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Road test

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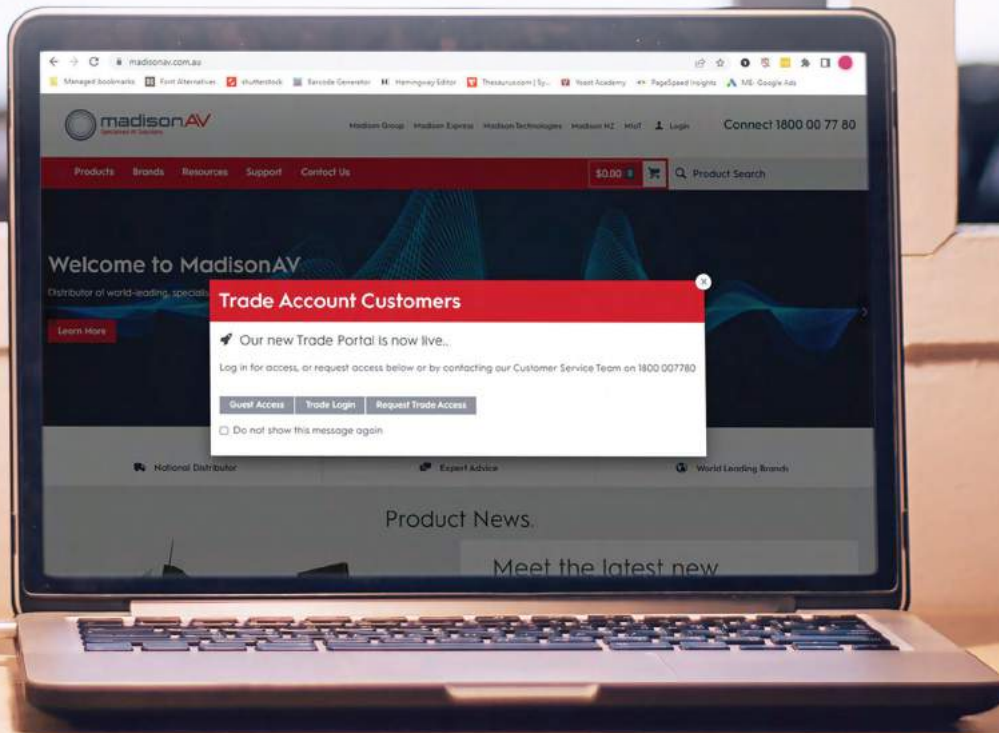


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PO Box 1045, Ascot Vale, VIC, 3032
Phone +61 (0)407 735 920
Email jason@vcscreative.com

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GROUP TECHNOLOGIES WELCOMES NEW DIRECTOR OF SALES



Shane Cannon

Over the past decade, GT's involvement in the integration market has grown substantially, encapsulating more supply to the Professional Audio installation sector than ever before. With this growth comes the appointment of Shane Cannon as GT's new Director of Sales.

Shane brings with him extensive experience in the live and installation audio markets, having served as Senior Executive Sales Director at leading technology solutions company Diversified (formally Rutledge AV) for over two decades. Helping steer the prominent industry provider across a range of audio visual and broadcasting solutions, Shane was instrumental in the successful delivery of commitments to a range of global-facing markets, including corporate, government, education, media, and major entertainment sectors.

A fundamental asset in the growth of Rutledge and Diversified over the company's lifespan, Shane assisted in moulding the multidisciplinary provider from a 40+ strong Melbourne office to what became one of Australia's leading integration specialists, with 375+ staff in offices across the country. As Rutledge's needs grew, so did their scope

of high-end audio solutions, where Group Technologies played a pivotal role as one of the company's pro audio suppliers.

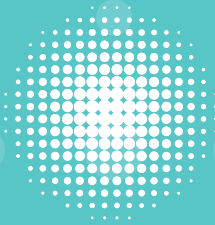
"Group Technologies and I have a pre-existing relationship of over 20 years, where I have had logistical and hands-on experience with their principal brands, including NEXO, RCF, DiGiCo and Quest. I am excited to begin contributing from the inside and look forward to what we will be able to achieve together. I'm thrilled to be joining a company with such a comprehensive portfolio of forward-thinking brands and a passionate team behind them," explains Shane.

"We're simply delighted to welcome Shane to the team at GT. Shane brings a depth of knowledge at the highest levels of AV integration in Australia, and we know that he will become integral in supporting our customers. We are very excited about the future of this department and are looking

forward to Shane utilising his expertise to provide top tier solutions for our partners," said Anthony Touma, General Manager of Group Technologies.

Beginning as a component-level repair technician for AV hardware in the early 90s, Shane is a qualified electronics specialist who brings his industrial knowledge to bear when navigating complex tenders. His technical aptitude is backed up by an extended network of active industry peers with whom he maintains constructive connections.

Shane has had extensive success in building business relationships, with a demonstrated proficiency in face-to-face communication, presentation and negotiation. This aptitude has led Shane into cooperative phases with some of Australia's largest performance venues, stadiums, convention centres, theatres, corporate bodies, education institutions and much more.



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Allan Brown and CMI's Corey Sleeman



CENTRESTATE PA UPGRADE

JBL VTX A8 array with Crown IT3500HDS amps

40 years is a long time in any business. That's about how long Centrestate Sound & Lighting have been providing event equipment hire to regional NSW. Over that time, director Allan Brown and his team have seen a lot of technologies, brands, and models come and go.

Located in Orange, NSW, Centrestate recently invested in a new JBL PA to lead their hire line-up. They were looking for a flagship rental PA system to replace system inventory that was ageing and becoming cumbersome. Allan is now

stranger to JBL, having cut his teeth with 4560s early on.

In the years since, their inventory has "been a bit of everything. We went with the JBL VTX this time because the jobs we are now doing require a substantial line array. Full-on 5,000 people type stuff. Our previous rig was only half the size and I had to keep on hiring extra boxes in."

Based around the VTX A8 series, and powered by Crown IT3500HDS amps, the new PA now

caters for all the larger shows at Centrestate. They were after a high quality, tour-grade rig and that is what they got.

They've also added many accessories to aide in ease of deployment, transportation and rigging. Apart from the array frames, the package from JBL distributor CMI included ground stack plates, transportation dollies and speaker covers.

These make set up and pack down easier, but Allan finds a real advantage with the VTX A8s in being able to "set your angles and



GEAR LIST

- 16 x JBL VTX A8
- 3 x CROWN IT3500HDS
- 2 x JBL VTX A8 AF – array frame
- 2 x JBL VTX A8 BP – ground stack base plate
- 4 x JBL VTX A8 VT – VTX A8 vertical transporter
- 4 x JBL VTX A8 VT CVR – vertical transporter covers

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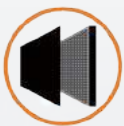


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everything, before you start to lift. That can be all preset on their pins, so you're not lifting a box and trying to find a hole to slot it into. And coming back down, you just click the levers out and it packs back down to a transportable 'array'."

Centrestate tried using some of their existing amps to drive the JBLs but found that, "You've got to go with Crown, which has all the software in it. You just program it straight in and away you go."

Like any smart operator, Allan did look around when researching the new rig. CMI had gear ready to ship at a price that fitted his needs. He expands; "I can't complain there. They did a really good job." And, after sales support has impressed him too; "They asked me for my thoughts on it after being used, and will be back showing new models soon."

Ultimately, the proof is in how it performs. For Allan, "the system itself is magic, there's no doubt about that. The transport of it, the setting up of it; all the crew like it. It's easy to get around, easy to adjust and it performs so well."

A great example of this comes from a recent gig, Stars Under the Stars in Parkes at Overture, where they used the VTX A8 rig for an open-air opera performance. One thing stood out to Allan; "The percussionist had all the little jingly bells. We were 60 metres back at front of house, and we were picking up all the little bells where I normally wouldn't with previous rigs. Getting detail that far back, it performed really well."

Impressing a seasoned veteran to that degree is testament to the quality of the current JBL range.



Photo supplied by Arts Centre Melbourne

ARTS CENTRE MELBOURNE BRINGS TRAINING TO QLD THEATRES

Arts Centre Melbourne has announced it will partner with Queensland Performing Arts Centre (QPAC) and Stage QLD to deliver a \$750,000 accredited industry training program for performing arts technical crews. The first-of-its-kind collaboration, funded by the Post-COVID Collaborative Funding Round, builds on Arts Centre Melbourne's Arts Industry Learning initiative, and Tech Connect training program.

The Post-COVID Collaborative Funding Round is a joint initiative of the Sidney Myer Fund, Gandel Foundation, Lord Mayor's Charitable Foundation, The Ian Potter Foundation and Vincent Fairfax Family Foundation.

"Arts Centre Melbourne's Tech Connect

program is a ground-breaking initiative as it is the only one in Australia that operates in a working theatre space. We are thrilled to deliver this successful program in Queensland where there is an immediate and ongoing need for an industry-based Registered Training Organisation. It's so important that we take a

leadership role in helping the performing arts sector recover from the long-lasting impact of the COVID-19 pandemic," says Arts Centre Melbourne Interim CEO Leanne Lawrence.

Tech Connect QLD training builds upon the Tech Connect Victoria program, funded by

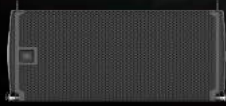


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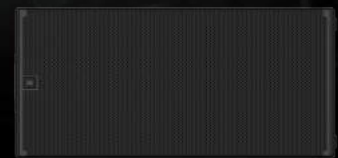
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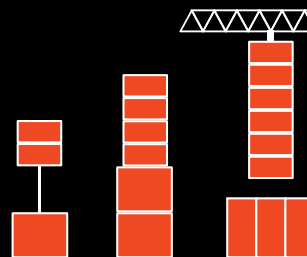
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Photo supplied by Arts Centre Melbourne

Creative Victoria, that has delivered training in regional centres including Horsham, Shepparton, Gippsland and Geelong. The Queensland program will provide and deliver accredited industry training that creates sustainable employment pathways for young technical crews within the arts sector to deliver the next generation of theatre technicians. The training model combines formal classroom-based study with structured mentoring in theatres, enabling trainees to work alongside the industry's top technical specialists, directors, designers and performers.

"Many young people aspire to work in the arts, but it becomes a reality for only a few. Especially for young people in the regions,

industry-relevant stage production skills training is scarce or non-existent. VFFF is delighted to support the Tech Connect partnership between Queensland Performing Arts Centre and Arts Centre Melbourne, to facilitate young people learning on the job in performing arts venues," says Vincent Fairfax Family Foundation Chief Executive Officer Jenny Wheatley.

"While we often collaborate with our friends at Arts Centre Melbourne to tour first-class international acts, it is wonderful to now work with them behind the scenes to build future resilience across the Queensland arts and cultural sector by supporting emerging artists and technical capacity. QPAC is

grateful for the support of the Tech Connect QLD funding partners, particularly Vincent Fairfax Family Foundation, and we look forward to commencing the program in early 2023," says QPAC Chief Executive John Kotzas.

"Arts Centre Melbourne's training program is the gold standard for traineeships within the Live Theatre sector and this program allows opportunity to be delivered to our regional venues whilst allowing trainees to also experience the workings of Queensland's premier performing arts precinct, the Queensland Performing Arts Centre," says Stage Queensland Technical Committee Chair Tim Panitz.

Arts Centre Melbourne's unique, nationally accredited Registered Training Organisation (RTO) Arts Industry Learning will provide training to Technical Supervisors (Certificate IV level) & Trainees (Certificate III level). The RTO will deliver face to face training and assessment requirements over annual 2–3-week designated block training periods with QPAC nominated as the training hub for the first year. For the following years, block training periods will align with Stage QLD conferences in other host/hub venues state-wide.

Arts Centre Melbourne training will also include industry-specific mental health sessions delivered by the Arts Wellbeing Collective (AWC). The AWC brings together the expertise of mental and allied health professionals with industry insights from its members to co-design resources and services that support positive mental health for people working in the performing arts.



Tech Connect 2019 in Horsham. Photo credit Sharron Cronin.

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CHAMELEON FINALLY GET TO GO TO THE LOGIES!

The 62nd Annual TV Week Logie Awards ceremony was held on 19 June 2022 at The Gold Coast Convention and Exhibition Centre in Queensland, and broadcast live on the Nine Network. It is the first ceremony to be held since 2019 due to the pandemic.

There were two important firsts this year; the event was held at a new venue, and for the first time ever, Chameleon Touring Systems provided all of the lighting and rigging!

Lighting Designer for the event was Shane O'Dwyer with Daniel Saveski and Megan McGann as Lighting Programmers/Directors. After designing the show's lighting for the past eight years, Shane was thrilled to design a rig in a venue with increased height.

"It was a lot of fun," he said. "The set could be a lot taller which made the wider shots much grander and gave us much more to play with."

Shane worked closely with set designer Mark Dyson to ensure a cohesive, classy outcome, saying he was excited by Mark's design for this year's event.

"He created a 'floating light box' look that I was keen to add to around the room as well as above the stage," he commented. "The floating light box consisted of Claypaky Scenius

Unico, Vari-lite VLX washes and GLP JDC-1s. I then chose black truss which essentially 'disappeared' on screen so you only saw the lighting fixtures."

The rig was dominated by Claypaky fixtures with Sharpy Washes around the room located on curved trusses in front of LED screens, also used as general wash. Claypaky B-EYE K10s were located on the stage floor and were the workhorses, popping up all through the show. Claypaky Scenius Profiles acted as the key



lights for stage washes and pick-up positions for Steadicam shots. Claypaky Sharpy Beams were used as table overheads with extra fixtures creating overhead beam looks. Claypaky Mythos were located on the front truss to create a finish to the set along with LED Molefays.

Robe BMFL LT Ground Control Followspots were used to pick up presenter walk-ons

and walk-offs, while Martin MAC Viper FX dominated the room with breakup gobos over the audience.

GLP Impression Bar 10s were around the orchestra with more used for Jimmy Barnes' set, located on the band risers. Ayrton MagicBlade FX were added to the floor package for Jessica Mauboy's performance.

A massive amount of 258 ShowPRO TrussMates were utilised, with Daniel admitting they were his favourite fixture look. "Having such a large matrix of them up in the roof created a 'star field' which gave us some very interesting looks," he said. "It may be one of the simplest and smallest fixtures we had on the show but the big looks we got when

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GEAR LIST

3 x MA Lighting MA2 full size

1 x MA3 full size

2 x MA3 Compact XT

4 x MA2 NPU

6 x MA1 NSP

54 x Claypaky Sharpy Wash 330

10 x Claypaky B-EYE K10

46 x Claypaky Scenius Profiles

39 x Claypaky Scenius Unico

102 x Claypaky Sharpy Beam

31 x GLP JDC1 Strobe

4 x Creamsource Mini

15 x Ayrton MagicBlade FX

258 x ShowPRO TrussMate

7 x Claypaky Mythos

29 x GLP Bar 10

3 x Robe BMFL long throw followspot

30 x Vari-lite VLX wash

9 x LED Molefay

Red Carpet

Lighting Design by Shane O'Dwyer and Daniel Saveski

Lighting Director Patrick Neff

1 x MA3 light

1 x MA2 onPC command wing

19 x ShowPRO EX36 wide

2 x Robe Patt 2017

21 x Sunstrips

2 x 4K HMI

16 x Chauvet ColorDash HEX12

21 x Chroma-q Colorforce72

5 x Portman P1

6 x Prolights ECLPanel TWCJr

20 x Prolights ECLPanel TWC

9 x Robert Juliat Dalis 862

12 x ShowPRO Hercules

6 x Claypaky Sharpy Beam

8 x Robe BMFL Blade

4 x Creamsource Mini

Chameleon Bump in Crew

Tim Alder, Greg Davies, Scott Black, Kishan Maisuria, Henry Ludgate, Michael O'Connor, Angus Ludgate, Sam Turner, Bob Hsiung, Troy Spence, Terrie Coggins, Cooper Corcoran

Chameleon Logies Inside Crew

Scott Black, Kishan Maisuria, Henry Ludgate, Michael O'Connor

Chameleon Logies Red Carpet Crew

Greg Flood, Ethan Harvey, Luke Spence

running bitmaps and general effects through them were fantastic."

The most challenging aspect of the show for Daniel was the sheer size, with 63 Universes all lined up in the correct spot; 2371 fixtures and 19698 parameters to be exact. He had to make sure each truss and fixture would fit in the correct stream that would make sense from a systems point of view.

"Everything is done on-site with no pre-programming apart from getting our console layouts right off-site," he added. "For the first few days whilst the rig is getting built, Megan and I spend some time building our presets for each fixture type on the floor, ensuring our building blocks are ready to go for the programming stages."

The event was the first time that Shane has ever worked with Chameleon and he was impressed; "It was a great experience and they worked very hard. It was a big show," remarked Shane. "They were on site the whole time and put in a lot."

"Working with Chameleon was fantastic and the crew were great," agreed Daniel. "Nothing was a problem and any issues we had on-site were fixed straight away."

Chameleon also provided all trussing, rigging and power distribution

Colourblind supplied the Intelliflex LED tape as well as two MA3 compact XT for the media servers.



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ROYAL PARTY!

Cameo illuminates the Queen's 70th anniversary at Buckingham Palace



With more than 16,000 street parties, the people of Great Britain celebrated the 70th anniversary of Queen Elizabeth II's reign during the first weekend of June. But by far the biggest show took place in front of Buckingham Palace in London. 22,000 spectators gathered in front of the three stages where Queen & Adam Lambert, Rod Stewart, Alicia Keys, and Ed Sheeran played, among many others, and another 13.4 million watched the BBC's mega-event live on TV. For the lighting of the main stages, Buckingham Palace and the Tree

of Trees sculpture designed by Heatherwick Studio, Version 2 Lights supplied more than 600 Cameo spotlights, including over 60 of the new hybrid outdoor all-rounder OTOS H5.

In total, the forecourt of the world-famous Buckingham Palace as well as the palace itself was lit by 62 OTOS H5, 156 ZENIT W600, 392 FLAT PRO 7 G2 and 72 FLAT PRO 12 G2. The lighting design was done by Nigel Catmur. Nigel used the Cameo spotlights for the numerous live performances of the biggest

British pop stars as well as for the moving speeches of heir to the throne Prince Charles and his son Prince William. In particular, the new superstars in the Cameo portfolio, the OTOS H5 Beam-Spot-Wash Hybrid Moving Heads, played a central role in the visual staging of the globally broadcast anniversary party. Prominently placed on high truss platforms, the OTOS H5 framed the action wonderfully and sent impressive beams into the royal evening sky.



The ZENIT W600 LED Outdoor Wash Lights also played an important role in the lighting design of the platinum party. With their massive luminous flux of 21,000 lm, the wash lights ensured a strong and uniform illumination of the stage in daylight and in the evening. In addition, the Cameo FLAT PRO 12 G2 RGBWA LED outdoor spotlights have

been integrated into the set base via circular cut-outs. The even more compact FLAT PRO 7 G2 also set coloured highlights at various positions in the set.

The members of the royal family themselves provided very special moments. In addition to Prince Charles, who paid tribute to the Queen's

lifelong, selfless service, Prince William in particular impressed with an emotional appeal for environmental protection and the power of cohesion in difficult times.

