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# THE INSTALLATION ISSUE

- > POWERSOFT DRIVES DOCTOR WHO
- > HARD ROCK CAFÉ BRINGS BACK THE ROCK
- > LSC POWERS REDLAND PAC
- > SALTY'S HANGS TEN WITH EAW
- > ANU TRUSTS RENKUS-HEINZ

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Team 18 Racing's custom comms

Novatech transforms The Ghan

Introducing Cordial Cables

Vision for Riverside Theatres

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Jenny Barrett covers New Zealand

John O'Brien's Backstage

Brian Coleman: The Gaffa Tapes

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# School Auditorium Becomes Medieval City with PIXERA

**After 30 years in the business, Melbourne's Clear Systems has grown to have one of the most diverse hire inventories in Australia. Involved in corporate, community and other events, the company's expertise in audio, lighting, staging and rigging allows it to offer an experienced team for hire, service and installation of complex AV projects.**

One of the company's latest projects, a theatre show based in Mount Martha, demanded a media server that was capable of turning an ordinary school hall into a medieval village, for the school's annual theatre production. For this, Clear Systems turned to PIXERA's Australian distributor, Show Technology. Over the course of their 15 year partnership, Clear Systems and Show Technology have built a long-standing alliance with customer support at the core.

For the project, Show Technology provided Clear Systems with two of Austrian manufacturer AV Stumpfl's PIXERA media server minis, with two outputs. The company also provided an AV Stumpfl PIXERA director USB Dongle.

"We needed media servers that could provide advanced mapping and content feed throughs, and AV Stumpfl's PIXERA minis were the perfect solution," said Daniel Bowen, Clear System's hire manager.

AV Stumpfl's PIXERA is an award-winning media server system for real time media processing, compositing and management. Designed to be flexible, powerful and ultra-high in performance, the PIXERA media servers have been built around the key theme of usability. From specialists to beginners, the product is designed so all users can operate the system and smoothly progress in their skill set.

One PIXERA mini server managed the content for six projector screens, covered by two Panasonic RZ-970 laser projectors, while the other mini server was used to stitch together

two short throw laser projectors for a single cyclorama wide banner image at the rear wall of the stage, creating the location and themes of the show - an impressive experience for the audience.

"The great thing about the PIXERA product family is that there is a hardware and software solution for any size of project and any budget," said Show Technology's Branden Butler. "So, whether you are looking for a versatile system for a small live event, or a large-scale solution for a massive museum installation, PIXERA will be the perfect fit in both cases."

Bowen explained: "Both servers were linked with the PIXERA director dongle which was controlled via the lighting console for perfect timing of every cue. The lighting system was created with Martin Professional MAC Auras and ShowPRO Tri Pars, ShowPRO Fusion Bars and ShowPRO Pharos."

Clear Systems also supplied a Global Truss performer stage to extend the existing stage in the hall including their curved sections to draw the audience closer to the stage, for full immersivity.

"The implementation of the project was a lot easier than envisaged thanks to the expertise and support from Branden Butler at Show Technology, who shared his wealth of knowledge from the very beginning," said Bowen. "Show Technology's guidance provided us with the best method of set up at the start, so any alterations made through rehearsals were handled without any issues and prevented any challenges from cropping up later in the process."

The entire project was a success, with the final result exceeding the school's expectations and delivering the brief in full, transforming the school into the medieval era. "It was truly a great result, one that Clear Systems were proud to have been a part of," concluded Bowen.



One of Clear Systems latest projects, a theatre show based in Mount Martha.

# Team 18 Racing chooses custom comms solution from D2N



Team 18 was founded as Charlie Schwerkolt's lifelong vision to build a championship-winning race team and a successful culture for the team and their partners. As the team consistently won more races, they grew, and as they grew, so did their technology requirements. One of those requirements was for a cutting-edge comms solution and for this they turned to one of the market leaders – D2N Technology Solutions.

Team 18 Data Engineer, Mark Sylvester, explained, "The need for a new radio and comms system came about due to the team's expansion. We were looking to update from our two-radio system that we used when we ran a single car team in 2019, to when we added another car to our campaign for the 2020 season. We were looking for something more flexible than a two-way radio setup, to expand our options in communication and

have more freedoms in our programming. We were introduced to D2N via Steven Richards who joined the team after a long and successful driving career that saw him win the Bathurst 1000 five times and D2N provided us with the belt pack system that we now use."

Team 18 and D2N had to come up with a balance between what D2N could provide and how the team were going to work that into their current system.



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Sylvester continued, “We had a few systems in mind and we did our own research as to what sort of system we wanted. We eventually came up with three or four different proposals that we were looking at and discussed them with Jason Owen at D2N. The process ended up taking a few weeks, but in the end, we settled on a combined Kenwood, Riedel, and MRTC belt-pack system and D2N set about putting this system together and assisting with the install.”

According to Sylvester, the system that D2N provided has given Team 18 far more freedom within the team’s communication. He added, “The belt-pack system and the way we use it is very handy because it interfaces with two-way radios, meaning we can free up the two-way radios we already have and bring some further communications through via the belt pack, as opposed to clogging up a two-way which can only handle one channel at a time.”

## The way Team 18’s data station is setup, the engineers on each car sit two-by-two with all their screens setup in the middle, so they can’t see each other.

Sylvester said, “When it comes to those important strategy decisions during a race weekend and during the races themselves, communication is crucial and the belt-pack system allows us to all be latched on so we can talk freely while the race is live. It has significantly helped us to streamline our communication from a strategic point of view and definitely satisfies the requirements we have as a race team.”



While the drivers often take the spotlight, motorsport is very much a team sport and success definitely comes down to everyone completing what Sylvester calls “the one-percenters” that determine results on race day. These “one percenters” include the crew performing a fast pit stop and the engineers selecting the best strategy to get the car to the finish line as quickly as possible.

Sylvester continued, “The aim of better communication is to minimise any unforced errors and accidents that can happen and with this new comms system from D2N we have been able to do that. Most of the time our unforced errors come down to communication errors, so the more we streamline our communication and the more efficient it is, the better chance we have to succeed on track. We’ve got our radio system to a position now where we’re very happy with it and we can continue to keep focused on the task at hand over a race weekend.”

Team 18 use the D2N belt-pack system within the team’s engineering and team management. The belt-pack allows the

crew to listen to multiple communication channels at once, whereas the two-way doesn’t, so having multiple communications readily available with adjustable volumes and settings is very valuable.

Sylvester added, “We have also recently implemented a direct plug-in to the car which is a massive performance gain for us. Now we can talk via the Riedel system direct to the car via the umbilical cord that we have. Every team is scanning each other’s radios, so what that allows us to do is to stop broadcasting our communications across pit lane and discuss any changes or strategic decisions more freely with the driver. The fact we can talk directly open-channel to the drivers is a massive advantage for us.”

Typically, there are a few comms groups setup within the team in order to streamline the signal path of information to and from engineers. They also have a race management channel from Supercars Race Control via the belt pack.

