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PO Box 1045, Ascot Vale, VIC, 3032  
Phone +61 (0)407 735 920 | Email [jason@vcscreative.com](mailto:jason@vcscreative.com)

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# South Australian production company supplies Sydney WorldPride



Photo Credit: Cain Cooper

## Adelaide's Novatech deliver lighting, video, and comms for global LGBTIQ+ event

From 17 February to 5 March, Sydney played host to the first ever WorldPride event to be held in the Southern Hemisphere. With the legendary Mardi Gras parade in its 45th year, Sydney knows how to do rainbow and took the sparkle of the Mardi Gras parade and spread it across three weeks and two hundred events. South Australian production company Novatech got in on the celebrations, bringing four semi-trailers of lighting, video and comms gear inter-state to support three shows in the Domain.

Nations across the globe compete to hold WorldPride, a regular event that

promotes LGBTIQ+ issues on a global level. Encompassing parades, festivals and a human rights conference, previous hosts have included London, Toronto, Madrid, and New York. Sydney Gay and Lesbian Mardi Gras beat out Houston and Montreal to win the bid to host WorldPride 2023. Tipped to be the biggest event in Sydney since the 2000 Olympic Games, injecting an estimated \$600M into the economy and enticing half a million people to the seventeen day party, it was in the words of Leko Novakovic, Managing Director of Adelaide's Novatech Creative Event Technology, "A big deal. A whole organisation runs it on behalf of Sydney, with support from the government, Destination New South Wales, and it attracts some very big sponsors."

Based in South Australia and founded by brothers Leko and Milenko Novakovic in 2001,

event hire and production company Novatech frequently works outside of South Australia, "We got involved in WorldPride through SUBVRT Experience Studio's Josh Chapman who were producing the three events at the Domain - the opening and closing ceremonies and a dance party. They engaged us to do production supply for the lighting, video and comms; Norwest Group did audio; Mandylights did lighting design, direction and operation; Square Division did the show design, and on opening night, Alex Grierson, Brad Salt and Pete Lynn from FMTN Inc fulfilled screen producer/switching roles, with Nick Macfie from Production Technologies providing overall Technical Direction."

The Opening Ceremony 'Live and Proud' on the first Friday was hosted by Australian Idol winner Casey Donovan and RuPaul's Drag



Photo Credit: Cassandra Hannagan

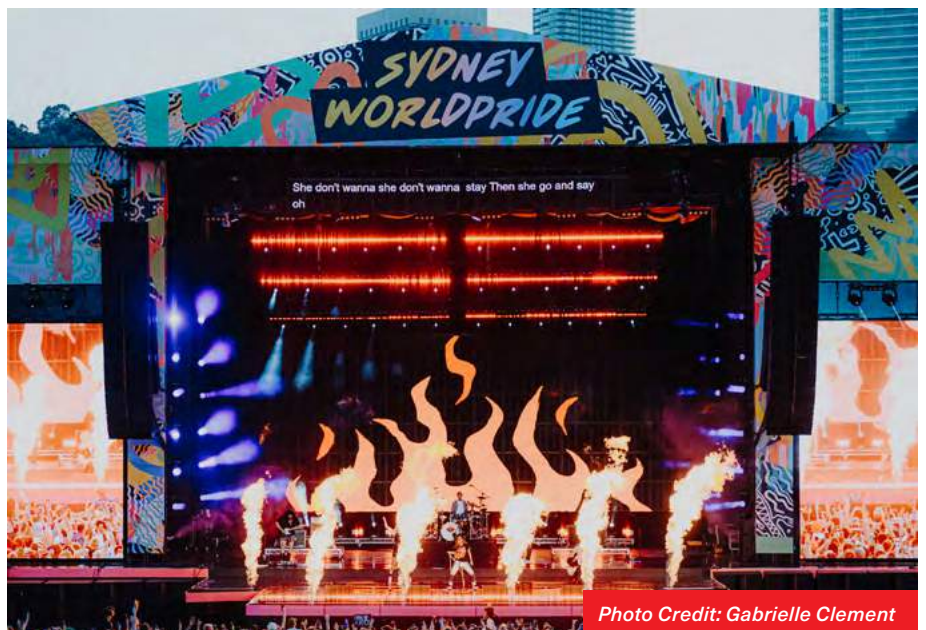


Photo Credit: Gabrielle Clement



Photo Credit: Anna Kucera



Photo Credit: Gxbriellemxry



Photo Credit: Daniel Boud

Race's Courtney Act and featured British hyperpop star Charli XCX, Australia's own Jessica Mauboy and the inimitable gay icon Kylie Minogue, international video messages from the likes of Stephen Fry and Jessica Coolidge, and speeches by prominent LGBTIQ+ leaders, all broadcast live by ABC TV and around the world.

On the Sunday, the Domain Dance Party hosted 10,000 at the biggest LGBTIQ+ circuit event Australia had ever seen, featuring DJs Suri, Isis Muretech, Tackthai, Du Jour, Dan Slater and headliner Kelly Rowland, "The first weekend was a big success with huge

turnouts on both nights, the OB went well, and Kylie absolutely went off. She had a surprise special guest; the dancers huddled together, used a stage lift and bang! Out comes Dannii Minogue. I was in the crowd and the roar was incredible. Then Kelly Rowland knocked it out of the park at the dance party. There were really good vibes over the whole weekend."

Gear wise, "We took some big stuff - there was stage left and right IMAG with ROE CB5s, Vanish for the upstage and FOH delay, autocue and stage surtitles screens. We filled four semis and flew in ten people. It was an elaborate set up on the Friday night because of

the integration into OB and that's where Nick Macfie and FMTN Inc came in. FMTN Inc ran disguise to trigger all the content and it was pretty full on. Lighting was significant too - very washy, washy. And we tweaked it again for the

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Sunday, re-angling everything and putting in a floor package. And comms was a major as well, we had forty Riedel Bolero packs and a bunch of their Smart Panels, with the challenge of integrating to OBs again. Plus Hytera 2-ways into the network for pyro and drone people. It was full on."

Turns out, not surprisingly this Summer, that the biggest challenge was Sydney's weather, "We left and it looked fine all week then on the Tuesday an out-of-nowhere storm comes and smashes us with seventy mils. I didn't even pack a jacket but that's Sydney for you I guess!"

The next two cities to host WorldPride are Washington DC (2025) and Amsterdam (2026).



Drone Show. Photo Credit: Anna Kucera

## ICC Sydney invests in next generation of AV professionals

### Future-proofing event delivery service

International Convention Centre Sydney (ICC Sydney), managed by ASM Global, has activated its Audio Visual (AV) Graduate Program for the fourth time, with five AV professionals joining the venue's ranks following completion of their tertiary education courses.

Part of a raft of learning opportunities at ICC Sydney, the AV Graduate Program supports the next generation of technical professionals to access unparalleled vocational training and development opportunities.

Through the year-long initiative, the graduates will gain exposure to a calendar of events, live entertainment, exhibitions and conventions, working across all areas of ICC Sydney's leading AV and production services including audio, lighting, vision, rigging, staging, and digital event solutions.

ICC Sydney CEO and Group Director - Convention Centres, ASM Global (APAC), Geoff Donaghy said the program provided candidates with a unique opportunity to gain experience working in a world class venue with access to industry leaders and professionals to mentor them and provide

best practice training as they rotate through each division of the Audio Visual department.

"We believe in creating careers, not simply jobs. As an employer of choice, ICC Sydney has earned a strong reputation for fostering career opportunities through our award-winning training and development programs. Our AV Graduate Program ensures candidates will be mentored by the industry's leading AV professionals, build on their in-demand skills, and experience working on a diverse range of extraordinary events," Mr Donaghy said.

ICC Sydney Director of Audio Visual Services, Brian Nash, said that previous professional development programs delivered by the department had nurtured and developed a total of 18 AV professionals and had been beneficial for both the candidates and the venue team alike.

"Our AV Graduate Program is an excellent pathway for candidates to gain the best available on the job experience working on complex and creative events, while increasing the likelihood of securing employment at the conclusion of the

program. In the past we've retained 100% of the graduates, progressing them through to casual and permanent roles."

"It is through programs such as this that ICC Sydney is future proofing its event delivery services by investing in the next generation of AV technicians while we match the demand from our clients," Mr Nash said.

ICC Sydney's AV Graduate Program is one of several professional development programs offered by the AV Services department, including the Professional Growth Traineeship Program which has recently seen the participation of seven AV trainees, the digital media cadetship and the two-week practicum placement as part of the National Institute of Dramatic Art's 'Live Production' certification.

A graduate of ICC Sydney's 2022 Professional Growth Traineeship Program, James Burke said of his experience, "The traineeship was incredibly rewarding. It was amazing to train in the many different aspects of AV right under one roof, from audio, vision, lighting, staging and rigging. With this well-rounded exposure, I feel confident in my ability to deliver technical solutions for our clients. I wish our new AV graduates all the best for their participation in the program."

ICC Sydney is committed to investment in professional development, and team members are given the opportunity to participate in over 2,000 courses through the venue's Academy of Extraordinary, and in conjunction with external providers such as the Australian Institute of Management, International Association of Convention Centres and the Venue Management Association.



ICC Sydney AV Graduates and Trainees

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# Hamer Hall at Arts Centre Melbourne installs new grandMA3 system

A new grandMA3 full-size console, a grandMA3 compact XT and a grandMA3 onPC command wing have been delivered and are in action at the 2,466-capacity Hamer Hall, the largest indoor venue at the Arts Centre Melbourne complex, which has a busy schedule of orchestral and contemporary music performances and other events.

All three consoles were delivered in July 2022 by MA Lighting's Australian distributor Show Technology, replacing Hamer Hall's previous lighting control system.

Arts Centre Melbourne's Head of Lighting Peter Darby said MA devices were the most requested lighting control options by incoming productions.

"We thought it was the right tool for the job and the best choice for the venue," he said.

Once they had decided on grandMA3 hardware, the next conversation was about the running mode.

With the proven power and flexibility of Phasers as the system backbone, they agreed that a full grandMA3 package (hardware and software) was the way to go to control their approximately 150 fixtures, a mix of moving lights, conventional and LEDs.

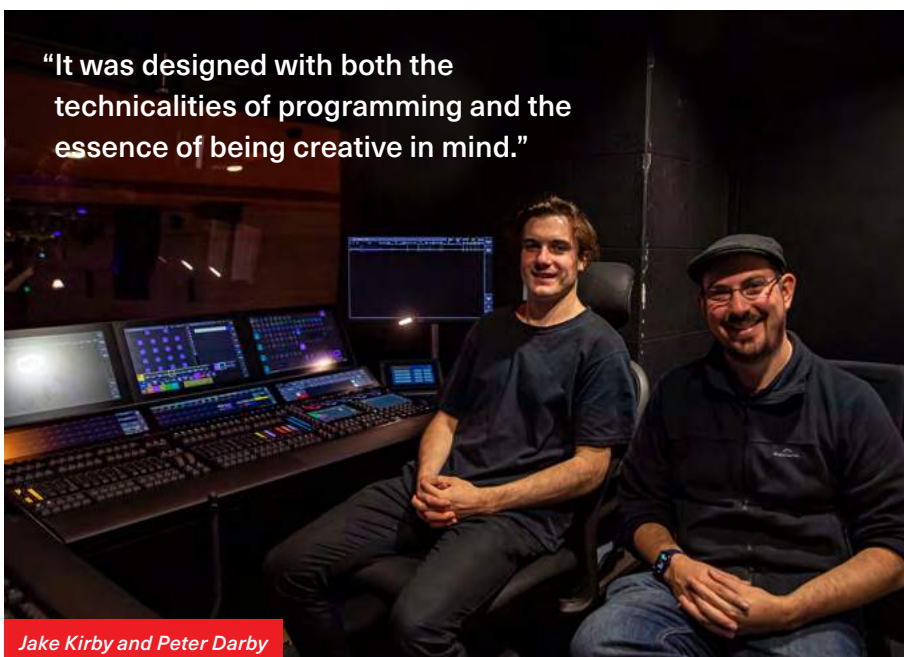
"The Phasers are such a straightforward way to create very complex effects that have not been possible with previous versions of grandMA."

Hamer Hall's new lighting supervisor, Jake Kirby, said the dual encoders and other features reduce button presses and ultimately save time.

Jake lights around 80 per cent of the shows in Hamer Hall, the other 20 will have their own LD.

"Often, we will have an afternoon sound check which will be the only 'rehearsal', and from then we go straight into a show that evening

"It was designed with both the technicalities of programming and the essence of being creative in mind."



Jake Kirby and Peter Darby



never having seen the full performance before, so we have to be prepared for anything.”

Hamer Hall is the home to the flagship Melbourne Symphony Orchestra, who have their own grandMA3 showfile. Jake and all the other operators have their own user profiles for maximum adaptability, and the console’s multi-user functionality has also been helpful for some shows.

Hamer Hall has a lively mix of shows and events most days of the week from school

graduations, jazz, orchestral concerts, and a range of other music genres.

Peter Darby said every day is different with new challenges and ways to be creative.

“Each show must look different, and the grandMA3 system with all the components really assists in achieving this,” says Peter who also like the console’s ‘letterbox’ screen, the light path beneath each encoder, and the soft touch keys which are “a big departure” from the grandMA2.

Jake Kirby said he liked the tactility and responsiveness of the faders and being able to import Vectorworks 3D files via MVR directly for basic previsualisation.

“It was designed with both the technicalities of programming and the essence of being creative in mind.”

Another Arts Centre Melbourne venue, the outdoor Sidney Myer Music Bowl, also has grandMA3 for lighting control.

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# 5G+8K



# Sydney's Abercrombie REBORN



Photo Credit: Maria Boyadgis

## With World-First Mezzo A+ Install

**With over 30 amplifiers installed, the iconic Abercrombie Hotel is taking full advantage of the enhanced networking capabilities offered by Powersoft's new Mezzo A+ and Quattrocanali DSP+ platforms.**

Powersoft's new AES67-enabled amplifier platforms, including the enhanced A+ versions of its innovative, half-size Mezzo range, have made their global debut at the recently reopened Abercrombie hotel in Sydney, Australia.

The Abercrombie, located in the inner-Sydney suburb of Chippendale, traces its roots back to 1843, when it opened as the Australian Inn. The current, art-deco building, on the old Carlton United Brewery site, was completed in 1938 and served as a much-loved watering hole and live entertainment venue until its closure in 2014. It was acquired by hospitality group Solotel in 2016 and reopened two years

late, as a result of Sydney's on-off coronavirus lockdowns with a 36-hour launch party in December 2022.

The new-look Abercrombie comprises three venues: a ground-floor club space, public bar and beer garden, late-night cocktail lounge and rooftop terrace Casa Rosa; and Lil Sis, a aperitivo wine bar inspired by the caves à vin of Paris.

Tasked with delivering a state-of-the-art AV system worthy of the Abercrombie's multimillion-dollar redevelopment were Production Audio Video Technology (PAVT), Australian distributor for Powersoft, EAW, AtlasLED, Symetrix and Radio Design Labs, and local system integrator BeyondAV, who inherited "a very difficult acoustic environment" complicated both by the age of the property (the Abercrombie has been a listed building since 1989) and the presence of new residential buildings around it.

"Revitalising old buildings is always fun, with unique challenges," explains PAVT's business development manager, Dave Coxon. "A

major challenge with the Abercrombie was containing all the sound, patrons, voices and music, as, unlike in days of old, the venue is now surrounded by accommodation. It's the only freestanding hotel I have ever seen with an apartment complex freestanding over the venue!"

Additionally, he adds, the Abercrombie's original hotel rooms "remain in the upper two levels, creating many small spaces requiring multiple amp channels".

Amplification is Powersoft throughout, comprising 16 Mezzo 604 A+ and 13 Quattrocanali 1204 DSP+ amplifiers, all AES67 compatible, as well as two high-performance X8s. The Powersoft amplifiers, explains Coxon, are installed in two rack rooms, with all equipment (plus NETGEAR AV switches) fitting into a single rack at each location. Needing a "truly waterproof" loudspeaker for the two large outdoor areas, PAVT specified a combination AtlasLED's SM82 range with EAW subwoofers (SB120/150 WP), while a Function One EVO X system was installed in the main room.

# NEW DUAL LISTEN FEATURE



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Pliant Technologies announces the latest MicroCom XR firmware update, which includes the addition of a new Dual Listen feature.

Dual Listen gives users the ability to listen to two intercom channels simultaneously. This provides the benefit of monitoring communications on both the A and B channels, while also allowing users to switch between talking on either channels A or B independently. In addition, this new feature is selectable on each pack in the system, giving the individual user a choice between Dual Listen and normal A or B channel communications.

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Photo Credit: Steven Woodburn

The new A+ models are the latest additions to the Mezzo range, which offer the same reliability, build quality and acoustic character of larger Powersoft amplifier platforms but in a half-size form factor. A+ models, comprising Mezzo 322 A+, Mezzo 304 A+, Mezzo 602 A+ and Mezzo 604 A+, offer all the remote control and monitoring functions of the A versions, but further extend their networking capabilities with AES67. The A+ range joins the Duecanali DSP+ and Quattrocanali DSP+ fixed-install amplifier platforms and the T Series touring amplifier in offering AES67 compatibility.



Photo Credit: April Josie Photography



Photo Credit: Steven Woodburn

These models are able to receive audio-over-IP (AoIP) streams compliant with the AES67 standard, which allows high-performance streaming AoIP interoperability across different networking systems. Powersoft A+ and DSP+ models can receive AES67 streams natively by connecting the dedicated AoIP networking port to an AES67 network.

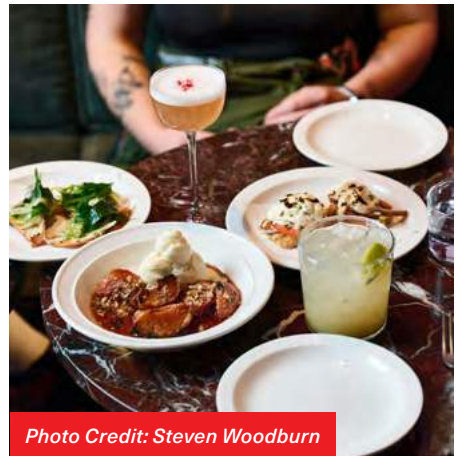


Photo Credit: Steven Woodburn

Coxon is full of praise for Powersoft, describing its introduction of the AoIP-enabled models as “a godsend” after years of delays on the Abercrombie and other projects. “With this project delayed over two years due to Covid and delivery in the heat of the component shortage, Powersoft’s quick development migrating to AES67 has kept projects going,” he comments.

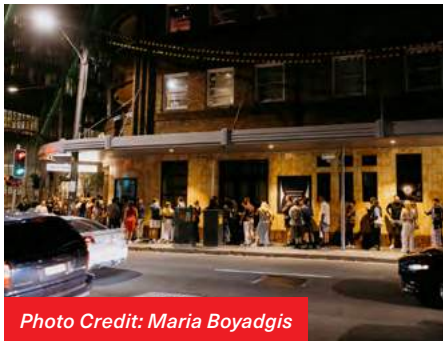


Photo Credit: Maria Boyadgis

While it’s not always straightforward being an early adopter of new technology, the Powersoft A+/DSP+ amplifiers were crucial to realising the relaunched Abercrombie, Coxon concludes, which opened on schedule with a spectacular a multi-day launch party featuring some of Sydney’s hottest DJs. “Being the first project to install A+ versions of the amplifier, and with the release of the ArmoniaPlus 2.5 update, which added support for AES67, coming three days before handover, made life fun!” he recalls. “That said, we had no major issues, and the project opened on time, tuned and loud, with a 36-hour opening party.”



Photo Credit: Maria Boyadgis

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# HOLOPLOT X1

## The Revolutionary German PA in London

Sound designer Gareth Fry and composer Nico Muhly collaborate on 'DAVID HOCKNEY: BIGGER & CLOSER (not smaller and further away)'

At first glance, the inconspicuous London cuboid venue Lightroom presents a blank canvas set to host a varied programme of original creative content. The opening show 'DAVID HOCKNEY: BIGGER & CLOSER (not smaller and further away)' is set to be the first in a series of unique exhibitions, created in collaboration with leading artists and innovators. The Hockney experience is as astonishing visually as it is alive with sound. The show features a specially created score written by American contemporary composer Nico Muhly and sound design by Olivier and Tony award-winning sound designer Gareth Fry. Lightroom's sound system is supplied by Berlin-based pro audio company HOLOPLOT's revolutionary X1 Matrix Array and was installed by industry leading integrator and HOLOPLOT partner, Creative Technology.

Four and a half years in the making, Lightroom was conceived by award-winning design studio and production company 59 Productions and is a joint venture between

them and London Theatre Company, the creative engine behind the Bridge Theatre. The 'Bigger & Closer' exhibition allows the audience to enter Hockney's thought process and creative motivation, generating new perspectives on some of his most well-known as well as more recent works.