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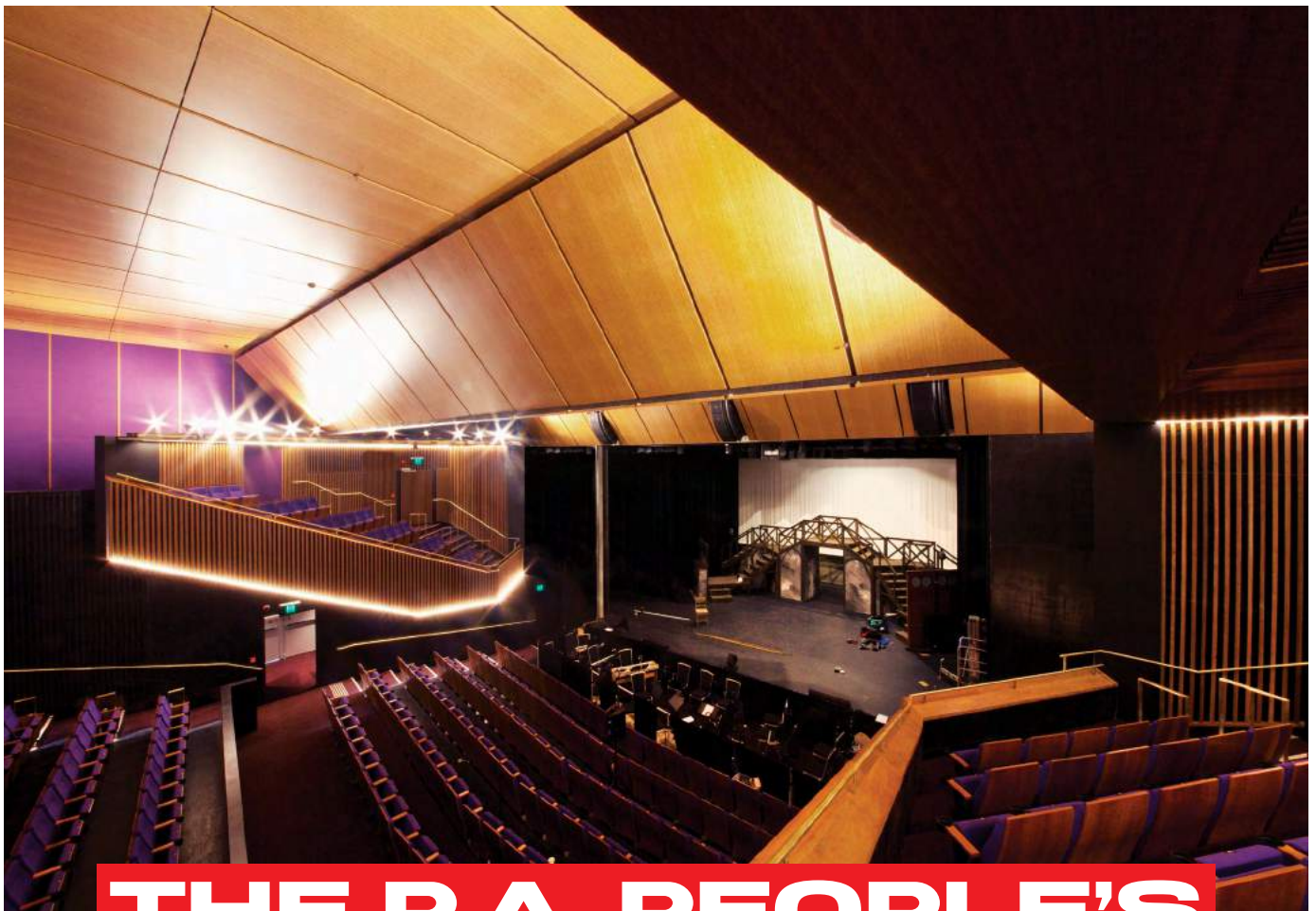
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THE P.A. PEOPLE'S VENUE ENGINEERING TEAM IS READY

Many readers of CX would be aware that Sydney's The P.A. People has just celebrated their 50th year. Well known as a Tier 1 provider of installed audio systems in large venues and as one of a handful of Event Communications specialists world-wide, The P.A. People has recently expanded its operations to incorporate a new Venue Engineering team.

Five months on from its launch, the new team is poised to show a range of new TheatreQuip products alongside its existing range of tools and audio products, and to reveal several new distribution arrangements for specialised theatrical engineering products at the forthcoming Integrate and ENTECH trade shows.

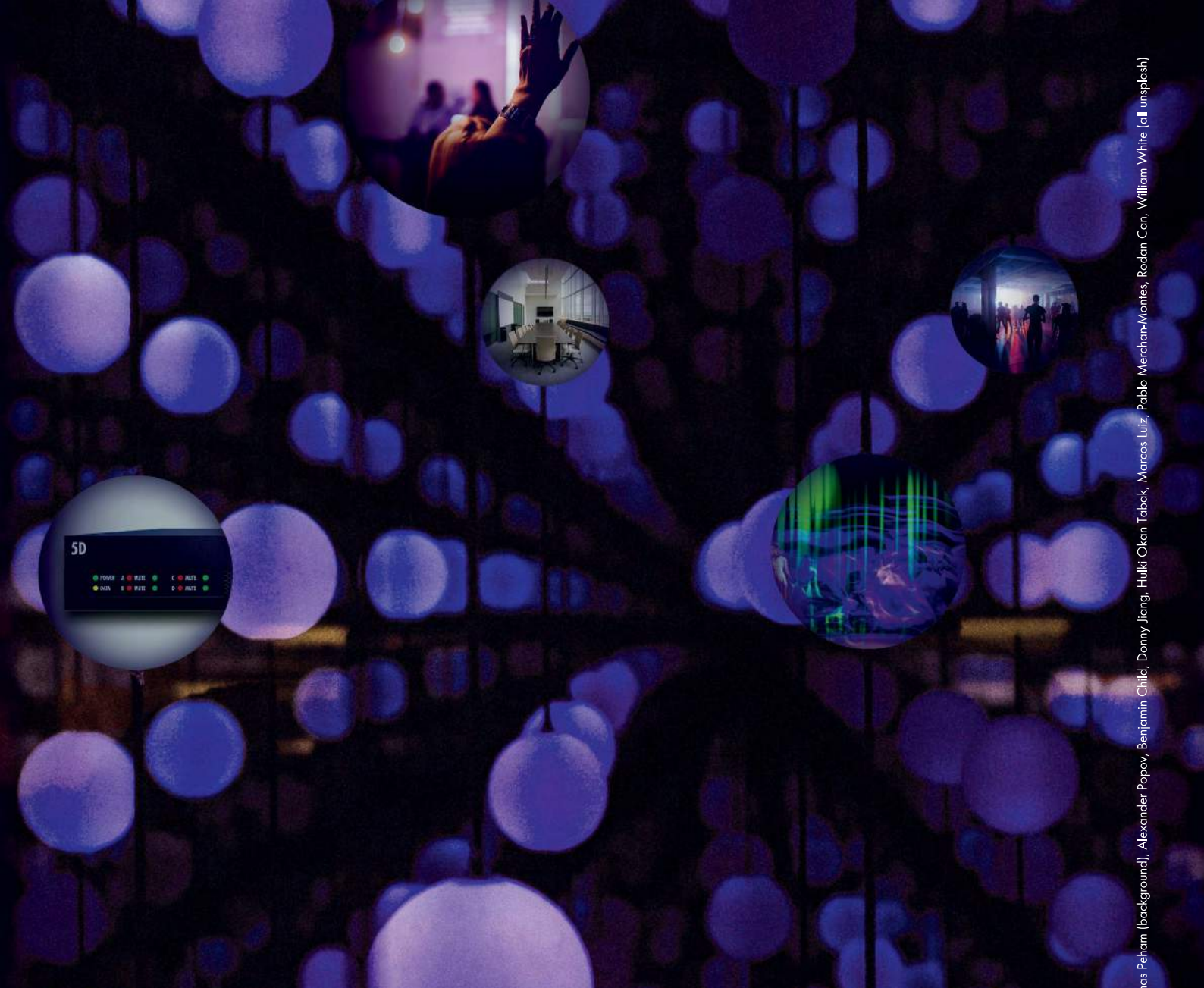
For many years The P.A. People have developed a reputation as a specialist in the provision of stage management, audio and lighting systems in theatre spaces around the country. They would work alongside other specialist engineering firms to deliver a complete theatre package including drapes and track, over-stage counterweight systems and hoisting, and orchestra lifts. In the midst of some significant changes in the local market and the COVID-19 pandemic, the company saw an opportunity emerging to establish their own Venue Engineering team.

The first step in establishing the new team was the acquisition of TheatreQuip. TheatreQuip can trace its origins in the Australian theatre industry back over thirty years, and it brings a wealth of theatrical experience and product to The P.A. People's new Venue Engineering portfolio, including a comprehensive range of drapes, curtain tracks and accessories.

Around the same time as the company was in discussions with TheatreQuip, it was revealed to the market that Jands Venue Engineering was to be sold to its main competitor. Given that JVE was the largest player in the local industry, The P.A. People felt that this consolidation in the market might be an opportunity to use their experience and engineering approach to create a new team with a focus on innovative and standards compliant solutions, proven products from around the world, and the very best in Australian design and manufacturing.

It was not too long after the sale was announced that the phone started ringing. Under the leadership of Peter Grisard, The P.A. People's Venue Engineering team already comprises some of Australia's best theatre practitioners. So far, Peter has been joined at The P.A. People by Andrew Mathieson in the role of Chief Engineer, Michael Rafferty, Dallas Winspear, Simon Steinfurth, Jay Wardrop, and Tim Pike as State Manager, Queensland.

The team has hit the ground running with several significant projects in the pipeline including the design, manufacture, and installation of a full counterweight system at Sutherland Entertainment Centre, provision of drapes, tracks and lighting bars for the new Bondi Pavilion, and a full theatrical fit-out including an adjustable acoustic shell and a motorised fly tower for a new multi-purpose venue in South Australia. Coupled with their expertise in the systems-orientated part of



Photos: Thomas Peham (background), Alexander Popov, Benjamin Child, Donny Jiang, Huki Okan Tabak, Marcos Luiz, Pablo Merchán-Montes, Rodan Can, William White (all unsplash)

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the theatre market, The P.A. People are now well positioned to offer a complete solution for venues and theatres across Australia and New Zealand.

“Key to developing the capability of the new Venue Engineering Team has been to secure a number of international agencies for the distribution of specialised theatrical products,” said Chris Dodds, Managing Director of The P.A. People.

The first of these to be publicly announced is the company’s appointment as an authorised systems integrator and installer of SERAPID Rigid Chain Technology throughout Australia and New Zealand.

One of the core elements of many stage machinery projects is the horizontal and vertical movement of heavy loads for applications such as orchestra platforms, adjustable seating systems, and complex stage structures.

Andrew Mathieson, Chief Engineer Venue Engineering at The P.A. People commented, “Members of our engineering and design team have had the opportunity to work with products from the world’s best actuator manufacturers over many years and on many projects. SERAPID is one of the best, and their product range is the most versatile for venue applications. We are delighted that SERAPID has chosen to partner with The P.A. People and our Venue Engineering team as our supplier of linear actuator technology.”

“While The P.A. People are a relatively recent entrant into the world of Venue Engineering in Australia, their clear focus on engineered solutions, safety and compliance, coupled with the demonstrable expertise of their new Venue Engineering team have made their appointment as a SERAPID authorised systems integrator and installer a logical choice,” said Robert Degenkolb, Managing Director of SERAPID Singapore Pte. Ltd.

The second significant announcement is that The P.A. People have been appointed exclusive distributor of MOVECAT Motion Control products in Australia and New Zealand. Movecat are Germany’s number one supplier of specialist entertainment hoists including D8+ and BVG-C1 rated chain motors and SIL3 compliant motion control systems suitable to lifting and moving loads over audiences.

Over the past three years, The P.A. People have worked with MOVECAT products on a number of hoisting projects, including the design and supply of the 10-tonne motorised gondola supporting four LED screens at Sydney’s Ken Rosewall Arena. Supported by four 2.5 tonne MOVECAT PlusLite chain hoists with 25m height of lift, the system is rated D8+, but also features full load monitoring and position encoders on each hoist for additional safety and a unique bespoke cable management system.

“I first saw the PROstage+ hoists a few years ago,” said Chris Dodds. “They are significantly lighter than any other D8+ hoist on the market; around 85Kg for a one tonne D8+ hoist complete with 36m of unique ‘D’ shaped chain is remarkable.”

“We are delighted to appoint The P.A. People as our new Australian distributor,” commented Peter Streicher, CEO for MOVECAT. “MOVECAT has a large installed base of chain hoists and control systems around Australia and New Zealand. There have been a lot of changes in the local marketplace over the last twelve months. The P.A. People have the knowledge and understanding to represent our product and to support our existing and new customers. We look forward to a long and productive relationship with The P.A. People,” he concluded.

The P.A. People has also secured distribution rights for the range of specialist screens, fabrics and flooring products from industry leader Gerriets of Germany. The company also

distributes a range of specialist AV products, rigging accessories and test equipment from Audio Press Box, Teqsas, Eclipse Broadcast, CableJog, Nixer and CTP Systems, all of which will be on display at both Integrate and ENTECH.

Meanwhile the company has also been busy developing a complete range of new Australian designed and built TheatreQuip products. Over the next few months, TheatreQuip will release and show their new range of theatrical drum and pile wind hoists, new fully extruded theatrical and architectural lighting bars, all alongside their existing range of drapes, tracks and accessories.

“We have had a very steep path since we announced the formation of this team in February, but we feel we are now well placed to provide solutions, products and advice to the industry. Our team is focussed on providing innovative and standards compliant solutions, proven products from around the world, the very best in Australian design and manufacturing, all backed by The P.A. People, an organisation that has been trading continuously for 50 years. We are confident that the expertise and experience of the team we have been fortunate to assemble is the best in the country. We look forward to the opportunity to meet in person with the consultant community, clients, end users and dealers at the Integrate and ENTECH tradeshows later this year,” Dodds concluded.

Michael Rafferty, proprietor of the TheatreQuip business since 2001, commented on joining The P.A. People team. “I am delighted that the TheatreQuip business is now part of The P.A. People,” Michael explained. “I am looking forward to working together to deliver the very best staging solutions for venues and contractors alike. Chris has put together a very experienced team with a lot of familiar faces as well as some new ones, and we have hit



PAP Ken Rosewall Arena Gondola



the ground running. We are looking forward to creating a new chapter for The P.A. People over the next fifty years by providing the best Venue Engineering solutions in Australia.”

Peter Grisard is also enthusiastic about his new role at The P.A. People; “It has been great to join a company that is so well respected in the marketplace. In my previous role I have worked with Brett Steele and his team extensively, but I had not realised the depth of engineering that the company has developed over its fifty years. Everything they do is engineering focused, from their events and service teams through to the Installed Systems division. The expansion into Venue Engineering is a natural fit for The P.A. People.”

The P.A. People also offer sales, hire service, installed systems and event communications across a broad range of sectors. They can be found at the Integrate Expo on stand C23.

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MIXES THAT PUNCH

Don't let compression Distressor your mix (see what we did there?)

Do you ever feel like your mixes lack power and punch? Maybe they start out with plenty, but eventually wind up sounding flatter than a freeway. If this sounds like a predicament you've faced more than once, you're not alone. This article is specifically for engineers striving to preserve the punch in their mixes right through to the final master.

There's nothing worse than realising, just before you're ready to print a mix, that the punch from a song's rhythm section has vanished like the mirage off a hot road. Only now, when you've armed play/record on your favourite mixdown device, have you suddenly realised that the snare is nowhere, or the kick sounds like an insipid pillow strike.

Have you been asleep at the wheel these last six hours or has this catastrophic change been a slow drift away from your mix fundamentals while you've inevitably focussed on other things?

It's the latter to some degree, typically, although there are usually other processes at play here that have slowly chipped away at your punch and dynamics without you being fully conscious of it. Occasionally, as a mix develops, you can misread how best to present the dynamic elements of the track, hammering them with compression early on, only to later realise they would have been better off with none at all. Did you try the drums without compression, or did you just apply your default mixdown mentality; "Must compress the drums! Must compress the drums!?"

It's a frustrating feeling when you suddenly realise that the 'punch' of your mix has taken a leave of absence. Here's a few ways to combat its disappearance.

The Master Bus

Starting with the crudest, most influential control measures we might have in place, often the master bus compressor contributes to a severe lack of dynamics and punch if it's set incorrectly or ignored for hours. Typically it's hidden from view 95% of the time, which doesn't help!

It might be working too hard (harder perhaps than when you first set the parameters), be set to attack your signal too quickly, release too slowly, or even be the wrong compressor for the task at hand (they're all a bit different). When a mix bus compressor is any of these things it can easily rob your mix of punch and life.

The quick remedy here is to bypass the bus compressor, temporarily releasing your mix from its ham-fisted clutches. If the song explodes back into life, then great. You've found the cause of the problem and can make moves to resolve it; adjust the settings afresh so the unit's no longer clobbering the audio, or maybe even ditch it altogether.

The same logic applies if you have a limiter or multiband limiter/compressor in the mix bus chain. Limiters in particular can annihilate your dynamics, impactful sounds like kicks and snares more so than virtually any other element. These signals are fundamentally about the transients. Take that aspect of the sound away with a limiter, and you're effectively just turning these instruments down. Maybe this is your problem.

Channel Compressors, Limiters & Sidechains

Individual sounds on individual channels or groups can suffer a similar fate during mixdown, although here more specifically, the loss of punch might be worse. While mix bus compressors can sometimes make a mess of transients, they typically do so by turning everything down. In extreme cases your whole mix may be forced to 'duck' as the kick and snare, for example, push the rest of the instruments down as one. Although, in

an ironic twist of logic here, ducking of this type can serve as a sonic weapon if used with care and specific intent. Slightly overcooked kick and snare levels will trigger a mix bus compressor to push the other instruments back just enough to allow the driving drums to dominate the soundstage. Used incorrectly, however, and the drums themselves will be flushed down the same toilet as the rest of the instruments.

On individual tracks, too much control can quickly smother the impact of a sound, particularly if it's a fundamental component of a song, like a kick drum or snare. When these are held back too much on their individual channels or subgroups, they can quickly be reduced to wallpaper. That's okay if your preference is for these elements to behave as such, but if you'd prefer them to sound like they're tearing through said wallpaper with punch and attitude, then perhaps not!

Often it's a delicate dance between these two types of dynamics control. Some channel compression (but not too much) combined with some action on the mix bus (but not too much); that works best. Just don't forget to keep asking yourself the simple question: 'Why am I compressing these drums so much if I want them to punch?'

Then there's a third process; sidechaining a sound (or group of sounds) to which you might add more extreme levels of compression and distortion. By choosing to create a bombastic sidechain mix of, say, drums and bass, putting these elements through a more severe compressor/limiter and returning this signal back into the mixer, you can add aggression, excitement, power and 'attitude' to your mix without adding too many wild dynamics. Sidechaining punchy elements and controlling them heavily with compression (the beneficial side-effect of which is distortion) allows you to increase the apparent density, as it were, of things like drums, creating the perception that they're stronger, louder, more consistent and vivid, without them increasing substantially in volume. By sidechaining your punchy dynamic elements, you get them to pop and project more attitude, whilst making the overall mix

flatter and less dynamic. This is particularly important if you want to drive very small speakers whilst preventing them from clapping out under the weight of too much dynamic.

Phase... Again!

Another great robber of dynamics is phase. Indeed, if it's severe, a phase issue is almost guaranteed to turn the dynamic, percussive elements of your mix into, harsh, thin, impotent and often strangely inconsistent sounding garbage.

The science behind this is simply the action of sound waves combining to partially or fully cancel, rather than reinforce, one another, thus reducing their amplitude and therefore impact. Particularly with drums (although phase problems are by no means restricted to this complex instrument alone – almost anything can exhibit or develop phase problems), multiple mics can wreak havoc with the power and punch of a drum sound.

With acoustic drum kits in particular, always check for phase: every time you add an effect, include extra mics, add reverbs, or induce phase incoherence with EQs and compressors, taking particular care to make sure your DAW's delay compensation is on and working the way it should. Make sure, for example, that the power of your kick and snare sounds aren't undermined by out-of-phase overheads. If things go soft, or thin, or lack vitality the moment you turn the overheads up, you have a phase problem that needs rectifying. The same goes for every other mic on the kit. Test each additional mic to make sure it's reinforcing the fundamental power of the whole kit, not just of the drum it's closest to.

Leave Some Things Alone!

One of the more straightforward ways to preserve the punch in your mixes is to leave some of the instruments alone, particularly in respect of their dynamics! Sometimes mix engineers get thoroughly carried away with trying to control every single element of a mix to the eventual demise of a song's overall dynamic push and pull, by almost literally stopping the arrangement's capacity to breathe. Mix engineers (and I'd include mastering engineers here) can sometimes undermine a song's natural highlights by fighting against every moment that pops, dominates or exaggerates the arrangement. Let's not forget something vital here folks; songs live for those moments! Snuff them out with compression and severe limiting at every juncture and you may just consign the song to the scrap heap.

Mix Order & Fader Levels

Lastly, if a lack of punch and power is something you suspect your mixes suffer from habitually, rather than occasionally, then maybe other issues are at play here. Assuming

you don't have an undiagnosed technical issue in your system, perhaps it's time to rethink (or reimagine) your process. Two obvious suggestions I have here in this regard are 1: Try working on things in a different order of mix priority, and 2: Learn to push your levels around far more with an ear for experimentation.

With regard to point 1; far too many people work a mix from left to right, with little or no thought given to why, and the vast majority of these engineers have the kick drum on Channel 1. Why? No-one remembers...

If you're in this category, don't be insulted, and certainly don't despair. When you establish your drum sounds first, either out of habit or ritual, their punch and volume can often be overtaken by other instruments later. Like a runner who leads early in a race, looks the goods but then gets swamped in the home straight, your drum tracks shine early but are overrun towards the end of the race. If you want your drums to punch and sound less like

wallpaper by the end of proceedings, consider working on them last!

Regarding point two: faders are the quickest way to turn something up that's drifted into obscurity. Don't be afraid to push faders around... like a little brother. Too many engineers get progressively more gun-shy about moving faders around too much once a mix starts to take shape. Bollocks to that. Get your hands on some faders and go nuts with them, particularly if the mix feels lacklustre. Don't play balances safe all the time, intellectualising their relative levels like a scientific doctrine. You're at the helm, steer the course you want to take without fear or favour. You won't hit rocks, but you may just rock!