Sylvester is clearly a big fan of the D2N comms solution’s flexibility as he explained, “The direct line to the driver has been the biggest wow factor for us, not just from the engineers’ side but also the drivers’. For us to have the ability to download from the car and also talk to the driver open channel without broadcasting it, it means we can talk more freely when it comes to discussing car setup changes and race strategy. The radio system we use gives us the edge because it provides the team more options and more freedoms for critical communication. The Riedel system allows us to set noise limits and talk calmly. I distinctly remember one of our drivers saying how good it is having their engineer talk calmly and at a comfortable noise level, so he doesn’t have to turn his helmet fan off. It’s little things like that which you lose when the engineer is yelling at the driver as they are sticking their head through the door!”

In conclusion Mark Sylvester brought the whole Team 18 comms solution down to some fundamental basics saying, “With the D2N comms system the driver feels calmer, relaxed



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and is able to give better feedback which ultimately for us results in a performance gain. D2N understand the wants and needs of motorsport and teams and provide a quality support network to assist our team when we require it. Motorsport is a unique working community where weekends are crunch time. Quite often when we have external suppliers they can be difficult to contact on a weekend, but D2N are ready and able to help if any issues arise 24/7. The last 12 months have presented a logistical challenge between Sydney and Melbourne due to the COVID-19 pandemic. That said and even though D2N are Sydney based, they have still given us excellent support and had people on the ground in Victoria that have assisted the team during this difficult time.”



# IF THE PLUG FITS – IT WORKS!



The Fitness Audio brand is in a unique position. It sources four different headmics for their core customer base; clubs and instructors in the global fitness industry. The fitness industry is not like any other group of wireless mic users. They shout and sweat all over their mics for hours a day until the low cost, poorly prepared ones give it up. The better ones, as sold by Fitness Audio, keep going. Their two lower-mid price instructor imported mics including the E\*Mic have a 12-month warranty against “sweat death”. Their two Australian designed and assembled mics, the Aeromic and Cyclemic, have a 2-year warranty against “sweat death”. Most other mic brands exclude sweat damage in their warranty.

The Covid 19 pandemic has resulted in many fitness instructors purchasing their own mics to teach classes at the clubs. As casual employees, they only get paid for each class they teach, so many will work at different clubs. So, their issue becomes “Why doesn’t my mic work in the second gym when it does in the first and the connector is the same?” We are talking about Switchcraft’s tiny XLR connectors. We know them as the 4-pin TA4F as used by Fitness Audio, Chiayo and Mipro or Shure/JTS or EV/Telex. There’s also the TA3F 3 pin versions as used by AKG and Samson, amongst others.

The issue is there are three different internal wirings for the T4 group and two different wirings for the T3 group! The only thing in

common for them all is that Pin 1 is used for the Ground cable. All the other connections move about the available pins. Then there are the two wire versions from lesser known and lower cost transmitters. How do you get a three wire electret condenser mic working from a two wire transmitter without a dedicated bias feed? These are the challenges that FA put to their tech team to solve and solve it they did!

If an instructor teaches at a Fernwood Female Fitness club that uses a Fitness Audio wireless system as well as at a Fitness First club that uses a Shure, and they buy just one headmic, now any of our four fitness mics with the MultiMic option will work with both transmitter brands!

We tested it thoroughly in-house, then from December 2020 we started sending them out to selected Aussie instructors for real live testing in situ. After six months with zero issues, we are now ready to tell our pro audio dealers and our fitness end users that we have reduced our T4 and T3 wiring options down to one mic for each that works with all brands. Less SKUs is good for business and an all options connection is great for the instructors!

**For more information, contact Andrew Zarounas at Fitness Audio Distributors in Sydney by calling 02 8399 1052 or email [andrew@fitnessaudio.com.au](mailto:andrew@fitnessaudio.com.au)**



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# NOVATECH TRANSFORMS THE GHAN

Parrtjima. Photo Credit: Tourism NT

**Working as the creative directors and producers of the 2021 Parrtjima Festival in April, which is owned by the Northern Territory Major Events Company (NTMEC), AGB Events produced and delivered a travelling installation on The Ghan for NT Tourism with the help of technical partner Novatech Creative Event Technology and a FUJIFILM Z5000 projector.**

Novatech Creative Event Technology Director of Sales and Marketing, Ashley Gabriel, explained, "We needed a projector with ultra-short throw capability plus a small footprint as rear projection and long throw projection wasn't an option. We also needed to fill the screen with as large an image as possible in a confined space, like a train carriage. It also needed to run reliably on the train trip down from Darwin. I'm delighted to say the FUJIFILM Z5000 was the perfect projection solution as it provided great ultra-short throw in a small footprint giving bright results on the screen from sitting on the floor, so any viewing sightlines were not impeded yet a great image was displayed."

The end result was a whole carriage of The Ghan, a 900-metre luxury train that travels the 2,797 kilometre stretch between Darwin and Adelaide, being turned into a travelling Parrtjima light installation utilising digital imagery from the 2019 Ranges Show. This imagery was projected onto a wall the entire width of the Ghan carriage measuring 2.7 metres by 1.6 metres high and was enriched by an epic musical composition and narration.

Gabriel continued, "The Z5000 projector almost became invisible as it was sitting on the floor in a custom enclosure very close to

the screen. It was so discrete and enabled a great projection result based on the circumstances. It was also incredibly reliable for the entire trip and resulted in the brilliant clear images we needed."

Due to its flexibility, only a single projector was required for the entire production as it ran a programmed video set including holding slides, then a video of projections in Alice Springs amongst many other amazing images.

Ashley Gabriel concluded, "We used the Z5000 as a single front projection using a simple but effective video input. It is a very flexible projector with great optics given its unique dual-axis lens. In short the Z5000 was the only projector we trusted to use in a confined space and in a unique event location such as The Ghan train travelling the length of Australia. It really was the ideal projector for the job."