"We've produced many large-scale projection mapping shows, exhibitions, and theatre shows, but we've never had our own space," says Lightroom CEO, Richard Slaney, the former CEO of 59 Productions. "With immersive shows cropping up all over, we wanted to do something different. Hockney was top of our list of artists, so we emailed him to see if he was interested. Not only did he say yes, but he's dedicated the last three years to the project. The idea of working with him was ours, but the show itself is entirely his creation.

"It's hard to imagine from the outside, but the basement itself is 14m deep, allowing us to get projections up to 11m high. During the test phase, David came and sat next to us and

talked to us about how he'd made the artworks and the stories behind them. It was then we realised this was the show we were meant to create. You want David on your shoulder, his voice in your ear, guiding you through his work. The harmonious marriage of David's voice and Nico's beautiful soundtrack were the two core elements, accompanied by some subtle sound effects that truly underscore the importance of audio in this unique production."

Looking for a suitable audio solution that could turn Lightroom's ambitious concrete structure into a smooth sounding gallery space without compromising the 360-degree visuals, the team quickly realised that conventional loudspeaker solutions would need multiple wall cavities or mounting positions on all four walls to achieve the desired immersive effects.

"The initial brief was to consider a sound system for Lightroom that would provide good sound coverage, and also not bother the neighbours in the office above the main space," says Fry, who has a long association



with both 59 Productions and the London Theatre Company. "It had to be essentially invisible so that all four walls of highly reflective concrete could be an unhindered projection surface from floor to ceiling. It was an immense challenge because as built, the space has a reverb time of over six seconds and there is very audible background noise of projector fans. All of this is the natural enemy of intelligible sound."



Fry's initial design was a traditional point source-based sound system, with speakers hidden in multiple alcoves around the space. "But I wasn't happy," he recalls. "It didn't feel like it was going to end up sounding very good with very uneven coverage. That bugged me for months after I'd submitted the final design. But every time I looked for an alternative, I couldn't find one that met the brief. Then I went to an early demo of HOLOPLOT. I knew instantly that this could be the solution to all

our problems. As soon as I left the demo, I called everyone and put the previous system design on hold, and HOLOPLOT were kind enough to arrange a special demo so everyone else could hear the system.

Fry suggested HOLOPLOT and a system design that only required two positions within the room, yet delivered more creative tools that could be used to generate immersive effects. The system not only provided the answer for the current exhibit but also paved the way for future shows.

"There are many things HOLOPLOT can do that I've never heard any other speaker system do. It has a bunch of magic tricks up its sleeves. But first and foremost, it gave us a sound system that could provide intelligible sound with very even coverage in a highly reverberant space. For that alone it was worth its considerable weight in gold!" he exclaims.

The final system design consists of two HOLOPLOT X1 arrays at either end of the room. Each array comprises four X1 Modul 96s and four X1 Modul 80-S, embedded and entirely hidden within predefined wall cavities, each at a different height. The acoustic centre of the East Array is at 4.61m and for the West Array at 6.66m. A traditional audio solution, with sources facing each other, would have created phase issues and spill between the sources.

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# LED CHINA 2023

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as well as the relative sound pressure level for each area. This allows for uniform coverage from each array no matter where the listener is positioned within the space. Additionally, each array is strategically placed behind colour-matched, acoustically transparent material, which preserves the integrity of the 360-degree projection surface.

The immersive effects that are used in Gareth Fry's sound design were created with X1's Wave Field Synthesis (WFS) capabilities to create Virtual Sources. These Virtual Sources are positioned at a set distance from the North and South walls where it was not possible to integrate arrays or point sources.

The positions of the Virtual Sources are defined inside HOLOPLOT Plan, the recently launched sound system design software allowing sound designers to visualise the impact of X1's unique capabilities on any given space. The 'bundled' waves are reflected from the wall as if there is a point source positioned there, allowing the listener to localise the sound from a position where there is no array. It was key at the Lightroom experience that visitors would be able to localise sound from these reflections no matter where they are within the main space. To achieve this, multiple reflections were distributed along the North and South walls of the venue.

"The biggest challenge for the installation was getting the speakers into position," explains Jack Strong, Creative Technology Business Development (Integrations). "But with specially designed dollies to help manoeuvre the cabinets, an experienced team and good planning, everything went smoothly. And now the system is in place, any adjustments needed for future projects can be done via HOLOPLOT's software, dispensing with the need for mechanical steering or for additional cabinets to be added, which is a huge advantage."

"The notion of having a freely adjustable speaker array without making any physical changes to it is very much a paradigm shift," says Fry. "As sound engineers, we're used to having microphones where you can adjust its directivity from omni to super-cardioid by flicking a switch. With HOLOPLOT, this is essentially the same, but for a loudspeaker."

"Lightroom is huge, but it feels intimate. It's an immersive experience but done differently. It's more personal and evokes emotions. There's a story within it, and it's sequential, so you can enter at any point," concludes Slaney. "I think we've raised the bar in terms of technology here. We may not be changing the base of art exhibitions, but we are certainly at a landmark moment within that range of different experiences. This is how you do it in a very particular kind of way, and HOLOPLOT has been the key to making the show 'alive with sound'."



"Lightroom is huge, but it feels intimate. It's an immersive experience but done differently. It's more personal and evokes emotions."

## Roland VR-120HD

Roland Professional's latest incarnation of their VR series AV switchers is the VR-120HD. It replaces the VR-50HDMk2 but with major upgrades in almost every area of functionality. Highlights of the VR-120HD include 6 HDMI inputs (with scalers) plus 6 SDI inputs, 8-layer compositing, built-in AV record and playback, Program, sub-Program and Aux bus outputs, deep level automation for a host of parameters, PTZ camera control, a direct streaming output along with USB 3.0, and a plethora of other features. The VR series are built from the ground up to make catering for Hybrid events seamless and uncomplicated.

**Australia:** *Roland Australia* [proav.roland.com](http://proav.roland.com) or (02) 9982 8266  
**New Zealand:** *Music NZ* [musicnz.co.nz](http://musicnz.co.nz) or 0800 775 226



## Magewell Eco Capture AIO M.2

Magewell has unveiled a new model in its Eco Capture family of ultra-compact, power-efficient, M.2 video capture cards. The new single-channel Eco Capture AIO M.2 provides both HDMI and SDI interfaces with embedded audio support for flexible input connectivity. Magewell's Eco Capture cards offer systems integrators and OEM developers a high-performance video capture solution with low power consumption in a space-efficient form factor. The cost-effective, low-latency devices feature a high-speed PCIe 2.0 bus interface with an M.2 connector and measure just 22x80mm, making them ideal for incorporation into small, portable or embedded systems where full-sized PCIe slots are not available.

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A background image showing a portable stage setup in a studio or rehearsal space. The stage is a simple metal frame with a black top surface. In the background, there are silhouettes of people on the stage and some studio equipment.

## Kali Audio MM-6

Kali's best-selling LP-6 studio monitor has been updated for home use as the MM-6. Featuring easy connections for televisions, gaming consoles, A/V receivers, and other entertainment systems, the MM-6 brings studio quality sound into your living room. The MM-6 has boundary EQ settings that let you dial in the perfect sound whether you have the speakers on stands, on a desk, or on a bookshelf. You can also add or subtract bass and treble and the included remote control works on the digital inputs, so you have easy control to how loud your speakers are, even if the device you're connected to doesn't let you turn the sound up and down.

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**New Zealand:** NAS [nz.nas.solutions](http://nz.nas.solutions) or (09) 414 4220



# NEW GEAR

## Brompton Technology Tessera G1

As the first LED receiver card to support 10Gb fibre connections direct to the panel, the G1 will drive the next generation of LED panels. These next-generation, ultra-fine pitch panels will be capable of supporting a one million-pixel capacity or up to 1,000 fps. All of this made possible by a 20x increase in computing power compared to the existing top performer, the Tessera R2+ receiver card. The G1 will facilitate the integration of additional calibrated channels, which Brompton defines as RGBW (Red, Green Blue and 'Whatever'). These additional light emitters in the LED panel represent a significant leap in colour-rendering accuracy, especially important on skin tones. The 10Gb bandwidth capabilities in combination with the possibilities offered by 20x more processing power positions the G1 as a future-proof solution and a must-have for content creators in the future.

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



## Sennheiser Profile USB

The Profile USB is a cardioid condenser microphone that presents an easy and stylish solution for streaming and podcasting. It combines professional sound with direct accessibility of all functions, allowing streamers, podcasters and gamers to fully focus on their content. The side-address microphone is available as a table stand version (AUD \$239, NZD \$269) and as the Profile Streaming Set with a 3-point self-locking boom arm (AUD \$349, NZD \$429).

**Australia:** Sennheiser  
[en-au.sennheiser.com](http://en-au.sennheiser.com) or 1800 648 628  
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[en-nz.sennheiser.com](http://en-nz.sennheiser.com) or (09) 580 0489

## Riedel Simplylive

Riedel's Simplylive Production Suite is a software-driven live production platform that lets you choose from a range of application layers, tuned to the tasks you need to do, from slow motion replay, master recording, streaming or referee review, to an all-in-one production solution that gives you virtually everything you need to create a show.

Simplylive Production Suite lets you add personnel to cover large events, or shrink it to a one-operator show. It is compatible with all of today's video formats (SDI, NDI etc), and intrinsically migratable to the IP and cloud universe. It enables live switching cameras and video sources, cueing and scrubbing slowmo replays, controlling audio, or adding graphics, all using a single touchscreen interface.

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The Ovation E-2 FC is a compact LED ellipsoidal spotlight that delivers high quality light and convenient features in a quiet, durable design, optimised for smaller venues. Its advanced full spectrum Ovation RGBA-Lime colour mixing system produces exceptionally high CRI output that can be smoothly sized with an integrated manual zoom, and focusing is made easier with a dedicated Focus Mode button.

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# BACK TO THE SANDPIT

One of the most important components of any good music production is the desire for exploration and experimentation. But far too often we don't do it. We shirk it, chicken out, look for conventional solutions or fall back on past practises. We stay on the road, fearful that heading off track will endanger our work. But what are we afraid of? Monsters?

It's time we got off the road, abandoned the map, and headed out into the great wide open. Why? Because unlike our musical palettes and technical lexicons, which are limited to the things we know and the instruments and equipment around us, the great wide open is limitless.

If you head out there, and experiment again like you did when you were a child, without ego or expectation, you will discover sounds you never knew existed... because up until that moment, they didn't!

Developing a sound in this way, without a plan, without ego, without expectation, is incredibly satisfying as a musician or producer. One minute you're scratching around for something new that might serve a song you're working on, the next minute you've captured something unique to the production that's not been derived from the power of your intellect or experience. It's new; to you, to the song, to the world. To anyone on any given day, be they famous or fiercely independent, that is a win.

The key to working in this way is to be fearless and enthralled by sound for its own sake.

Are you still excited by sound: fascinated by how things work, amazed by a new waveform that captures your imagination, or brought to tears by a chord progression or vocal performance? Do you still lose all track of time when you're producing or mixing? If so, read on!

This article is for those of you still brave enough to experiment with sound, but who perhaps don't head into the sonic unknown wide-eyed and eager for discovery quite as often as you used to. We often struggle with this as we get older. Our egos trying to convince us we know more than enough about sound already, and that it's dangerous to experiment because it makes us look like we know less.

But tell your ego this: the process of exploring a new sonic landscape is not about knowing.

On the contrary, it's about heading into the unknown and stumbling across a new sound; a texture, a melody, a noise, a shape, like Darwin discovering a new species.

## Shaking Yourself Up

The problem with a philosophy like this, however, is that it's easier said than done. Even if you consider yourself an audio explorer, chances are you often find yourself stuck in your processes as if fixed to the ground with concrete boots. It's an unfortunate side-effect of learning any craft, developing techniques, or building a library of experiences: the more you develop your skills in a field of expertise the more they come to define you. Then later, rather than aiding you in your desire to expand your horizons further, they start to limit your vision of what's possible.

But there are several ways to combat this sonic atrophy from creeping into your life, some of which are simpler than falling off a log.

As with any disease, the first step is to recognise and acknowledge that you have a problem. How you go about that is up to you, but signs of sonic atrophy are usually embedded in your work. When you start to repeat yourself, become overly familiar with your own techniques, bored by your process and/or equipment, or known for your 'sound,' these are often signs that the rot is setting in.

If any of that sounds like you, we may have caught it early... but now is the time to act!

## Playpen No.1

Start by setting yourself up with a bunch of instruments, some that might be familiar to you, and others that aren't. Put them through a recording chain that includes some unfamiliar guitar pedals, a couple of amps, a mic or two... a mixed bag of things basically. The key here is to build yourself an unpredictable, versatile rig that you can leave set up for days or weeks, not hours, allowing you time to experiment with it any time of the day or night.



Particularly if the prospect of setting up a physical rig in the corner feels too daunting, it's important to set the system up in downtime, when you're not feeling like the whole thing is an indulgence or a gamble.

What's crucial is that you can get to playing with this stuff in 10 seconds flat, like a child in a sandpit. You're trying to remove the engineer in you from this scenario, the organiser from your personality, the artist, your own powerful ego, from this creative playtime. You're just picking up a shovel (metaphorically speaking) and piling sand into a bucket... for fun.

The setup must be able to turn on and be recorded in basically no time at all. So even if the setup takes a while in the beginning, on the days when you use it, you should be approaching the rig as a child might. You want to create sound, avoiding wherever possible the need for the 'adult' in the room to step in. It's all about discovering sound and recording it. Nothing else.

## Playpen No.2

The world inside your computer is vast. Use it that way.

So many people I know have complex rigs, software coming out their ears, and enough plug-ins and virtual instruments to entertain them for the next 10,000 years, and yet nearly none of it gets used, let alone experimented with. Who has the time?!

Like Playpen No.1, a virtual setup needs to be built almost like a physical standalone rig, rather than added to a DAW production on-the-fly. That way, later if you need to, you can simply import that setup, lock, stock and barrel, into your production via the DAW's import procedure.

Setting the virtual rig up as an independent file does the same thing a physical playpen. It allows you to dive into sounds immediately, with no setup time or adult supervision requirements. You can turn on the computer, call up the session file and there it all is, ready to go immediately.

Particularly for sessions where a new production might still be a blank canvas, a setup like this in the form of, say a Pro Tools file marked 'Playpen 1,' immediately gets you experimenting with sound.

When you set a few of these up, you can quickly find that sounds flow quickly and effortlessly on the days when you need them fast, rather than being back at scratch every day, spending two hours bumbling around in your vast collection of plug-ins and soft-synths looking for inspiration. Or worse, not bothering because it's all too arduous.

Make it easy for yourself and sounds will pour out.

### Playpen No.3

This experiment is all about sounds you, or someone else, has already recorded.

There are several ways to attack this idea: you can work with an existing song, import random unrelated audio tracks from different songs, or make a session file out of samples, loops and pads etc that weren't created by you.

The trick now is to mash them up in different ways without the clock running. Consider this homework or research if you like, or if you don't like that idea, imagine it as a holiday in Fiji.

Playing with sounds outside of conventional work hours, when there's no direct pressure on 'achieving a predictable outcome' is vitally important to this experiment because you're trying to rekindle the process of playing with sound for the hell of it, rather than for a specific purpose.

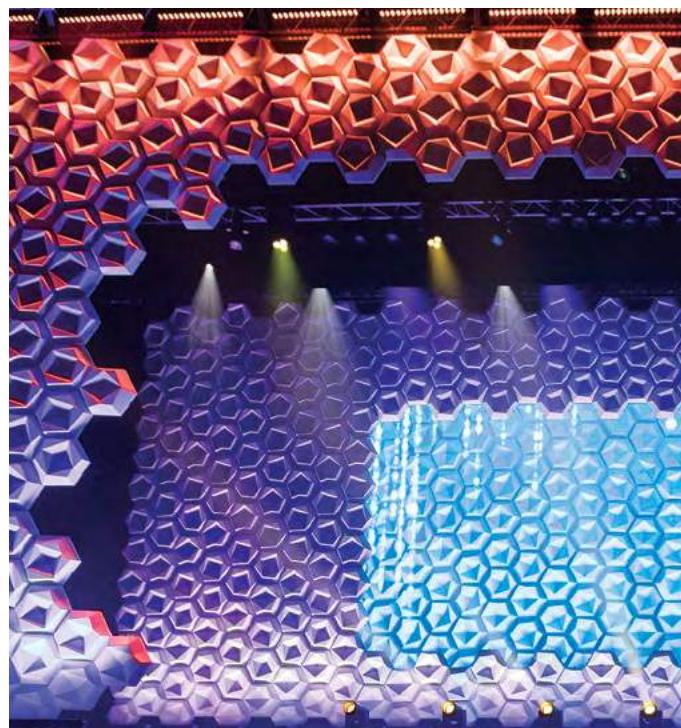
The two concepts are worlds apart: one is trying to reach a particular destination, the other couldn't care less where you're headed!

So now, open a file you know, or create a new session out of say 24 random sounds; long and short, smooth and percussive etc, and quickly turn all the files backwards. This quickly gets you listening to a whole new world of instruments in the blink of an eye. Next, you could put a roving narrow band filter across one of the more conventionally 'straight' sounds to see what emerges. Put an EQ across the channel, automate the band, and then just draw some random lines on the automation pass. You could play with a delay's feedback control and place it on all the instruments in your file. Solo each one with the feedback cranked way up and what do you get? Now get some phasers and flangers going, and an auto-panner for good measure, and add them to the sounds. Now where are they at? What does channel 16 sound like with all those things added? What does 24 make of the same inserts?

The trick here is to see how far down a rabbit hole you can go in quick time, and to indulge in the randomness of the pursuit. If you find this hard to do 'off the clock,' you sure as hell won't experiment like this during a session. Now is the time to reacquaint yourself with the world of the random!

If there's one characteristic common to literally thousands of celebrated songs around the world in the last 70 years, it's the chance discovery of a hook sound borne of experimentation. This might have involved an instrument, a device, a piece of audio gear used unconventionally, or a happy accident. You owe it to every song you're involved with to encourage this to happen.

Andy Stewart owns and operates The Mill in Victoria. He's always trying to get studio professionals to think outside the box, beyond their comfort zone. Are you up for the challenge?



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## THE HOWARD MORRISON CENTRE

# Back to its theatrical roots

Shand Shelton transforms an iconic Rotorua venue from retired convention centre to a contemporary performing arts venue

### The History

The original Municipal Building, constructed on land gifted by Ngati Waikaue, was completed in 1938 and served as Rotorua's Civic Administration, Picture Theatre and Concert Chamber. Heritage New Zealand (HNZ) listed the building as Category 1 in 1994 shortly before the building was substantially redeveloped as a Convention Centre in 1995.

This redevelopment was not wholly supported by HNZ as the contemporary additions were considered unsympathetic to the heritage façade, as well as reducing the main auditorium capacity by over three hundred seats.

In 2007 the Rotorua Energy Events Centre, a purpose-built events and conference facility opened nearby, drawing much of the conference business away from the Convention Centre. The decision was made to re-purpose the Convention Centre as a

performing arts centre, and Shand Shelton's close relationship with the building began. In 2010, Shand Shelton redesigned and upgraded the stage house, dressing room block and back of house spaces, led by Theatre Consultant Phil Conroy and Architect Roger Shand. Notable works included the reconstructed and enlarged stage house, improved scene dock access, additional dressing rooms, upgrades to the theatrical lighting infrastructure, production communications, and DMX, new theatrical dimmers and stage drapes as well as the full replacement of the existing bespoke flying system with a new counterweighted flying system.

In 2014 the venue was renamed the Sir Howard Morrison Performing Arts Centre in honour of one of Rotorua's performing arts legends.

### Seismic Strengthening as Opportunity

The improved level of theatrical amenity

and infrastructure saw the venue become the premier performing arts centre in the Bay of Plenty and Waikato region for touring companies such as the Royal New Zealand Ballet and New Zealand Opera. Following community engagement in 2015, a business case was made for the auditoria seating to be increased from seven hundred to nine hundred and fifty. In 2017, following the Christchurch earthquakes, changes to the building code for seismic performance had deemed the venue earthquake prone, subsequently being closed to the public. Many, alongside Rotorua Lakes Council, viewed this as an opportunity to revitalise the venue's potential as a performing arts centre and increase the use of the facility for the community.

Shand Shelton, as a specialist in live performance spaces having upgraded over twenty-six theatres across both New Zealand and Australia, were awarded the contract following their success in a competitive architectural competition. Partnering with

Dunning Thornton, a structural engineering consultancy firm, they worked through numerous solutions that met the new building codes and would complete the journey in realising the full potential of the performing arts centre through four key performance spaces: the Civic Theatre, Concert Chamber, Banquet Hall and the newly constructed Foyer space. Dialogue with Tangata Whenua and inclusion of artworks produced by local Ngāti Whakaue artist Henriata Nicholas contributed to the building's reincarnation into an asset for performing arts in Rotorua, and to honouring Sir Howard Morrison's legacy.