Andy Stewart owns and operates The Mill studio in Victoria, a world-class production, mixing and mastering facility. He's happy to respond to any pleas for pro audio help... contact him at: andy@themill.net.au or visit: www.themillstudio.com.au



Mixing Rock is a balancing act



THE COME TOGETHER TOUR

The Come Together Tour is one of the first tours off the rank as promoters and production managers navigate the entertainment world post COVID restrictions. Simone Williams and Michael Knapp share their thoughts before the tour kicks off.

The Promotor: Simone Williams, Liberty Stage

The challenge for a boutique promotor lies in capturing audiences as a glut of postponed and new events compete in an uncertain market, "We've gone from famine to feast. We are in a highly competitive, very crowded market and after two years of no income, risks are high. We cannot afford to lose money. Add to that rising costs of flights, accommodation, and production, and no one's business model can involve reducing ticket prices."

Simone's solution is to explore niche products, "We are focusing on finding something that sits outside of the general offering. I've got my thinking cap on all the time!" The Come Together Tour fits that brief. Great albums covered by New Zealand's top musicians. The concept was born during the first lockdown, "We wanted to develop something that required only local resourcing and provided opportunities for New Zealand talent." Goodbye Yellow Brick Rd, Sticky Fingers, Live Rust, Brothers In Arms, and Abbey Road went

ahead in-between lockdowns and achieved stellar reviews and over 25,000 concert goers, "It was one of the most rewarding things we have been involved in, with a huge sense of camaraderie." Postponed from 2021, Rumours gets underway in July and the next tour starts in August with Bowie's Ziggy Stardust, then in October with Tom Petty's Damn the Torpedoes and finally in November with The Beatles' White Album.

Keen to promote emerging talent and discover new exciting combinations, Simone

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Rumours set up

approached Christchurch-based Adam Hattaway encouraging him to shift from the alternative space into the mainstream and get in front of new audiences. He joins Jon Toogood, Delaney Davidson, Deva Mahal, Anthonie Tonnar, Lou'ana, Milan Borich, Dianne Swann, Brett Adams, Matthias Jordan, Sam Scott, James Milne, Alistair Deverick, Mike Hall, Finn Scholes and Nick Atkinson with Jol Mulholland as Musical Director.

The last few weeks have seen good ticket sales but booking patterns are unpredictable, "Usually you would expect a certain amount sold by this date, and another big wave by this date, but everything has gone out the window now. There are no benchmarks, I'm just riding the wave!" Simone's gut feeling is that tickets will sell closer to the date of shows than pre-COVID as audiences wait until they are sure that they won't be sick or in isolation, "I'm consistently adjusting the marketing approach."

Competition and the vagaries of the market aside, Simone is overwhelmingly glad to be back in the saddle, "There is a wonderful community feeling within the industry in New Zealand. We have our own regular suppliers and contractors, so we have felt their pain. We all want to support each other and help everyone to survive. After the last two years of uncertainty, having no sense of purpose and not knowing when it was all going to end, there is a really good feeling to be back at it."

The Production Manager: Michael Knapp

Michael Knapp has worked alongside Simone for over fifteen years and acknowledges the success of the 'Come Together' model, "Simone has really fought to survive and to keep our industry and the musicians going. The historic albums concept has captured the over-forties market. Many of the audience who are coming to Rumours will have seen Fleetwood Mac in 1974. That's the kind of niche businesses need to survive in the market, especially once the international acts start to arrive."

Michael's production caters to the audience too, with sepia-tinged visuals, vintage amps and Par Cans galore, heaven to the self-acclaimed Mr Par Can, and very handy in light of COVID-related supply chain issues.

Speaking two days out from the first Rumours show and having worked on a show last week, Michael is already adept at dealing with production post-pandemic, "The major impact has been on staffing. The business owners and designers have clung on, but the foot soldiers have been forced to find other options. Venues and suppliers have lost the people who get everything from A to B, who plug this into that, who make it happen. Some have shifted into the movies, others retrained, had a family, or moved out of cities."

Michael counts himself fortunate that he has

a long relationship with suppliers and venues from as far back as 2016's The Last Waltz Anniversary tour, "We travel light; just myself and a front of house engineer, and I have been able to rely on our suppliers to ensure everything is in place in every city. Western Audio, Sound People, AC Lighting, NW Group, Oceania and Hang Up have all been amazing. Our venues – Auckland Live, Isaacs Theatre and Wellington Opera House - have also prioritised us as they know we are regular. But you still feel it in the air and sense that things are very thin on the ground."

Michael supports suppliers and venues taking on as many shows as they can to recoup the losses of the last few years, "I try and give as much notice as I can but if someone hasn't got what we need, it isn't the end of the world. I feel as if there is a new sense of cooperation in the sector post-lockdowns. No one complains, we just come up with a plan B. It reminds me of putting shows on in Christchurch after the earthquake. There is always another way to hang or fly something, and there's always Par Cans!"

He is seeing the solidarity in the workplace too, "People are really looking out for each other. If it's been a while and a tech is having trouble patching a cable, we step up. Where time is getting tight, someone finds another loader. People are being really proactive. Everyone is aware of the stress that staff have been carrying and we are all trying to ensure that



Simone Williams, Director, Liberty Stage

being back at work is as enjoyable as it can be.”

Sickness is another threat facing all shows, “Last week we lost a French horn player and had to transpose the part for trombone, a drummer was replaced the day prior, and we lost a violinist on the day itself. And it was the same for crew. We are very careful, wearing masks and adhering to health and safety protocols but that bug is a menace and you have to be ready for plans to change.”

The bugs have a knock-on effect on logistics too, “Travel is a minefield at the moment. Flights are being cancelled, not just because of the weather but due to staff shortages. Luckily Liz at Liberty Stage is like an air traffic controller and expert at rerouting us!”

Flexibility is key, in terms of gear, staffing, well-being, even getting there and away. Michael recalls Jon Toogood on the Sticky Fingers tour just prior to the last lockdown telling the audience if you want to do some dancing, you need to do it tonight, “There is still a sense of making the most of every show, because you aren’t a hundred percent sure that tomorrow’s show will go ahead.”



Rumours - Auckland show. Photo credit Ivan Karczewski.



Rumours set up



Michael Knapp, Production Manager, The Green Room Ltd. Focusing 18 x 6 bars of Par 64 cans along with the Kiri te Kanawa Theatre house rig (Aotea Centre, Auckland)

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THE PICTURE OF DORIAN GRAY

The tech of the world-leading, game-changing production

Sydney Theatre Company's *The Picture of Dorian Gray*, presented by Michael Cassel Group, has completely redefined what is possible on the stage. With Eryn Jean Norvill playing all 26 roles, a dizzying combination of ultra-precise live camera work, motorised LED screens, totally novel staging, live image manipulation, and unmitigated technical audacity combine to create a piece that will change theatre practice globally.

Every rule and limitation of theatre is shattered and pulverised before being reshaped into something completely new. Sets are positioned upstage *facing away* from the audience. Millimetre-precise blocking on the part of both the star and the crew see the performer believably interacting with up to seven other versions of herself on multiple moving LED screens, even handing herself props thanks to some incredible Assistant Stage Managers.

Every new section of the show introduces another technique that no stage has ever seen before. Every night of the show runs in

both Sydney and Melbourne have erupted into a standing ovation. I was ready to give it a standing ovation after 20 minutes. This production is an artistic and technical masterpiece and was completely created in Sydney by Australians. It will conquer the world.

Live Video Pioneers

Celebrated director Kip Williams adapted the text of Oscar Wilde's 1890 novella for this production, cannily understanding that the themes of vanity and self-obsession translated perfectly to the modern visual language of

screens, Instagram, and Snapchat. Kip has made extensive use of live video throughout his career and intended *Dorian Gray* to be a tour-de-force in the use of the technique.

Video Designer David Bergman had worked with Kip and live cameras previously, most notably on Sydney Theatre Company's *A Cheery Soul* in 2018. "With *Dorian Gray*, we deliberately set out to make the most exciting and technologically sophisticated show that any of us had ever worked on," says David. "We were working off the back of smaller productions that had used similar tech. Kip had done a lot of shows using live cameras, but none of us had attempted anything this complicated before. The initial creative conversations were about finding the most exciting things we could think of from an audience point of view, and incorporating ideas from films we love."

The show begins with the actor addressing the audience with one LED screen hanging centre in portrait mode. As the show goes on, more LED screens are introduced and fly, track,

move, combine, break apart, and interact. "All of the video techniques and movement lead the audience through a visual journey of how the 'language of the cameras' works," explains David. "And we constantly change the rules through the show. It keeps it exciting for the audience and keeps the crew on our toes. We can never rest, and the next chapter is always the next step up."

The Camera Choreography

Three wired cameras on tripods and two wireless cameras on Steadicam rigs are crewed by operators drawn from film and television. Without spoiling the show for those

who have not seen it, they are performers as much as the star. The demands on them are precise in the extreme. I have never seen so many performers hit so many marks so accurately for that long.

"We call it the 'choreography of the cameras,'" illustrates David. "They constantly have to re-shift and reimagine their aspect ratio, framing Eryn up in the right spot in the right frame, every time. They're constantly thinking of how the frame is used; sometimes square, sometimes extreme vertical."

Video Supervisor Michael Hedges is in charge of the video crew and the tech they employ.

A demanding two hours with no interval, the show is an extreme feat for everyone on stage. "We all work with the camera operators and make sure they're in good health and good spirits," says Michael. "With some of them coming from a totally different working environment in film, we have helped them adjust to theatre schedules and calls, and they in turn have trained some theatre personnel, assistant directors and the like, to become Steadicam operators."

Dorian Gray may only have one official cast member, but each show includes 18 crew performing. Stage management, cameras, lighting, sound, radio techs, and mechanists;



at curtain, everyone takes a bow. The sheer precision of every moving part means they've earned it. "When interacting with the pre-recorded video elements, repeatability is the hardest," confirms Michael. "There are two shots that have to be millimetre perfect. Rehearsing these, we locked off the shot, noted the degrees, and spiked the position. Getting it right every show isn't magic, just a whole lot of theatre craft. It's hardcore precision, and the camera team have to get it right night after night."

The Secret Weapon – disguise

At the heart of the video system, a disguise 4x4pro media server runs the show. Its capabilities are not only essential to the smooth running of the production but were necessary for its creation.

"This is my first show using disguise," relates David. "It's the secret to our success in

terms of how we managed some of these ridiculous sequences. We absolutely relied on its previsualisation tools. A lot of the creative process started in Lockdown #1, 2020, in Sydney. From home, I was able to build a rendered 3D model of all the screens, and run content on them. We'd Zoom with the creative team, have discussions about what screen went where, and which configuration would work with each chapter."

During rehearsals, the video team ran disguise in the room. Live cameras fed into disguise's previsualisation engine, sending the real video into the simulated screens. The output was fed to a monitor, and Kip Williams got to see the show from the audience's point of view. Switching between previs presets for points-of-view throughout the auditorium enabled the video crew to create pre-recorded video that worked with the audience's sightlines, creating the realistic illusion of multiple characters sharing the stage.

Video Land

The three main wired cameras are Sony broadcast models owned by Sydney Theatre Company which were purchased for other productions, as were the two Steadicam cameras. "We developed our own hybrid Steadicam rigs for this show to make it light," says David. "A traditional Steadicam set-up on a film shoot is only worn for 10 or 15 mins because it's so heavy. We're using a DJI Ronin gimbal on a Steadicam arm, which took a couple of kg off the weight, making the whole rig 9.5 kg. We have multiple operators and stagger them on the rigs through the show."

The wired cameras output SDI to a BlackMagic Design Smart Videohub 20x20 switcher. The two wireless cameras transmit using a Teradek Bolt 4K 750. From the switcher, four out of the five camera feeds go into disguise, which is running all of the pre-recorded video content and mapping to the screens. An ETC Ion desk,





purely for video control, triggers all cues in disguise via sACN. Video Land in Melbourne's Playhouse is below the stage. There are two operators for video; one on the lon, controlling disguise, the switcher, network monitoring, and a computer system for effects (more on that later), and the other operator controlling focus, iris, and zoom on the cameras via remote control.

The remote camera control is a mixture of cabled serial control sent to iris and focus, and a 'homebrew' solution for zoom. "If you go down into Video Land, you'd think the camera op is flying a couple of model planes," jokes

Michael. "It's a radio controller, which goes to an on-camera RC motor to control the zoom."

Simple Motion

The flying LED screens are made of ROE Visual Onyx 3.5mm pitch panels supplied by Technical Direction Company. The automated motor system that flies them around with breath-taking accuracy was custom-built for the STC by Sydney automation company Simple Motion.

"disguise is receiving position data from the automation system, which is used to map the content," continues Michael. "Each screen

is on its own fixed truss, with a built-in hoist to fly them in, out, and track. The system tours with the show, so it doesn't need much reprogramming when you come into a new venue. Simple Motion have also developed an anti-swing algorithm running in the background which means the screens can move sideways extremely quickly without swinging. It's a system developed from container shipping technology, where they lift huge weights on long cranes. The system knows how much weight it's carrying and how long the cable is, so it knows when to slow down at what exact ratio to cancel out any swing. Its full speed is pretty exciting – it can

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traverse two metres per second and stop on a dime! We never use it anywhere near that.”

Wi-Fi and Smartphones

Perhaps the most terrifying technical moments of the show are when the entire production hinges on live video being sent from an iPhone held by Eryn Jean Norvill, who uses its camera and live face manipulation to play multiple characters in real time. There are whole sections reliant on a consumer electronic device on Wi-Fi. What could go wrong?

“We learnt a lot of lessons from an STC production of Julius Caesar, which had actors using nine iPhones, in the round,” divulges Michael. “For instance, you can’t have two iPhones streaming beside each other within half a metre or they take turns sending frames. It was trial and error to get every little bit of performance out of the system. We’re now using a Unifi Wi-Fi 6 network with long-range access points. Its transmitters managed to cut through the RF noise. We have two access points, one upstage and one downstage. Line of sight to the access point is vital. We’ve tested for RF interference from the LED screens, from dimming lights, and for how much metal can we work around. One of the things we found is that the longer the phone stands still, the better the connection. We block to that, and work with it.”

Later in the show Eryn is swinging and diving between phones with only moments in between, and there’s a bit of necessary theatrical deceit going on here. “When we tried live iPhone in-app image manipulation in other shows, we found it’s too fiddly for the actors

to do while performing,” confides Michael. “The iPhone outputs NDI video, which goes into three Mac Minis. They rotate the vision, and run it through Snap Camera, the desktop version of Snapchat. That applies face filters, and the video goes out via NDI to disguise. The section where all the face filters are applied is sequenced. The Macs receive MIDI commands via disguise which are translated into keypresses.”

Take a Bow

“Dorian Gray is a tour-de-force of everyone stepping up and giving their all,” attests Michael. “You have to trust the vision. Most of the people on stage haven’t seen the show and can’t really envision what it actually feels like to watch it; they just see the looks on people’s faces when they get a standing ovation every night. Until someone asks you to reach for perfection, you don’t know just how high you can reach. Most of the time, near enough is good enough, but this is a show where it isn’t. You have to hit the mark, and if you can’t, we have to figure out how.”

At the time of their interviews, both David and Michael were already working on a new production with the same creative team; an adaptation of Robert Louis Stevenson’s *The Strange Case of Dr Jekyll and Mr Hyde*. They’re taking ideas and techniques learnt from *Dorian Gray*, and upgrading the tech. “We’re using a commercially available, professional system for camera control on Jekyll and Hyde,” teases Michael. “We’re now using Tilta Nucleus M with motors and digital read-outs for precision control. We’ve also developed custom electronics to wirelessly control the iris.”



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INTEGRATE

Integrate 2022 Show Preview!

Welcome back to Integrate! Whether you're reading this edition of CX digitally two weeks before the show at ICC Sydney 17-19 August, at work, at home, or perusing one of the copies gracing the show floor of Integrate itself, welcome back to Australia's largest centrally located AV expo!

We're thrilled to be back on the show floor, interviewing notable industry figures, checking out new tech, making videos, taking photos, and writing up the show for the September issue!

There's nothing like an in-person event, and we're stoked to be an official media partner for Integrate as it makes its return.

So, if you see us walking the aisles, say 'Hi', and you might just end up in the next edition!

AVE are showcasing their installation lines at Integrate, and improving market awareness of the brands and solutions they offer for integration applications. Stand B29 will be featuring the new LD Systems DQOR range of outdoor installation speakers (IP Rated), alongside the new IPA amplifier range and Zone X DSP matrix mixer with Dante. AVE will also have a working display of their popular CURV500 range, and more products around the stand to show potential users the range of solutions they offer.

LD Systems DQOR 3/5/8

These modern and dynamic looking installation speakers are available as 3", 5" and 8" versions in black or white, with two connection variants: low impedance (8 Ohm) or as a 70/100V version with multiple power taps, and can be operated under low impedance (16 Ohm). Whether indoors or outdoors, the 2-way speaker fits harmoniously into any installation. Thanks to the clever slide-and-lock wall mount with concealed integrated connections, there is no need for unsightly cables. To maintain an elegant and smart look in the long term, the front grille is made of corrosion-resistant aluminum. With a tilt angle of up to 27° and a 45° horizontal swivel angle, DQOR speakers offer flexible positioning to meet your needs.



LD Systems IPA 424T

The IPA 424 T is a professional, four-channel installation power amplifier with 4 x 240W. While the 70/100V outputs are equipped with high quality toroidal core transformers, the low impedance 4-Ohm outputs are completely transformerless and guarantee the highest possible audio quality. The DSP functions include, amongst others, a parametric EQ with matching speaker library, dynamic tools, a matrix mixer, priority source selection, and delay.



LD Systems Zone X1208D

With its DSP hybrid architecture, the ZONE X 1208 D can adapt your sound system for different circumstances and possible uses. Choose one of the different DSP templates and use the event scheduler to set up calendar-managed workflows with automated preset options. Twelve balanced mic/line inputs with low-noise microphone preamplifiers and separate switchable 48V phantom power, as well as eight balanced line outputs are available. There are also eight GPI and GPO logic ports which can be used for automated processes and the integration of third-party devices.





Visit AVD at Stand B30 to experience their UC and integrated meeting room solutions for yourself. These solutions include Barco ClickShare wireless conferencing and ClearOne audio and video equipment. AVD will also be showcasing the legendary AVProEdge MXNet AV over IP solution, along with their other offerings. Absen LED will also be present, showcasing why they are a leading LED display manufacturer.

Meeting Room Solutions

Barco and ClearOne combine seamlessly in BYOM integrated bundled solutions. These bundles have been put together by AV Distributors and can come preconfigured and programmed for ease of installation. AVD will be displaying three of their BYOM solutions at Integrate this year.



AVPro Edge MXNET

MXNet is the AV over IP solution from AVProEdge. Featuring Dante, mosaic video walls, Atmos downmixing and other unique features that make it a powerful AV over IP system on a 1G network. The ecosystem includes encoders, decoders, pre-configured network switches and cabling, all to make the integrator's life easier. MXNet is the perfect scalable video and audio distribution system for your next installation.

Absen NX Series

NX series is a slim creative display LED, with a special rotary clamshell back cover design. The small panel is angled at 45° in order to create various shapes such as L-shape, cube, concave and convex. NX series can be applied in various scenarios such as retail, corporate application, and transportation hubs. The NX series comes in four pixel pitches: 1.5mm, 1.8mm, 2.5mm, and 3.7mm.



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The Amber Technology display will feature new and soon-to-be-released products as well as product demonstrations from a wide range of leading brands distributed by Amber Technology.

Some of the highlights at this year's Expo include:



Digital Projection Satellite MLS

Come and see the Satellite projecting onto a 200-inch Grandview screen. The Satellite Modular Laser System offers simple building blocks that lets users address a range of applications, from single project installs to complex, multi-channel domes, caves, and simulators. The projector 'head' is compact, quiet, lightweight, and consumes little power, offering benefits to system design, transportation, installation, serviceability, and lifespan.

RTI Integration Designer 11

This control application programming software has been designed to elevate every installation, from small to large commercial spaces. Its integrated System Manager and built-in Driver Store add programming power while saving time on every project.

Williams Convey Video

The world's first real-time language translation, open captioning, and archiving systems, powered by Google's artificial intelligence platform. It can transcribe up to 27 languages and more than 70 dialects with up to 94 per cent accuracy.

Yamaha ADECIA

This new communication product works to provide a complete and customisable audio solution for meeting spaces. ADECIA ensures the highest quality audio conferencing solutions, and incorporates the RM-CG ceiling microphone, RM-CR room control processor, Yamaha's PoE switches, and VXL Series Line Array speakers.

Bluesound Professional

The purpose-built hardware and software provides high performance networked audio for retail, bars, restaurants, hotels, and gyms, among other commercial applications. It is powered by award-winning multi-zone audio management software platform, BluOS, and can be made native in a range of controllers, streamers, amplifiers, and speakers for easy project configuration.