Photo Credit: Novatech

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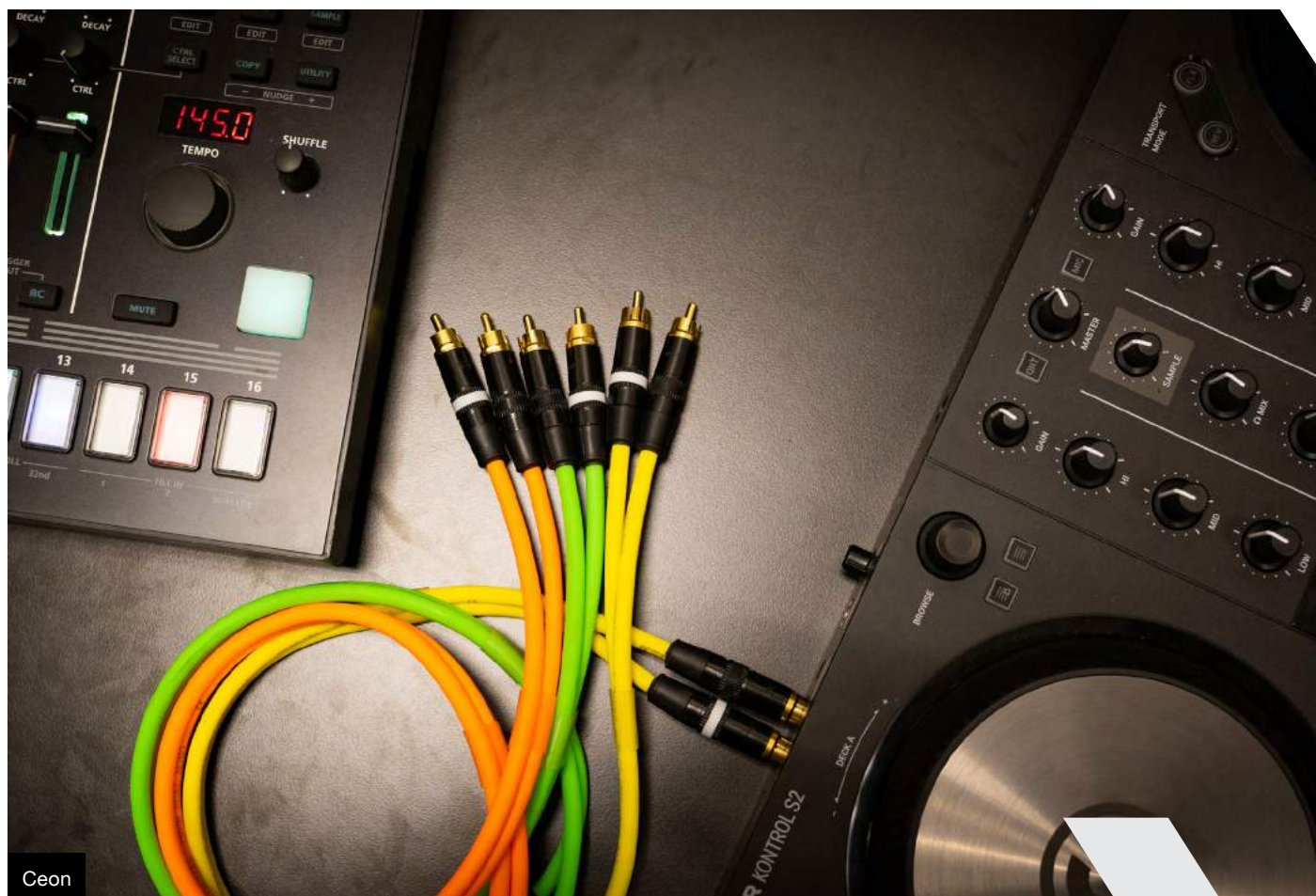
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# INTRODUCING CORDIAL CABLES

**In the world of professional sound, one of the most critical yet often overlooked aspects of good signal flow is the ubiquitous audio cable. Ensuring signal gets where it needs to go is only half the battle when it comes to cables, as any good engineer will tell you. Whether it's maintaining a rock-solid connection between systems and instruments during a performance, or cleanly bridging the minutiae of carefully calibrated hardware, cables consistently shoulder a tremendous amount of responsibility.**

Enter Cordial, a German cable manufacturer with a passion for both the art and science of signal transmission. In the realm of globally recognised cable builders, Cordial ranks as one of the very best. With a broad product portfolio, covering instrument, microphone, and loudspeaker cables, to multicore systems, DMX, MIDI, and digital audio cables, Cordial has become a trusted supplier for technicians and musicians who take their craft seriously.

With over 25 years of experience in high quality manufacturing, Cordial's precision-made cables have set the standard for accurate, dependable, worry-free transmission of audio, video, lighting, and data signals. With Neutrik and REAN connectors, wiring designed for optimal conductivity, flexibility and tensile strength, as well as trendsetting inclusions such



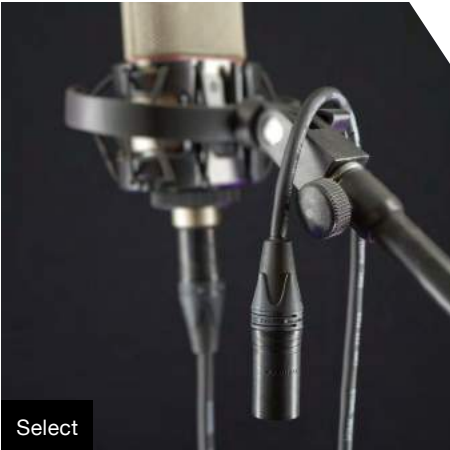
Essentials

as Neutrik silentPLUGs and anticorrosive gold plating, Cordial's approach to quality engineering has become the stuff of legend.



Essentials

Thanks to the company's track record, Cordial's bulk cable offerings are becoming a go-to resource for installers and integrators worldwide. Chosen for their combination of superbly clean signal transmission characteristics, coupled with unsurpassed reliability and durability, Cordial cabling now forms the backbone of many major concert venues, exhibition halls, opera houses, and television stations, as well as houses of worship, night clubs, schools and more.



Select

Easily recognised by their colourful, touring-grade wraps, Cordial cables are the first choice of countless professional performing artists, live sound technicians, recording engineers, and venue designers in over 60 countries across the globe.

As of January 2021, Cordial cables are distributed in Australia by Group Technologies. "We are very excited to partner with a brand that has such a strong heritage, and products manufactured with excellent attention to detail," says Group Technologies' General Manager Anthony Touma. "The addition of Cordial to GT's portfolio is a perfect fit, and keeps in line with our focus on brands that deliver market leading audio products."

In addition to their presence in the retail sector, Group Technologies is also a leading supplier of systems integration hardware across Australia, offering solutions for venues, corporate, restaurants, education and more. The addition of Cordial to their range will allow for expanded bulk cable product availability for installers throughout Australia.

The partnership with Group Technologies serves to bring reliable supply of Cordial's exceptional product offering to more AV professionals and their clients across the country, as Tobias Felbermayr, Cordial's Head of Sales & Marketing, explains; "We are delighted work with an exclusive Australian distributor with an extensive history in professional audio. Group Technologies has a clear vision, excellent communication, and a broad knowledge of the market. We are working with them to offer artists, professionals and integrators in Australia a dependable source of quality cables. We believe they have the depth of insight required for Cordial to flourish in Australia, and we are very excited about our partnership."



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# Vision for Riverside Theatres revitalisation gets green light

**The City of Parramatta, NSW, is driving forward its ambitious redevelopment of the iconic Riverside Theatres after Council approved the next steps to progress its new concept proposal.**

The Riverside Theatres Redevelopment Concept Proposal outlines Council's vision for a major upgrade and significant expansion of Riverside Theatres, which includes new venues and increased capacity at the existing site.

Council agreed in late July to begin exploring design options, developing functional specifications and validating cost estimates.