## Commitment to a Technical Transformation

Work began in October 2019 and with the arrival of Covid 19 shortly thereafter, construction works slowed. The project team utilised the additional time to address

what they had uncovered after decanting and deconstructing the building. Phil Conroy recalls, "It soon became apparent that because of various decisions made in the 90s, we needed to strip out the theatrical systems. For example, the dimmers were only ten years old, but they wouldn't support LED. During construction, a new client-appointed technical team representing the Council's interests advocated for significant equipment upgrades. Kevin Greene, Technical Design and Delivery Lead and Molloy, Senior Performing Arts Technician, have driven the venue to a comprehensive networked solution, a major advance for provincial theatre in New Zealand."

The technology upgrade was underpinned by an awareness of the end-user needs, "Theatres in New Zealand are predominantly receiving houses, not production houses, and we wanted the venue to meet the expectations of touring companies. Shand

Shelton bring that understanding of the market. Equally, a provincial theatre has to be easy and economical for local community groups to use, enabling them to achieve better quality productions and provide a learning environment to grow the business and encourage users to return."

The result is essentially a digital environment, barring some analogue audio, "All the comms, the data, DMX, lighting, audio and video can be combined to run simultaneously across all four of the theatre spaces or separately."

The equipment is a mixture of client-supplied and competitively tendered packages with LSC Control Systems supplying the dimmers, InTec Systems supplying the audio and new line array, Sixty82 supplying the trussing, Stage Mark supplying the chain hoists and rigging systems, Showtex supplying the stage drapes and Hardwood Technology supplying the sprung floor system amongst others, "The contractors truly collaborated on this project, listened to what we wanted to achieve and worked hard to find solutions that worked in a live theatre environment."

## Flexibility and Practicality

Rotorua Lakes Council wanted to enable flexibility of layout and ensure that the venue was both functional and practical for a wide range of performance types, as well incorporating the artistic inspiration of the local iwi. One of many challenges for Shand Shelton lay in balancing the need for flexibility with ease of use.

Shand Shelton's redevelopment of what was Rotorua's Civic Theatre (now Matangi Rau or the Sir Owen Glenn Theatre) has increased the seating capacity to over nine hundred and fifty seats, "We knew that at least in the auditorium the basics were there due to our work in 2010, and so we focused largely on updating the technology and the theatre services. We re-tiered the seating, added new draperies, replaced the original lighting bridges and made all the systems more workable, accessible and safer. Henriata Nicholas, worked with Shand Shelton and New Zealand seating manufacturer Merje DDM to overlay taaniko patterns onto the new seating fabric."

A major challenge was designing the new orchestra pit, "We couldn't make the pit deep enough due to the hydrogen sulphide, an issue which impacted the whole build. We had to pay close attention to detail on everything from a power socket to distribution boards to make sure they were protected." Serapid won the competitive tender for the pit, offering a solution installed by ITE out of Melbourne, that works on a rising chain, with the lift structure and drive gear folding up to create seating storage or to floor level to provide additional seating when an orchestra is not needed. "We were impressed with the Serapid solution, especially thinking back to the days of screw jacks and hydraulics!"



Concert Chamber. Photo Credit: Stephen Barker



*Orchestra Pit Stage Lift*



*Foyer. Photo Credit: Matt Hunt*

Dating back to the 70s, the Concert Chamber (now Te Haumako or Black Box Theatre) had a major overhaul as part of the project, “We created a flexible theatre space allowing for stage-end for up to three hundred people, and smaller in-the-round, short traverse and thrust stage performances. There’s also retractable seating and mobile seating which is completely automated and can be put away in ten minutes, and we have ensured that the trussing system, lighting etc. can be easily adapted to any of the set configurations. I know from experience you are not going to want to spend two days turning it over.”

The Concert Chamber presented some unique challenges too, “We were trying to recycle as much as we could of the original structure and during the strip-out we identified some 1930 and 40s timber in the roof that we thought we could re-use although it wasn’t straight and had bellied. We worked closely with Dunning

Thornton and using modern technology we were able to clip onto it, and so have essentially created a beautiful timber theatre.”

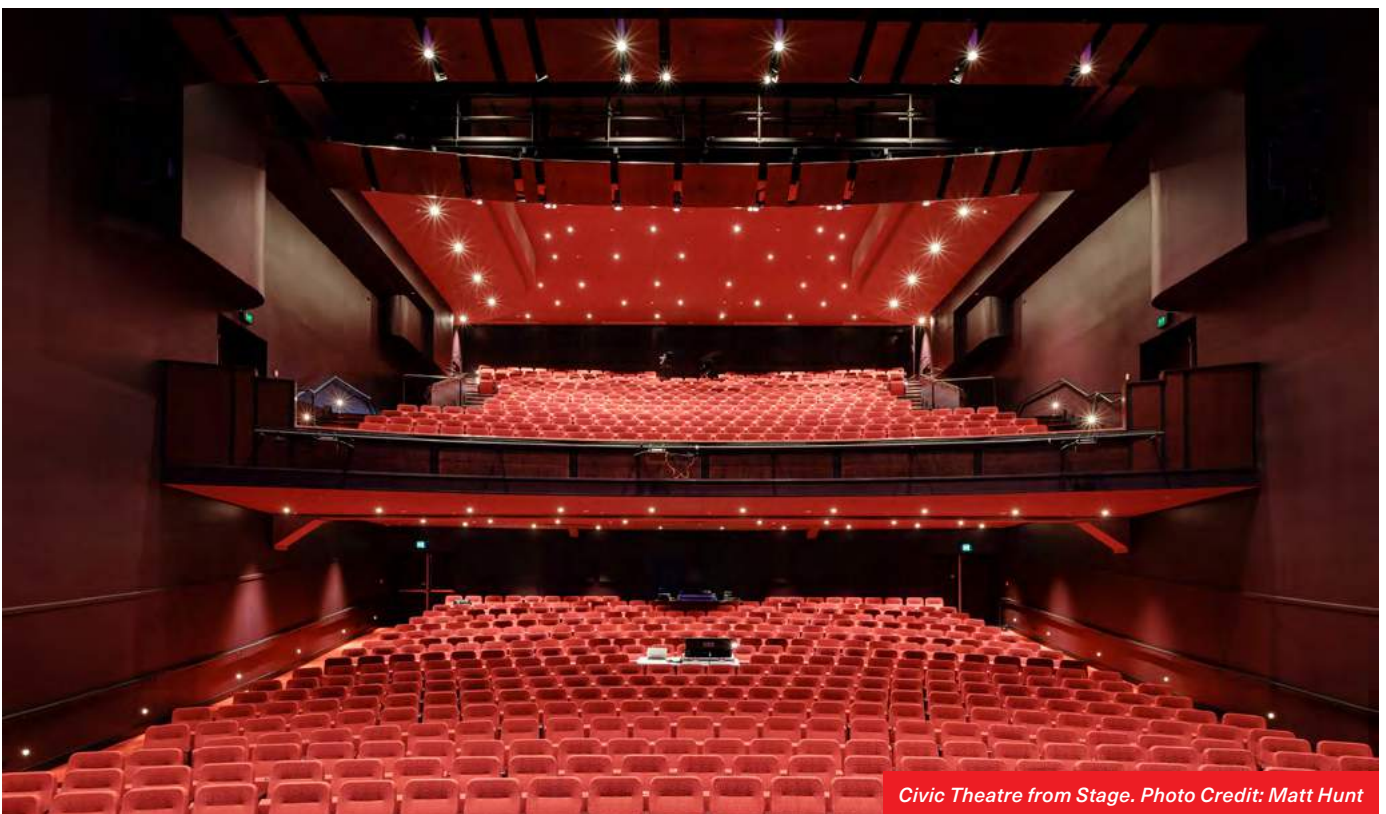
The Foyer was conceived around the sustainable use of timber and the form of a whareniui, providing entry and a generous space to meet and greet, with a stunning glass frontage, incorporating a pattern designed by Henriata Nicholas. It has the potential to be used as a theatrical space with structures designed to provide rigging points for suspended equipment. The Banquet Room, residual from the 1995 redevelopment, was retained as is but with upgraded theatrical systems and lighting.

### **An Asset for Rotorua for the Future**

Phil feels strongly that they have turned the venue into something that Rotorua can be

proud of and that will promote performing arts in the region. For Shand Shelton, and particularly for Phil and his team, there were two standouts on this project. The level of collaboration was exceptional, “We had the hard discussions with the tech team Kevin and Molloy, worked through the issues and agreed on the best solution. It was a dynamic working relationship that coped with the challenge of designing and building at the same time.”

The commitment of the project team to digital integration was also outstanding and has created not only the required flexibility across the venue but also a theatre where there are opportunities for passionate people to learn the craft, “A result of Covid is that many people have left the industry and creating a safe working environment where staff can feel supported and secure about their future will help improve knowledge levels internally and in the wider community.”



*Civic Theatre from Stage. Photo Credit: Matt Hunt*

CHAUVET  2

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## VuePix Infiled Screens Provide a Fully Immersive Experience for Leviathan, the new thrilling ride at Sea World



# THE LEVIATHAN AWAKES

**Welcome to The New Atlantis. Sea World's brand new precinct, promising a maximum thrill in an ultimate utopian destination.**

Rising from the depths of The New Atlantis are three new unique rides, the mighty Leviathan, the world's most iconic wooden rollercoaster, the magical Trident, Sea World's new tallest landmark, and the Vortex, a high-speed thrilling swinging attraction.

"Leviathan is our new signature ride at The New Atlantis precinct, which opened in December 2022," says Cameron Crawford, Project Manager at Village Roadshow Theme Parks. "We have many different rides throughout our parks. But this is something that has never been done before in terms of a timber roller coaster and an immersive precinct themed in such a big way".

"Initially, we were looking at a range of options to bring the underwater themed load station of the Leviathan rollercoaster to life, testing different technology and working closely with our thematic consultants Earthstory Productions. After evaluating all the options, we appointed ULA Group to deliver the latest digital screen technology for our unique immersive undersea environment."

ULA Group has a long-standing relationship with Village Roadshow, supplying lighting and visual technology for their theme parks for almost 30 years. "Our VuePix Infiled technology has been at the forefront of many theme parks throughout the world," states Cuono Biviano, Managing Director of ULA Group. "We have vast experience in this space, and we understand the requirements for the technology being delivered for this kind of environment. One of our key points of difference is an individual approach to each project and each client, and a level of customisation we can go into with our projects. We can sit with our clients and our integration partners and work out a perfect solution for the project, to deliver a result that our client envisages and requires."

Prestige Group, a leading local audio visual expert, was contracted as an integration partner for this project. "Prestige Group is one of our Platinum partners, who have been fully factory trained across the whole gamut of VuePix Infiled technology. For a client like Village Roadshow Theme Parks, it gives them a guarantee that the product will be installed correctly, maintained correctly and supported during the whole warranty period, to provide reliability that this project requires," comments Cuono.

"This project is a unique addition to our portfolio. It is not every day that you get to supply the screens for the world's most iconic wooden rollercoaster," says Nathan Wright, General Manager of Prestige Group.

ULA Group team and VuePix Infiled experts worked closely together with Prestige Group and the client to select the perfect digital platforms, providing the ultimate themed experience for the load station of the Leviathan ride.

Several tests were conducted at ULA Group showrooms to make sure the selected technology and the content created by Cutting Edge were a perfect match. Cutting Edge worked with Earthstory, the overarching story and thematic design consultants for this project, to translate their vision into digital content for the screens.

There are eight VuePix Infiled MV series screens installed in the location, all of them of 2.9mm pixel pitch, totalling in over 12.3 million pixels. All of the displays are an irregular shape, with the largest one (11x3m) installed overhead in the main area of the rollercoaster load zone.

"The VuePix Infiled screens were mainly chosen for their superb reliability, great durability in this kind of environment and local product support," comments Nathan.



“There has also been a high level of customisation involved in this project, due to the excess salt air in this location. A double coating of silicon has been applied to all the screens to help them withstand the harsh elements in this environment.”

The complex control solution is run by a NovaStar H2 processor, with a custom media server triggering all the content via various motion sensors and ride controllers in certain parts of the coaster.

“There is no other load station for a timber rollercoaster like this in the world,” says Cameron, “and it has been very rewarding to watch people’s reactions and how they interact within the environment. Some of them are overwhelmed and it takes them a few goes on the ride, both forwards and backwards, to take it all in and to enjoy the unique thrill that this immersive experience provides”.

“People are coming to the theme parks for a once-in-a-lifetime experience, and this is what

it is all about,” concludes Cuono. “Together we have delivered a unique solution, a truly immersive experience, so when the patrons come along, they are drawn into different imaginary worlds and forget about the world outside for a moment.”

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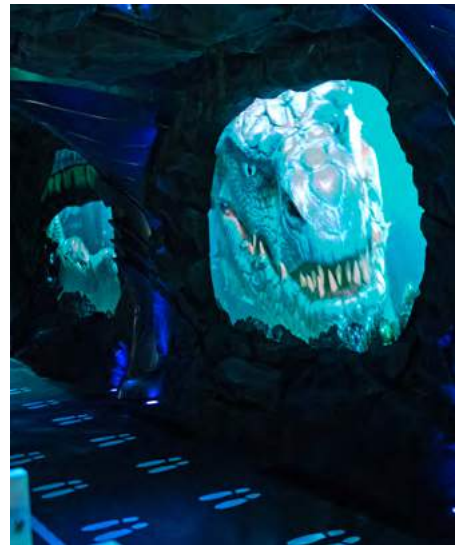
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"Leviathan is without a doubt the most impressively themed roller coaster this country has ever seen," wrote parkz.com.au, a website dedicated to theme parks. "The physical roller coaster experience is just half of the package... it is the themed experience that separates Leviathan from most other wooden roller coasters... it's one of the most cohesively presented areas we've seen in an Australian theme park in decades... the term world-class is thrown around all too often in this industry, but Sea World have pulled off a world-class audio-visual experience here. The Leviathan show is a remarkable feat, to be sure. And the creative and technical teams behind it should be endlessly proud of their efforts... it is without a doubt the best-produced ride show currently in Australia."



"Leviathan is without a doubt the most impressively themed roller coaster this country has ever seen"

# Claypaky Sharpy Plus Aqua Fixtures Open the Flood Gates for Gwar



**Heavy metal band Gwar recently wrapped the North American leg of their “Black Death Rager World Tour,” in which Claypaky Sharpy Plus Aquas played a key and unusual role.**

The tour marked the third for Nick Drake as the band’s Lighting Designer; he is also a lighting technician with Richmond, Virginia’s Lite-Tek Entertainment, a lighting rental and production company which supplied the fixtures. Lite-Tek has a history with Gwar, which also hails from Richmond, having worked with them multiple times over the years, including providing lighting and studio space for the band’s 30th anniversary live stream from Lite-Tek’s warehouse during the COVID pandemic.

Gwar’s fall tour kicked off at the Blue Ridge Rock Festival in Virginia in September 2022 and concluded in Baltimore in November 2022.

Sharpy Plus Aqua fixtures add an IP66 rating to the award-winning Sharpy Plus platform,

making the moving heads perfect for outdoor events and challenging environments that call for beam and spot luminaires in a single, flexible package.

A Gwar tour, as fans have come to expect, is a very challenging environment indeed. “Massive amounts of liquids are used in the show,” says Drake. “We went through three 30-gallon tanks of water every night for part of the show. I had four Sharpy Plus Aquas upstage and two downstage in the splash zone, but all six were consistently soaked. All of them really needed to be protected against water. The Sharpy Plus Aquas, with their IP66 rating, made perfect sense.”

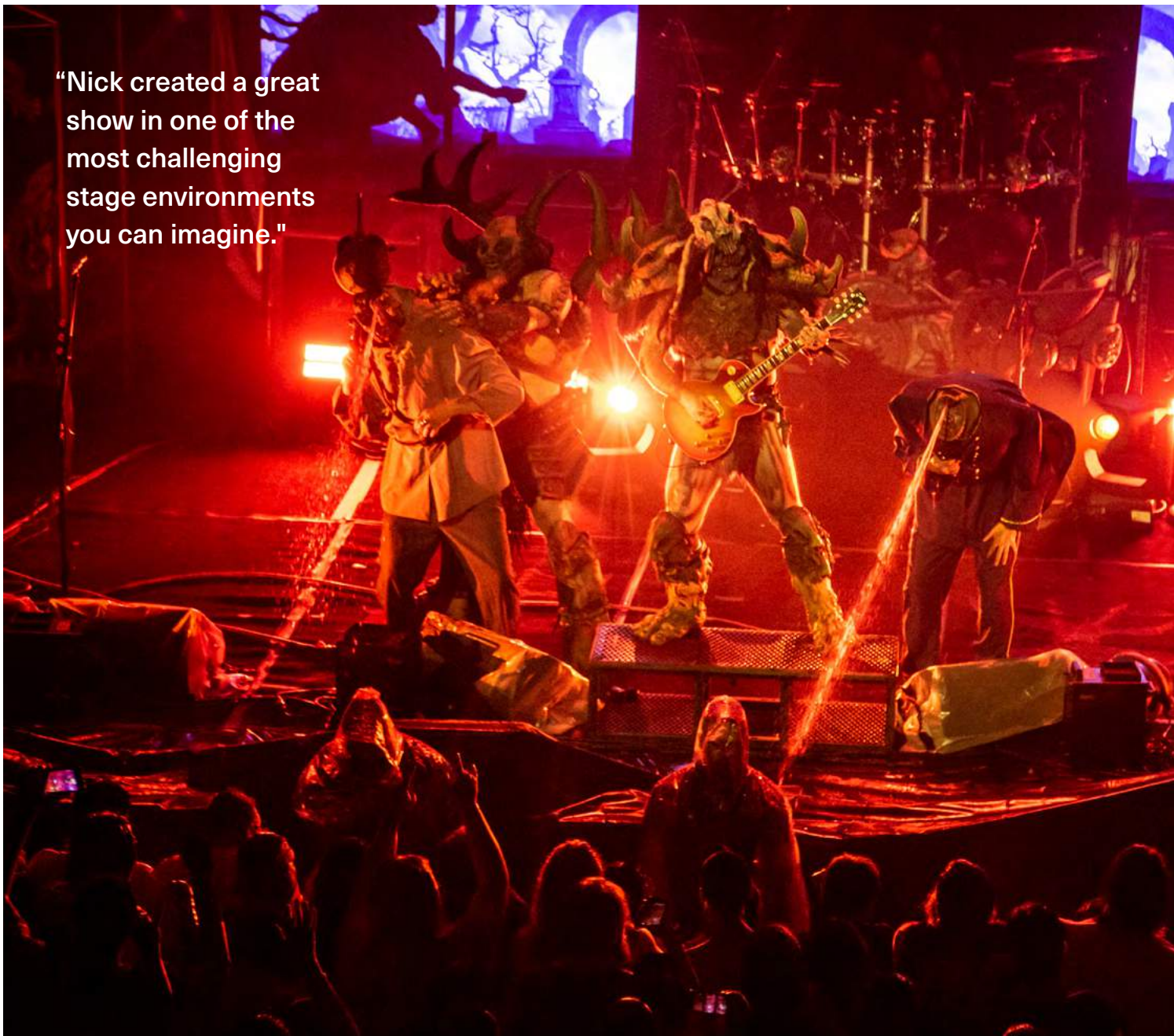
Drake explains that on previous tours he used

only strobes on the ground, but he was eager to bring out spots this time. “They had to have an IP rating and they had to be robust enough to withstand two months on tour. Lite-Tek’s acquisition of Sharpy Plus Aquas at the start of the tour was perfect timing.”

The tour featured music from the band’s 2022 album, ‘The New Dark Ages’ which gave a different vibe to the show, Drake notes.

“The new music is a lot more dramatic and demanded big looks and moods instead of super hard-core strobes. With just six Sharpy Plus Aquas as my spots I could create giant, sweeping looks and movements for the new music and weave in their old style, too. I used the fixtures in new and unique ways to make really cool scenes for every song.”

“Nick created a great show in one of the most challenging stage environments you can imagine.”



He found that the versatile fixtures enabled him to create big looks as well as intimate settings. “I could single out characters in a very character-driven show. For ‘Rise Again’ I was able to focus on slowly building an intimate scene of two characters sword fighting with the spots defining the look of the characters on the sides without using any other fixtures. I could really highlight them and make a small, intimate space on the stage for them.”

In contrast, ‘Berserker Mode’ at the end of the show, featured a 10 x 7-foot alien monster and flying intergalactic fluids. “The spots let me create really big looks for this scene no matter if we were playing in a small club or at the Blue Ridge Festival,” Drake says. “And the IP rating was a necessity here.”

“I liked how the Sharpy Plus Aquas meshed with every rig I had, no matter what the stage,” he continues. “They were never too overpowering or underpowering. They’re just like Sharpy Plus but waterproof!”





Drake says the fixtures will be his “number one choice for Gwar in the future. The band loved them. They made the band look good in every scene and let them do what they wanted with their performances without worrying about the lights.”