Wyrestorm Apollo video bar/Wyrestorm HALO VX10 video bar

The Wyrestorm Apollo video bar is a unified communication product designed for both small huddle spaces and large conference rooms, with an all-in-one conference solution with speakerphone and presentation switchers, HD PTZ camera, and HDBaseT receiver. The HALO VX10 all-in-one video bar integrates a 4K wide-angle AI camera, dual powerful stereo speakers, and a beamforming four microphone array into the one device, ideal for small meeting rooms, huddle rooms, and home offices.

AVer VB342 Pro

With a high quality 4K PTZ lens, the VB342 Pro video bar delivers vivid images and clear details for small to medium rooms. Intelligent AVer AI features create crystal-clear AI powered meeting experiences, with Auto Framing re-framing the meeting view to keep everyone in picture. It also includes Presentation Tracking and AVer Audio Fence to deliver uninterrupted presentations.

Wolfvision Cynap Pure Pro

This wireless presentation and collaboration system can add-on to existing infrastructure, providing app-free, button-free, wireless screen mirroring. The Cynap Pure Pro combines with a range of collaboration tools, such as Zoom and Microsoft Teams, and features annotation, whiteboard functionality, a media player, and web browser, all of which are operated seamlessly with Cynap GUI.

SurgeX Squid Power Management System

With an array of power quality tentacles providing completely contained network control and AC/DC protection in a compact design, SurgeX Squid combines AC/DC outlets with advanced surge protection, power conditioning and management, and analytical software for small meeting rooms, huddle spaces, digital signage, and video applications.



Newline Q Series

This range of interactive touchscreens for the education sector is more powerful and secure than previous solutions. Deliver an engaging and immersive AV experience in the classroom, with extensive connectivity, exceptional colours, and 4K picture clarity.

Australian Monitor ZONEMIX4

This is a next generation zoning, paging, and control solution for projects seeking a flexible, competitively priced audio control system. ZONEMIX4 is a highly customisable audio mixer and paging system, and includes two audio mixers, various wall controllers, and programmable paging stations.



Evoko Kleeo

A complete, smart desk booking device for individual workspace bookings that signals to everyone which workspaces are available, checked-in, or waiting on occupants. This device will be showcased at the Amber Technology stand.

The ULA Group stand at Integrate 2022 will feature the latest LED display technology from VuePix Infiled, including the XR studio solution, 4K Digital Wallpaper canvas, various examples of indoor LED display applications, ultimate curved display solutions and the best LED and LCD display technology for outdoor media.

Also on display will be the award-winning wireless technology for film and entertainment lighting professionals by Astera, the innovative professional lighting range by Elation Professional, the latest control system and network solutions from their global manufacturing partners, and much more.

ULA Group take pride in providing their clientele with the most advanced lighting and visual technology, together delivering fully comprehensive technology solutions for some of the world's most iconic structures, buildings, entertainment venues, performances, and multi-faceted engineering projects.

ULA Group would like to invite all AV integrators, creative designers and industry professionals to come and check out their latest technology on Stand D30.



VuePix Infiled XR Studio



Astera Product Range



Elation Professional KL series

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Eventec STAND B16

LSW Acquisition

The recent acquisition of LSW has landed Wharfedale Professional, Soundking and Nicolaudio with Eventec. In their Event Lighting brand, they have recently completed and supplied multiple Maximus trailer stages, introduced fanless studio panels, and upgraded the PAR6X120B.



HAVOC Series

The professional range of moving heads is seeing an influx of new models, with the HAVOC series featuring a 7 x 40W RGBW zoom wash and 120W LED beam.



Event Lighting

Event Lighting Lite has expanded the range of moving heads further. Eventec recently introduced certain models in white housings, and the LM19X30P, LM19X20BER, and LM250 which have all proven popular for installations and productions.

Event Audio

Event Audio is new on the scene, with a range of audio cables and connectors at an affordable price point.



Event Pixels

Event Pixels has provided installations and portable systems throughout the country, with more on the way. Eventec have continued to increase their offering of pixels pitches and styles to suit the ever growing LED screen market.

Epson STAND C2



Epson will be highlighting the new EB-PU2220B 20,000 lumen projector. Epson's EB-PU2220B is the world's smallest and lightest* 20,000 lumens model, which is 60% smaller and 50% lighter than its predecessor, the EB-L20000UNL.

With very high reliability and almost no maintenance, this projector can handle the busiest workload. The PU2220B features a robust, compact chassis for simple integration into existing infrastructure. Featuring support for HDR, 360-degree installation flexibility, tile assist, 4K enhancement and a sealed optical and laser engine to protect from dust and smoke. This large venue laser projector is ideal for rental and staging events, lecture halls, churches, and digital signage installations.

*As of 2nd February 2022.



High End Systems

High End Systems has had a resurgence, with stock being held in the country, and a smooth supply of products. The Lonestar, Talen, and Cyberlight LED were recently released with additional exciting models on the way.

Wharfedale Professional

Wharfedale Professional will continue to be stocked with popular models and the introduction of some new players. The WLA1 series of passive line array has drawn interest along with the GPL installation series. Both models have been ordered and are on their way Down Under for the first time.





/ ATND1061 Beamforming Ceiling Array Microphone

A Mic for All Meetings

The ATND1061 Beamforming Ceiling Array Microphone is a state-of-the-art, professional conferencing solution for meetings of any size – from boardrooms to classrooms. Up to **6 output channels** and **32 user-defined pickup zones** capture every person speaking in a room with clear, natural audio that reduces distracting environmental sounds.



FLUSH MOUNT



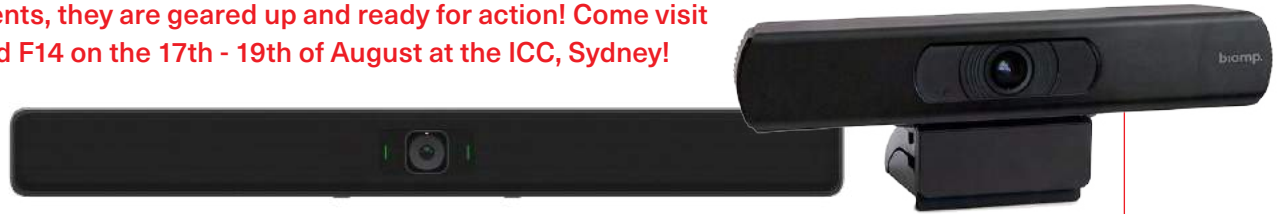
SURFACE MOUNT



VESA MOUNT

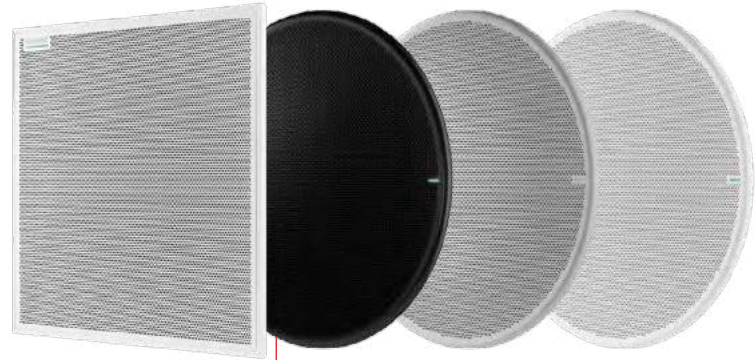


Jands are excited to be at the Integrate Expo! After a long hiatus from in-person events, they are geared up and ready for action! Come visit Jands at stand F14 on the 17th - 19th of August at the ICC, Sydney!



Biamp Parlé Bars and Vidi Cameras

Parlé audio and video conferencing bars for small to medium sized rooms combine beamtracking microphones, smart loudspeakers, advanced signal processing, an optional 4K camera with auto-framing, and Biamp Launch, their automated deployment and tuning technology, into one plug-and-play device. Vidi conferencing cameras enable extraordinary video meetings in huddle spaces and small to medium sized conference rooms. Equipped with a 120° field of view and 1080p @ 30fps streaming capabilities, these cameras are designed to provide users on both ends of the call with exceptional performance every time.



Shure MXA920

With next-generation array architecture for enhanced directional pickup and more natural speech, the MXA920 ceiling array microphone is easy to use and quick to deploy for AV conferencing, camera tracking, voice lift, or sound reinforcement. Automatic Coverage technology requires no setup yet gives you precise control of audio capture if desired.



Shure Stem Ecosystem

The Shure Stem Ecosystem gives you the freedom to create, manage, and scale your meeting space audio the way you want it. Address essential audio for video conferencing needs and achieve higher quality collaboration with straightforward solutions that make the process of adopting new technology effortless.



Blustream HEX70SL-KIT

The HEX70SL-KIT 4K HDBaseT extender set offers market leading features in a slimline chassis. The product delivers HDMI, bi-directional IR and bi-directional PoC up to lengths of 70m.



Electro-Voice EVID Family

EVID premium commercial loudspeakers bring best-in-class sonic characteristics and high fidelity to a broad range of installation applications, including performance and sports venues, retail environments, conference and meeting rooms, and hospitality settings, such as restaurants and bars. EVID loudspeakers feature innovative designs that beautify not only the sound of a room but also its looks. EVID 3.2, 4.2 and 6.2 models are available in "T"-designated versions with internal 70 or 100 V line transformer.

Panasonic Connect

Panasonic Connect plays a central role in the growth of Panasonic's B2B solutions business. From museums to universities, or from concert halls to corporate installations, their industry leading projectors and professional 4K displays are making an impact by giving users freedom to express their creativity and engage their audiences.



AV-UHS500

The 4K Live Switcher is easy to use in a variety of applications, such as event staging, broadcast at stations and OB vans, lectures at universities, and conference halls. The 12G-SDI compatible AV-UHS500 has almost all the basic functions of high-end large model switchers and is capable of 4K video production with the same operability as HD. Its integrated body is incredibly portable, making it ideal for music, sports, entertainment and other live events. In addition to 4K/3G/HD multi format support, installing additional optional units enables expansion to up to 16 SDI inputs to enable smooth operation at events with many cameras.

PT-MZ20K Series



The PT-MZ20K Series are 3LCD Laser, 20,000 lumens, WUXGA projectors. Almost totally silent (36dB in quiet mode) and with light construction (23.3kg), they're ideal for lecture theatres and seminar rooms. Featuring 20,000 hours maintenance-free operation due to the dustproof construction and long-lasting eco filter, their refined optical engine balances high brightness and vivid colour with pure white generator and dynamic contrast. There are eight optional lenses available including zero offset ultra-short-throw.

PressIT360

The intuitive Panasonic PressIT360 connects to a PC with just one USB Type-C cable and provides high-resolution visuals and clear sound. The solution is an addition to the Panasonic PressIT family, with the Panasonic PressIT Wireless Presentation System already popular for collaboration in meetings. PressIT360 contains all the essential elements for easy hybrid video conferencing, including four integrated cameras with a resolution of 2560x1440 to provide a 360° horizontal view of the room, alongside seven microphones and sound, with Panasonic's unique recognition technology to ensure the speaker is always in clear view.



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OUR BRANDS:



MadisonAV STAND B16

MadisonAV is finally getting their chance to showcase the expansion of their business since taking on HARMAN Professional brands and Philips over two years ago. With a booth that is twice the size of their previous stands, this years' presence at Integrate is very much a signal to the market that they are growing their size and support of the market.

Ken Kyle, CEO, said; "it's obviously been quite some time since we've been able to attend a major show like this. We're really looking forward to being able to see a lot of customers in Sydney, and to promote the power and performance of our world-leading brands in Australia. For MadisonAV, it's also our first real chance to showcase the very real development of our business. We've invested heavily over the past couple of years in a greatly-expanded national sales team, as well as in our

exceptionally skilled technical support teams." "Whilst the show is obviously very product-centric, it's also timely for us to discuss and promote some of our specialist value-added services, including the pre-sales services we offer like EASE modelling, system design and specification assistance. We'll also be showing our new e-commerce website and trade portal. Our customers can sign up on the spot for access to stock on hand information, trade price and other useful tools."



AMX Video & Control

See multiple active demonstrations of Networked AV, Fixed AV switching, Unified Comms and User Interfaces, all highlighting the flexibility of AMX video and control products. Products being shown that have not been showcased previously in Australia include the Precis family of matrix switchers and windowing processing, as well as the DVX 4K60 all-in-one presentation switcher. A recent partnership with Yealink Microsoft Teams Rooms control integration is also being showcased on stand.

SpinetiX Digital Signage

Discover one of the worlds' most flexible end-to-end digital signage solutions. The SpinetiX solution is designed to solve evolving business needs, with their Cloud based Arya solution, Elementi software with 250+ widgets, DSOS Operating System and award-winning media players.

AUDIOropa Assistive Listening

The range of hearing augmentation solutions displayed by AUDIOropa includes Induction Loop Systems, Infrared Transmission Systems, RF Transmission Systems and the latest product release – Cross:Talk Intercom Systems, which are specially designed for contactless dialogue in areas equipped with contact and aerosol barriers of glass.

Roadworx Sound Masking

Learn how adding sound to an environment can reduce distractions and increase productivity and privacy by reducing ambient noise distractions. MadisonAV can also assist with Roadworx Sound Masking solution system design.



Philips Professional

With over 30 screens on display, it's easy to see why Philips have been growing in Australia. With products to suit all types of usage, the product demonstrations include Touch, Videowall, High Brightness, Robust, 16/7, 18/7, 24/7 and Built-In Tuner screens. Launching at the show will be a 37" bar type display panel.

tm stagetec systems STAND B15

tm stagetec systems (TMS) is a technology systems integrator with expertise in professional audio, public address, network and equipment management and information systems.

TMS is also invested in product research, development and manufacturing. This, together with project engineering, product distribution and technical support, helps the company to be among the market leaders in audio, video and intercom technology.



Glensound Dante I/O and Intercom

Come and see the latest gear and how easy it is to build small systems. Glensound designs and builds the highest quality audio systems for the broadcast and commercial audio market. Glensound products are intended to be rugged and reliable to withstand the rigours of the outside broadcast world. Glensound designs contain systems to manage high input levels without distortion or clipping and prevent external interference to the audio path. Their systems are both user-friendly and use high quality components to keep noise low and provide the cleanest sounding audio.

HuddleCam HD Conferencing Cameras

See a range of USB connected conference cameras with pan, tilt, and optical zoom capabilities, including the new SimpliTrack Lite Autoframing Camera.

Icron USB Extension

Icron's patented ExtremeUSB technology extends the range of USB over multiple types of media such as CATX, fiber, LAN, wireless, coax, and powerline. The range will be showcased, including the latest product release – the Starling 3-2-1 USB-C 10m Extender.

Ptzo Optics Streaming Cameras

Web video conferencing, video recording and streaming solutions with connectivity options including NDI, HD-SDI, HDMI, USB 3.0 and IP.

Infrastructure

MadisonAV has a long-established reputation as leading infrastructure suppliers in Australia. They'll be showcasing their relationship with cable brands such as Roadworx, Belden and R&M, as well as connector brands such as Amphenol, Kings, and Whirlwind.

With dozens of MadisonAV sales, technical and support staff on the stand, Integrate is a great opportunity to connect, as well as to host discussions with the many overseas supplier representatives that will be attending the show. Meetings can be pre-booked on stand here - <https://qrd.by/g62tk1>. Senior international business leaders and technical leads from HARMAN Professional and Philips have confirmed their attendance.

www.madisonav.com.au



JBL Professional and Commercial Audio

An extensive display of the huge JBL product range, including new Control Contractor Commercial Loudspeaker products announced recently at NAMM – including wall-mounted speakers, pendant speakers and landscape speakers and subwoofers.



PRODIGY.MP

PRODIGY.MP is a multifunction audio processor that is designed to address numerous applications in pro audio, broadcast, installation and studio applications. PRODIGY.MP provides flexible I/O, dual networked audio, DSP (EQ, Delay, Limiter, Matrix/Mixing, Inserts), Sample Rate Conversion, multiple sync generation/handling/distribution and powerful hard-and-software.



Anubis

Merging's 30 years of developments are all concentrated into the Anubis. This compact AD/DA is unique in its configurability without changing the hardware. Included is the new 32-bit dual PreAmp topology, incredible headphone amps, D/A converters, all combined with a powerful low-latency mixing engine evolved from 25 years of DAW design.



StageTec AVATUS

AVATUS is the future in audio consoles. This innovative concept makes full use of the benefits offered by IP technology. The console controller provides TCP/IP connectivity for integration into a network. The surface consists of one large or several smaller modules. The system supports remote network connections and even browser-based mixing that requires no specific hardware.

Redback look forward to catching up with many of their valued customers at the show to chat about new product developments, ideas and trends in public address. They have many new lines to preview, plus a brand new dedicated Redback catalogue reference, filled with their newest products.

More than anything at Integrate, Redback enjoy talking to installers and AV integrators about new trends, product features and ideas to help grow the industry. Drop on by the stand to chat with their sales team. During Integrate week they will have staff from all states on-board to help liaise with interstate customers too. Redback look forward to seeing you there!



12x16 Audio Matrix System - A4650

Redback set out to see just how much they could fit onto the rear panel of a 2RU case with the new 12x16 audio matrix system. With touchscreen wallplate controls in up to 16 zones, it's perfect

for multi-function venues where multiple sources have to be sent to many different zones and configurations need to be changed quickly. Incorporating 4 microphone inputs and up to 12 line inputs, this easy to set up and control matrix is ideal for RSL clubs, pubs, taverns and function centres. Operation is intuitive and requires no complex training. Any input can be selected to any output zone or combination of zones. All four mic inputs can be selected simultaneously to any zone or combination of zones, along with one of the auxiliary inputs.



The 2022-23 Redback Product Guide

For the first time, Redback have produced a dedicated catalogue so that customers, system designers, and architects can have a central reference for their product line. This 96 page catalogue dispenses with the rest of the Altronics product range and focuses solely on public address, and also features all of the new lines on show at Integrate.

4x4 Audio Matrix System - A4450

Feature packed yet simple to set up and use, this mic/line level mixer pairs with easy-to-use wallplate controllers. With 4 inputs selectable to up to 4 zones it is ideally suited to gyms, cafes, restaurants, small clubs, and function centres. Designed with end users in mind, this complete audio source controller for buildings and venues provides source selection and level control from remotely located wallplate controllers located up to 300m from the main unit. Multiple inputs can be selected/mixed to a zone as desired. It can even be used with the new 7" LCD touchscreen paging console!



The IP Communicator Paging System – A4868

This system has been developed in conjunction with leading Australian PA contractors and an international IP audio manufacturer. It is designed to be simple to set up and install, and most importantly easy for the customer to use. There is no complex programming or set up involved.

This flexible system is ideal for schools, shopping centres, and large facilities where multi-zone paging is required between multiple buildings. It bridges the gap between internet protocol (IP) based and traditional 100V line PA systems. All components are designed to be plugged into the building local area network (LAN) and will connect to existing building PA, alarm and bell signalling equipment.

“Ideal for schools, shopping centres and large facilities where multi-zone paging is required between multiple buildings.”



4x8 Stereo Audio Switcher System – A4460

Designed to allow the distribution of 4 stereo audio input sources to 8 stereo output zones making it ideal for use in function centres, hotels, meeting rooms, and domestic homes. Sends audio sources from one room to another with total ease.

Combined with touchscreen wallplates, this system provides a central control of audio sources within any environment, mixing up to 4 inputs into 8 zones. Each master control plate can control every zone, plus stream Bluetooth audio. Whilst the local zone wallplates provide source selection for each zone, plus local Bluetooth, all wired back to the main unit using standard UTP cabling. Four external MP3 triggers are also provided to play different sounds on events – such as doorbell activation, motion detection, gate opening etc.



Are you concerned about your mate's mental health?

FACT: Most Australian tech crew and roadies have attempted or considered suicide!

Support those around you and register for free mental health training



Passion, Pride, Pitfalls Dec 2014

www.entertainmentassist.org.au

Supporting the mental health of Australian entertainment industry workers

Please join TAG for a coffee and an information briefing on some of the world's finest AV technology; Q-SYS Audio Video Control Ecosystem, mixing solutions from Allen & Heath, commercial microphones from Audio-Technica and loudspeaker systems from Martin Audio. Milk and sugar with that?

The 5-Brand Latte Glass

In an industry first, and Integrate global launch, Technical Audio Group (TAG) proudly announces its all new Five-Brand Latte Glass. The new glass brings together the logos of the four brands TAG represents, Allen & Heath, Audio-Technica, Martin Audio and QSC plus TAG's own logo, and features each prominently on the top lip of the glass. Compatible with a large variety of liquids the glass is ideally suited to coffee, in particular a caffè latte or flat white. It can of course be used for other types of coffee, however, a short black, espresso or piccolo will only occupy around 50% of the available liquid capacity. For particularly hot drinks like a long black or a cup of tea, especially black tea, a readily available third-party paper towel or cloth may be required for the user to comfortably hold the glass. Manufactured from heat tempered toughened material, the glass has a capacity of 200ml and can be used in either a standing or sitting position. TAG recommends the optimum use of the 5-Brand Latte Glass whilst seated on the TAG Integrate stand accompanied by a QSC, Martin, A-T or A&H product specialist. After use, the 5-Brand Latte Glass may be taken by the user for ongoing drink consumption at home or place of work, however, the quality of its contents cannot be guaranteed once removed from the TAG Integrate stand. The 5-Brand Latte Glass carries a lifetime defect/breakage warranty and benefits from a free-of-charge replacement programme. It is in stock and available immediately from the TAG stand at Integrate.