"Riverside Theatres is the heart and soul of performance culture in Western Sydney and for more than 30 years has attracted some of the world's best artists, nurtured local talent and showcased the diverse and vibrant stories of Sydney's Central River City," City of Parramatta Lord Mayor Cr Bob Dwyer said.

"We are ready to take Riverside into the future and are excited to reinvigorate plans for its

redevelopment. Council remains committed to investing the \$100 million generated by the sale of land for the Powerhouse Parramatta into a redeveloped Riverside Theatres. We look forward to working with partners in the government and private sectors to breathe new life into the iconic theatre."

"Our vision is that Riverside Theatres will become the centrepiece of Parramatta's revitalised arts and culture precinct: a hub of performance excellence that attracts talent and investment, complements the Powerhouse Parramatta, and welcomes the whole community."

Riverside Theatres' incoming director Craig McMaster said the aim of the redevelopment is to build on the Riverside legacy.

"We are creating a centre for living culture and aspire to make the theatres accessible and inclusive for all," Mr McMaster said. "The performing arts in Western Sydney have been growing significantly over the past 30 years and we need a world-class space that will nurture local culture, support performance development, and provide the capacity needed for the growing Central River City."

The Riverside redevelopment is an important community priority reflected in Council's Cultural Plan for Parramatta's CBD 2017-2022. Council proposes bringing a Riverside redevelopment scheme, budget and operating model to Councillors for endorsement early next year.

The Council owned and operated theatre, which opened in 1988, attracts more than 180,000 patrons to up to 1000 performances and events every year.

Riverside Theatres is home to the National Theatre of Parramatta, which cultivates Western Sydney's next generation of artists, performers and creators, and FORM Dance Projects, a presenter of independent contemporary dance. It also offers an extensive educational program for young people and people with disability.



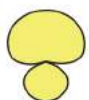
Craig McMaster

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# DOWNLOAD FESTIVAL ROCKS WITH GRANDMA3



Download Festival. Copyright Oli Crump

**A full grandMA3 system was specified for Main Stage house lighting control system at the UK's Download the Pilot event, a special three-day 10,000 capacity festival at Donington Park, packed with a fantastic line-up of top artists who rocked the weekend, staged as a government test to gather data for assisting the safe re-opening of live music.**

UK rental company Siyan provided the lighting package, including a grandMA3 full-size console and a grandMA3 light. The FOH system, set up and guest LD schedules were coordinated for Siyan by Ben Inskip and the rock music community enjoyed great performances from headliners Frank Carter & The Rattlesnakes, Enter Shikari and Bullet for My Valentine, plus many more.

Ben, a production designer at ARTDPT in addition to being Siyan's lead designer,

utilised some of his Covid-19 lockdown time over the last 18 months to get fully acquainted with the grandMA3 hardware and software. "Ironically, while it's been an undeniably tough year for the industry, there could not have been a better time to get to know and drill down into the intricacies of this powerful grandMA3 system," he commented, adding that MA Lighting's UK distributor Ambersphere was "extremely helpful and fully supportive" in the process.

One of the many advantages of being an early adopter of new system architectures is that "your skills and experiences can grow with it," said Ben, explaining that he has started using grandMA3's many features for a range of different applications.

For Download, the requirement was for an extremely flexible and busking-friendly console setup, so LDs not bringing in their own consoles and specials could walk up to the desk and have the show they planned and pre-programmed. grandMA3's 'Recipes' he finds "very powerful" in this context when building a busk file. He particularly likes the way Recipes enables the same effect to be applied across all fixture types extremely quickly and thinks the feature is a "game-changer" for programming all shows, especially multi-user festivals.

He fully appreciates the Appearances graphical elements of grandMA3 – sets of looks that can be assigned to pool objects, presets, view buttons, or windows – which result in files "being much tidier, and frankly, looking cooler."



Download Festival. Copyright Ben Inskip - Siyan

The Download house rig comprised approximately 130 fixtures, a mix of moving lights from three different brands, LED luminaires, some classic festival generics in the form of 2 and 4-cell blinders, which no self-respecting festival would be without, plus haze and fog machines. The house grandMA3 was used by several daytime guest LDs, and Ben lit all those artists who didn't have their own LD or operator, getting some time on the console himself, which proved a big success.

The intention is to have a similar grandMA3 setup for the Main Stage West at this year's Reading and Leeds Festivals, currently scheduled to go ahead at the end of August. With the industry now exploring the practicalities of re-starting, "it's time for a fresh approach and I am very happy to say that for me – it's grandMA3," stated Ben.

Apart from enjoying using the grandMA3 setup and flashing lights for a real live band onstage once again, Ben and the Siyan crew including project manager Steve Finch loved Download's many social aspects; seeing familiar smiling faces rocking up to FOH, mostly who had not been seen in-person since the pandemic started, exchanging experiences and stories. "Everyone was simply ecstatic to be back in a field, working hard, lighting bands, and listening to live music!"

Straightforward colour coding of presets is now a seamless process in Appearances, and logos or other icons can easily be added, all of which assist in general console navigation during programming and playback. "Some work is needed early in the process, but this really pays off later and substantially speeds up finding your way around," and especially in a festival situation with constant time pressure, "this is a great advantage".

He uses Vectorworks and Depence2 for drawing and pre-viz and MVR (My Virtual Rig)

to import the files directly into grandMA3, where the grandMA3 system enables exportation so files can be supplied to guest LDs on request, who in turn can work on a house rig showfile using their own visualisation platform. All the fixture parameters and positions will be correct, so they can walk up to FOH on site for their artist's slot and be ready to go. With so much work able to be done working offline, this is again invaluable for a festival set up where the goal is to make the process "as easy and seamless as possible for all."

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# Spacemap Go Opens Up Mobile Chamber Opera



Photo Credit: Erin Baiano

**Birds in the Moon, a provocative new chamber opera with music by composer Mark Grey, has launched a US tour based on a revolutionary staging concept: the entire production is housed in a 20-foot shipping container that can be quickly set up for outdoor performances at essentially any location. To simplify audio production while also offering an extended horizontal soundscape, the production utilises 12 Meyer Sound self-powered loudspeakers mounted on the container and on fold-out wings. The show is mixed on an iPad with Meyer Sound's Spacemap Go spatial sound design and live mixing software.**

The "containerised" opera debuted at Domino Park in Brooklyn in early May as part of the New York Philharmonic's free, city-wide Bandwagon 2 program.

From the outset, Mark Grey created *Birds in the Moon* with unprecedented flexibility and portability in mind. The idea was to reach reasonably large, open-air audiences while still providing a dynamic and panoramic soundscape, and to do so with a streamlined system that supports both automated and live workflows. An accomplished sound

designer as well as a composer, Grey turned to Spacemap Go as the foundational tool for implementing his ambitious aural concepts.