“Nick created a great show in one of the most challenging stage environments you can

imagine. I’ve been a Gwar fan for years, so it was special to be part of his production. The added benefit is that we now know for certain our fixtures are protected from intergalactic fluids – something we hadn’t effectively been able to test for in R&D,” adds George Masek, Strategic Marketing Manager for Claypaky.



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# ORIZURU



## Waging Peace with an LED Crane

The orizuru (ori- “folded,” tsuru “crane”), or paper crane, is considered to be the most elegant of all Japanese origami creations.

Adelaide’s Molten Immersive Art collective used this classic design as the inspiration for a daring, suspended 3D optical illusion, commissioned as part of the Games For Peace component of the Waging Peace exhibition at the University of South Australia’s Museum of Discovery (MOD).

Constructed from a mixture of acrylic sheeting and custom-made LumiSheet LED panels from Melbourne’s Platform Creative, the lighting aspect of the installation was controlled using ENTTEC technology.

The programming for the light panels was sent through a console via a legacy ENTTEC RDS4 splitter and into two Legacy ENTTEC Pixie Drivers (with Pixie Linkers). A series of Legacy PLink CVC3s then fed data from these into the

LED panels in order to illuminate exactly the right parts in order to create the illusion of a 3D paper crane when viewed from a particular spot within the gallery. All of these components can now be replaced by the ENTTEC CVC4s and a power supply.

An incredibly creative piece of light art indeed.

Platform Creative’s Rich Walker joined Ryan Stephens, Creative Director of Molten Immersive Art, as they talked us through the project ...

### ENTTEC: So, how did it all happen?

**Ryan:** “The project from concept to completion took roughly three months. Our crane design required a mixture of LED panels and opal acrylic to create a two-tone effect. We started with a base set of 10 triangles of different shapes and sizes. We then selected three of these (large-wide, medium-narrow, and a small) and made a 3D model to work out how many of each triangle we would need to have made by Platform Creative.”

**Rich:** “We used our LumiSheet panels, which we design, manufacture and deliver to clients on a daily basis for projects throughout Australia and NZ (standard lead time is 7-10 business days from order to shipping). The LEDs are internal, LM80-certified and are engineered specifically for this product. Supplied as a one-piece sealed unit, the panels are finished with patented heat sink technology to maximise the life span of the LEDs.”

“They work by carrying light across a surface created with our patent 3D v-cutting grid system. By altering the pitch of this light-carrying grid, we can optimise its brightness and uniformity to the unique specifications of the client.”

“We wanted to allow Molten to fully evaluate the product first, so we designed a prototype panel with LEDs around the whole perimeter. This sample panel had three cable exits so that they could evaluate the brightness and effects using each individual LED side. It turned out that the whole thing was too bright, and that using the LEDs on only one edge provided the perfect illumination with a slight gradient effect.”

# SQ

**INVENTORY CHECK**



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**Ryan:** "In total there were about 30 triangles which were mixed and matched to create the shape of the crane. It was fairly slow-going hanging all the triangles; the installation on site took a full week, but the project itself ran smoothly. The triangles all had to be hung at precise angles to create the illusion. On-site we had a live camera feed with an overlay of the crane design and someone on the ground to make sure it was all working."

"The biggest challenge was that we had never built a perspective sculpture before! We always knew we wanted to have lights that had pixel-level control, and the team from ENTTEC were very helpful in spec'ing out exactly what we would need to work with the LumiSheet as well as the gallery's existing lighting system. We didn't have any trouble at all with the ENTTEC equipment, and it was delivered surprisingly quickly – the next day, I think. Then it was all set up and configured on the ground before we installed everything."

**ENTTEC:** Thank you both – it was a pleasure to collaborate with Molten and Platform Creative on this, and you can be proud of a job well done!



Installation



"The biggest challenge was that we had never built a perspective sculpture before!"

**entech** 10 - 24 October 2023

# The Touring Tradeshaw for the Post Converged AV World.

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If you are interested in exhibiting at ENTECH 2023, please email the show organisers at [exhibit@entech-roadshow.com](mailto:exhibit@entech-roadshow.com) to obtain a prospectus.



# SUBSCRIBE AND WIN WITH JANDS!

Celebrating 53 years of Jands 'Setting the Stage', every subscriber to the print edition of CX Magazine from October 2022 to September 2023 goes into a monthly prize draw\* to win a prize from Jands, culminating in the huge Grand Prize draw to win a \$17,500 L-Acoustics Home Stereo System in October 2023!

Every edition of CX through October 2023 will feature a centrefold drawing from Jands' past, present, and future. The Grand Prize winner will also get a custom printed copy of all 11 centrefolds, and a lifetime subscription to CX!

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**October 2023 - GRAND PRIZE!**



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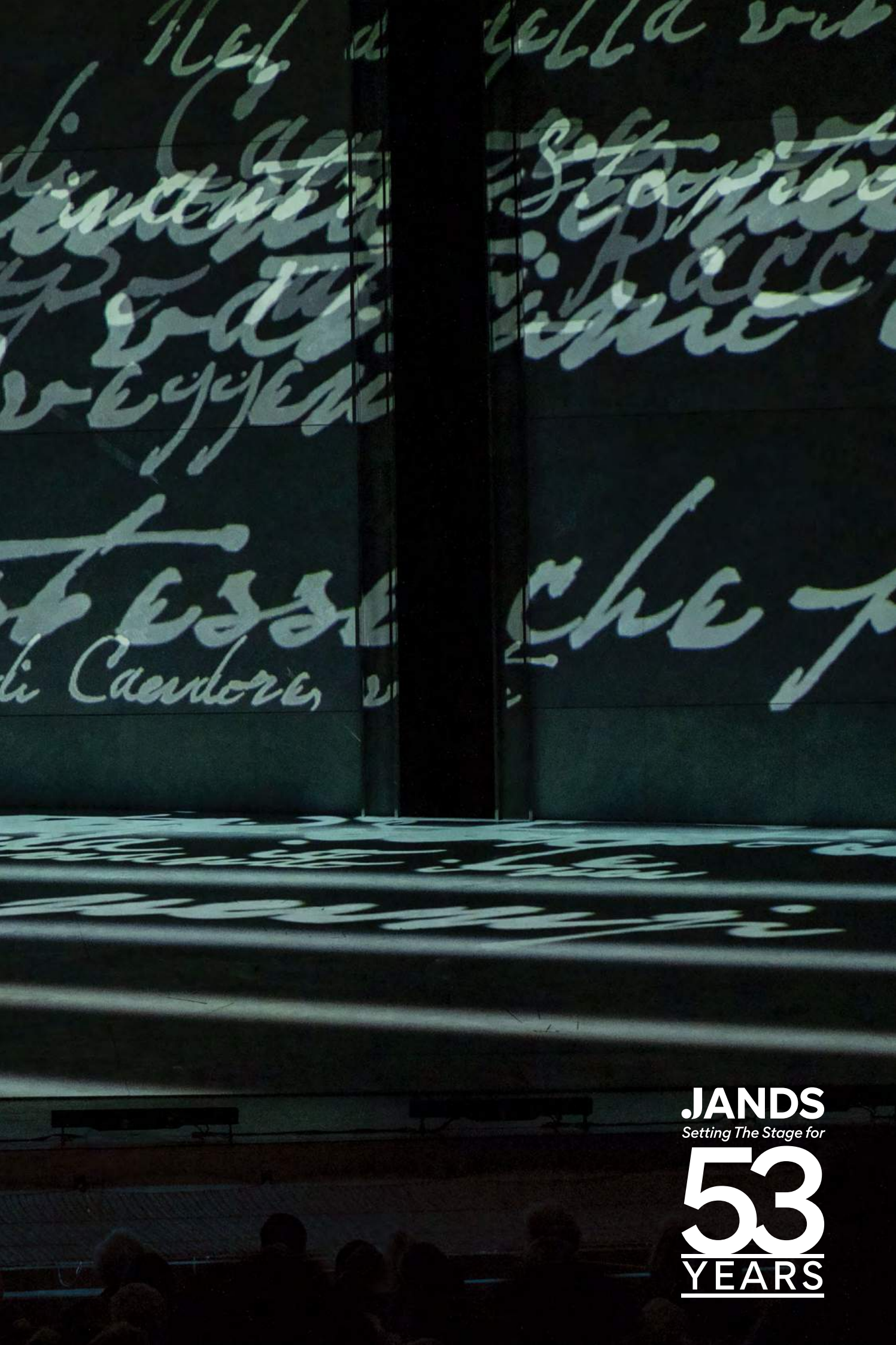
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# Robe Lights the Way for MacBeth at New Zealand Opera

**The New Zealand Opera's recent acclaimed production of Giuseppe Verdi's MacBeth unleashed a classic and grisly narrative of power, politics, corruption, murder and authoritarianism that is every bit as pertinent today as when William Shakespeare penned the original play, circa 1606.**

Lighting designer Matt Marshall was delighted to be part of a talented cast and creative team delivering this outstanding production for which he specified and used Robe T1 PC moving lights, supplied by Wellington-based Grouse Lighting, to provide special soft backlighting to delineate the cast and evoke a sense of separation between them and the large scape video projections across the set.

The performance opened at the Aotea Centre in Auckland, then travelled to the St James Theatre in Wellington and the Isaac Royal Theatre in Christchurch, impressing critics and theatre buffs and thrilling audiences.

It was the first opera that Matt has lit using T1 PC fixtures and his first creative collaboration with British director, designer, and video artist Netia Jones, who designed set, costumes and video as well as directing the work. Projected images played a

prominent role in the dramaturgy, beamed onto three imposing scenic walls making up the set.

With video projections so fundamental to the action and aesthetics, this also informed the way he lit the stage and cast. It was needing a specific and refined backlight to give depth and three-dimensionality which led him to T1 PC to make the characters pop out but not affect the impact of the images.

Matt, who works internationally and prolifically on cutting edge opera and contemporary dance productions, first saw the Robe T1 fixtures at a demo by Australian and New Zealand distributor Jands and was struck by their silence in addition to the quality of light.

The production's visual style was very noir with multiple greyscales, monochromacy and sharp contrasts, so he needed a crisp, cold white to complement and contrast with this, for which the seven T1 PCs were a perfect solution.

Having previously used T1 and T2 Profiles on shows for the Western Australian Ballet in 2021, he knew that light output was excellent and that the products were ideal for this environment, but it was the quietness that really blew him away! It's also something that is essential for opera, as everyone involved in this genre of performance, from the orchestra and conductor to all the artists, is acutely conscious of ambient noise levels.

"There's absolutely no sound coming out of them at all," Matt repeated with raised eyebrows. "Amazing!"

Other features like the accurate shuttering system and super-smooth dimming were also useful, especially when confining light to specific areas and preventing spill onto the set.

Fixture placement was absolutely critical in each venue and lights had to be rigged on drop bars and other rigging infrastructure to get them spot-on, as no luminaire could be below the 10-metre projector pathway.

Matt loved thinking out of the box and taking a different approach to lighting such a classic opera as much as he enjoyed utilising the T1 PCs which he reckons added a sense of clean white slickness to the grungy downbeat atmos of the proverbial 'Scottish Play'.

## Jands in New Zealand

Robe distributor in Australia and New Zealand, Jands, have recently moved into new premises at Auckland's The Hangar, in Catalina Bay. This comes at a time of expansion and consolidation for Jands New Zealand, having recently appointed Kit Watson as General Manager, Maldwyn Greenwood as Technical Manager, and Nicholas Van Dyk as Technical Sales Manager to join both Jason Allott and Phil Sargent in supporting the region. The new facility and new talent in the team ensure that Jands will be 'Setting The Stage' in New Zealand for decades to come.

# EOS APEX



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DOING THE MATHEMATICS WITH

# GRANDMA3

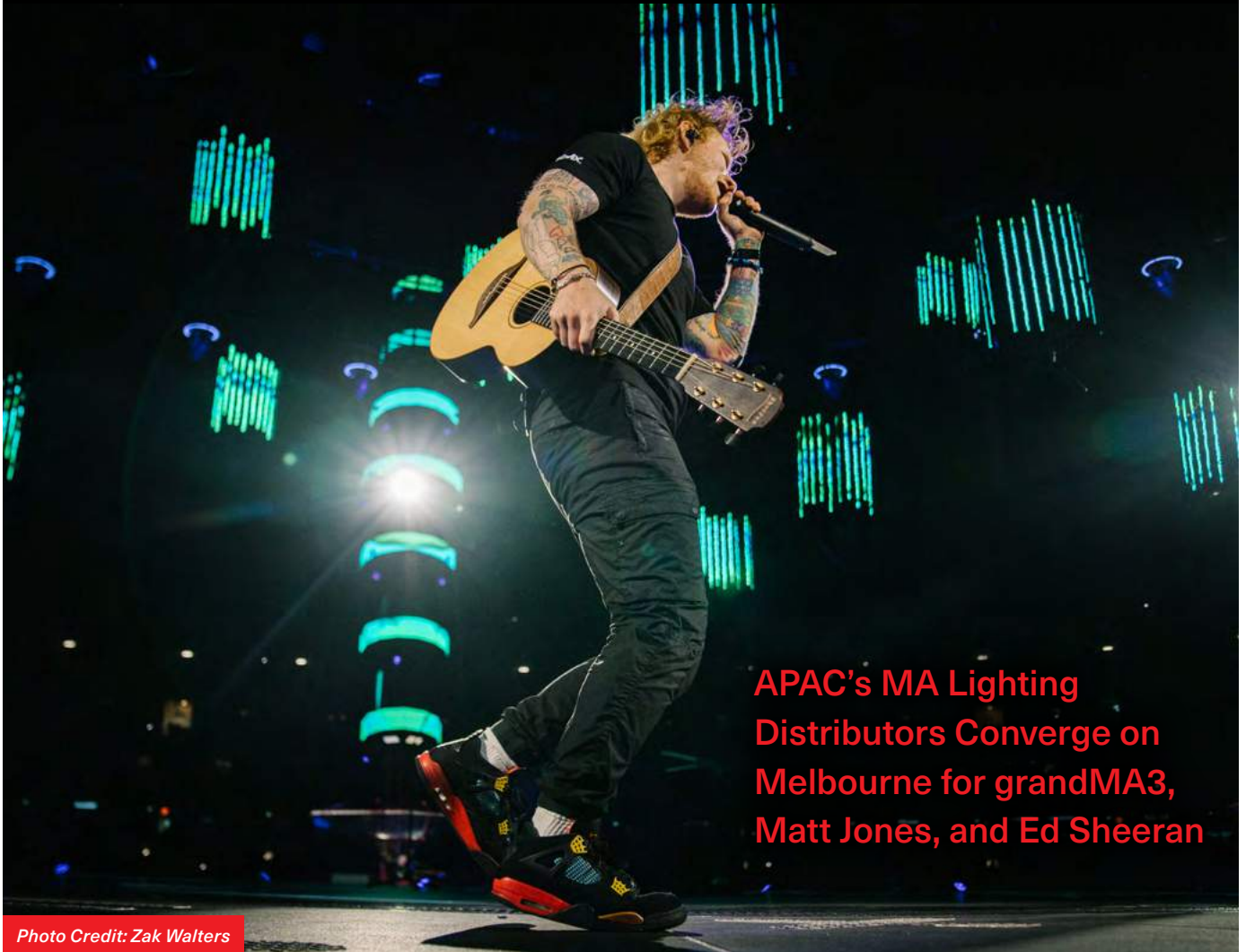


Photo Credit: Zak Walters

## APAC's MA Lighting Distributors Converge on Melbourne for grandMA3, Matt Jones, and Ed Sheeran

28 Feb to 3 March was MA Lighting APAC Distributor Week in Melbourne. Hosted by Australian and New Zealand MA distributors Show Technology, around 45 staff members from Vietnam, Indonesia, Korea, Japan, India, China, Singapore, Malaysia, and Taiwan joined the locals for tech training on the grandMA3 platform, networking (in both senses), and some bonus sessions, including two with Ed Sheeran's touring lighting director Matt Jones, and one with LD Jarrad Donovan on lighting for worship.

Daniel Kannenburg, Brand and Product Manager with MA Lighting was one of four MA employees hosting the event. "At MA, we believe one of our most important jobs is to train our distributors," states Daniel. "At this meeting, we're covering grandMA3's new features and functionality, networking, and other topics like GTDF (General Device Type Format) and MVR (My Virtual Rig) files."

The focus on MA3 has become particularly topical as the industry takes up the platform en masse. "It's now what everyone's using," explains Daniel. "The uptake started slowly after the release in 2018, but now it's past critical mass. Every scale of show, from

smallest to largest, is running on grandMA3."

Ed Sheeran's touring lighting director Matt Jones made the upgrade from grandMA2 to grandMA3 during the pandemic slowdown, and uses grandMA3 on the current Ed Sheeran + - = ÷ x (Mathematics) tour. Matt originally hails from Melbourne but has spent the best part of the last 15 years working out of the UK. Starting out at English production legends Neg Earth, Matt has gone on to work on major projects including Ed Sheeran's 2017-19 'Divide' tour, Expo 2020 Dubai, and The Australian Open.

"Back in the design stage, the Production and Lighting Designer for the Mathematics tour, Mark Cunniffe, asked me if I wanted to

use grandMA3 on the tour, and I said I was open to it," recalls Matt. "If we didn't adopt grandMA3, we would have put ourselves behind, technically speaking. It was a group decision between Mark, our programmer Alex Passmore, and myself, and we went for it."

When Matt encounters Lighting Designers, Programmers and Operators who are hesitant to move to the newest version of grandMA, he has this advice; "If people think they're not ready or it's too hard, it's just not the case," observes Matt. "You can get support, and there's fantastic resources available for learning. I really got a lot out of Lighting Designer, Director, and Programmer Cat West's



*Pictured Above L-R: Alan Loh (Regional Sales Manager, MA Lighting SE Asia), Daniel Kannenberg (MA Brand Manager, Product Management, MA Lighting), Sukesh Hickson (Technical and Production Director, Hope Unlimited India), Luke Chikkala (Tech Support, MA Lighting), Franco Zaghini (Director of Business Development, International Sales, MA Lighting)*

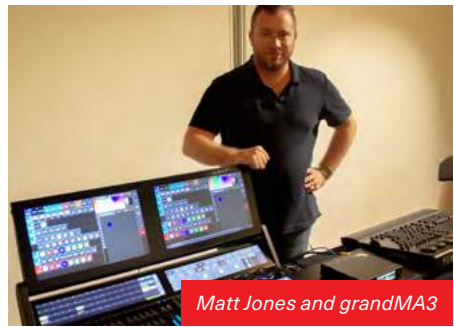
instructional videos, particularly the ones about grandMA2 to grandMA3 transition. They gave me confidence to do a stadium sized show on the platform. People are often scared of change, but fundamentally, everything is still the same in grandMA3, but with new features, new nomenclature, and new menus.”

Matt’s favourite new grandMA3 feature is Grids. “Grids are extremely useful,” extols Matt. “I find I’m able to have much more complex fixture selections and groupings, and creating them is much more intuitive. The next is Phasers; the workflow isn’t complex, but allows for more complex outcomes and results, when compared to grandMA2. It’s all a much more intuitive approach to the idea of a matrix, and working in the x, y, and z planes. I think Grids and Phasers are the two best arguments to upgrade. Staying back on grandMA2 would only put you behind professionally.”

It’s not just the huge stadium tours that Matt is using grandMA3 on. He’s deployed it on tours for Australian acts including The Rubens



*Photo Credit: Zak Walters*



*Matt Jones and grandMA3*

and The Cat Empire, and recently used it for a gala event at Melbourne’s own NGV. “I had the pleasure of lighting the Alexander McQueen exhibition gala launch,” comments Matt. “It was a nice way for me to try out version 1.8 of grandMA3 and play with some of the new features. As usual on this type of gig, we didn’t have much time to get up and running, and I found the new features in 1.8 very useful, as I could create the show a lot faster than in the previous version.”

## GRANDMA3’S NEW TRICKS

### Phasers

Phasers are a powerful tool in grandMA3 that allow lighting designers to create complex visual effects and sequences with ease. A Phaser takes the well-known programming concept of presets and palettes and evolves beyond simply static looks with all new dynamic capabilities. One of the key benefits of using Phasers in grandMA3 is the ability to create complex lighting sequences with just a few clicks. Rather than being limited to applying basic maths curves or high and low points to values like a traditional ‘effects engine’, Phasers allow multiple existing presets and values to be sequenced together to create complex dynamic effects and dynamic transitions which can be applied to multiple fixtures in seconds. Another key benefit of Phasers is the ability to easily synchronise these dynamic effects with music by allowing speed to be lined up with the measures or bars of the music itself.