Audio-Technica Beamforming Ceiling Array Microphone

The ATND1061DAN beamforming ceiling array microphone is an ideal solution for meeting spaces from large to small, and is designed in a familiar form factor (roughly the size of a wireless access point) and is easy to install, set-up, and operate. Room configuration, zone setup and other settings are handled through A-T's user-friendly Digital Microphone Manager software application. The ATND1061DAN has six individual output channels, which, collectively, can be configured with up to 32 user-defined microphone pickup zones, providing the flexibility to cover a wide variety of room sizes and meeting types. Across all the output channels, the microphone's 90-degree orthogonal beams are capable of focusing on a particular point in space, preventing the pickup of unwanted noise.



Martin Audio Torus

Each TORUS cabinet is designed for a flexible horizontal dispersion pattern and this can be manually adjusted between 90°, 60° or 75° (asymmetrical) via the unique Dynamic Horn Flare. This not only moves and locks the waveguide but also adjusts the horn mouth, including the low diffraction termination into the baffle, to ensure correct geometry and optimal performance in each of those settings. A vertical pattern of either 15° or 30° is achieved via two separate cabinet types: T1215 and T1230, respectively. These cabinets can also be combined to fit venue and coverage requirements. TORUS features a phase plug mounted in front of the 12" neodymium driver to increase mid-band sensitivity, and along with three 1.4" HF polymer dome neodymium compression drivers, the sonic performance is not compromised even when driven at higher SPL.



Q-SYS On and Off Ramps

The QIO range expands the I/O customisation possibilities of the newer Q-SYS Core processors, like Core Nano, Core 8 Flex and NV-32-H (Core Capable), that have a lower onboard I/O count. All models feature a compact form factor that can be rack- or surface-mounted either near the Q-SYS processor or remotely. Audio I/O models feature professional mic/line level inputs with +48 VDC phantom power and/or line outputs to ensure high performance and compatibility, along with microphone detection on inputs to enable monitoring, usage statistics and failure notifications. The four units, available now, are QIO-ML4i with four mic/line inputs, QIO-L4o with four line outputs, QIO-ML2x2 with two mic/line inputs and two line outputs and QIO-GP8x8 with eight logic inputs and eight logic outputs and designed for systems needing to interface with occupancy sensors, push buttons, LED indicators, buzzers and more. With the QIO Series, integrators can daisy-chain up to four QIO devices on a single network run (with local daisy-chained DC power) to consume fewer network ports, avoid rack clutter and easily expand I/O in the future. Alternatively, the QIO Series are PoE capable providing simple, single cable connectivity when devices are not daisy-chained.

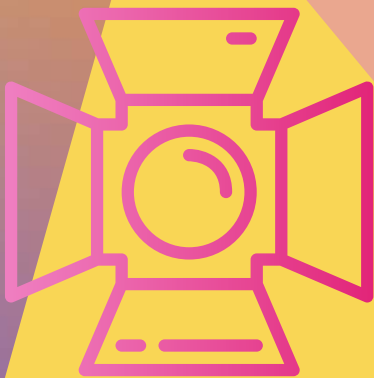
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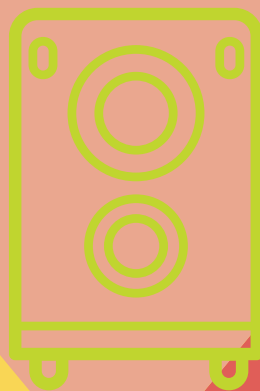
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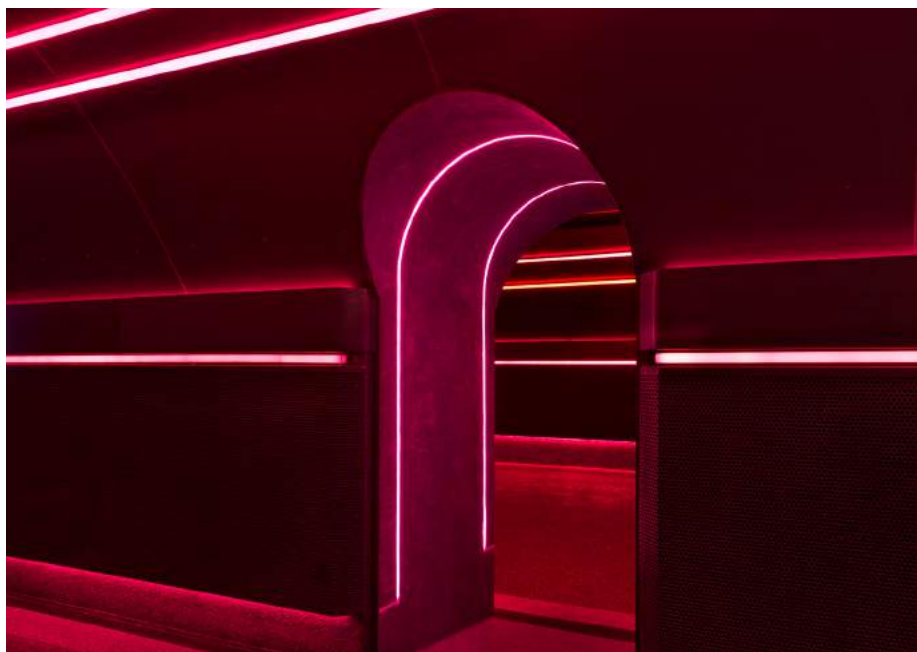
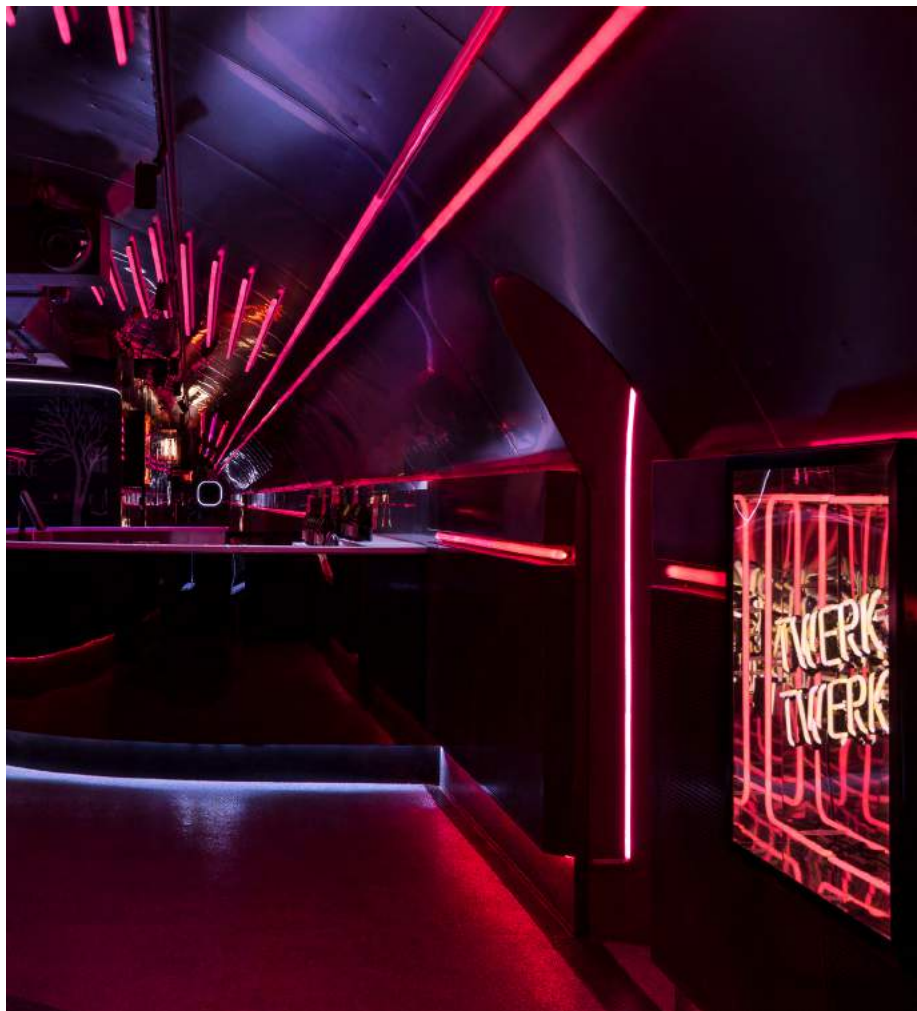
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PLATFORM ONE UPGRADES TO WORLD-CLASS AUDIO WITH NEXO

For over two decades, Melbourne's Platform One nightclub has played host to some of the world's biggest names in dance music and entertainment. With both a culturally and historically significant background, the venue has carved itself a strong handhold amongst Melbourne's premier event space offerings. Housed in the iconic Banana Alley Vaults, Platform One is comprised of two long, domed tunnels which stretch over 65 metres from Flinders St to the Yarra River.

The Banana Alley Vaults were first constructed in 1892 and were used primarily by local fruit merchants, who rented them for fruit storage. The name "Banana Alley" was coined after merchants began storing and ripening bananas onsite before they were taken to market. By the late 1980s, the Vaults had all been put up for lease and began serving a variety of retail purposes. In 2001, Vaults 7 and 8 underwent a major interior conversion, and Platform One Nightclub was born.



Since opening its doors, the venue has seen countless internationally acclaimed musicians and DJs grace its multiple dancefloors. The nightclub's close proximity to public transport and a unique underground aesthetic made it one of Melbourne's most sought-after event spaces for almost 20 years.

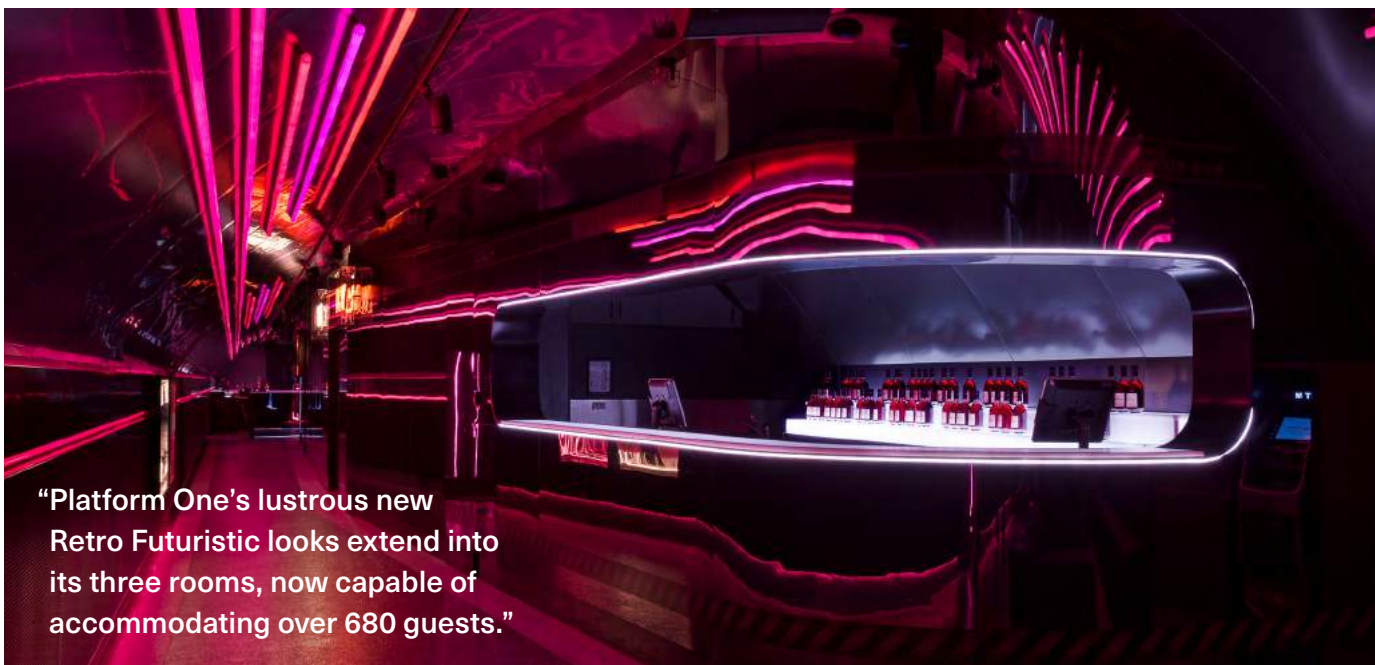
In August 2019, Platform One closed its doors to the public in order to concentrate on a series of extensive renovations and improvements.

The multi-million dollar upgrade includes a completely new air conditioning system, a multitude of new fixtures, internal structural changes, the addition of an addressable venue-wide LED lighting system, and a complete overhaul of the primary sound system in both the main room and side rooms.

After exhaustive listening tests comparing multiple high-end loudspeaker brands within the venue space, NEXO's latest P+ series was

chosen for its compelling balance of pristine sonic performance, weight and physical footprint. Working with Concert AV, one of Melbourne's premier DJ & Audio Visual retailers, Platform One installed a scope of P8, P10, P12, L15 and MSUB18 systems from NEXO throughout the venue.

NEXO's P+ series offers a refined combination of heritage and contemporary design engineering in a range of powerful, compact



“Platform One’s lustrous new Retro Futuristic looks extend into its three rooms, now capable of accommodating over 680 guests.”

2-way coaxial speaker systems. Completely designed and manufactured in France, P+ is NEXO’s most recent addition to a set of pioneering technologies in sound reinforcement, that has seen them become a favourite of installers and production companies for over 3 decades. The P+ range’s sleek look and stunning sound quality make them the perfect solution for Club audio, whilst their compact nature and scalability lend advantage to installers faced with tricky architecture such as Platform One’s uniquely shaped rooms and curved ceilings.

Whilst the famous tunnels are an iconic feature of Melbourne’s heritage, they are also acoustically hostile with regards to professional sound reinforcement applications. The advanced technology underpinning the NXAMPMK2, NEXO’s amplifier/controller combination hardware, was engineered to overcome precisely these kinds of hurdles.

Combining multi-channel, high powered, networkable amplification with sophisticated loudspeaker processing and control, the NXAMPs work in tandem with the P+ series loudspeakers to deliver a tailored audio experience that is nothing short of world-class.

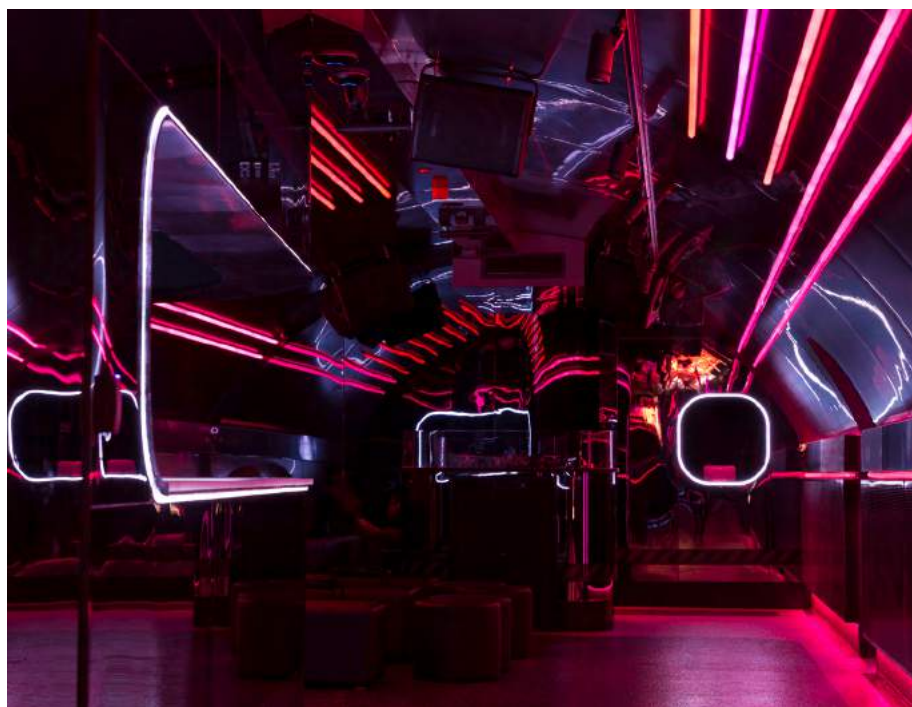
Engaged in renovations throughout 2020 and the ensuing COVID-19 crisis, management and crew were determined to emerge from Melbourne’s quiescent period with a nightclub that would rival even the most distinguished international venues. Borce Kajmakoski, Co-Founder & Director of LEVELS Entertainment, says the intention behind the upgrade was to take an already-iconic venue and elevate it to the highest tier:

“It was a great venue, but now it’s a superclub. We were aiming for a sleek, high-end experience; one which also gives an impression of exclusivity. The new lighting and

fixtures go a long way in helping establish that feeling, but we also needed to make sure the club audio had the same kind of wow-factor. We feel the NEXO system is certainly up to the task.”

Adding to the P10, P12 and subwoofers making up the FOH system, are additional P12s placed as DJ monitors and an ID24 system in the VIP area. NEXO’s immersive audio-oriented line, the ID series, was chosen for its ability to deliver full range audio in a super-compact format, well suited to the venue’s private booth.

Platform One’s lustrous new Retro Futuristic looks extend into its three rooms, now capable of accommodating over 680 guests. Originally designed around a neon pink and orange theme, the venue walls can be ‘re-skinned’ with any colour scheme imaginable thanks to cascading rows of fully addressable LED strips. This customisable nature extends to the venue





audio, where each room can be run as an independent zone or combined from a single source.

“When we are hosting our own regular nights here, the main room will play Pop and RnB, and the side room will play House music. We are excited to resurrect ‘P1 Saturdays’, which was one of Melbourne’s biggest regular club events around 2006, along with ‘Infusion’ which was also running here at the time. I have fond memories of Platform One having a great

sound system at that time, but standards in audio are a lot higher now. We felt that going for something state-of-the-art like the P+ series was the most appropriate choice. We needed something that would be suitable for both DJs and live performances, and the P+ series has enough muscle and clarity to cover both,” explains Kajmakoski.

With the ability to not only excel at the DJ-oriented events that are a mainstay for Platform One, but also deliver enough power

for contemporary live music performances, the P+ series is a reflection of NEXO’s recent focus on innovative, multipurpose audio solutions. Armed with a major facelift and the sonic excellence of NEXO, it would be hard to argue with Platform One being called one of, if not the best nightclub space in Melbourne right now.

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WILLINGA PARK CONFERENCE CENTRE

From one TV to multifunction AV extravaganza

What started out as simple quote led to the ultimate challenge in this large-scale project for the prestigious Willinga Park Conference Centre, situated on the south coast of NSW. But who doesn't love a challenge, especially when you pull it off and get to tell the story? Better Music Installations' Garry Peadon shared his Ben Hur of an AV installation story when it came to fitting out this high-end conference centre and equestrian park nestled on 2300 acres in Bawley Point. Give these guys a medal already!

Mid 2019, one week out from sheeting the new build, with no cabling in place, Willinga Park Conference Centre reached out for a quote on installing a 12m x 5m video screen for their conference hall. There was also the boardroom and restaurant to be considered, which led to an entire custom-made, state-of-the-art audio-visual fit out, becoming Better Music's largest and most challenging job to date.

One video screen then became four. One Eventtec P3 11.5m x 3.5m screen gracing the conference room, two Eventtec P1.2 3.6m x 1.4m screens in the wings and one Eventtec P1.2 2.4m x 1.3m screen in the boardroom. Each of the screens is fed from an Extron Quantum Ultra 610 scaler so all the screens can take signal from any source.

The audio component of the installation is where the challenges ultimately revealed themselves, with any decisions having to be made around the rooms' architecture. The restaurant provides a very clean modern minimalistic space, with a timber ceiling that leaves no room for obtrusive structures. 16 QSC AD-C6T speakers and four QSC AD-C81T subs were used here and installed just above the timber to avoid being visible, keeping the integrity of the ceiling.

CMI commissioned Fohhn and Adamson loudspeakers for the two remaining rooms and introduced Better Music to Fohhn for the first time, which Garry mentioned they had not previously heard of. Here's to making new friends! The challenge with the boardroom,

with a capacity of 20 pax, was due once again to the architecture of the room. Ceiling speakers were not permitted due to the strips of laser-cut wave foam that formed its structure. This plush room is also lined with leather and reported to be worth over a million dollars, so its aesthetics were paramount, and surface mounted speakers were also not permissible. Time to think outside the speaker box!