"It's been amazing working with Spacemap Go over the past year, exploring all that it can do," says Grey. "It has really outperformed my expectations, for example, in the way you can automate sonic trajectories over time, capture that scene, and then move on to the next. And recalling everything is simple, as Spacemap Go integrates effortlessly with other software programs."

The loudspeaker system comprises two ULTRA-X40 main loudspeakers and two 900-LFC low-frequency control elements mounted on the container/stage, plus eight UP-4slim loudspeakers on the extended wings. The entire front end is extraordinarily simple: two wireless microphones for the performers, four DPA 4099 microphones for the instruments via preamps, and a vintage stereo reverb unit all feeding directly into the analog inputs of a GALAXY 816, along with 24 channels for electronic soundscapes from the Mac Mini via an AVB network connection.

"We've proven that you can set up a great system without a ton of outputs, and Spacemap Go is key because we can do it all without using a dedicated mixing console," Grey continues. "Each scene in the show has a Spacemap Go Mix Snapshot with labelling, configuration, and Spacemaps assigned to the channels. We then perform the mix live on the iPad with Spacemap Go. When the Ringmaster is on top of the shipping container, we mix his position using a Spacemap that drives the X40s harder. When he comes down, we crossfade manually between two Spacemaps to bring the image down and achieve more gain before feedback by bringing up the UP4-slims and backing off the X40s with a slider." QLab running on a Mac Mini provides audio playback via Milan AVB directly into the GALAXY, and is the show controller that recalls Spacemap Go Mix Snapshots in the GALAXY 816 and lighting as well as video cues hosted on a second Mac Mini.

Grey adds that he has been astonished at the spatial effects he could achieve using Spacemap Go, despite having less than sixty feet of spread between the far end



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Photo Credit: Erin Baiano

loudspeakers. “It’s not really surround in this case, but more like panoramic stereo, but with depth to it,” he says. “When I put content through the ULTRA-X40 main speakers, to listen as a reference, it has good separation. But when I put it out into Spacemap, creating a trajectory across the open wings, it just opens up until it seems like it’s 50 feet wider than what it should be. It’s pretty amazing, when you come up with something conceptually and then translate it into the real world in a performance. That’s where Spacemap Go has definitely outdone itself.”

This mobile venue became the stage for the entire Bandwagon 2 series of four weekend-long festivals across New York City. The New York Philharmonic partnered with six organizations and more than 100 artists to present 39 performances, spanning artistic disciplines from reggae, jazz, and opera to dance, poetry, theater, film, and visual art.

“There are so many curveballs that happen with the Bandwagon festival,” says Grey. “With the various acts that come through, we have to be flexible to mix on the fly. Spacemap Go makes this all possible.”

After a successful New York run, *Birds in the Moon* will make its West Coast premiere September 1–4, presented by The Broad Stage. The four outdoor performances will take place at Lot 27 in Santa Monica, CA.

*Birds in the Moon* is produced by Cath Brittan and directed by Elkhannah Pulitzer, with libretto by Júlia Canosa i Serra. The Container Stage and set for *Birds in the Moon* were designed and built by Chad Owens with video design by Deborah O’Grady, lighting design by David Finn and costume design by Christine Crook. It is presented in partnership with Meyer Sound, with additional support from DPA microphones. Audio consultant for the New York performances was Garth MacAleavey, resident sound designer and director of production at National Sawdust.



Photo Credit: Erin Baiano



Photo Credit: Erin Baiano



### Astera AX9 PowerPAR

The AX9 is a high-intensity, rock-solid, all-purpose everyday LED lighting fixture with all the advantages of Astera, including battery operation, wireless control, and quality engineering. AX9 is the 'big brother' of Astera's AX5 TriplePAR. AX9 is bigger, brighter and benefits from all Astera's latest innovations, like the Titan LED engine, an optimised bracket with Airline Track, a Titan-style keypad for fast and easy local control and direct control via the versatile AsteraApp.

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 or AU 1300 852 476 / NZ +64 9 218 6532



### AMX Precis

AMX has debuted four new Precis PR-Series matrix switchers supporting up to eight sources and eight outputs, the new Precis PR-WP-412 windowing processor to dynamically window up to four sources, and the new UVC1-4K HDMI to USB 3.0 capture device. The Precis PR-Series Matrix Switchers are available in four configurations - 4x2, 6x2, 4x4 and 8x8. All models include pixel-for-pixel video reproduction, fast switching, comprehensive EDID management, HDMI audio de-embedding, an open control API, and a simple-to-use web interface. The PR-0402 also supports auto-switching to provide touch-free video switching in small applications.

The new AMX PR-WP-412 combines a 4x1+1 windowing and a 4x2 seamless matrix switcher in a single, compact unit. The new UVC1-4K capture device solves the immediate issue of PCs that lack HDMI or other video inputs. The UVC1-4K delivers content from video cameras, document cameras or other HDMI sources into software-based conferencing and streaming applications via the computer's USB port. Features include 4K60 4:4:4 video input, HDMI and separate analog audio input, standard UVC interface and control, and USB 3.0 output up to 3840x2160p@30fps.

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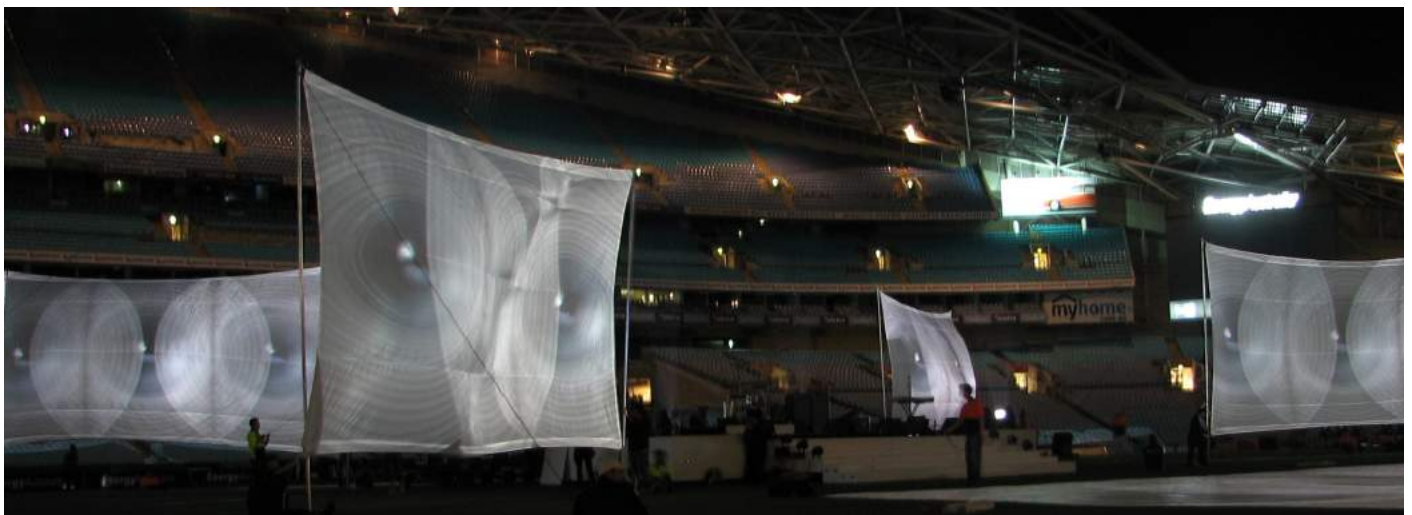
# NEW GEAR



### AIDA CCU-IP

The CCU-IP is a full featured PTZ joystick controller for serial and IP camera control. Built to withstand strenuous use, its soft-touch keys are comfortable even with prolonged use. Supporting up to seven cameras with its intuitive controls, the CCU-IP runs the control protocols VISCA and VISCA over IP, and can be powered by PoE.