### Grids

The new Selection Grid concept allow users to control how effects and timing are executed over a selection of fixtures with great precision. A Selection Grid is a virtual coordinate system that can be used to arrange the selection of fixtures in a true three-dimensional space. The distribution of things like Phaser looks, transition timing and delay sweeps can then be applied over any axis of that space. This, coupled with the well-known MAticks, allows users to realise complex dynamic looks over big groups of fixtures, or multi-element parts of fixtures with ease without needing to resort to bitmap effects or endless math calculations and complex layout views. Selection Grids can be used to create a wide range of lighting effects, from simple static patterns to complex moving sequences. For example, a lighting designer could use a Selection Grid to create a dynamic pattern of moving lights that sweep across the stage, or to create a series of static fixtures that form a precise geometric pattern. For fast recall a Selection Grid can even be stored as a fixture group, meaning the same selection of fixtures could be recalled in numerous Grid layouts for even greater dynamic flexibility.

### Recipes

At the heart of the console, the powerful new feature bringing all of these elements together is the Recipe. Recipes allow building block ‘ingredients’ such as Selection Grids, Phaser presets and MAticks timing to be combined and literally cooked into a complex stage look quickly and easily. These cooked stage looks can then be incorporated into cues and sequences and used over and over again with multiple fixture groups. Where the true power of Recipes lies is in the fact that the actual selection of fixtures used can be changed or replaced on a whim without any show reprogramming or cloning required. A touring designer could have eight lights hanging in a club one day and 100 fixtures on a festival stage the next and all that is required is to update a single fixture group. All the show programming will instantly be transferred to the new selection of fixtures including complex dynamic looks like fans, wipes, and builds.

**+ - = ÷ x - The Numbers**

To say that Ed Sheeran's Mathematics tour is big is to indulge in wild understatement. Everything about it, from the structural engineering to the crowd size, is jaw dropping. Next to almost 550 square metres of ROE LED, Matt is running a lighting rig that includes 138 Ayrton Domino LTs, 48 Ayrton Perseo Profiles, 22 laser-source Ayrton Cobras, 162 GLP XDC1s, 164 Astera AX2s, and 72 Astera AX9s.

"We're running two grandMA3 full size for lighting control, two grandMA3 fullsize for video, six grandMA3 fullsize unit XLs, with one at each of the big red masts" outlines Matt. "There's another inner node under Ed's central stage, which receives MIDI commands from Ed's loop pedal. We're also running a Follow-Me followspot system. This is a very structured show, with pyro, automation, and video, but there's absolutely no timecode; it's all me pressing buttons, or taking MIDI triggers from Ed. The entire MA network backbone is running on its own Luminex network switches."

Matt emphasises the need to have a structured approach to programming in grandMA3; "But that's always been the case," he clarifies, "and you should always label things! For Mathematics, each song has its own Page and Sequence, and each song has bumps and hits. Each song has its own Macro that changes windows to give access to specific Groups, Presets, and Sequences. In programming, we found a combination of Groups and Grids helped create dynamic looks very quickly. We also made good use of Recipes; each Recipe may have 20 different Group combinations."



Photo Credit: Zak Walters



MA Lighting distributors from Vietnam, Indonesia, Korea, Japan, India, China, Singapore, Malaysia, Taiwan, Australia, and New Zealand with MA staff at MCEC, Melbourne



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# PANTHER and The Audio Equation

Major Tom and Ed Sheeran's  $+ - = \div \times$  (Mathematics) Tour

**This was it. The record-breaking, biggest ticketed concert in Australian history had rolled into the MCG. Thursday March 2 would see 105,000 paying fans pack the stadium, beating Adele's record of 100,000 in 2017. The next night, Ed broke the record again with 109,500.**

This juggernaut wasn't just eagerly awaited by the horde of Ed fans known as The Sheerios, it was also a PA and concert tech nerd's big night, hearing Meyer Sound's astonishing PANTHER line array deployed in-the-round, with an ingenious mast and cable net rigging system that actually uses the PA as essential ballast.

Walking onto the grounds of the MCG is intimidating for anyone, anytime, but as I strolled onto the pitch to see the audio crew from English production company Major Tom, I was overwhelmed by the sheer scale of both the production and the stadium itself. Even for Ed's seasoned crew, this was to be the biggest show of the world tour so far, just pipping their previous crowd record of 100,000 in a German stadium.

PA system technician Charlie Albin, who was just about to hand over the touring reins to Adam Wells, greeted myself and Meyer Sound's Owen Ironside, and took us on a tour of the stadium as soundcheck roared into life.

Six arrays of PANTHER hang from the central ring of the circular LED screen and cabling, known as 'The Halo', each using 10 Panther-L (long) and four Panther-M (medium) dispersion elements. Eight outer arrays hang from the giant red 'masts' that also host the LED 'Plectrums', holding 12 Panther-L, two Panther-M, and two Panther-W (wide) elements. Six flown arrays of Meyer Sound 1100-LFC low-frequency control elements (subwoofers) hang next to PANTHER, and 22 Meyer Sound LEOPARD elements ring Ed's central podium as fill. Six ground stacks of three 1100-LFC each sit under the stage.

All of this was firing on all cylinders as Charlie took Owen and I to almost every conceivable listening environment in the stadium; down on the ground, up in the gods, and everywhere in between. What completely blew me away was walking around the 'G about half way up, for a hundred metres or so around, passing between three or four arrays worth of coverage, I couldn't hear it change, anywhere. The pattern control on the horns is so tight and the system deployed so beautifully that I couldn't find the seams.

I actually got Charlie to show me where coverage overlapped, between two outer flown arrays up in the gods, from an inner flown array to an outer flown array on the ground, and from front fill to an inner array. I could only just pick it, and I still think that was possibly psychological. If he hadn't told me, I would never have found the borders.

PANTHER is remarkable for many reasons; its power to weight ratio, its brilliant new design using lighter and better materials, and its full AVB signal path. But most importantly, it sounds utterly linear, incredibly accurate, and beautifully dynamic. An empty MCG with 14 line arrays at full volume produces a healthy amount of reverberation and slapback, but the accuracy of PANTHER and the team's configuration kept it to a minimum. Later that night, when 105,000 acoustically absorbent punters turned up, it was perfect. It was a gobsmacking achievement in large-scale live sound.

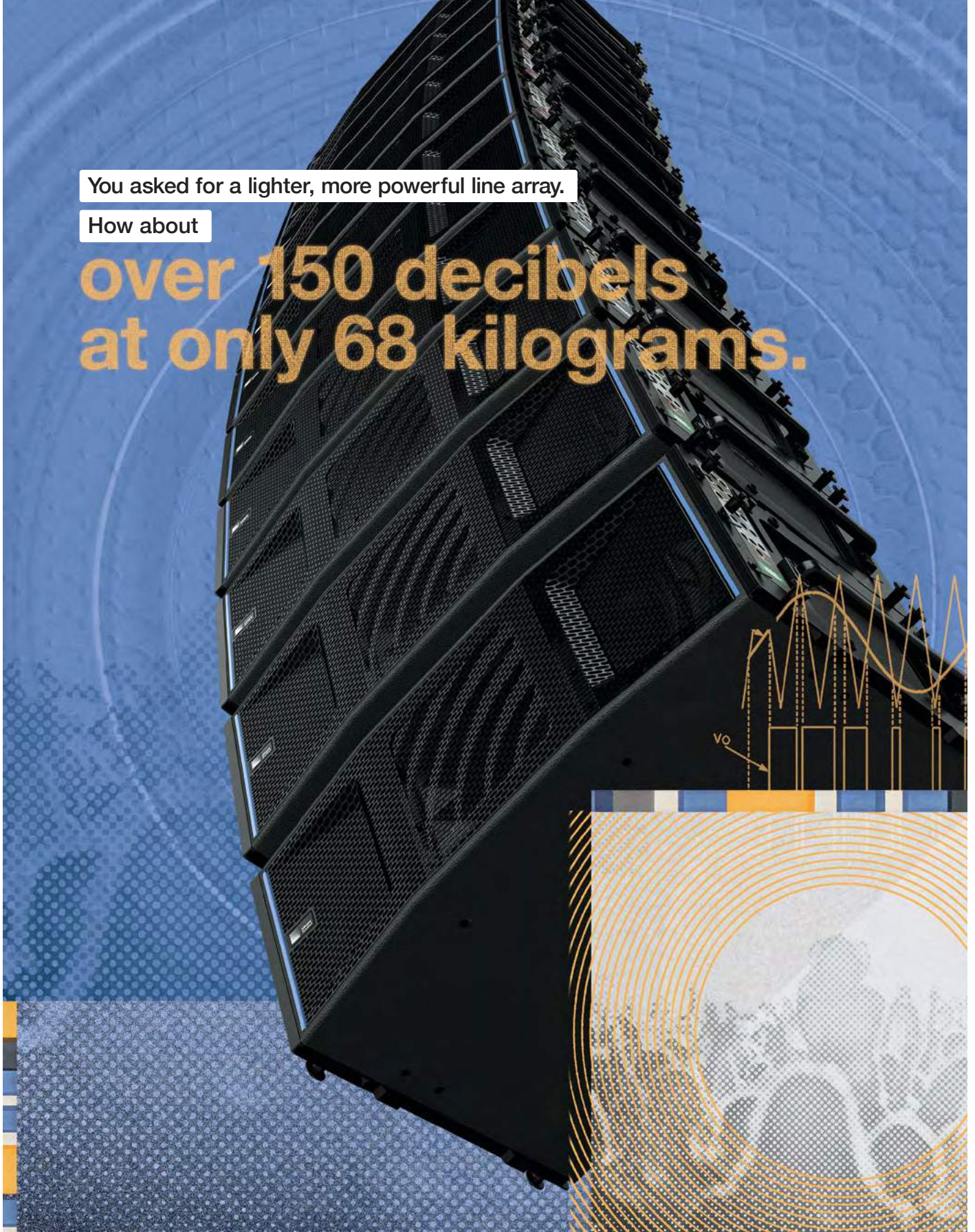
As is traditional, I sat down with Charlie and FoH engineer Chris Marsh on a pile of roadcases backstage after soundcheck and asked them about the tour, the staging, the tech, and some of the more startling things I had heard about the rig, like why they had nine DiGiCo DiGiRacks for a seven piece rock band.

First, we start with the incredible mast and cable structure that holds The Halo, all of the

You asked for a lighter, more powerful line array.

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at only 68 kilograms.**



## PANTHER

You know what you want in a line array. And now, we're giving you more than you ever thought possible. Introducing PANTHER. Over 150 decibels at only 68 kilograms and 97 centimeters wide. Exactly what you asked for—turned up a notch.

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lighting, both rings of PA, and the 'Plectrum' LED screens up. "The engineering firm was Cundall," relates Chris. "They did the original wire frame system for The Millennium Dome (now O2 Arena) in London, which if you compare it with this tour, is very similar. Stage One in Yorkshire built the structures, and the artistic company with the vision was Wonder Works."

With the PA an actual structural part of the design, providing a major part of the weight and tension that holds the entire show up, how did a loudspeaker that did not yet exist come to be designed into the show? "It's well known that Meyer Sound are my PA of choice, and LEO has served us well worldwide for years," explains Chris. "This project was completely new from the ground up. We learnt quickly in the design process that LEO was too big and heavy for the gig. We went to Meyer Sound to ask for advice, as we wanted to stick with LEO, and they said 'Let's talk'. We told them about the project, they hinted they already had an idea of how to do it, so we gave them a deadline. So, while the show was being designed, they provided us drawings of PANTHER and the weights involved. We still hadn't seen or heard it."

Famously, the opening concert of the tour in Dublin's Croke Park in April 2022 was PANTHER's first gig. "Previous to that, we had heard PANTHER once, in a field, playing tracks," smiles Chris. "We managed to run it up for a while before we got told off and had to turn it down. Dublin was PANTHER's first time in a stadium, with a band, with live music. Obviously, we have great faith in Meyer Sound."

"It's the third generation of Meyer Sound line arrays that we've worked with," adds Charlie Albin. "PANTHER has preserved the linearity of LEO and LYON. In a dynamic show like Ed's you can mix quiet then loud, and it doesn't shift tonally. It has a better dynamic range; you get all of the excitement of the drums and cymbals in the mix. When a guitar riff kicks in, it has punch and power. The biggest achievement in the engineering for me is the quality of the horn design; it just feels smooth. You walk from on axis to really off axis with a 6dB drop and it stays consistent. For an in-the-round show with 360 degree coverage, you're in a tonally consistent listening environment no matter where you travel. Designing and optimising a PANTHER system on this scale is phenomenal, as you're no longer fighting engineering compromises. You can focus on the room, the acoustics, and what the FoH engineer and band requires to deliver a better mix."

"PANTHER is lighter and smaller than its predecessors, and that makes a huge difference to show design," agrees Chris. "The SPL power that it delivers compared to the lack of electrical power that it consumes are major factors. Over the course of this tour, we are looking at massive savings in terms of less trucks, less air freight, and less diesel going to generators. For what we're doing right now, I wouldn't choose any other box."

Astonishingly, Charlie tells me it's four hours between getting the PA truck on-site and starting to tune. "It had to be a well-thought-out system," Charlie elucidates. "An audio team of eight handle everything on the day. It's four hours from tipping trucks to boxes in the air, and another few hours of tuning and

optimisation. We can confidently go from truck to show-ready in a day."

The complete AVB signal path allows granular control over the system. Even in smaller venues, the full complement of loudspeakers have to go in the air, as the masts and stage need them for stability. With 28 Meyer Sound Galaxy processors running the rig, the system tech gets control of power and mute to every individual speaker, and can monitor telemetry from every amplifier module.

Chris is mixing the show on a DiGiCo Quantum 7, from which he's also mixing monitors. Having been tipped off by the local DiGiCo distributor Group Technologies that there were nine DiGiCo DiGiRack digital stageboxes running on the gig, we needed to know why! Charlie had the answer: "There's an SD-MiNi Rack under each of the six masts with 16 in and out," Charlie explains. "Most of the inputs are used. For example, under one mast, there's two guitarists with multiple guitars, two stereo rigs, redundant equipment and patching, two vocal mics, two talkback mics and more. It's a similar story for drums, keys and even bass."

Under the central stage, RF World is filled with Sennheiser IEM transmitters, a Sennheiser 6000 system for Ed's guitars and mics, Sennheiser 2000 wireless mics for Ed. All up, just for Ed, there's six guitar wireless packs, two main vocal transmitters, two loop vocal transmitters, and spares of everything. All RF input is via AES to a full size DiGiCo SD-Rack which can handle up to 56 in plus MADI. Ed's Ableton looping rig comes to FoH via MADI through a DiGiCo Orange Box.

**"PANTHER is lighter and smaller than its predecessors, and that makes a huge difference to the show design"**

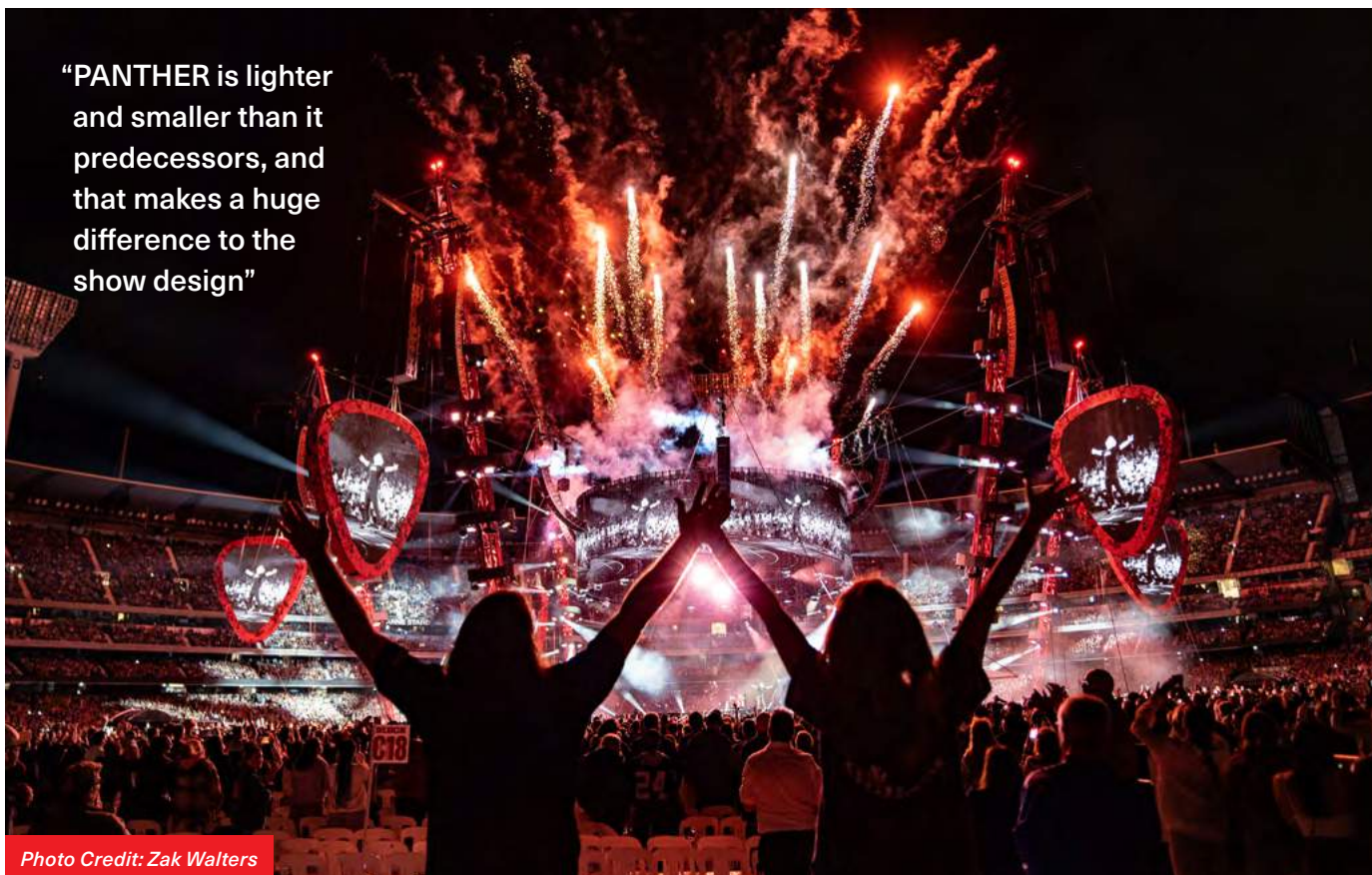
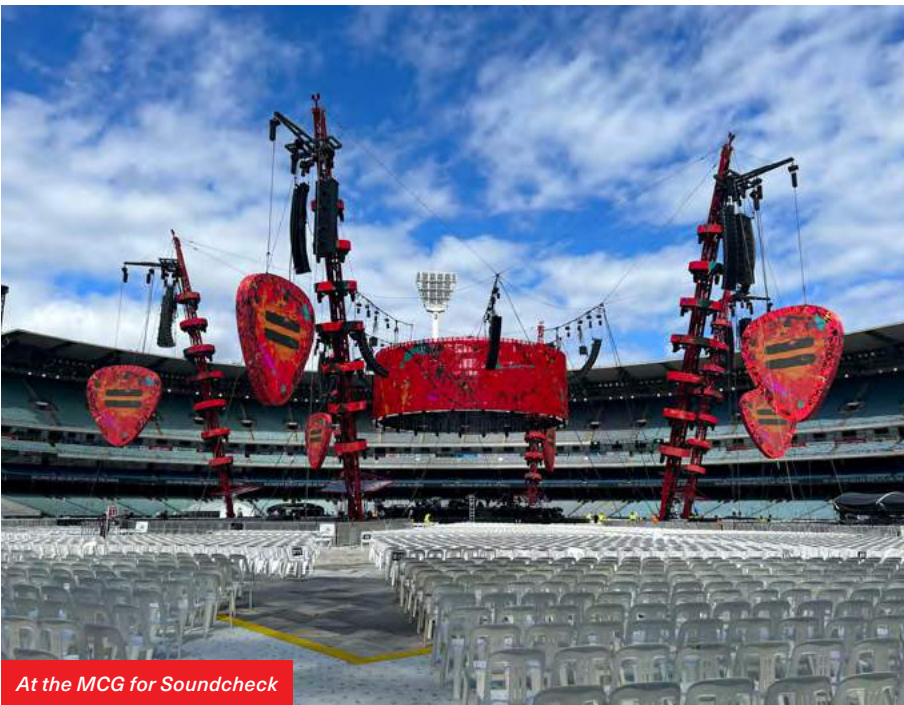


Photo Credit: Zak Walters



Photo Credit: Zak Walters

With Ed's band arranged in a circle at the bottom of the masts, all facing in towards Ed on the centre stage, I was immediately consumed by the thought of how Chris would handle their mics, as they had not only LEOPARD front fill, but a not insignificant amount of PANTHER aimed straight at them. "That challenge was what I feared the most on this gig!" laughs Chris. "I was really worried I wouldn't get enough gain before feedback, and that the band wouldn't get enough of a seal on their in-ears and feel the sub bass being out of time. I spent a lot of time playing with it. We went into rehearsal with the front fill, the band and the PA. All the drums are triggers, which is an effective way of keeping the noise out, and the band's vocals are going through a CEDAR Audio DNS 8 Live noise reduction processor. They work really well, and are an absolute lifesaver. The vocal mics are Sennheiser 945s and the IEMs are JH Audio with a very good seal."