Welcome six Fohhn LX-10 speakers and one Fohhn AS10 sub to the rescue. Garry explained there was around 80mm between the foam strips, which needed a speaker that would fit and not be seen. These are then run through a QSC CDX4 2Q amp and provide the perfect solution to quality sound that's still sympathetic

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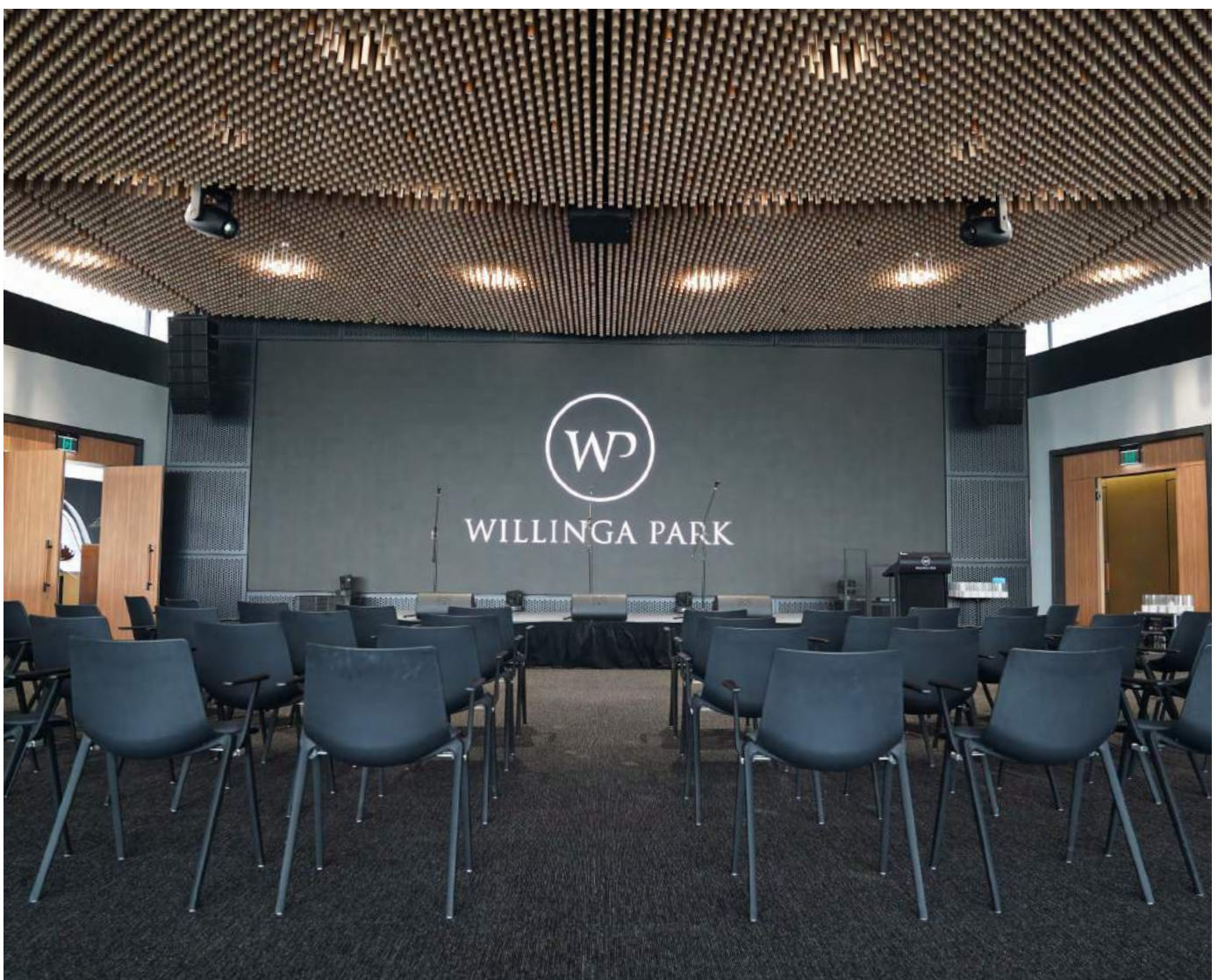
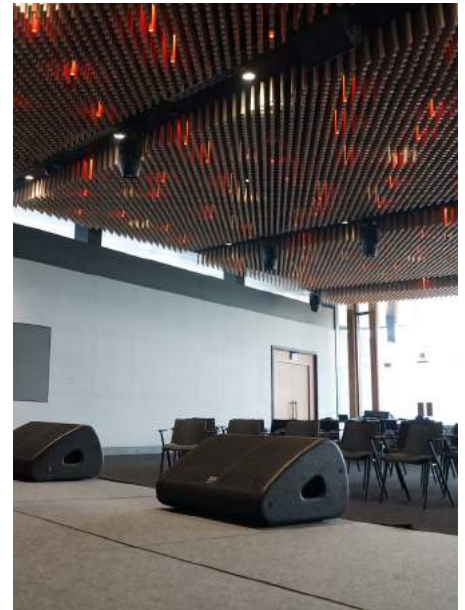


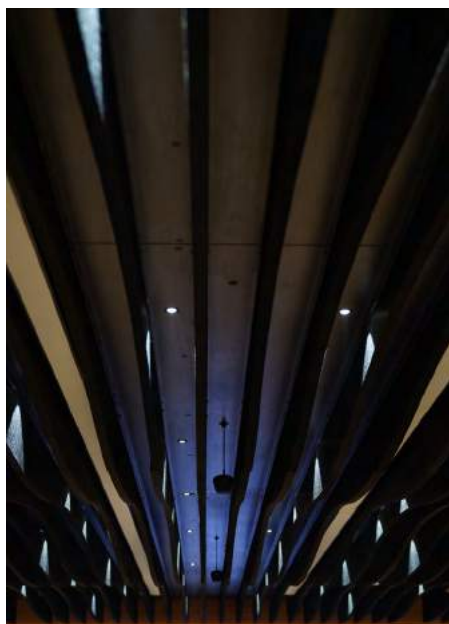
to the room's aesthetic requirements. According to Garry, "they blend in nicely." And who doesn't like to blend in?

If there was a star of the Willinga Park Conference Centre, it would most likely be the premium conference hall, with a capacity of up to 300 pax and a multipurpose flexible layout that hosts many high-end conferences, expos and functions. In keeping with the theme

of ensuring everything is neat and seamless, tracks were custom designed for 12 Adamson IS7 line array speakers to be rolled out to the front of the stage when required, such as band performances. The tracks can be moved to the back of the wall to blend in with the room when not needed by pushing them with a not-so-magical stainless-steel stick. No motorisation necessary.

They have also been designed with trenches on them to recall different pre-sets such as speaker positions and centre fields. This allows for even the most unskilled to set things in motion because it's completely automatic. The choice to use Adamson speakers here was to match a high-end system with a high-end venue. Having used Adamson speakers before, Garry noted the fact that they are small and





light and fit the track well. A single Adamson IS7px also hangs neatly in the centre with two Adamson PC5s and four Adamson Point 8s distributed on the entry and back deck of the conference hall for extra coverage of the various spaces.

With so many systems in place throughout the entire venue, it was necessary to utilise a main control system that was user friendly and could oversee all aspects of the installation. The QSC Q-SYS Core 510i was chosen for this reason, with its ability to allow any staff member to push a button and have a conference up and running, all completely wirelessly. Whilst having used Q-SYS on previous jobs, Better Music hadn't used it on a job to this scale.

Garry believes going with Q-SYS was a good choice because they had just come out with NV-32-H boxes for video streaming, which became the backbone for routing all video networking, Dante switching, lights, amps and curtains. Having so many different systems meant there had to be some sort of central control. Everything also had to run on Willinga Park's standard network system, all running through their Ethernet switches.

The mammoth project commenced in June 2019 and was completed in November, requiring a great deal of tech support. "CMI were great to deal with," says Garry, and offered good tech support, along with tech support from QSC distributor TAG and a lot of other companies which was greatly needed. What started out as a simple quote for a TV ended up being a project that would make any tech nerd salivate.



WILLINGA PARK CONFERENCE CENTRE - FULL GEAR LIST

Main Control

2 x QSC Q-SYS Core 510 DSPs

1 x Extron Quantum Ultra 610 scaler

8 x QSC NV-32-H endpoints

1 x Biamp Tesira DSP

6 x Shure ULXD wireless receivers

Audio - Conference Room

3 x Lab Gruppen D80 amplifiers

1 x Lab Gruppen D40 amplifier

1 x Adamson IS7px loudspeaker - Centre

12 x Adamson IS7 loudspeakers - L&R

2 x Adamson PC 5 loudspeakers
- Entry Deck

4 x Adamson Point 8 loudspeakers
- Back Deck

2 x Adamson S118 subwoofers

1 x QSC TSC-7 touch screen

1 x AtteroTech BT2A Bluetooth receiver

1 x Williams Sound DL210NET hearing
loop amp

Video - Conference Room

1 x Eventtec P3, 11.5m x 3.5m LED
video screen

2 x Eventtec P1.2, 3.6m x 1.4m LED
video screens

2 x QSC NV-32-H endpoints

1 x Barco Clickshare wireless presentation
system

1 x Barco WePresent wireless
presentation system

Lighting - Conference Room

8 x Clay Paky Axcor 400 moving heads

Boardroom - Audio

2 x Biamp Parle TCM1 hanging mics

6 x Fohhn LX-10 loudspeakers

1 x Fohhn AS10 subwoofer

1 x QSC CDX4.2Q amplifier

1 x Williams Sound DL210NET hearing
loop amp

Boardroom - Video

1 x Eventtec P1.2, 2.4m x 1.3m LED
video screen

1 x QSC NV-32-H endpoint

1 x QSC PTZ12x72 IP camera

1 x QSC TSC-80 touch panel

Restaurant

1 x QSC TSC-55 touch panel

1 x QSC CDX8.4Q amplifier

16 x QSC AD-C6T ceiling speakers

4 x QSC AD-C81T ceiling subwoofers

1 x Sony 65 inch 4K TV

1 x Attero Tech BT2A Bluetooth receiver



NATIONAL ART SCHOOL

CELL BLOCK THEATRE

At their current location for 100 years, Sydney's National Art School (NAS) occupies the site of the former Darlinghurst Gaol. Literally carved out of the old women's wing of the Gaol, the Cell Block Theatre at NAS has 10 metre high, 200-year-old sandstone walls covered in reminders of its previous life. Heritage listed and totally unique, the Theatre does equal duties as a lecture hall, concert space, and high-end function venue.

NW Group were no strangers to The Cell Block Theatre, having worked production on numerous corporate events in the space. When funding became available through the NSW Government's Arts Maintenance and Upgrade Programme, NAS approached NW to undertake consultancy and design work for a total refresh of the Theatre's AV capabilities.

"NAS had very particular objectives for The Cell Block," explains NW Group's Andrew

Hasler, who became Project Manager for the refurb. "The first was to service the school's internal requirements for lectures. The second was to provide AV for school and community performances, including arts and multimedia. The next was groups renting the space that required a higher level of production, and last was providing infrastructure for companies like NW when we come in with full production."

The biggest challenge in designing an AV

system for the Theatre was the diversity of its users. "We had to design a system to satisfy all of the varying levels of tech experience," continues Andrew. "This meant a complicated system that usually has four technicians to run it needed to be automated into a single button push. A lecturer comes in, wakes up the room, the lights come on, and two touch panel presses brings up stage light, the lectern, mics, video conferencing, and projection. At the

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other end, when a production company comes in, they need to be able to swap everything into full production mode instantly.”

NW Group developed a design in conjunction with TAG as automation experts, Show Technology for lighting, and Michael Diener at Pollard Productions consulting on rigging. NW’s own Ian Shapcott handled audio design, as well as NW staff taking care of video, with NW’s George Blackley as site manager. The job went out to tender, and NW Group won the gig in August 2021. Working under principal contractor FDC and around Sydney’s big lockdown, work started in November and was handed over in February 2022.

Work on site was tricky due the heritage overlay. This meant not just looking after floors and walls, but certain parts of the building are designated as “archaeological”, so must continue to display historical features such as old timber slots, the architecture of the gaol, and more. Penetrations into the sandstone walls were a no-no, but NW were allowed to drill into mortar joints. Appropriately, what became the ops corner was historically a padded cell!

Automation

Adrian Riddell, System Design Engineer at TAG, was approached by NW Group and suggested QSC’s Q-SYS would be the optimal platform for automating the entire AV system. Adrian’s initial design was handed over to NW Group, and their site manager relished learning the platform, handling the integration of Dante audio, lighting control, video automation, and camera switching.

Q-SYS triggers simple pre-set house light settings, AV presets including ‘lecture’ or ‘cinema’ mode, and can flick the whole rig into expert ‘production’ mode. Q-SYS automatically detects video inputs throughout the space and sends them to the projector. A Barco PDS4k switcher is located at the ops position, taking inputs from HDMI wall plates on either side of stage and at the lectern. For video conferencing, Q-SYS connects external microphones and cameras.

Audio

The Theatre is a 25 metre long room with sandstone walls and a wooden floor. Keeping

acoustic energy tamed was the goal of the acoustic design. Ian Shapcott’s solution was four elements of L-Acoustics A10 per side with two elements hung as delays. The speakers are steered in from the walls, and hung low enough that they’re not spraying energy aimlessly into the cathedral-like space. Two L-Acoustics KS21 subs handle low-end, and there are two L-Acoustics X8s set as front fill. Six additional X8s are available as foldback.

At ops, a Yamaha QL1 mixing console takes signal from a Yamaha RIO 3224-D2 stage box via Dante. Eight channels of Shure ULXD4 wireless mics are in-house, with eight handheld and eight belt pack transmitters.

Video

With the previous projection system consisting of an underwhelming 2000 lumen projector onto a small screen, it was more than time for an upgrade. A Barco UDM-4k22 is now connected via fibre and covers a Screen Technics 250” 16:9 electronic roll down screen that’s around 6.5m wide.

Q-SYS NV-32-H video encoders at the lectern

GEAR LIST

Video Equipment

- Screen Projector – Barco UDM-4k22
- Screen – Screen Technics 250” 16:9 electronic roll down (6m wide)
- Rear Wall Projector - Panasonic PT-RZ120BE
- Camera – QSC PTZ 12”x 72”
- Switcher – Barco PDS4k
- Video Encoders – 2 x Q-SYS NV-32-H
- HDMI Input – 2 x Visionary Solutions Duet
- HDMI wall plate (switched from Barco PDS4k)

Audio Equipment

- Control Desk – Yamaha QL1
- Stage inputs – Yamaha RIO 3224-D2
- Network – Dante
- Speakers
 - 10 x L-Acoustics A10 (4 x line array)
 - 4 x L-Acoustics KS21 Sub
 - 2 x L-Acoustics X8 front fill
- Amps – 6 x L-Acoustics LA4X
- Foldback – 6 x L-Acoustics X8
- DJ Kit
 - 1 x DJM900 Mk2
 - 2 x CDJ3000
 - L-Acoustics 108p (foldback)

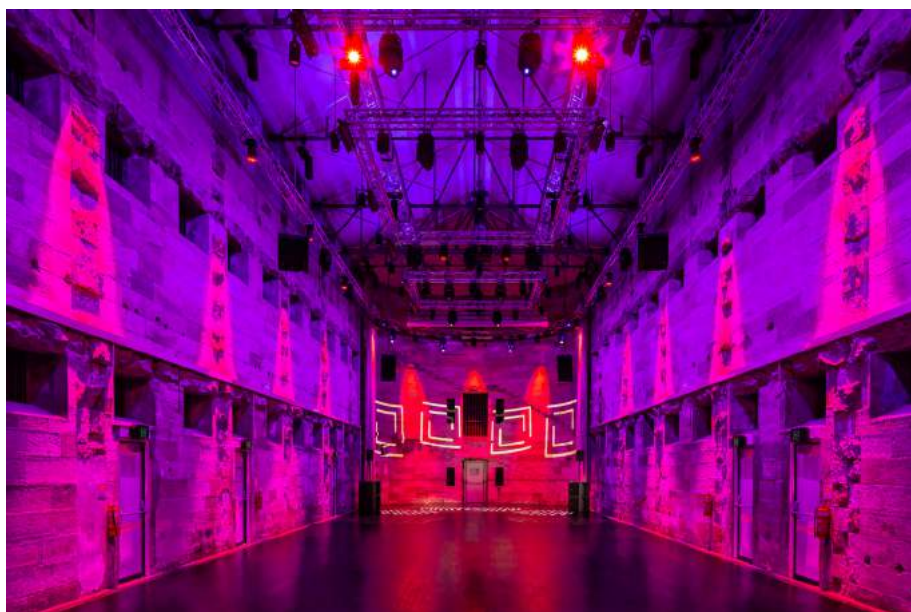
Lighting Equipment

- Control Desk – Grand MA3 Compact (running in MA2 mode)
- Network, Playback & Protocol
- 2 x ELC showSTORE
- 1 x ELC SwitchGBX10
- 2 x ELC Switch5
- 7 x ELC Node3
- 1 x ELC NodeGBX8
- DMX512, Art-Net, RS232 (Q-SYS to showSTORE)
- Dimmers – 2 x LSC UniTOUR36 (total 180a 3p)
- Lighting Fixtures
 - 21 x Martin ERA400 CLD
 - 30 x Clay Paky Mini-B
 - 18 x Prolights Cyc100
 - 8 x Prolights Cyc050
 - 12 x Fusion Bar Q XV
 - 31 x LED House light
- Atmospherics – 2 x Unique Hazer 2

Rigging Equipment

- Control desk – Vector Console
- Motor control - 5 x Digi Hoists
- Hoists – 29 x Stageket 500kg BGV D8
- Load Cell – 33 x Kinesys Librace!





and ops enable users to connect directly to the system, in addition to the other HDMI inputs around the venue.

A Panasonic PT-RZ120BE is currently being installed to project images on the curved wall behind the stage.

Lighting

The lighting system is controlled via a grandMA3 compact over an Art-Net network across ELC switches and nodes. Each lighting truss has its own ELC node. The main lighting fixtures are Martin ERA400 and Clay Paky Mini-B LED movers. The lighting design focuses on delivering comprehensive theatre stage lighting with two rows of front light and one row of backlight for film or orchestral requirements. House lights are an RGBAL fixture with variable colour temperature from 2800k – 6500K in 15ch mode to allow for maximum integration into the event lighting design.

Prolights EclCyc 100 and 050 fixtures wash the walls of Cell Block Theatre, with Fusion bars Q XV lighting the ceiling. The ELC showSTORE

controls house lights from its preset, four step-dim, via the Q-SYS touch screen located at the main entry. House lights can be controlled via the grandMA3 in production mode, giving complete control of all colour and colour temperature parameters

Rigging

Taking into consideration the low capacity of the roof trusses that date back to the 1950s, NW Group were well aware of the limitations on what they could hang. There was also the matter of the school being able to operate the system without qualified riggers present. Consulting with Pollard Productions, NW were steered towards a Kinesys Vector console, which allows limits to be set for loads, points and group trusses, and can automate the parameters of everything a rigger would be required to check. A multi-level user hierarchy gives access to control based on skills and qualifications.

A mother truss was dead-hung from roof beams, with pick-up points as required. All cabling resides in trays above the mother

truss, where it's distributed to speakers, stage boxes, and stage plates. "There's no fixings or attachments you would typically use in an install because of the heritage overlay," observes Andrew. "The tech we've used to install the systems are therefore a bit more 'temporary event style' rather than 'install style'."

29 permanent motors support the truss. Libra load cells actively monitor load weights and will stop movement if points or trusses are overloaded, underloaded, or become out of level by more than 50mm. Each truss has a 'home' and 'working' height setting, while the projector and screen trusses have a 'show' height. There are four additional hoist positions located in the centre of each pod and one on stage. These have been installed with a Libra load cell to facilitate scenic elements or aerialist performances and are operable via the Vector console.



DARWIN ENTERTAINMENT CENTRE

E3 Productions deliver lighting and comms 'firsts'

Darwin Entertainment Centre, an 1100 seater main theatre with a 270 seater studio, took possession of the first ETC Source Four LED Series 3s in Australia in July 2021 as part of a significant infrastructure upgrade. Supplemented in March 2022 by another Australian first, the FreeSpeak Edge Base Station, Head Lighting Technician Tomm Lydiard is relishing the impact, technically, and in terms of economy and convenience.

ETC Source Four LED Series 3

"We wanted to be able to offer our touring acts the industry standard. Our venue was pretty much all Selecon Pacifics and Zoomspots up until this point," explains Tomm. "We'd get shows that would come through, see the packs

and pull a face even though they were well maintained. We wanted to offer them the very best."

Customer demand and Tomm's own knowledge of the market meant that the ETCs were a no brainer, "The ETCs come with a lot of features that you can't find currently on other LED products. My main concern was brightness, and I knew that the ETCs come with XDLT lens tubes to up the output."