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### Highlite Showtec Performer Profile 600 MKIII

The Showtec Profile 600 MKIII ellipsoidal features a high output 260W warm white (3200K) high CRI > 90 LED engine, and features quiet fan operation, DMX controlled variable electronic strobe, 4 dimming curves, adjustable refresh frequency and gamma brightness for flicker free operations. Perfect for theatre, TV and film applications, there are a wide range of fixed and zoom lenses available (19°, 26°, 36°, 50°, zoom 15°-30°, zoom 25°-50°) allowing for projection of hard-edge, precisely focused light. The fixture comes with 4 blades for manual shuttering, manual focus knobs, and a B Size metal gobo holder.

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



### L-Acoustics SB10i

The L-Acoustics SB10i delivers the same sonic signature of the company's much larger subs, but from a vastly scaled-down enclosure design; SB10i is not much larger than two side-by-side shoe boxes. Equipped with a single 10-inch driver, 27 Hz bandwidth limit, and 124 dB maximum SPL output, the high-powered SB10i measures only 540 x 540 x 170 mm and weighs a mere 15 kg. Sonically corresponding with L-Acoustics X4i and 5XT ultra-compact coaxial speakers, the new sub has an elegantly discreet design, and is available in RAL colours, making it a prime choice for high-end residential and commercial environments, and sophisticated hospitality settings, sports luxury boxes, museum installs, and much more.

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### Event Lighting Lite LM250

The LM250 is a powerful 250W 7500K LED moving head spot with a 12 to 36 degree beam angle, featuring one colour wheel, a fixed gobo wheel and a rotating gobo wheel with interchangeable glass gobos. Effects include a 3-facet rotating prism, frost filter, colour correction filters, 0-100% dimming, strobing up to 25Hz and motorised focus. Controllable via DMX, sound activation, built in programs or optional wireless DMX, the LM250 comes with an optional road case that holds 2 units.



### Williams AV IR Plus

Williams AV IR Plus makes hearing assistance more accessible with the introduction of an industry-first Infrared (IR) system that combines secure infrared and optional WaveCast audio over Wi-Fi delivery in a single affordable box. This scalable IR system uses Distributed Emitter Array design to accommodate up to 16 emitters with flexible coverage in a space up to 26,750 square metres. The IR Plus features a distributed IR emitter array architecture allowing up to four emitters either stacked together for large room arrays, or distributed throughout the room to accommodate wings in room design, balconies or other obscured venue locations.

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### Event Lighting Rack Cases

The Event Lighting Rack Cases range are the perfect way to transport and store your assets. Five different models with three sizes available. The RACKA2RU and RACKA4RU are available in ABS, while the RACKP2RU, RACKP4RU and the RACKP6RU are available in plywood.

### Event Pixels Pixboard Series

The new Pixboard series from Event Pixels is designed for LED digital advertising. All screens come complete with Wi-Fi access for use with a smart phone, and on-board storage of content. The control system is Colorlite, with an app compatible for Android and IOS users. The Pixboard series will be stocked and available single and double sided, with various physical sizes and pixel pitches.

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**MA Lighting grandMA3 onPC rack-unit**

The grandMA3 onPC rack-unit is an onPC controller in 19" format with the grandMA3 onPC software already pre-installed on a powerful computer. Just connect a mouse, a keyboard and up to two external monitors and you can directly control 2048 parameters. In combination with other onPC products, this can be extended to a maximum of 4,096 parameters. It is also a playback device; all relevant connections including DMX Out/Inputs, MIDI In/Out, Timecode and DC remote are built in. You can combine the grandMA3 onPC rack-unit with a grandMA3 onPC command wing and/or up to two grandMA3 onPC fader wings to control or pre-program your show. In addition, it can act as a backup unit in a grandMA3 lighting control system.

**Australia: Show Technology [www.showtech.com.au](http://www.showtech.com.au) (02) 9748 1122**  
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**Simply Live ViBox Servers**

Simply Live's ViBox Servers are designed for remote production. Their modern, forward-thinking architecture allows the UIs to operate independently of the server, enabling an unparalleled level of workflow flexibility. A ViBox server can be located in-venue with cameras, while operators work from a production centre - or even from home. Remote operators don't need to be in the same location; they can be in different rooms, buildings, or in completely different cities. And by significantly reducing the bandwidth required, Simply Live's UI Gateway adds the missing link to making remote production workflows affordable.

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# GEAR



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Marina Bay Sands - Singapore



by **Jason Allen**

# ULA GROUP TURNS 30!

**Australian and international success story, importer, distributor, and manufacturer ULA Group are celebrating their 30th birthday this September.**

From making speakers and disco lightboxes in his Mum and Dad's garage to manufacturing in Europe and China and selling LED screens in 100 countries, managing director and CEO Cuono 'Con' Biviano continues to ride the wave of technical innovation in lighting and LED, as he has since the 1980s. I sat down with Con (over Zoom, unfortunately), and from his Queensland HQ, we talked history, business, ups, downs, and the golden era of disco lighting...

**Con, I've had some informers tell me that you started your career as a DJ in Melbourne. Is that accurate?**

Ha! Almost. At school, I took up an elective subject in radio announcing. I ended up on 3CR in Collingwood, doing the dusk 'til dawn slot. It came out of a love for music in my family; my cousins were DJing at the Veneto Club in Bulleen, and I got involved sourcing music from local record stores. After 3CR, I worked at 3RRR on the Pulsation Club Show on a Friday night. I started getting music in from Tower Records in New York, many outlets throughout Europe, and from Central Station Records. I actually ended up opening the Central Station franchise on the Gold Coast.

Pulsation Club Show was so popular in Melbourne that we got invited to DJ school discos; this was from 1985 to 1987. I then saw an opportunity, and rented venues and

equipment, organised fashion shows, and created our own dance parties. I started building gear in my garage, dipping lightbulbs in Rosco Colorine. Loving lights and sound, I took a course at SAE in St Kilda, then started studying electrical engineering at RMIT when I was 18.