At the MCG for Soundcheck

Other special tricks up Chris's sleeve include immersive IEM mixing and some special outboard processors. "We're using KLANG processing on the IEM mixes, which is relatively new for us with this project," offers Chris. "We introduced KLANG to the band along with controllers for each of them to adjust their mixes. The controllers lasted through rehearsals, then the band didn't need them. It really gives everyone a feeling of ambience. I've never told Ed about KLANG and I never intend to. He now keeps both in-ears in a lot more. He used to pull one out, looking for a feeling of space, and now he keeps them in because he already he has that in his head. He doesn't know why this is, and I don't particularly want him to start thinking about it. We tried a gig without it, and it didn't work, so it's KLANG forever now!"

Lurking in a rack at FoH is the old hardware implementation of Waves MaxxBass. "The MaxxBass is inserted over left-right," reveals Chris. "I mainly use it bring out the 'thump' of Ed using his guitar as a kick drum in the solo looper songs. I pick a frequency, boost it, and give the song some punch. Really, I've always been hardware person. I also have two beautiful Bricasti M7 reverbs in the rack, but they have proven to be totally surplus to requirements in all these reverberant stadiums we're playing!"



L - R: Adam Wells, Chris Marsh, and Charlie Albin

### Meyer Sound on the Ground

28 GALAXY Processors

212 PANTHER Line Array Elements

78 1100-LFC Low Frequency Control Elements

22x LEOPARD Line Array Elements

2x ULTRA-X40 Point Source Loudspeakers (used at FoH as monitors)

Network switches: 49 Luminex GigaCore 26i



# Flipper's Roller Boogie Palace

Immersing skaters in Hippotizer-driven video and light

**America's legendary Flipper's Roller Boogie Palace has landed in London, offering fun-seeking skaters an AV-rich, club-like experience. Billed as 'the world's best rink', its West London location is decked out with no less than 10 LED screens, five projectors and 200 Lucenti Tubes, all driven by Hippotizer Boreal+ MK2 Media Servers which were bought by the venue owners.**

With the original Los Angeles Flipper's known as 'Studio 54 on wheels' due to its disco soundtrack and famous faces, and the more recent New York Rockerfeller Center revival resetting the party tone, the London incarnation has big shoes to fill. The new two-storey, 34,000-square-foot space is able to welcome 2,500 people per day, and is set up as a live music venue and bar-restaurant in addition to the rink.

Rigged around the main skating area are a number of screens, LED walls and projections, enhancing the visual feast. The projection surfaces are roller blinds made from Carbon Black, a new fabric with carbon fibre nanotubes woven into the material. This is a black projection surface and with the blinds over the stunning windows gives the option of allowing natural light to flood the venue or have the blinds down to give a more immersive visual experience.

Lucenti LED Tubes are rigged in triangle formations above the rink which run alongside club-like lighting and a slamming sound system. The interiors were designed by independent design studio, 93. Production design was delivered by nVisible, headed by production designer, Tim Dunn, who brought Digital Insanity's Richard Bagshaw in to programme the media server solution

with client-created content, working with Will Harkin, Technical Project Manager at Creative Technology.

"From the moment I was approached to help with the creation of Flippers Roller Boogie Palace London I knew Hippotizer was the right product to give this club what it needed to set it apart from other venues," says Harkin. "The vision was to create a system that could serve media to 16 unique screen destinations around the venue day in and day out, but also allow an operator to manually manipulate content in time with the music to give a dance party feel to the club nights held at Flippers every Friday and Saturday night."

Flipper's is now offering regular DJ nights, celebrating spinners who speak to diverse skater communities. Evening tickets are sold as a club night, with the only difference being that dancing is on wheels.

"It's quite incredible how much the Boreal+ MK2 is actually doing," says Bagshaw. "It's driving a lot of pixels, to a lot of screens, as well sending pixelmapped video to the LED strips and DMX triggers to the lighting console to keep the looks changing with the video timelines. It's performing really well, most often from lunchtime to 10pm most days and until the early hours on weekends. It's impressive."

"What's also been really helpful is a new feature in Hippotizer v4.8 - Preset Timelines - allowing us to create looks and save them as either layer or mix presets and then create timelines in Timeline Plus using these pre-saved looks. This also makes updating looks really quick and easy as you just have to update the preset and this cascades through the programming."

"The Hippotizer's ability to map the LED lighting strips using PixelMapper to create the unique chevron design ceiling lighting system the runs the length of the venue was another defining factor in choosing it," adds Harkin. "I am really impressed with the hardware specifications and performance of a Boreal+ MK2, but most of all the dedication and support we received from Green Hippo with the delivery of this project."

The team designed the Hippotizer system to be able to drive live content to the screens - for instance streaming coverage of sporting events - and there are also cameras rigged around the rink which can feed live action skating into the Boreal+ MK2 and onto the screens.

"Another key aspect is that all of the visual content timelines can be triggered from a Streamdeck controller," says Bagshaw. "When there isn't a professional media server

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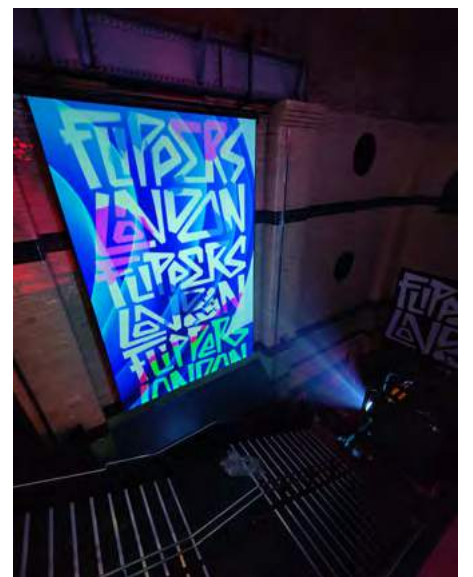
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“I am really impressed with the hardware specifications and performance of a Boreal+ MK2, but most of all the dedication and support we received from Green Hippo with the delivery of this project.”



operator, the team can simply choose whether it's the timeline they want to run, or a live feed, and they're ready to go. They just press play and it runs the selected content on the desired screens, in any location or either floor. In turn, that content also triggers the lighting cues, based on the points of the timeline. The Boreal+ MK2 is a monster - it needed to be that to provide the power that we needed to be able to run it all.”

Flipper's Roller Boogie Palace was originally founded in the late 70s by Ian 'Flipper' Ross, and the London version is headed up by his daughter, Liberty Ross, entrepreneur Kevin Wall and the singer, Usher. 93 Founder & Creative Partner Tim Hubbard said of Flipper's in an interview with Design Week: “You can't help but be overwhelmed. When you've got brilliant digital content, brilliant brand, great sound, great music, great lighting, great

interiors, good drinks, great service, an amazing experience of a fantastic rink. And then you see all those people, that community coming together in that space. It's a real energy.”



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# The Future of Wireless Audio

Wireless Multi-Channel Audio Systems will revolutionise large events

**Alignment meetings with regulatory bodies, demonstrations to high-profile wireless users and decision-makers – is there a new type of wireless audio transmission on the horizon?**

While the rumour mill is leaking some details here and there, four Sennheiser experts reveal what this new technology is about. Dr Andreas Wilzeck (Head of Spectrum Policy and Standards), Martin Brandenburg (Project Manager), as well as Dr Sebastian Georgi and Jan Watermann – the two research and development engineers who are the inventors of what is called Wireless Multi-Channel Audio Systems (WMAS) – dive into the benefits of the technology and explain how it will change the wireless landscape.

**Gentlemen, you are working on a new technology called WMAS, wireless multi-channel audio systems. What is this technology about? Who is it for?**

Sebastian: "With this technology, we are re-thinking wireless transmission in multi-channel applications such as big live events, theatres, and broadcast studios – wherever many audio channels are up in the air. Sennheiser's implementation of WMAS is essentially a bi-directional wireless broadband technology, which combines microphones, in-ears, and remote control in just one broadband RF channel."

"When we started out with this development project, our original intention was to combat RF fading, the natural signal loss on stages. RF fading can cause signal dropouts, which is what makes every sound engineer's job so difficult. By finding ways to better exploit the diversity offered by the broadband RF channel, we wanted to eliminate the risk of signal dropouts."

"In addition, we aimed to simplify set-up for the user, acknowledging the fact that narrowband wireless systems require quite complex stage set-ups, especially in multi-channel applications. Another goal was to make better use of the scarce frequency resources, an

ever-increasing challenge that audio engineers are faced with."

**What is the difference of this broadband approach compared to today's wireless microphone systems?**

Jan: "Today's wireless audio technology relies on narrowband RF solutions, with one transmitter sending signals to one receiver unit. And, unfortunately, the transmitter cannot notice whether 'its' receiver has been switched on or not, or whether it is out of range. In a figurative sense, you could say that every microphone, once configured, is fighting on its own."

"Broadband wireless technology, on the other hand, is system-based, a cooperative approach, as it were. Many mobile devices are linked over the air with one rack-mount unit. Now, everything happens in a single broadband RF channel with a bandwidth of 6 or 8 MHz, the bandwidth of a TV channel. The audio engineer simply selects a carrier frequency for the broadband RF channel to be configured, and the system will coordinate itself, with the quality and range that the

# Sometimes it all gets too much...



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engineer chooses for the individual audio devices.”

**That sounds amazing, but does a solution that occupies a full TV channel - so 6 or 8 MHz of RF spectrum depending on where you are in the world – really save frequency resources?**

Martin: “It does indeed. Just bear in mind that WMAS is designed for multi-channel audio applications that integrate wireless microphones, in-ear monitors, remote control, and other audio applications into one radio interface. This brings significant efficiencies in spectrum use – not just by technology, but also by enabling workflow improvements. These wins can be invested in flexibility and audio quality. For example, IEMs and microphones, which today are split between two RF ranges that are several MHz apart, can now be handled together in a single TV channel, which, in addition, makes frequency planning a breeze. But to be clear, narrowband, 200 kHz digital wireless microphones will continue to be used for applications where this integration is not required, or where only a few mics are used.”

“Secondly, our system will operate with a total of 50 mW of transmit power per RF broadband channel, which is the transmit power of a single microphone today. Within the capacity limit of the system, there will no longer be any scaling of the total transmit power by the number of devices used. Furthermore, this transmission power will be distributed over the entire RF broadband channel, so the spectral power density is lower by a factor of 30 (6 MHz) or 40 (8 MHz) compared to a single wireless microphone with a bandwidth of 200 kHz. This low spectral power density means that an RF channel can be reused more easily. This would, for example, be an asset in multi-studio broadcast production facilities or on the different stages of a spacious festival site.”

“Last but not least, our approach allows remote control of all equipment at all times, and also



Jan Watermann

the allocation of resources to equipment as really needed at any given time. This makes it possible to save spectrum by employing a new workflow where the audio engineer can schedule resources on a timeline. Compared to today, where all devices would be actively transmitting at the same high quality all the time, this new workflow would mean a substantial gain in spectral efficiency at large events.”

“Overall, the Sennheiser solution will enable customers to significantly reduce their spectrum footprint while gaining unmatched integration, audio quality, low-latency transmission, control, and flexibility in their applications.”

Andreas: “It is worth noting that the number and complexity of large events and mega-events is continuously increasing, and the associated demand for radio spectrum is, too.

This is not just statistics – securing enough spectrum for these big events is increasingly causing engineers and event organisers a headache, especially with outdoor events. The WMAS solution will certainly help.”

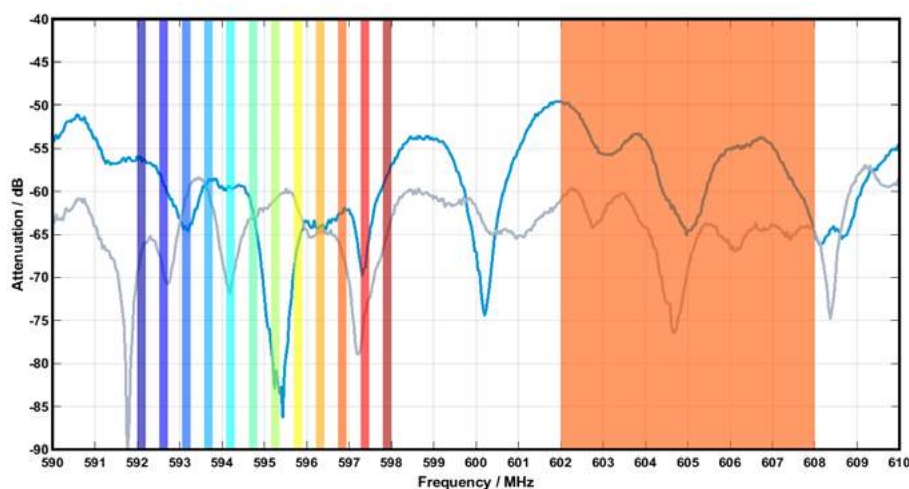
**You mentioned that current narrow-band microphones have a stipulated maximum RF transmission bandwidth of 200 kHz, but your broadband microphone will depend on this limit being lifted. Have the regulatory bodies already agreed to do this – worldwide?**

Andreas: “The relevant harmonised standard EN 300 422-1 for wireless microphones was amended in 2017 to take wireless multi-channel audio systems (WMAS) into account. This EN 300 422-1 standard is referenced more or less worldwide in the national regulations for the market access of wireless microphones.”

“We successfully initiated the necessary regulatory changes some years ago; they have already been implemented in many countries in EMEA and APAC. The process in the US is not yet complete, but we are confident that WMAS will soon be possible here, too. The availability of products based on this breakthrough technology will naturally accelerate regulatory changes on a global scale, because after all, no country wants to get left behind.”

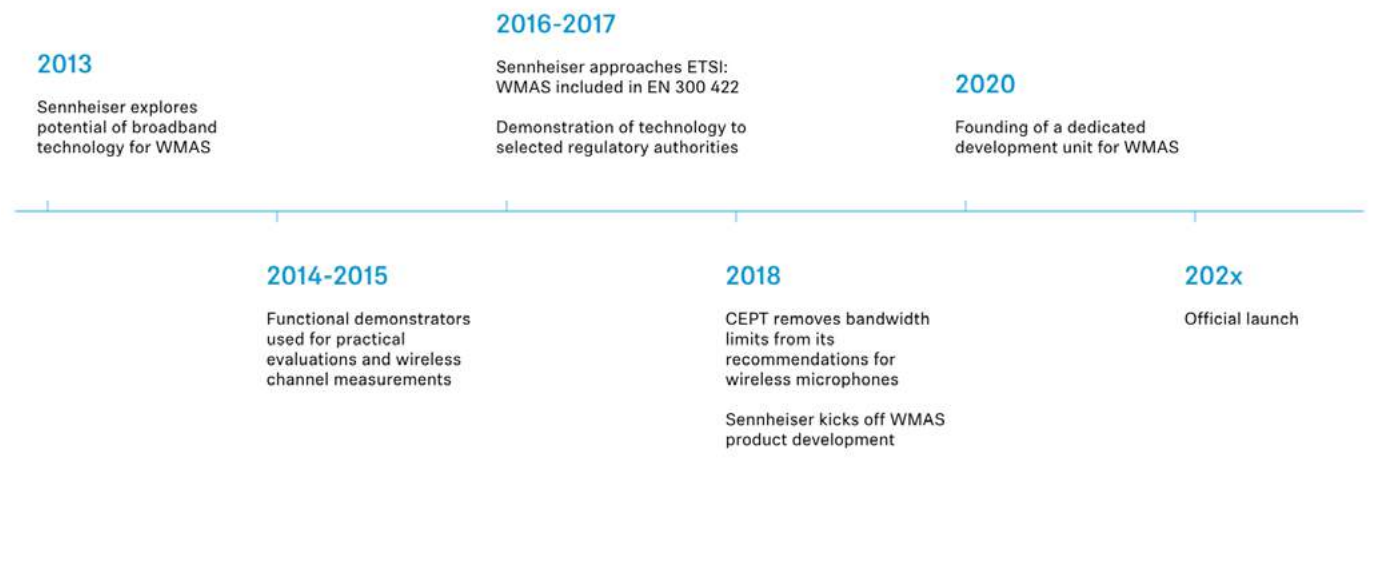
**Are the frequency ranges WMAS will be operating in the same as those of today's narrowband systems?**

Andreas: “Yes, our WMAS solution will operate in co-existence in the standard UHF frequency ranges for wireless microphones – no changes to the transmission power limits are required. It was just the bandwidth limit that had to be removed or lifted to at least 6 MHz.”



TV channel usage (6 MHz) of several narrow-band systems (left) and a WMAS (right), which assigns time slots instead of fixed frequencies. The blue and grey lines are the attenuation (in dB) of the measured receive signal of the exemplary antennas 1 and 2

## Sennheiser Development of Wireless Multi-Channel Audio Systems (WMAS)



**Allow me to ask why you are using a manufacturer-specific transmission technique. Wouldn't standard technologies, like, say, a 5G microphone with a SIM card, do the trick, too?**

Martin: "By offering a bespoke solution, we can create tailor-made systems for our customers and their use cases. Live audio has very strict requirements on latency, operational reliability, multi-channel audio, and audio quality that standard technologies cannot – or do not want to – fulfil today or in the near future."

Andreas: "In the end, our company will not be measured by the hype around a technology such as 5G, but by what we can deliver to our

customers and what will work for their very specific applications and workflows."

Sebastian: "In this context, it is worth mentioning that latencies advertised in 5G are measured differently than the audio stream latency requirements that we have to guarantee throughout an entire production."

**Could you once again summarise the advantages of this new WMAS approach?**

Jan: "We have already mentioned the improved use of spectrum resources by the new workflows that become possible through WMAS, and the flexibility that the system offers for larger premises or festival grounds thanks to its lower spectral power density."

"In addition, combined, bi-directional bodypacks including low-latency, true digital in-ear monitoring will be possible – bands and artists will just need one device instead of two. Mic transmission, in-ear monitoring, and permanent remote control will all happen via the same device in a single RF channel. Also, the sound engineer will be able to flexibly select the audio quality, latency, range, and resource occupation for every single audio transmission of the devices. Furthermore, all mobile devices will be perfectly synchronised, enabling wireless stereo and even 3D audio recording without any audio phase issues."

Sebastian: "The backstage tech space will look very different, as WMAS will allow our customers to have the processing of 64 audio channels done by a single 19"/1U rack-mount unit! Gone will be the days of receiver cabinets – our customers will save backstage space, valuable truck space on tour and thus energy, too. Except for selecting a single RF channel, extensive frequency planning will not be required. If we want to come full circle, we can look at the RF fading challenge we set out to solve in the beginning: Instead of today's typical spatial diversity with two antennas, WMAS will offer 30-fold diversity in a 6 MHz TV channel or 40-fold diversity in an 8 MHz TV channel – with a single antenna!"

**One final question that many users will be interested in: Can today's narrowband systems and the upcoming broadband systems co-exist?**

Martin: "We have successfully tackled this challenge and will follow up with a series of publications that provide more in-depth knowledge about wireless multi-channel audio systems, including more information on co-existence. Stay tuned!"



Martin Brandenburg

# MARTIN ATOMIC 3000 DMX



Still one of the best strobes on the market?



*The Martin Atomic 3000 DMX at Disturbed World Tour. Photo credit: Adam Cook/Twentyfourcore Productions*

When we think of high powered, super bright, high quality durable strobes, the Martin Atomic 3000 DMX is one of, if not the, first light that comes to mind for many. They have well and truly set the bar as the industry standard strobe light for nearly the past 20 plus years. The Martin Atomic 3000 DMX was originally released to the buying public in 2001.

Many hire places will still stock these. They are still in use in a number of venues, large and small, across the country. Unfortunately, they have since been discontinued. The only way to buy them is second hand. Depending on condition, they still sell for a couple hundred dollars each.

At just under half a metre wide and weighing in at about 7.5kg, they are easy enough for one person to set up and pack away. It can be installed in any orientation on a single clamp. With an H stand they can also be placed on the floor. Being incredibly versatile to hang, they can seamlessly fit almost anywhere in a lighting rig.

When compared to the competition when it was released 22 years ago, the Atomic was whiter and brighter than anything else on the market. It was a true strobe capable of creating a powerful and overwhelming strobe effect. In the decades since its initial release many

different strobe lights have been developed and brought to market, many boasting a host of new features, increases in output and savings in power consumption.

Despite all this, the Martin Atomic 300 DMX still remains in the conversation when it comes to picking strobe lights for events. On paper, it may not look as appealing as many of the more recent offerings but those in the know who are looking for a quality strobe will still have the Atomic 3000 on their short list.

The Atomic 3000 provides high and low lamp power settings. The high power setting provides maximum flash intensity; the low power setting reduces output by approximately 50 percent, but extends lamp life.