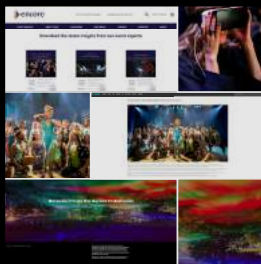
Decision made and funding secured, the theatre replaced 72 1K generic fixtures with thirty-six Source Four Series 3 LEDs, "We've twelve twenty-six degrees doing our front of house wash, substituting twenty-four Selecon Pacifics. Plus, twenty-four thirty-six degree Lustrs to do our upstage wash and our

overhead colour wash to stage, eliminating forty-eight Strand Harmonies."

As expected, the LEDs have significantly reduced the power bills with savings of up to eighty percent and Tomm is enjoying the ETC extras on offer, "I like the wireless DMX. It is very sturdy, and we now have access to Multiverse for the Lustrs which adds a whole new level of convenience." Used in conjunction with the console, City Theatrical's Multiverse can broadcast as many as ten universes of DMX from a single transmitter without excessive radio energy, freeing up wireless bandwidth.

Tomm has recently started exploring the NFC (near field communication) hardware too, "I can set up a patch on my phone, then tap the

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phone to the fixture to apply the settings.” This feature requires the Set Light app, and it works even if the fixture isn’t powered, allowing you to configure whilst rigging.

For Tomm though, as head lighting tech, it is the quality of the solution that has made a huge difference. ETC have added a deep red to the eight-colour Lustr X8 array meaning Tomm has access to a wider range of rich reds than ever before, all without sacrificing brightness, “It looks wildly better. The fixtures have totally exceeded our expectations.”

Five months later and the venue comms took a step forward too with the arrival of the FreeSpeak II Intercom System and Edge Base Station, ClearCom’s latest base station enabling connections to networked transceivers and eight channels of Dante; “We had been doing the best we could with a second hand FreeSpeak I and four wireless packs but we were struggling. Our priority as soon as we got some funding was to purchase something programmable and reliable and to have different closed party lines.”

Tomm and his team explored a few options but felt other offerings were overpriced.

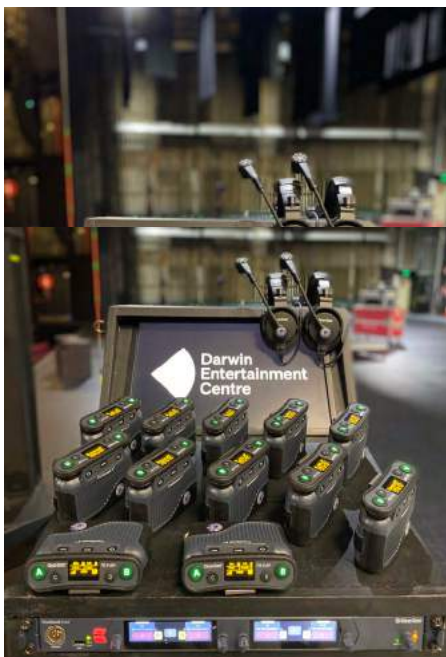
After a demo through the venue, they opted for the FreeSpeak II system, twelve wireless packs (one for every position), the FreeSpeak Edge base station and two Edge antennas to provide extra range in the concrete maze that constitutes the Darwin theatre, “We operate over three levels, through lots of concrete and steel, and cyclone venue thick walls, but the extra range provided by the two antennas is extraordinary. We can get to the foyer and the dressing rooms with no dropouts. The range is wild, so good and so clear.” When your lighting guy shows that amount of enthusiasm for a comms solution, you know it has got to be good.

10 out of 10 for Support

Darwin Entertainment Centre worked with E3 Productions, one of the Northern Territory’s leading providers of entertainment and event solutions, with whom they have a long relationship. Jeremy Lassemillante from E3 Productions recalls, “When Tomm got in touch he already knew what he wanted for the lighting fixtures. In fact, he knew more than me, I didn’t even know the Lustr 3s had been released! We worked closely with the team on

the comms upgrade and showed them a few options. The FreeSpeak II system required the least number of antennas and other bits and pieces, so was an affordable high quality solution.”

E3 Productions sourced both products from Jands, “Jands were fantastic to work with, especially navigating international shipping delays. They are amazingly supportive of us here at E3, and of our clients.” Tomm seconds that; “Jands customer service was excellent. They came out and sorted a couple of noisy Lustrs straight away and we’ve sent something in for repair and it came back quickly. I can’t fault the service of E3 and Jands – ten out of ten.”





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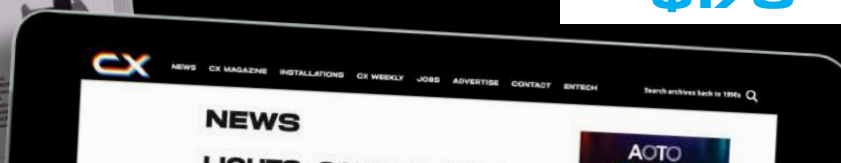
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HOW TO SURVIVE IN THE POST-COVID EVENTS WORLD?

As the world gradually starts to re-emerge from the COVID-19 pandemic, the economic damage done is really starting to show. Add the complexities created by the ongoing conflict in Ukraine and the result is a pretty dreadful financial picture right across the board, including in the events industry and especially event tech.

While inflation has driven the cost of events way up, increased competition is forcing prices down. And the fight for contracts is as brutal as the fight for Ukraine. However, there are things you can do to give yourself an edge in these tough times.

What is the situation?

The last couple of years have been great for those involved in running virtual and hybrid events. The technology has been able to jump forward as thousands of events of all kinds were forced to go from in-person to virtual. In fact, 85 per cent of the 1,830 marketers surveyed by LinkedIn in 2020 said that they

held a virtual event within the last year, with 28 per cent saying that the overwhelming majority of their events were now virtual.

Understandably, the expectation was that this would forever change the nature of the events game, leading a lot of new players to enter the scene to get a piece of this profitable pie. However, the uptrend appears to be beginning to tail off.

"The patience of virtual attendees is wearing thin," said Ken Holsinger, senior vice president of strategy-data solutions at Freeman in a press release. "They want better experiences." This statement was in relation to Freeman's release of a new study into opinions on the events industry. The research found that 85 per cent of attendees and 86 per cent of exhibitors were expecting to return to in-person events by the end of 2021, with positive sentiments on this move increasing significantly.

To a limited extent, this shift in moods was predicted. Responding to the question of whether virtual events are really here to stay, as part of an article for Forbes, Keneisha Williams of Black In Events Network said, "Yes. But not at the magnitude many are assuming. There will always be virtual and hybrid events, but in-person events will always reign supreme over virtual. We had to adapt to virtual because we had no choice. Humans are social creatures

and we need face-to-face experiences."

"Given the option, attendees are going to choose in-person as long as it's in reach. I also believe if a company has a big enough budget to host hybrid events, which ultimately includes virtual, they will. However, it won't be at the top of the list for many organisers."

The challenges facing the event tech industry are multifaceted, however. Not only is there increasing demand for in-person events, but massive inflation has led to event organisers lacking the budget to invest in major tech upgrades that may be needed to run more complex virtual events. The analogue simplicity of an in-person event certainly seems more enticing under these circumstances.

Combine this with a lot of companies (many freshly founded) offering innovative all-in-one solutions and the competition has become cut-throat, especially around the corporate events scene. As an example, virtual events platform Hopin went from being the fastest-growing European start-up of all time to laying off 12 per cent of its staff as share prices fell 41 per cent in Q1 of 2022.

What is the solution?

Julius Solaris, founder of Boldpush, made a number of suggestions to his peers in the

event tech industry regarding how to deal with this somewhat unexpected downturn in virtual event bookings in a LinkedIn post. The crux of his argument appears to boil down to 'be the best'.

"Develop more," he said in the post, among a number of other suggestions. "After an incredible year of development (2020), many platforms stopped building better features or improving UX. You can still win with a better product."

Sure enough, a few notable tech firms are starting to experiment with more advanced technology. Dolby.io, who we spoke to in the last issue of CX, were working on using WebRTC to create events in the metaverse, allowing attendees to interact with the event they were watching and fellow attendees in a revolutionary way. However, there are limitations to this approach, most notably the inherent cost of such a system.

Solaris also emphasised the importance of specificity, noting that 'all-in-one' solutions tend to result in jacks of all trades that are masters of none. That is to say, a solution that does a reasonably good job in a lot of situations, but an exceptional job in none of them. "All-in-one can be all-in-none," he said. "What's your all-in-one software best for? Is it virtual, in-person, or hybrid? Is it better for associations, marketers, or agencies? If you don't have an answer to these questions you may be out of the game quickly."

Solaris also stressed picking the right contracts to fight for rather than pitching for every event going. A focused product and

pricing structure, offering a perfect-fit solution to a planner's needs, is far more likely to succeed against those offering a more general solution that may need tailoring to those needs.

Relatedly, not only did Solaris also recommend working closely with planners to give them the support they need, but others have emphasised the need to design events to fit the requirements.

"In-person events have always needed to evolve," said Cindy Lo of Red Velvet, as quoted in the Forbes article mentioned above. "Virtual events have expedited the process for both registration and attendance – all event organisers have to start thinking about what type of experience, content, and engagement they will have to account for following the shift to virtual. Gone are the days of organisations producing one annual sales summit to the next. They will have to start designing additional virtual or hybrid events to fill in the gaps and not to cater to large numbers like they used to so the content and experience is personalised for the audience."

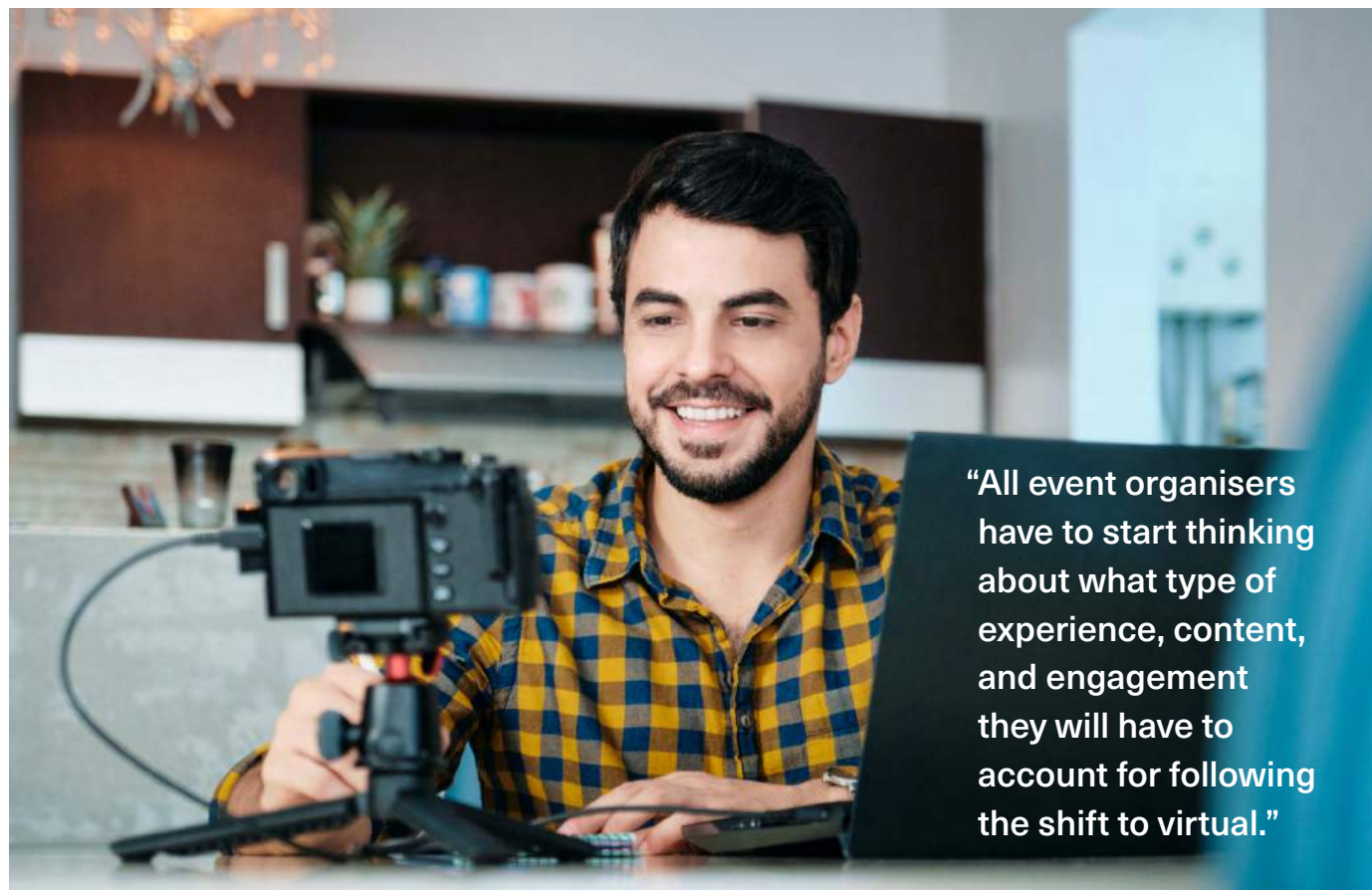
It's a point that Holsinger agreed with, albeit from a different perspective. Using sporting events as an example, he added in April Walsh, senior manager of industry relations at Freeman, for a good analogy: "If April and I were to get courtside tickets to see the Lakers play and our friends were watching at home, how much interaction would we have with them during the game?" he asked rhetorically. "We need to design events for the audience experience that is unique to each medium."

What happens next?

Various industry experts predicted that there would be a rush back to in-person events, especially among massive trade shows. However, most also agree that, once the novelty of being able to leave the house wears off, virtual and hybrid events will see a resurgence.

Quoted in the Forbes article, Marco Giberti of Vesuvio Ventures, who co-authored Reinventing Live, said, "Post-Covid virtual events and webinars will be unrecognisable. It will be like comparing traditional TV with streaming, print magazines with tablets or music CDs with Spotify. Events will probably start online and move to offline activations to later go back online again. Communities will interact through the combination of virtual and face-to-face experiences in ways that will increase their return on investments and improve efficiencies. This trend will facilitate and accelerate hybrid events and a new generation of face-to-face event experiences."

Lo added, "The golden ticket is going to be that magic hybrid model that doesn't break the bank, basically a broadcast while also having your in-person meeting integrated. However, something to account for is everyone will have a different comfort level. As long as people follow protocol and continue to get vaccinated, we should hopefully start to see corporate events returning back on the books sooner than later."



"All event organisers have to start thinking about what type of experience, content, and engagement they will have to account for following the shift to virtual."

THE LARGE SCALE EVENT NETWORK OF

VIVID SYDNEY 2022



Sydney's The P.A. People are no strangers to large scale public events, and in May 2022 the team were called upon to create what is possibly one of the world's largest temporary event communications networks, and a significant audio system, in Cockle Bay for Sydney's iconic Vivid Sydney festival.

Vivid Sydney is the largest festival of Light, Music, and Ideas in the Southern Hemisphere, transforming Sydney's CBD into a fusion of creativity, innovation, and technology for 23 nights from 27 May to 18 June 2022.

This year the program featured the longest continuous Light Walk in the festival's 12-year history, spanning eight kilometres from the Sydney Opera House around Circular Quay, through the Rocks and Walsh Bay, Barangaroo, Darling Harbour, Cockle Bay and Tumbalong Park, Darling Quarter, Darling Square, the Goods Line and Central Station.



Along the Light Walk, the temporary event network provided a comprehensive IP backbone to support the distribution of content for a series of LED wayfinding signs, cameras, an emergency paging system, and centralised Sound Pressure Level monitoring. The network was based on existing in-ground dark fibre cable, temporary tactical fibre, and a range of high-capacity wireless links to achieve a high availability and resilient topology.

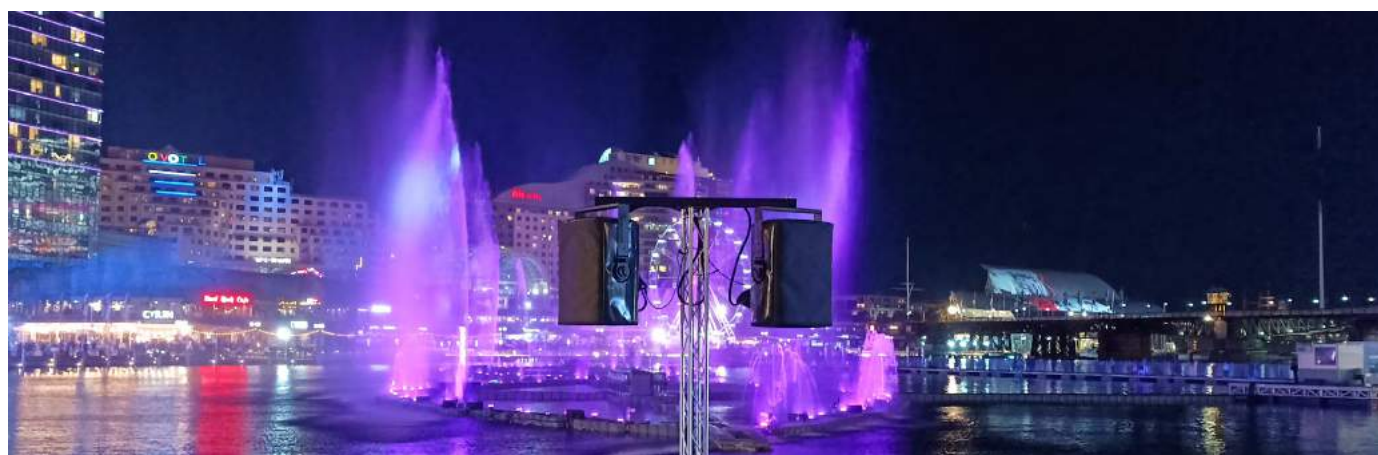
The network also supported the provision of internet services for both staff and various light installations, as well as connectivity to the cloud for real-time data analysis to support event operations.

As part of the communications package, in addition to the network and various end points around the event footprint, The P.A. People also provided a comprehensive communications framework to support the event team. Some 600 digital two-way radios over 44 talk groups on the Orion network were deployed, interfaced with a large Clear-Com Eclipse matrix intercom system comprising some 60 key stations installed in six separate event control rooms across the city. The intercom system was also extended with a FreeSpeak II Full Duplex system and additional Key Stations at the Overseas Passenger Terminal to provide production intercom for the opening night 'First Light' Welcome to Country and performance, and the Paramount+ Drone Show at Vivid Sydney – the largest in the Southern Hemisphere

Meanwhile back in Darling Harbour, a second team was busy providing the audio system to support Oracle Liquid's Sydney Infinity liquid and light show on Cockle Bay. Comprising some 24 Bose SMS118 subwoofers and 48 Celto CMP10 10" coaxial cabinets, the system was powered from just six Linea Research M44 amplifiers.

"It was a privilege to be involved in the delivery of this years' Vivid Sydney Festival," says Dom Jones, The P.A. People's Project Manager for the event. "After more than a year of planning and a couple of postponements, it was great to be able to get out and deliver the network and systems to support the Vivid Sydney production team, particularly given the crowds that came out in record numbers this year."

"This year the program featured the longest continuous Light Walk in the festival's 12-year history."





consideration regarding cabling. Then again rowdy pub gigs are where things like EON live, so I take that chance. And the floor wedges were not immune to taking a spray either.

The Bluetooth feature means nothing to me but would be useful for hirers. The rated output specification (650W RMS) is approximately right, and the 14kg weight is awesome. The onboard DSP comes default set ready to go, and you can dial in up to 100ms of speaker delay for the EON itself or (this is handy) for the 'pass through' output.

What stands out to me is that DSP, manufacturing, and design tech has come a

long way. These being relatively new, they leap ahead of some of the other 'current' stuff that was designed earlier.

With a 2" voice coil (woofer) and 1" horn, don't expect to melt any faces with EON700. It is a step up from entry level, and a step down from the next in line. For me, it is rental friendly, and it is pleasing the diaspora of artists I work with, from fine jazz to four-on-the-floor rock bands. At the price, it'll deliver the 12-month ROI that every rental device needs to achieve and after that, it'll make money for me.

If only I could find a hazer that does that...