I started my rental business from home in 1986, before I set up my first premises in Reservoir in 1987. We were called Audio World, and serviced the pro disco and DJ markets. I did a deal with Electro-Voice and brought in SH-1512 and DeltaMax loudspeaker systems. We'd hire out and sell DJ consoles we'd custom built, along with Technics desks, Jamo mixers, and Citronic gear. We'd also import lighting from leading Italian manufacturers.

**How did you first get into importing gear?**

My first import was from a company called Superstar out of Taiwan. A friend worked at a large packaging company and I got her to use her Telex to look them up, as I'd seen their catalogues. I was 17 years old, and my first order was \$10,000 for a whole 20 ft container full of their lighting gear. You can't even get the container for that anymore! By this stage, I was set up at the shop in Reservoir. The container came, and we unloaded it. I plugged in a couple of lights and a smoke machine. The smoke machine melted and the

lights blew up. All the gear was 100-120V! One of my DJs, Mario Lepore said "Don't worry, Con, we can fix this." We put in new motors, new bearings, new transformers that were wound locally, rebuilt most of the gear, and put it into rental.

**Northern Italy was the birthplace of modern lighting, and you have extensive connections to the manufacturers there. What's the history behind that?**

The big tradeshow for lighting back in the late 80s was the SIB Fiera in Rimini. It was organised by the SILB, which translates as the Italian Dancehall Owners Syndicate. The whole show was catering to the nightclub and disco market. This was the golden era of club lighting, and the show was mad. Rimini was known for having the best nightclubs in Italy, and the manufacturer's stands were monstrous. Everyone at the show was dressed for the clubs, and there were people walking the floor still going from the night before. It was a crazy era. (Editor's note – there's some footage on YouTube of SIB in the early 90s. Wow. It's hard to imagine it taking place today. You have been warned.) The stands had the biggest sound systems belting out the biggest bottom end you could imagine. It fired you up; if the passion for the industry ran through your blood, you had no choice!

The SGM stand was bigger than Ben Hur, and if you got yourself into the Claypaky light show, you counted yourself lucky because the line to get in was 100 deep. In those days, you weren't there to fight for agencies, you were there to immerse yourself in the latest and greatest technology, theming, and next new advancements in the entertainment world.

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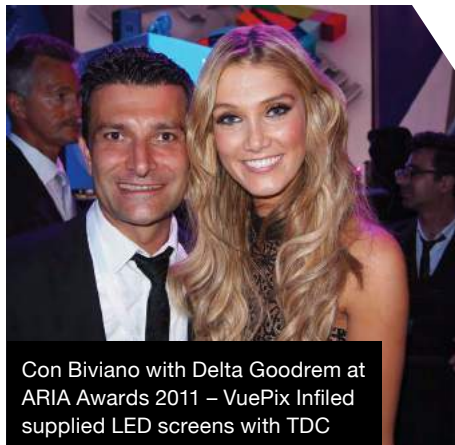
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Con Biviano with Delta Goodrem at ARIA Awards 2011 – VuePix Infiled supplied LED screens with TDC



2018 Tomorrowland



Con Biviano with Hamish McLachlan at Channel 7 Rio 2016 Olympic Studio, with VuePix Infiled screen in the background



Con Biviano with Michael Hao and Yan Huang at the VuePix Infiled factory celebration in China

You were just engulfed in the surroundings and then, organically, a relationship would spark with a new supplier.

The Italian government would help bring over delegations, and there were always a few Australians. The manufacturers would ask about my background, and I'd say "I'm from Lipari, Sicily". "Tu parli Italiano?" "Sì!" You'd click, talk about their relatives that had come to Australia, and you'd start cementing relationships.

I started dealing with Griven in 1989. It's the Italian brand I've dealt with the longest. The majority of those Northern Italian manufacturers did theatre and club lighting, and they were all within a street or two of each other in Castel Goffredo, in the province of Mantova. It was like one big family.

**Things have changed a lot in the import and distribution business since then. When did Australia become a much more mature and structured market?**

The changes really came into effect between 1992 and 1995. I started ULA in 1991, and I remember going to PLASA in London in 1993 and all the manufacturers had started wising up. They wanted structure and distribution. It got fairly serious quickly, but was still all about the relationships and having fun. I think one of the pivotal events was when Martin Lighting's founder Peter Johansen sold it. He'd built it into a monster, and then large corporations, private equity, and investment houses got wind there was money to be made.

**When did you relocate from Melbourne to The Gold Coast?**

I moved to The Gold Coast in 1992 not long after I married. Melbourne was going through a recession, and my wife couldn't get decent work. There were work opportunities for her in Queensland, and ULA had been selling a lot into installs, venues, and theme parks. My parents had also semi-retired here. The Melbourne operation remained with both Audio World and ULA, before I sold Audio World to one of its customers in 1993.

**You were one of the first companies in our industry to take advantage of the huge expansion of manufacturing in China. How did that start out?**

The first time I went to China was in 1989, to Xiamen to see King Long Light, after visiting Acme in Taiwan. You could see China was going to be the next big thing. I started importing from China as well as having my own custom-made products produced there.

I continued to grow the supply of product and manufacturing in China as well as in Europe, in the LED lighting technology space. And then as the years progressed and video projection started playing in the traditional lighting world, I envisaged that LED screens would be the future. I explored LED suppliers, and that is when I met my 'brother from another mother' Michael Hao, who was the GM of one of them. We hit it off, then a few years later in 2005, VuePix Infiled, our LED video company, was born.

The first VuePix Infiled panels I showed at the ENTECH tradeshow in Sydney. Michael Hassett, managing director of TDC, came and had a look, and said "If they pass our performance test, we're on." Our first LED screens subsequently ended up on Australian Idol.

It was a really interesting start; we had to learn a lot about LED and video, and how to manufacture the product to be Australia-friendly. We started out with a P25 mesh, with 25mm pixel pitch. When we started the VuePix factory, we had two orders, one for the Rugby World Cup in South Africa, and one for TDC. It started with 20 people and got up to 1,100 at its peak.

**Another of your well-known diversifications has been into the architectural lighting world.**

We were doing installs into clubs and pubs back in the late 80s, and then the owners would want to light the outside of the building. A PAR 38 dipped in paint just wasn't cutting it. I started growing our range of architectural lighting products, which led me to manufacturing custom products in the UK and then eventually launching the Anolis brand in 2005, which we were manufacturing in the Czech Republic.

Both the architectural lighting and digital LED screen business are very important to ULA Group. As I travelled the world, establishing the global network and looking at markets and what they were doing, it naturally educated me. The first step is knowing your product technically, then selling and supporting it.

When Singapore's Marina Bay Sands was in development, we got the phone call. "The designers of Marina Bay Sands don't believe that the exterior can be lit with LED. Con, can you do it?" I grabbed one of my tech guys and some fixtures, we jumped on a plane to Singapore, demoed the light onto the side of a building, and the rest was history. We went on to do the whole project with Laservision. That has really made me proud. This is the guy who was dipping lightbulbs in his garage, now lighting up Marina Bay Sands.