The Atomic 3000 is supplied in two models with different lamps: the Martin MAX-7 and MAX-15. The MAX-7 model will in theory accept AC power from 90 to 250 volts. The

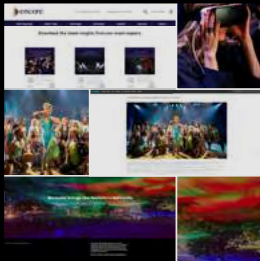
MAX-15 model will in theory accept AC power from 125 to 250 volts. The Atomic 3000 uses a 20 amp time-delay fuse for protection against current overload. It can be run on both 10amp and 15amp power supply.

Martin recommends that all maintenance tasks be performed by a qualified Martin professional. Truth be told, they say this about most of their products to the point where it is ignored, however the message is quite relevant when it comes to the Atomic. The one service/repair/maintenance task with the Atomic that you would undertake yourself might be changing the lamp.

The Atomic 3000 DMX uses a Xenon discharge lamp.

In a nutshell, light is created in a Xenon lamp when an electrical charge is sent through an ionised Xenon gas. This creates a light flash, perfect for strobe lights.

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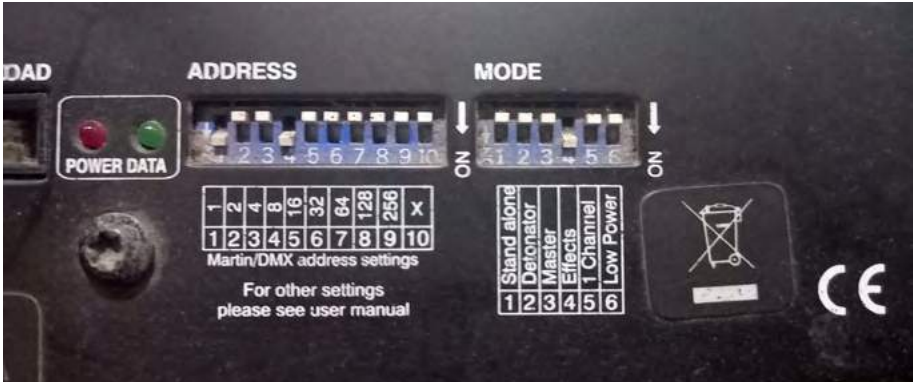
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Did you know: One of the more recent offerings was released by Martin, the parent company who produced the Martin Atomic 3000 DMX strobe. They have since released an LED strobe by the same name (Atomic 3000 LED). It looks quite similar to the Atomic 3000 DMX which tells you all you need to know about its design and how it was produced.



As they are gas filled and electrically charged, it is critical to ensure lamps are handled correctly, especially used ones.

They can be controlled using both 3 pin and 5 pin DMX. The Atomic 3000 uses 1, 3, or 4 DMX (Digital Multiplex) channels depending on the control mode.

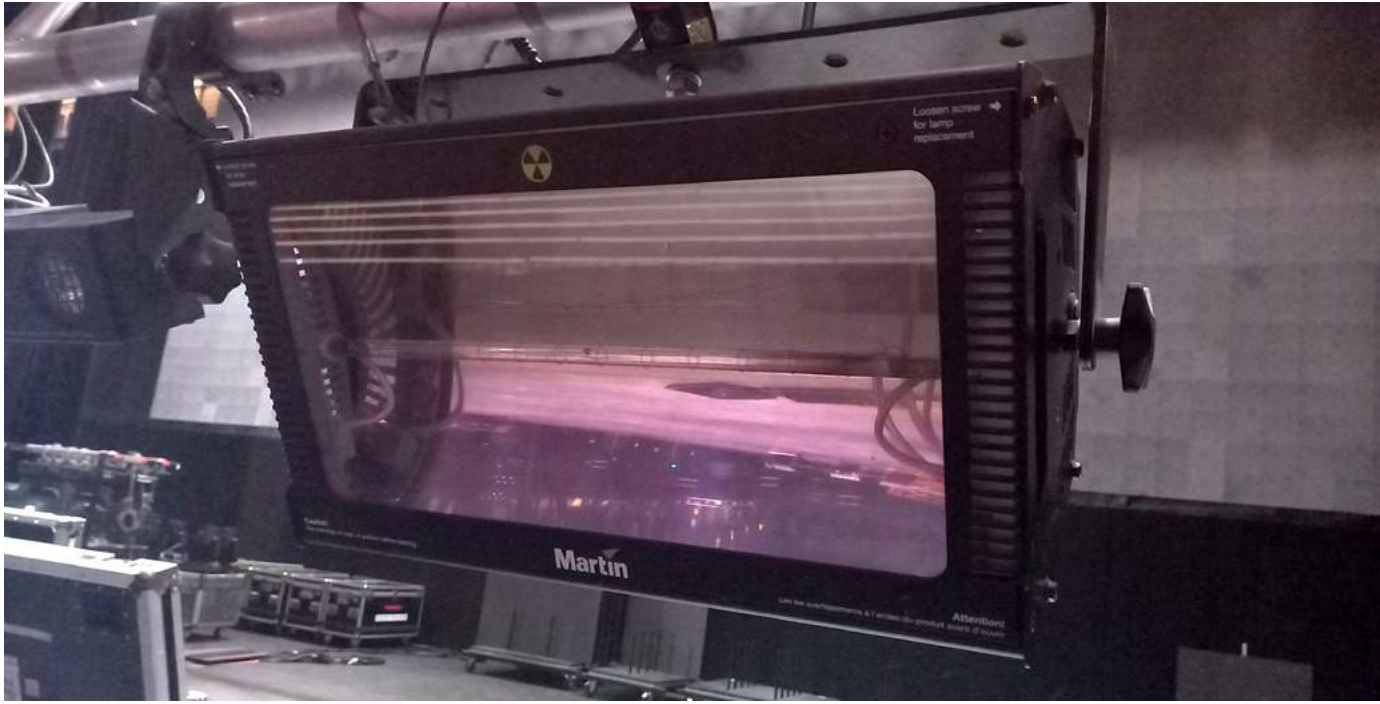
It is addressed using a DIP switch. DIP switches are rarely seen on lights and special effect fixtures these days. They were even uncommon 20-odd years ago too. They were mainly used on 'effects' style units like smoke machines, hazers and strobes.

The light was cased in a durable steel housing and of a very simple and practical design. Only real issue was that you could end up going through a lot of lamps and fuses, depending on how you used them. Lamps nowadays are a bit north of \$200 each. There are no serviceable parts inside the lights. Therefore there is no need to be opening them up during cleaning and servicing.

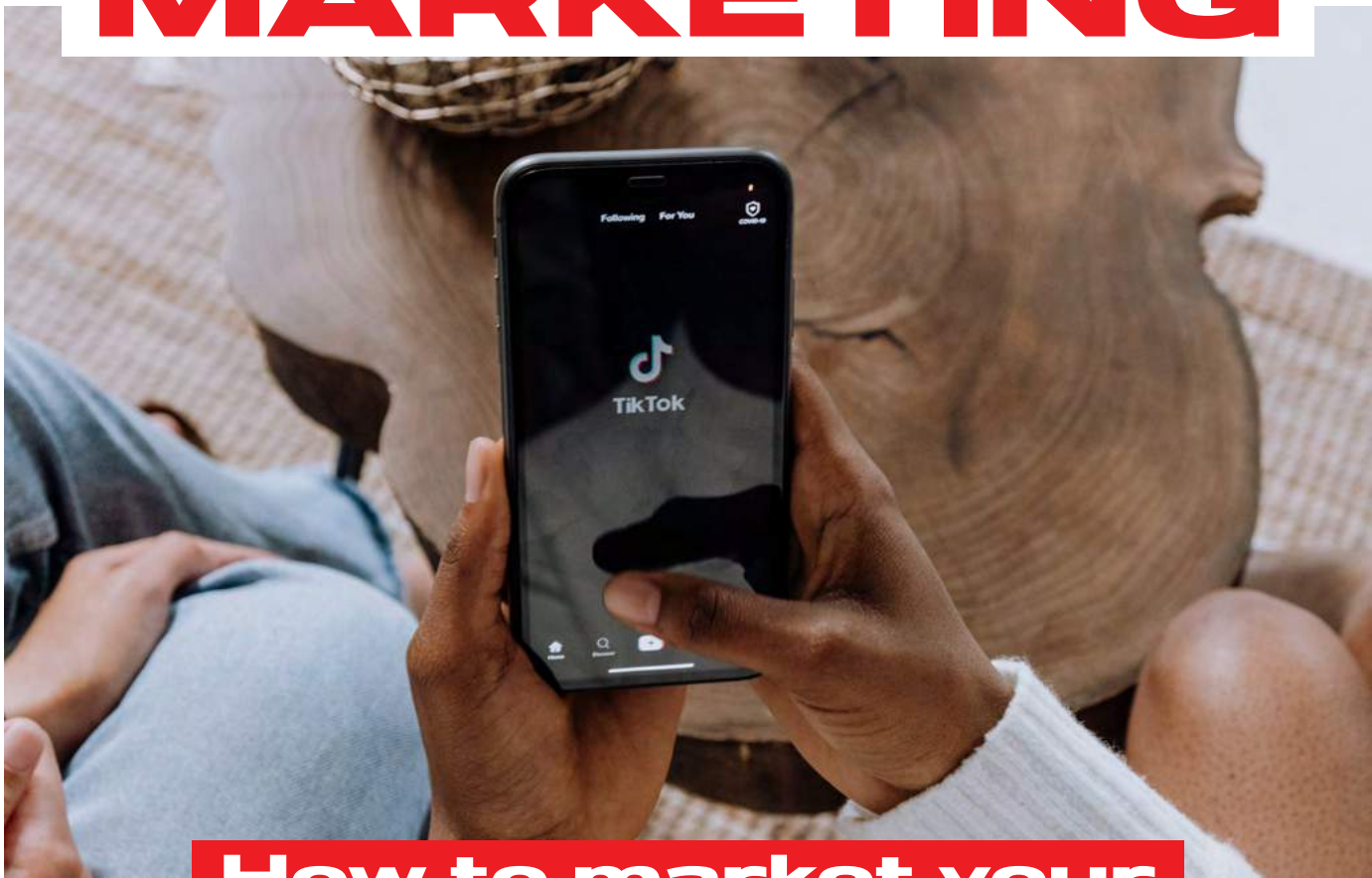
The Martin Atomic 3000 DMX did one thing and they did it incredibly well, arguably better than any other strobe of its day. We now see strobes that have an LED engine, can move, output all different colours and even be pixel mapped. Despite this, the Martin Atomic is still out in service. In an era where it feels as though every light is trying to do everything, a light as simple as the Martin Atomic feels older than it really is. There are very few lights that were released over 20 years ago, have since been discontinued, and are still relevant today. This is one of them.

**Straight from the user manual, showing the importance of lamp safety:**

'1. Whether or not you value your life, disconnect the fixture from AC mains power and allow the capacitor to discharge for 1 minute.'



# HYPE MARKETING



## How to market your hybrid events on TikTok:

**Hype marketing is designed for events. Admittedly, it is more commonly associated with product marketing, with Apple's major iPhone releases being perfect examples of it done well. However, hype is always built around a specific date, whether that's the date of the product launch or the date of your event. Effectively, your event is your product.**

For those who don't know, hype marketing is an extreme form of publicity intended to create a growing sense of excitement and anticipation among its target audience. Ultimately, the intention is to encourage high sales volumes as quickly as possible, often by using scarcity (often artificial) to promote greater demand.

Hype marketing is often associated with social media because the build-up of the hype depends on excitement spreading by word of

mouth. TikTok, as we will see, is a particularly good platform for this because of its format and audience, among other factors.

### The Power of Video

TikTok's sudden rise to the top inevitably set the trend for all social media, with video now heavily promoted across Facebook and Instagram, among others. Head of Instagram Adam Mosseri himself said that video is "driving an immense amount of growth online for all major platforms".

"There's still nothing like a sharp, shareable video to get your audience buzzing on social media," says Cole Nowicki of Hootsuite, the social media management platform widely used across the marketing industry. In a blog post, Cole points to the example of Strathcona Brewery, which uses animated videos of their beer cans dancing to give each brew a different 'personality'. "This is a great way to establish the vision for a new product while still staying within the overall theme of your brand."

When it comes to marketing for a hybrid event, the tone of the event will dictate the tone videos will need to have if they are going to

succeed with your target audience. If a serious business conference used videos of dancing beer cans, its viral success would probably not bring the sort of hype that sells tickets.

### Build a Community

A brand new account with no followers could post the finest 60 seconds of cinema on TikTok and almost no one would ever see it. Social media is, by its very nature, social. Without an engaged community there is absolutely no hope of generating a hype. Fortunately, building a community isn't really that complicated.

"TikTok thrives off niche communities - whether it's for books, art, pop culture, sports, fashion, self-care, or cars - there is truly something for everyone," says Monique Thomas of Later.com, a social media management system similar to Hootsuite, in her Ultimate Guide to TikTok Marketing. She goes on to show the example set by the Victoria and Albert Museum in London, which posts educational videos of their exhibits with a lighthearted tone that works well with a young audience.



trying to. However, disproportionately large amounts of people marking your videos with “not interested” means there’s something wrong with your strategy.

The same is true in reverse. Posts that have hit the right tone and reached the right audience will get more views, more likes and lead to more followers. Keep close track of how each of your posts is being received and make subtle changes to see what gives you more positive feedback and less negative. Try to be creative, though - the new and the novel often does far better on social media than a subtle variation of a tired trope.

**Lean into the Hybrid Format**

A lot of these suggestions could apply to using TikTok for hype marketing any kind of event, but the needs of a hybrid event are somewhat different. As such, your marketing also needs to be different.

The hybrid nature of the event and the many benefits they have over a traditional event should be strongly promoted, though not at the risk of overshadowing the emphasis on your particular niche. It is much harder to get hyped about a technical feature far outside your personal area of interest, but the flexibility and convenience of it are appealing.

Circa, an event marketing platform, recommends that those marketing hybrid events focus on optimising their attendees per marketing channel, marketing efforts per channel, brand awareness, prospect growth and overall return on investment. Brand awareness is perhaps the most important result from hype marketing, though it is important to monitor its success. Social media marketing can easily become a huge money trap, with expense far outstripping returns.

With a community built, your posts will get that all important initial boost of engagement and shares. Early success is essential for viral spread as social media algorithms generally promote those posts building a buzz.

**Have a Hashtag**

Ever since Twitter introduced the concept to the public, the use of hashtags as a means of reaching a niche audience and building a community has become universally accepted and adopted by all social media. They have also been very successfully used to create hype.

“Coinciding with the announcement of her new album, Cuz I Love You, pop (bop) star Lizzo created the hashtag #CuzILoveYou,” explained Cole. “Not only is the hashtag a great way for Lizzo’s fans to follow everything going on with the album drop and how her followers are

reacting to it, but she was able to get creative with its promotion. On Valentine’s Day Lizzo herself encouraged fans to tweet using the #CuzILoveYou hashtag, retweeting those that did. This clever approach gets the audience excited about their involvement and more engaged in the release.”

Naturally, having a single hashtag that is easy to incorporate into posts is the best for generating hype. For an event, encouraging exhibitors to have their own associated hashtags could also help widen the reach.

**Listen to Feedback**

TikTok’s algorithm takes note of which videos users mark as “not interested”, which users they hide and which videos they skip. The occasional negative feedback is inevitable and nothing to be concerned about - you can’t please everyone and there’s no sense even



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# RCF ART 932-A

by Joe Sofo

**Joe Sofo, Director of Melbourne's Concert Audio Visual, started out from his garage as a teenager, on the back of his other life as a DJ and drummer. In 2005 he went full time, initially with hire and production departments, moving into sales in 2009, fast becoming a full service company with hire, production, sales and installation arms.**

I've been a long time RCF user. In 2009 RCF was part of our inventory in our hire department but quickly became part of our sales offering. Back then we had a lot of other brands and some were giving us a lot of grief around warranties and delays in getting parts, particularly from about 2013 to 2015. Yet RCF excelled throughout that period for us and simply negated all issues. We all know electronics are electronics and they do fail, and RCF recognised that. There was never a problem with repairs and there were always spare parts. Quite simply, we found the product reliable and the service behind the product to be wonderful so we ended up dropping the other brands and just going with RCF and we haven't looked back since.

They've been excellent to date and they are just getting better and better, as you can see from the ART 9 Series. You see RCF equipment out everywhere. I was DJing in a nightclub the other day and there was a booth monitor from the old ART 3 series, and the test and tag label was dated 2003. That box has been sitting there since 2003 getting an absolute hammering four nights a week, and the DJs don't go easy on those boxes. It's 20 years later and it's still kicking.



## The ART 9 Series

The ninth generation of the ART series launched mid 2021. It is a bigger, juicier, meatier version of the previous HD series and consists of six new models, ranging from 10" to 15" woofers. They all share the same 2100 Watt power amplifier and two-channel Class-D amplifier with advanced DSP processing. The 912-A features a new 1.75" compression driver and the 932-A a beefier 3" titanium/neodymium driver.

We always do a comparison before we stock anything, and we lined the new range up, including the 912-A and the 932-A, against four or five of the closest competitor equivalents. Some of the competitors even use RCF drivers so are a very close comparison in terms of components.

We found that as soon as you get into a larger room, or you've got big vocals, or especially anything outdoors, the 932-A comes into a world of its own. When you are listening to them in a showroom at relatively low levels, the 912-A does sound better in my opinion. It is a sweeter sounding box, a bit more subtle, a little nicer on the ears but it runs out of volume before a 932-A does when you start putting bands through it. Don't get me wrong, the 932-A sounds great out of the box too, but in a small room, where you don't need that much mid-top end, it can become a bit too in your face. We figure it is better to use the 932-A and reduce for smaller spaces than carry the 912-A because you can't get more. We used to carry the RCF HD series and we had both the HD-12s and the HD-32s and we found that the HD-32s were going out a lot more than the HD-12s. People were hiring them with a set of subs and utilising all the extra volume.

So, we've put sixteen 932-As into the hire department. They hit the sweet spot for us in

terms of size, output and sound quality and they just do everything. All of the ART series sound great but the 932-As are a really nice midpoint and not too big at 12". When you compare the 932-A to a lot of other boxes with the same components, it is far superior.

## Weight and handling

They are slightly heavier than the HD-32s (18.8kgs versus 18kgs) but you don't feel it as the handles are really good. It is inevitably going to be heavier than your lower power boxes, but for how they look, what they are, and for the output especially, they are still relatively lightweight. Everyone wants to get the sound and output of a 15" box but they don't want to carry it around, and this is where the 932-A comes in. You get a lot of output for a very reasonable weight.



# ART 9 SERIES

*A giant leap*



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- Road-proof Cabinet with M-Brace Reinforcement
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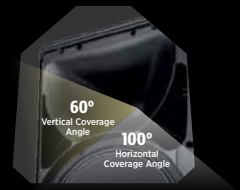
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- More Consistent Energy Transfer
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## Power

The 932-A comes with 132dB max SPL and I know some of these manufacturer ratings come from a speaker reaching that for one second before they explode! I believe RCF's ability to run continuous power at extremely high volumes without issues is better than their competitors. The 932-A is definitely the most impressive box in that price range for maintaining sustained high-level output without issues. Whatever RCF are doing in terms of cooling their drivers and whatever the tech is in terms of driver production and amplifier production, they are doing their job.

## Presets

The 932-A comes with three presets. Linear (flat), boost (extra bass) and stage for wedge and foldback. If you are running the box without the sub, you just have to be a bit careful when you are using the boost features. Like anything, if you are cranking up the bottom end in a 12" box, the 12" driver only has so much that it can give. It does sound a little bit sweeter when you do that because of the big 3" horn and extra bottom end in the 932-A, but you do inevitably lose a little volume. We

run all of ours flat and I think the flat setting is more than enough, and more than what most of the other boxes are producing. If you need more, put a sub underneath it and that will do the job.

## Other Models

We stock the 910 through to the 945 and every range between that for sale – the 912, 915, 932 and 935. For hire, we find it works for us to have more of one box, and the 932-As are working for us. Saying that, we have just put up for sale a single pair of ex-hire HD10s and we will replace them with a 910 as our premium corporate box.

## Client Base

Our customers are predominantly DJs and bands. Your five piece pub band are our main clientele. They are typically touring around, lugging the boxes in and out of the car and up and down staircases, needing to do three hundred plus people out of a pair of boxes and a single sub. With the wedding scene these days, there's five hundred at a wedding with three hundred on the dance floor, so they need a high output. We also have a lot of larger ethnic bands and that's where the 3" horn comes into play. We've even had a pub from Daylesford, an hour and a half away, who used to hire HD32s from us, come and grab a pair as an artist had spec'd them and they were looking to buy some. They came back and said they really liked them.