JBL EON710 AND EON712 - THE SPECS

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Frequency response:
52 Hz–20 kHz (-10 dB);
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Max SPL: 125 dB

Dispersion: 110° H x 60° V

Audio I/O: 2 XLR Combo,
1 XLR passthrough

Advanced dbx DSP:
Automatic Feedback Suppression,
ducking, 100ms speaker delay,
parametric EQ

Built-in 3-channel digital mixer

Bluetooth 5.0 streaming and control

Dimensions:
587 x 332 x 300 mm (HxWxD)

Weight: 11.9 kg

EON712

Custom-designed 12-inch woofer, 2414H compression driver, redesigned high-frequency horn

Power: 1,300W Peak / 650W RMS

Frequency response:
50 Hz–20 kHz (-10 dB);
60 Hz–20 kHz (-3 dB)

Max SPL: 127 dB

Dispersion: 100° H x 60° V

Audio I/O: 2 XLR Combo,
1 XLR passthrough

Advanced dbx DSP:
Automatic Feedback Suppression,
ducking, 100ms speaker delay,
parametric EQ

Built-in 3-channel digital mixer

Bluetooth 5.0 streaming and control

Dimensions:
669 x 382 x 324 mm (HxWxD)

Weight: 14.5 kg



Julius Grafton is Sydney-based, founded this publication, and celebrates 50 years in the industry this year. He can be found at juliusgrafton.com

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WHY I LIKE THE LIVE ENTERTAINMENT BIZ

It has hurt me physically and mentally. It has hurt me sonically and socially. It has bruised my soul. Yet still I come back for more of the entertainment game. Why?

Because of so many reasons. Seeing beaming smiles on punter's faces is a huge reward in itself. When an act is kicking it and the audience is responding in kind, it doesn't matter how big or small the show, how many boxes or fixtures are used, it is just an absolute buzz to be around.

You can approach it on your own terms; work for a company or production house, work for a management group or a venue, or follow the freelance route, and try them all. Build a career on your own terms or blaze it down just as easily.

The game can be looser than a kaftan at an office job. For starters, there's no dress code. Tutus are optional. There's little of the 9 to 5 routine. Sometimes, there's little routine at all!

You get to meet some amazing people. The entertainment game attracts a wide variety of misfits and interesting personalities. You'll get the odd diva, but that can be entertaining too. The camaraderie built by achieving the

impossible, show after show, will provide you with friends for life.

Those friends form an integral part of the teamwork that is essential to staging performances successfully, on-stage, on-screen, or on-air. Having everyone on-task and working together at critical moments can be the difference between a memorable event or a complete disaster. All in the public eye.

If it's your thing and the stars align correctly, you get to travel the world. You also get familiar with carnets, visa hassles, and forgetting where you are on the planet when waking up in the morning.

Speaking of stars, you get to see or work with your favourite artists, acts, and shows. Sometimes, this sword is double edged. Don't forget that public facing figures have private lives. Some are delightful offstage, some not. Guess what? They are human after all, with all the foibles us lesser mortals bring, amplified and distorted by endless public ego massaging.

So many options

Entertainment offers a wide variety of outlets and platforms both during and after a show career. Rock, theatre, broadcast, circus, events, film, festivals and more all cross over with similar tech, logistical structures and show vibe. Corporate or install AV are related pathways for many.

Few industries have such a mashup of tech and creativity, an intersect that allows a curious mind endless possibility. Architecture is the closest 'traditional' discipline but it's dead boring compared to show life. I tried both and gigs are way more fun!

'The show must go on'. I don't know how often this mindset has helped me in other pursuits outside gig life. Being able to focus intently and problem solve at crunch time is an invaluable state of mind that no university can teach. Convincing others of this merit is another challenge.



Because most shows are temporary or transient, there is a distinct lack of long-term security or planning opportunities. What happens when you are sick or injured? Who will pay the bills when you cannot earn? We've seen plenty of those discussions over the shutdown years.

As anywhere, there is a randomness of success or failure. Many talented people flounder because they weren't in the right place at the right time or just didn't fit in when they were. Being friendly with key decision makers certainly helps but it can border on nepotism.

After experiencing the inner workings of the rock and roll machine, my dewy-eyed punter impressions remain forever tainted. The innocent joy of soaking up a live show for what it is, without picking the eyes out of the production is long gone. Those that say 'make your passion a job and you'll never work again' are full of it. It's still a job, and a tough one at that, however passionate you are about it.

Why it's still worth a crack

For a minority, there's fame and fortune. Numerous local artists and crew grace the world stage at the top level. Even if you don't get that far, there are genuine ongoing opportunities around the country. Particularly now, after the skills drain of late. Whichever way you go, you'll end up with a trove of cool stories to bore the kids with.

For all the reasons outlined above and more, I still love the industry. My back might be shot, my ears forever ring with a 3k test-tone and my ticker remain scarred from innumerable electric shocks, but I'll return for the next show, ready to soak it all in and go on another ride.

The biz still gives me a buzz.

My favourite bit of all is the 'show rush.' There is a particular nervy feeling that event personnel get:

- when the first chord cuts through the darkness
- when the curtains part and the set is revealed
- when the kabuki drops on a product launch
- when the MC walks onstage for the grand intro
- when the cut goes to the on-air presenter
- when the siren signals start of play
- when the pyros go off at the crescendo

These moments are equally exhilarating and frightening. Rarely do other jobs offer such a reliable endorphin surge as you get when it's showtime. Even the most jaded entertainment professionals still feel a bit of this and keep coming back for more.

Slave to the grind of the rhythm

Networking is a necessary evil in any industry. In entertainment, even more so. It's a tight little game, where everyone knows of your faux-pas

or meltdowns. You are only as good as your last gig. But this also means everyone is only a phone call or two away when you need them.

Even working with a show that you love, like any job, there are elements of drudgery. Waiting in transit queues, doing the books at BAS or tax time, chasing up unpaid invoices; these are universal.

Past governments' deliberate ignorance of and obvious distaste for entertainment (and arts in general) as valid and vibrant business sectors are obvious. The cynic in me will wait and see what a change to more liberal governance may bring.

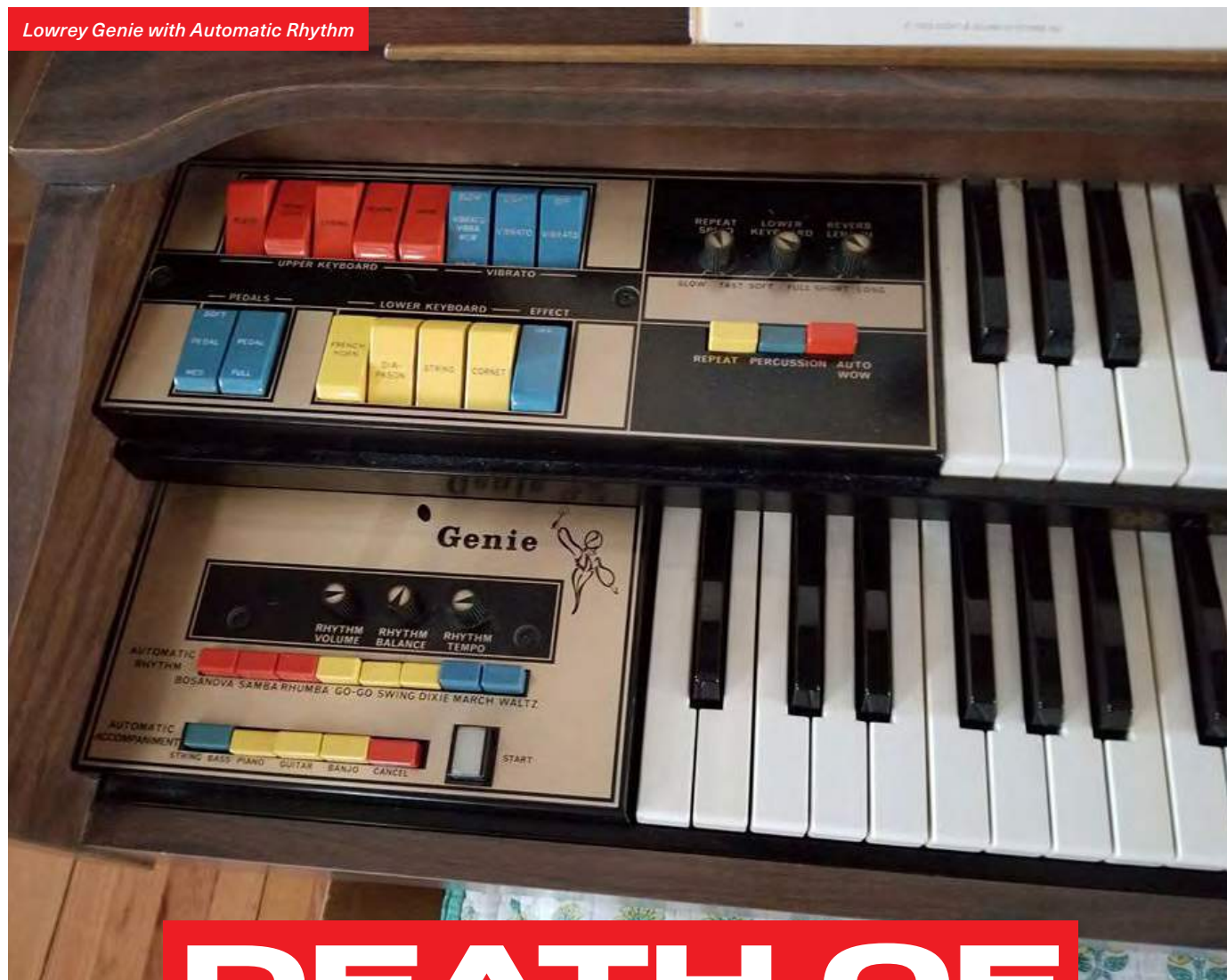
Even roses have thorns

After bigging up all the positive aspects of the industry, here are a few angles that might have you thinking twice.

First up, the hours are crap. Say goodbye to any semblance of meaningful interaction with people in normal lives. Travel weariness is another burden. It's not just the endless hours of trucks, vans, planes and hotels, but a general disconnect from home base, family and friends.



Lowrey Genie with Automatic Rhythm



DEATH OF A SALESMAN

SNIPPETS FROM THE ARCHIVES OF A BYGONE ERA

A broken guitar string in 1971 prompted me to walk into the newly opened Wadsworth Stamford music store in Bankstown Square, Sydney, where by chance I gained my first sales position, that of musical instrument salesman.

These were notable times in the music industry: The Beatles had broken up the year before, Elton John had his first international hit with 'Your Song', and Paul McCartney had just formed his new band, Wings.

Sheet music, especially with guitar tabs, was a hot seller, and my first enterprise was to plaster

the entire eastern wall of the store with sheet music, which ultimately paid the store rent. However, the real profits were in organ sales, which were booming at the time, but my three piano chords and one-finger melody neither impressed potential customers nor attracted any sales.

Wadsworth Stamford had the Wurlitzer organ distributorship and the store also sold the more affordable range of Lowrey organs. This was the era when Lowrey incorporated the 'automatic rhythm' box into its range, an array of annoying drum-like beats that I could never quite come to terms with. And I was horrified just a few years later in 1975 when I saw Paul McCartney incorporate a similar sounding rhythm machine in Wings' performance of Bluebird at Sydney's Hordern Pavilion.

"It's amazing what they can do these days isn't it?" McCartney told the audience.

Paradoxically, it was the 'Silent Generation', the generation before Baby Boomers, that no longer wanted to remain silent in the burgeoning electronic music world. So the Lowrey Genie organ with its 'easy play' one finger chords, auto bass, and rhythm machine became their instrument of choice.

Whilst I was selling acoustic guitars worth around two hundred dollars, Lowrey organs worth around two thousand dollars were gathering dust. So Frank Wadsworth arranged keyboard lessons for me. However, I still failed to impress, so he employed a keyboard player/salesman who was immediately promoted to



Paul Penton ABC Radio Operations Manager using a Stagetec console with NETIA radio assist

Store Manager, and I was shipped out to another branch and assigned to more mundane duties. This ultimately brought about my demise.

Some seventeen years later, somewhat frustrated by the diminishing opportunities after years in the music industry, I re-entered the world of sales, this time as a broadcast sales representative. I was soon to learn the enormous difference between customers walking into your store and you having to go out and find them.

The pro audio and video sales business has always been littered with personnel who would prefer a hands-on role in the industry rather than being summoned regularly to the Sales Manager's office where admonishing fingers were pointed when sales were down. George Bernard Shaw's crushing remark aimed at teachers from his 1903 play 'Man and

Superman' was, "Those who can, do; those who can't, teach." Similarly, a great contingent of those who couldn't participate creatively in the audio, video or music industry ended up in sales.

My business card read 'Sales Engineer', which was a bit of a stretch for someone trying to flog Sonifex cartridge machines to radio stations. Carts still reigned supreme in an analogue tape-based world; they were used for radio commercials, jingles, station identifications, and music. But the digital world was closing in, and in late 1989 an ABC Radio team led by Spencer Lieng won approval to implement their new digital innovation. This was D-Cart, which was a digital audio editing, recording and playback system consisting of a keypad and software application that replaced the need for cartridge and reel-to-reel tape machines.

Paul Penton was one of the ABC Radio engineers that used the D-Cart system when it was introduced all those years ago. I contacted Penton, who still works for the ABC as Manager of Audio Radio Operations, to chat about D-Cart.

"Believe it or not, we still use it," said Penton, who added that D-Cart was still in transitory use in some applications pending new solutions.

He said that ABC Radio National went on to incorporate other digital solutions such as the Stagetec audio consoles with NETIA radio assist (pictured) as part of their ongoing digital solutions.

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In Arthur Miller's play, *Death of a Salesman*, Willy Loman burns out in his early 60s. He is deluded, out of touch with a changing world, and suffering from a loss of identity after a lifetime on the road in sales. Conversely, I was excited about a world that was rapidly turning digital, but I grew tired of the cold calling and the demanding sales targets, which constitute the millstone around every sales representative's neck.

After a hiatus of some years I joined Audio Telex where I spent the next five years unsuccessfully trying to mould a sales position into a technical position. Despite some success in design and troubleshooting, management didn't want me rubbing shoulders with them. "You're just not the type," I was told.

Management soon became aware of my displeasure of the daily grind on the road. Thus I was demoted to office duties with the loss of the company car, and I got the idea that they were not exactly thrilled to have me around.

The demotion was analogous to the tale of Brer Rabbit, who cried, "Whatever you do, don't throw me into the briar patch." But the 'briar patch', in the form of the office was exactly the escape I needed. Here, amongst other duties, I was kept busy intercepting calls from troubled installers who were mystified as to why their 100V line audio systems were blowing up (invariably due to installation faults). And I was sometimes dealing with installers whom I surmised thought Ohm's Law was probably a 70s television police drama.

My new role was welcomed by the service department, which was often overloaded with calls from troubled installers that they didn't want to deal with. The position also gave me the opportunity to work on a couple of designs with my good friend Rudi Smit who was Audio Telex' long serving Design Engineer, and the unsung hero of the company who designed

and manufactured the bulk of the company's 100V line hardware and other equipment.

In an ironic twist, for my services, which included callouts on problematic installations, design, and liaising with the technical and service departments, I was promoted out of the briar patch back to Sales Representative. I was back on the road where I once again began to self-destruct, and subsequently Audio Telex and I parted company.

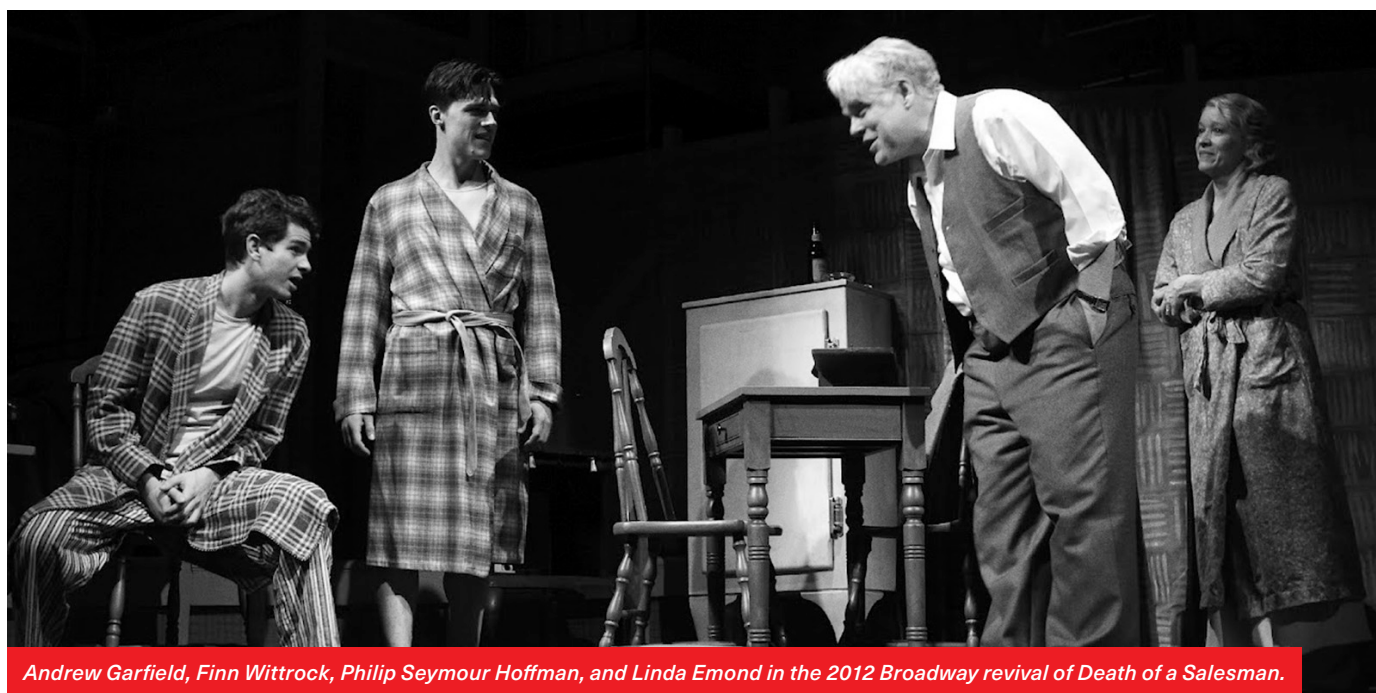
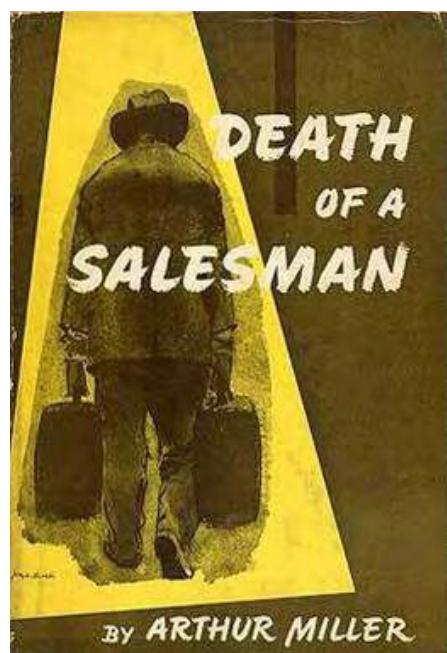
I don't think I lasted more than a year in my final sales position at Greater Union, where I remember doing a lot of audio design trying to win tenders so as to keep the Sales Manager at bay. Tendering for projects is a lengthy process, which can take weeks. I was once called out to a major shopping centre under construction, given a hard hat, walked through the site with my plans and asked to qualify certain aspects of the design while the installation was in progress. The problem was we didn't have the tender. Unbeknown to the installer, the project manager had given the tender and my plans to another company.

The second problem with the lengthy and time-consuming process of tendering was the 'second quote'. This was often practiced in licensed clubs and other venues where a committee had asked for two or more quotes, irrespective of the fact that an installer had already been surreptitiously appointed. So, I would often be the dummy doing the dummy quote.

It was on a rainy Friday afternoon two weeks after handing in my resignation to the Sales Manager, and now devoid of my company car, that I watched the office slowly empty while I waited for a taxi that didn't arrive. Thankfully, the General Manager of Greater Union noticed me alone in the office and drove me to a railway station. I never returned to sales.



Sonifex Cart machine bank



Andrew Garfield, Finn Wittrock, Philip Seymour Hoffman, and Linda Emond in the 2012 Broadway revival of *Death of a Salesman*.

The industry event everyone is talking about.

“People seemed **buoyed up** and ready for another convention next year!”

Desley Lodwick - Aberrant

“It felt **empowering** to part of such a highly knowledgeable group, **passionately** talking about direct industry issues and processes that need resolution for us all to **move forward**”

Martin Bowman
Clearlight Shows

“**The convention shows us what can be experienced and achieved when we all come together with the industry’s best interests at heart.**”

Deb Sloss
Studio Connections

“*The Roger McLachlan interview was an absolute piece of magic*”

Murray Tregonning
Murray Tregonning & Associates

“*I **still** can’t get over the quality of the food at the Convention Venue.*”

Gary Pritchard
LSC Controls Systems

“**The presenters were very engaging, the topics most applicable and the entertainment 1st class. *Don’t know how you are going to top this!***”

David Di Muzio
Production Audio Visual Technology

“The convention content was **great** - would have liked to have been able to attend all the presentations. **Really need more staff to attend all of it**”

Tiny Good
Showtech Australia

“*The convention proved once again, that it is **people** who inspire and make the world go round, not money.*”

Anonymous

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in 2023 and have your voice heard.

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