## THE SPECS

Frequency Response: 50Hz - 20000Hz

Max SPL @ 1m: 132 dB

Horizontal coverage angle: 100°

Vertical coverage angle: 60°

Compression Driver: 1 x 1.4" neo, 3.0" v.c

Woofer: 12", 2.5" v.c

Total Power: 2100W Peak

High frequencies: 700W Peak

Low frequencies: 1400W Peak

Height: 642 mm

Width: 370 mm

Depth: 363 mm

Weight: 18.8 kg

## Return on Investment

We have had no issues and they've certainly done some work, out every weekend. We've had great feedback from clients, and we have used them on some decent sized jobs. Over New Year's, where the warehouse was almost empty, we had a NEXO STM line array system out and we ran out of everything we'd normally use as DJ foldback, so we used the 932-As with a sub and the DJs were wrapped. I think we used them for all our DJ foldback over New Year's and they performed well. It's been over six months now since we started stocking them and it's been all positive.

**Product Info:** [www.rcf.it](http://www.rcf.it)

**Distributor AU:** [grouptechnologies.com.au](http://grouptechnologies.com.au)

**Distributor NZ:** [directimports.co.nz](http://directimports.co.nz)





# ACME LIGHTING LYRA

Darren Russell is the owner and Managing Director of Canberra's Elite Event Technology, one of the foremost production companies on Australia's East coast. Elite supply venues, large scale touring, and events, with a comprehensive and top shelf inventory of hire stock.

Elite Event Technology were somewhat involved with the development of the feature set of the ACME LYRA. We had a chance to test few of their new hybrid fixtures in the XA range. We liked them, but we did suggest that it would be good if there was a fixture, which would offer framing as well as animation wheel.

About six months later, ULA Group sent out a road case with a prototype based on our recommendations, for us to play with. It was a good light, however at that time we were going through a phase needing IP rated fixtures, and we suggested that an IP rated fixture could be the way to go. They took our suggestion on board and few months later, the LYRA was released. After we put it through our paces testing it, we ordered 24. We got 12 in November last year, 12 more a month later in December.

They were used recently at Parliament House on a job called Top Secret, an event promoting Canberra as a destination for event planners, where the quality of the framing shutters was put to the test. We did a dinner in the Great Hall for 50-60 people. We had to light two long tables and keep colour in the room. Using LYRAs, we were able to shutter in and light the tables in open white.

## Why the ACME Lyra?

We were looking for a workhorse light for gigs where an IP rated fixture may be needed. We own large numbers of IP rated wash lights, but we did not have an IP rated spot in our inventory. We needed fixtures that can do gobo projection and beam effects outdoors. We tried to find the ultimate all-in-one package, and this is it. We have it out on spec jobs and it has been looked upon favourably by everyone who

has given it a go. It's a really good workhorse.

We have owned a lot of ACME Lighting gear in the past, like LED pars and blinders. They have been reliable for us for a long time. Some of the innovation they have been coming up with lately is next level.

## Features

The features offered on the LYRA are fantastic. It's got all of the features in the fixture that suggest it should cost a lot more money. The animation wheel is really good. It has a few different levels of animation; it's a real feature. Movement is smooth, precise, and accurate, all the way through the range for both pan and tilt. The frost is nice and doesn't lose too much intensity when it is dropped in. The framing shutters are much better than the prototype. CTO and colours are great. The gobos are also

really good and they are all really useable. I don't think there is a feature we have not used. It does everything really well.

### How does it stack up?

We got the LYRA and put it next to an industry leading light with most of the same features and similar spec. The LYRA pretty much chewed it up and spat it out. Although it doesn't show it on paper, it is substantially brighter when you see it with the human eye. It's IP66, which not only makes it useable outdoors, but it makes it stronger and will reduce maintenance costs. It's much quieter than you would expect too, for a light this size

### Outdoors

The LYRA performs really well outdoors. We used the lights recently at Rochford Estate, SummerSalt, and Live in the Vines. We used them as profile spots because of the framing. We had set these up and left them in the rain for over 2 weeks, so the IP rating has been well and truly tested.

### Stamp of approval from the industry

The LYRA has been getting rave reviews. We have had overseas touring LDs as well as many of Australia's top LDs use these lights and they have been impressed by how bright they are. All who have been willing to give it a go have been receptive and positive. They are that feature packed it's getting called the "Swiss Army Knife Plus."

### Setting up and setting down

It's a bit heavier because of the IP rating, but the LYRA is built like a tank. It weighs in at 40kg and is nearly 72cm long, making it one of the bigger moving lights on the market. They come in single cases, with a front door opening on the case and pan and tilt locking mechanism. It is a two person lift, and the case is well designed.

### Consoles and compatibilities

The LYRAs play well with all the consoles

we own. When we first got them, ChamSys already had a library file. Hog did, but we got them to build us a new one. The MA had one in the MA2 and the MA3 libraries which had been created by end users. The MA2 one was pretty good, the MA3 one had a few bugs and glitches. We went back to ULA Group who through ACME provided a new version of the head file for the MA2 and MA3. The LYRA has five different control modes, and we usually run them in extended mode.

### The Verdict

It's a really good workhorse light that does everything really well. In my opinion, the ACME LYRA is probably the best thing ACME Lighting has made so far. Bang for your buck is pretty insane.

**Product Info:** [en.acme.com.cn](http://en.acme.com.cn)

**Distributor Australia and New Zealand:** [www.ulagroup.com](http://www.ulagroup.com)



"We got the Lyra and put it next to an industry leading light with most of the same features and similar spec. The Lyra pretty much chewed it up and spat it out."



## THE SPECS

Light Source:  
1,000W 8,000K White LED Engine

Colour Temperature Output: 6,500K

Total Lumen Output (Ra>70): 35,000lm

HCRI Mode Output (Ra>90): 25,600lm

Rated Source Life: up to 20,000 hours

Beam angle: 6°-50°

Diameter of Front Lens: 160mm

4-Button touch panel

Display: LCD display

Protocols: DMX512, RDM

DMX Protocol modes: 5:

Control channels: 40/39/30/31/22

Pan movement: 540°

Tilt movement: 270°

CMY Colour Mixing

Linear CTO Colour Correction:  
2,700K-6,700K

1 x Colour Wheel: 5 complementary colours plus open

CRI Optimiser Filter

1 x Static Gobo Wheel: 9 gobos, plus open

1 x Rotating & Interchangeable Gobo Wheel: 7 high-precision glass gobos, plus open

A graphic animation effect wheel with continuous rotation in both directions

2 Combinable Rotating and Indexable Prisms: one 4-facet prism, one 4-facet linear prism

2 Variable Frost Filters: Light and Medium

Shutter Blades: 4 Blades, each with separate movement and full blackout

# Are you concerned about your mate's mental health?

**FACT: Most Australian tech crew and roadies have attempted or considered suicide<sup>1</sup>!**

**Support those around you and register for free mental health training**



[www.entertainmentassist.org.au](http://www.entertainmentassist.org.au)

Supporting the mental health of Australian entertainment industry workers

<sup>1</sup>Passion, Pride, Pitfalls Dec 2014



Photo by John O'Brien

**Entertainment is an industry built on creativity. The creative nature of the performers is obvious but there is a gamut of originality and ingenuity behind the scenes bringing the artiste to the public. We already know it here; lighting, staging, video and audio design and execution all require the application of creative talent. When it's on the road, another type of creativity is needed in production and tour management, juggling people, schedules and budgets. Back home, booking agents are busy plotting itineraries using dart-boards and tarot cards, requiring an artistry all its own.**

Good management requires efficient problem solving, which often involves innovative thought processes and lateral thinking. You are in a creative industry; be inventive with how you approach it. So too with general life and industriousness. That's how I go about it. No longer able to create many live shows, I now commentate on them.

Every month, I sit down with an empty notepad page to write a column. With nothing to start on yet endless potential, it can be daunting. To stave off a complete creative blank, I jot down some random, if related, thoughts. Often, it sits there for days or weeks, while I await some sort of muse or inspiration before launching in earnest. But, at least I have something started. This little psychological trick works wonders in my workflow.

Writing is a creative process. But there is a great difference between authoring a novel and producing regular content to a deadline. Both require creative wordplay, yet the end goal diverges. With the former, high art and perfection are the aims. Multiple rewrites, edits

and contemplations can take a period of years before the masterpiece evolves.

Content (or column) writing necessitates an alternative approach. You are on a production schedule and, even if digital, the printing press awaits no laggards. Therefore, the process requires diligent adherence to deadlines. Which means getting it together ahead of time to allow enough free headspace before final edit. It also means letting go of any pretention of perfection and striving instead towards optimalism. A weight lifts when the Send or Publish buttons get pressed, dispatching the words into the ether.

This applies equally to the modern phenomenon of content creators, nearly our entire source of entertainment at home. From food to building, via crafting and comedy, to documentary or fluff, we nightly watch a diverse variety of subjects and presenters. For us, they are mostly refreshing as they are not scripted by commercial industry types. Such creators have great scope in topic, style, videography and editing, without a coked-up

studio monkey trying to regurgitate a tired format or industry trope. However, not all have the talent to ensure repeat viewing, so our watch list is curated regularly.

One downside is that small producers often lack the resources for high production quality. The smarter ones work around this limitation and stick to narrative and concept as the highlights of their 'shows'. Home based video editing no longer requires exorbitantly expensive equipment. Hey, you can even do this on your phone. But it does need to start with a good idea and a modicum of personality.

Building social media profile high enough to financially sustain such an enterprise is often a long hard slog. Many never make it beyond their day job. Yet you don't have to 'go viral' overnight to be a success at this either. I follow and interact with several such creators, many who now find this the entire source of their income.

Across the board, they are aware that they need to both build and then keep their



Photo by John O'Brien

audience. Some film what they are doing and then build a commentary around that afterwards. Others storyboard and come up with a concept before ever switching the camera on.

Commonly, all require lead time. Commentary based shows are quickest to turn around production wise but can also get held up determining legal status if they are contentious. Some post only when they are ready (and take the subscriber drop-off hit); others post to a schedule and must learn to tread the periodic hamster wheel.

When they hit a certain point (where the production load is too onerous for one person with a regular release deadline), many start employing professional camera operators, video editors and the like to assist. Eventually, they go fully 'pro' adding production assistants, set dressers, marketers and whatever else required to keep their brand slick and on time.

This is just one example of the many creative outlets available in our modern world. Open minds will see the potential everywhere. Whether for hobby or business, there are ample pursuits to engage a curious mind. Be careful though of turning a passion into a millstone. Keep a few activities just for fun, without being tainted by chasing a dollar. I've done this with photography. Although I have the technical skills to follow this as a career path, I've made a conscious decision to never rely on this for income. This way, it stays fun and I only do it when I am in the mood, thus producing much better work and much happier me.

Similarly, just because I know how to use Photoshop, doesn't make me good at it, nor



Photo by John O'Brien

Artists can make good managers. Why? Because they often see things differently to the mainstream; they can imagine left field solutions that others may not be able to see; they are adept at innovating. This skill is invaluable in countless situations.

naturally good at art. Adobe's flagship software is powerful, yes, but it is just a tool. Like a paintbrush, the skill (and art) is within the creator using these tools. Tools like WYSIWYG, lighting consoles, pixel mappers and spectrum analysers are the technician's paintbrushes, enabling their inner Dali or Beethoven to tint the canvas of the stage.

Integral to my personal intersection of art meets commerce is this here magazine, who've given me the creative license to imagine and refine content like what you just read. Thank you CX and thank you CX readers, for indulging my inner raconteur and enabling endless rambling bullshit. See you when I get creating again next month.



Artwork by John O'Brien



# LEFT OUT IN THE COLD

SNIPPETS FROM  
THE ARCHIVES  
OF A BYGONE ERA

**No matter what side of the mix you've been on, either performing or tweaking knobs, most of us know how cold some audiences or even venue management can be. But reality really hits hard when you're left out in the cold, bogged and stranded in a snowstorm.**

Playing a hard-core repertoire of Thin Lizzy, Aerosmith, and Deep Purple in a country RSL will often elicit a cold response. Such was the case when an entire RSL audience walked out on my first metal band, totally unappreciative of the cool sounds emanating from our Marshall stacks. And who could forget the frigid look as the manager terminated the performance, summoning us to the office, coldly and begrudgingly counting out the money.

In the cold winter of 1978 our band did a couple of gigs at Iceland, which was the ice skating rink at Prince Alfred Park, Sydney. At Iceland you did the load-in during the ice hockey game, and the open-air stage was on the opposite side of the entrance. Ice hockey, known for player aggression and punch-ups on the rink, attracted a similar audience in the bleachers;

and we'd get abuse hurled at us having to lug all the gear across in front of them.

After the ice hockey game the venue was turned over to the skating public, and we'd be the background music. You might say the reception was as cold as the ice.

It was, however, a double booking by the Iceland management that left us without a gig for that week. I rang our agent who offered us a support gig on the south coast of NSW. At first the band didn't think it was worth doing, but being a skiing aficionado I convinced the band to combine the gig with a skiing trip. Since it was a support gig, we didn't have to lug our PA or lighting rig, and there was a vacancy at Lodge 21, a ski resort in Smiggin Holes; four bunk beds in one room, but we weren't complaining.

As support gigs sometimes go we got the ol' cold shoulder from the main act's crew at the south coast venue. I won't name the act, but it was a familiar drill: six par cans out of the 16 can rig and virtually no foldback. So with that gig behind us we headed off to the snow country.

It was the first time any of the other band members had skied, and since nobody wanted to take lessons I became the crash course instructor. One of the band (who shall remain nameless) fancied himself as a comedian on

the slopes; he didn't understand that being cool was an integral part of the ski scene. On our first T-bar ride up the slope he set his sights on a female gun skier garbed in you-beaut ski apparel who was rocketing towards us. As she sliced across the T-bar in front of us he waived his ski stock comically at her.

"Watch out, watch out!" he jested. But the skier was so surprised at his uncool demeanour that she totally wiped out, continuing to tumble down the slope.

***"You're going to get us arrested," I said.***

Marcia Hines was booked to play at a venue in nearby Perisher the next evening, so we made the trek in my Toyota HiAce van to see her. We arrived to find that her flight had been cancelled due to a severe weather warning; a blizzard was headed our way! The venue was all but deserted but we stayed, heedlessly imbibing while watching the house band until closing time.

Upon returning to the van, it became evident that the predicted blizzard was now a reality and in spite of the fact that the van was fitted with snow chains we didn't get far before we were bogged to the doors in snow. There were frivolous attempts by the guys to dig the van out, but the blizzard kept intensifying.



Lodge 21 Smiggin Holes

There was no identifiable road and he had only advanced a few metres trudging through deep snow when I hurried after him. The entire landscape was blanketed in snow, and the wind was so strong that the snow was being whipped horizontally. I held my hand up to my face to test the old adage that in a fierce blizzard you 'couldn't see your hand in front of your face'. It wasn't that far wrong.

*"Mate, I can't let you go. You're going to get lost and they'd never find you; you could die out there."*

A tussle ensued accompanied by an exchange of unprintable expletives before he relented and rejoined our marooned group at the van.

It was amazing how quickly the snow was piling up. And I was later to learn about snow drifts, which in addition to the falling snow, a drift is an uneven distribution of the snow caused by strong winds. The van was starting to bury in snow, and it was getting scary!

Fortunately, it wasn't long before we heard a distant roar and a 4WD with huge tyres equipped with snow chains and emblazoned with the insignia Kosciuszko National Park burst through the haze.

"Can you tow us out?" I asked.

"Are you kidding? If you guys want to get out of here you'd better climb in the back," the driver shouted, trying to lift his voice above the howl of the wind. So we piled into the tray on the back of the 4WD, which was already half-filled with snow, for our ride back to the Lodge.

The next morning I visited the NRMA station at Smiggin Holes, and being a member, I asked if they could help me salvage the vehicle.

"Sure," said the attending technician, and he handed me a shovel, adding, "You'll need this to dig your vehicle out."



Snowstorm

One of the guys didn't like the idea of staying with the van as the snow piled up. He was also complaining of not being able to feel his fingers, and convinced he had frostbite after the unsuccessful dig with his bare hands. So he declared that he was going to walk from Perisher back to Smiggin Holes, which was two kilometres away; a walk in the park on a

fine day, but a potentially deadly trek in sub-zero temperatures in a blinding blizzard.

"No," I said, "We have to stay on the road with the van until help arrives."

"What if nobody comes?" he said as he headed off.

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Band on the Road

Carrying the shovel, I walked the two kilometres back to Perisher but couldn't find the van. It's worth mentioning at this juncture that this was a company vehicle, and the company had a strict policy that vehicles weren't to be taken out of the metropolitan area on weekends or during vacations.

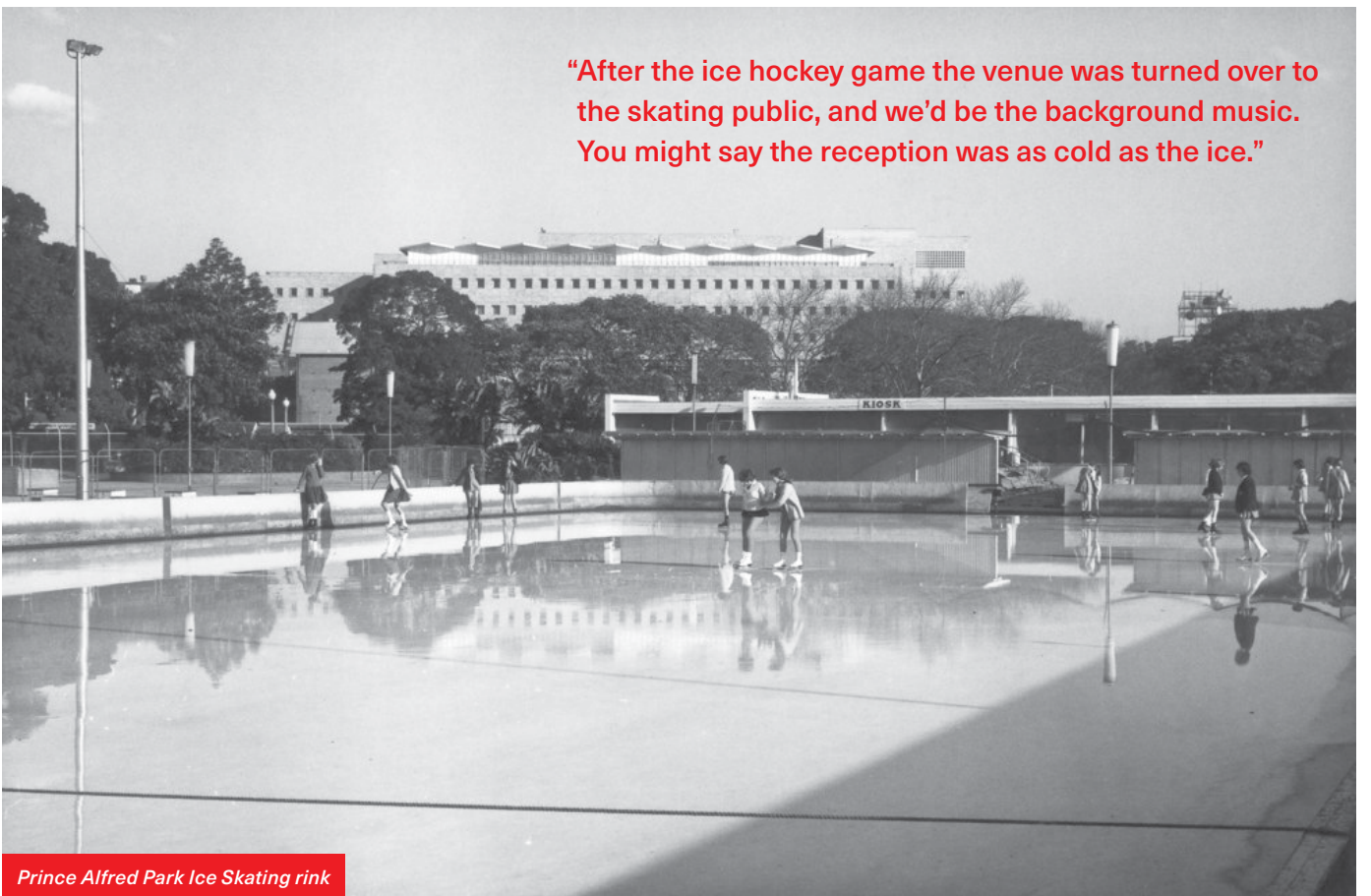
Whilst trekking back to the NRMA station I contemplated how I would explain the

disappearance of the company vehicle in the Perisher snow fields.

"The vehicle's gone. Can you tell me where it would have been taken?" I asked the NRMA technician.

"It hasn't been taken anywhere. It's under the snow; that's why I gave you the shovel," he said.

I again walked along the path where the road used to be until I came upon the white roof of the Toyota HiAce barely protruding from the snow. It took me all morning to dig the van out on my own, never begrudging my fellow band members enjoying their day on the ski slopes. Yeah right!



**"After the ice hockey game the venue was turned over to the skating public, and we'd be the background music. You might say the reception was as cold as the ice."**

Prince Alfred Park Ice Skating rink

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The lost technology and how to get it back

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A real-world guide

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An interview with the legendary Phil Manning

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