We've done a lot of iconic projects over the years. In Melbourne, there's the Bolte Bridge, The Melbourne International Gateway (a.k.a The Cheese Sticks), and Etihad Stadium. We've got product on the Burj Khalifa in Dubai, and throughout Europe and the USA. Projects like Brisbane Town Hall are particularly touching for me at Christmas, when I love seeing the kids react to it changing colours. The refurbishment of Brisbane's Gateway Bridge in 2010, with 100,000 LEDs totalling 3.6km in length, was the biggest job we had done at the time. After it was commissioned, I was flying into Brisbane, so I asked the pilot to approach on an angle so I could take photos. He made a PA announcement about the lights on the bridge. His words were "Ladies and gentlemen, don't be alarmed that we are going slightly sideways, I have a man behind the colour changing lights on the bridge on board, who wants to take a photo," which was highly embarrassing, but honestly, a bit of a career highlight for me!

**After 30 years of ULA Group, what does success look like for you?**

Success comes in a lot of different forms. One of our greatest successes is that we still have many of the same clients and relationships we started with. They've grown, we've grown, and it's an amazing thing to still have them as part of our life. Whether they spent a dollar or they spent a million, they have been part of the success and a part of the ULA family, and I don't forget that.

Another measure of our success is growth. ULA started with two people and very quickly expanded to five, then 30. Now we are over 650, and we're selling in over 100 countries. Looking back, my long-term goal and vision was to manufacture and globally distribute product within this industry. And I have done that successfully.

I travel the world and see our product on iconic buildings. We have screens in Times Square, at NASA in Florida, at the New York Stock Exchange, and Facebook HQ in California. I've seen our screens at the Soccer World Cup and wrapped around the Eiffel Tower. Railway platforms in New Zealand have our LED info kiosks, Flinders Street Station in Melbourne has our screens telling you when your train's coming, and we have our screens at many airports around the world. The huge Belgian EDM festival Tomorrowland has five and half thousand square metres of our LED screens. And there are so many more.

Success also comes from diversification. Whether it's our Astera product into the film industry, UVC disinfection products into healthcare, our LED screens on a motorway, or moving lights on a show, when one market is down, another will be up. We're a large country with a small population. It's easy to focus on one thing and hard to diversify, but in a country of 25 million you can't afford to do that. If you've got technology that can go into multiple markets, look for them, and make sure you've got the expertise to understand each sector, or you will fail miserably.

But the key to success for ULA Group is our philosophy that people and relationships always come first, and without them, there is no business. I would like to sincerely thank all my devoted team for their hard work over the years, to my manufacturing partners and suppliers for supporting me with my sometimes crazy ideas, and to all our loyal clients here and around the world who put their trust into our products and value our relationship. We are proud to be a key part of these global networks, supplying state of the art technology to create spectacular and unique projects around the globe.

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LETTERS



The King and I. Photo Credit: Brian Geach



Building Matilda the Musical

# TSA'S ADELAIDE SCENERY WORKSHOP

The tradition continues in SA

by Jason Allen

**I must confess, as a South Australian who spent a decade working in professional theatre, I had no idea that 65% of all commercial theatre sets in Australia were manufactured in Adelaide at a workshop with an international reputation for quality.**

Back in 1979, with a production of *Evita* to build, the Adelaide Festival Centre Trust created a workshop for scenery engineering and automation. For years, they worked across two sites, divided into mechanical and carpentry, working on set builds like the automation masterpiece *Phantom of the Opera*, and iconic shows including *Cats*, *Matilda*, *Billy Elliot*, *Wicked*, *Les Miserables*, and *Moulin Rouge!*

Amalgamated into one site six years ago, the workshop continued to produce high-quality set pieces until 2021, when ageing equipment, staff retirements, and COVID, meant the Adelaide Festival Centre Trust were struggling to keep the doors open. In a serendipitous moment, while on-site for a completely different reason, Theatre Safe Australia's Director Stuart Johnston found out about the workshop's existential crisis and decided to step in.

An Australian success story themselves, Theatre Safe Australia began life seven years ago when Stuart, a staging and technical

manager who'd led venues and toured with shows like *Cats*, saw a gap in the market for theatre technical services. The company started out doing mechanical servicing and safety inspections, and it wasn't long before their customers started asking for equipment sales and installation. The business expanded into performer flying, automation, and rigging services, and have now worked on shows including *The Lion King*, *Moulin Rouge!*, and *Hamilton*. Their upcoming projects include an automation system in Korea for *Hadestown*, Opera Australia's *The Ring Cycle* in Brisbane, and new Broadway smash *Jagged Little Pill*. Headquartered in the Gold Coast, they also have an office in Sydney, and now in Adelaide.

"The Adelaide Festival Centre Trust were looking at streamlining their resources, and making adjustments to their operating structure," relates Stuart. "We already had a good relationship with the AFCT, and I got into a conversation with the board, mainly about how to retain the workshop and keep the jobs in South Australia. We've come to an

arrangement where the workshop remains basically the same, operating out of the same premises, with most of the same people staying on and bringing the workshop's core values with them."

Those core values include attention to detail, dedication to build quality, and a passion for educating the next generation of technicians. "The inherited skill and knowledge of the workshop's staff is its greatest asset," praises Stuart. "They've been producing the highest quality sets in the industry for decades. The knowledge has stayed in-house, as the staff have been really well looked after and stayed with the workshop. The core staff love to train the up-and-comers and will reach out to TAFE and the Universities to get people in to develop. Some of these skills are both irreplaceable and disappearing. Being able to construct and mould scenery by hand is a dying art, and we need to keep it alive."

"This new relationship opens up opportunities for TSA and the workshop," continues Stuart. "Having the staff and their knowledge as part of our organisation is a huge thing for us. Along with our automation, rigging, and flying services for shows, we can offer a complete theatrical end-to-end solution to producers. Open communication with one company will save headaches for producers and designers, and we won't be trying to integrate automation and other elements into sets someone else has built. Everything will be addressed at the design stage."

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## PROFILE

### The Old Guard - Mike Price - Scenery Workshop Manager

Current Scenery Workshop Manager Mike Price has been with the workshop almost since the beginning. A machinist by trade, Mike started out at The Adelaide Festival Centre as a plant operator, technically part of the maintenance department. When the AFCT started to build scenery, Mike and the mechanical services crew would hire a space, take their gear out to it, build the show, and bring it back to the theatre. After a few rounds of this, they were established at a permanent facility in Gepps Cross.

“We were split into mechanical and carpentry, and I started in drawing and design,” says Mike. “In mechanical, we’d concentrate on structural steel and hydraulics. We developed our own stage automation system, Stage Master, which was co-developed with another company. Phantom of the Opera was the first really big show with a lot of automation for us. In addition to designing and drawing, we’d physically build the sets ourselves. We’d then do the bump-in, get the show up and running for rehearsals, go home, then come back for the bump-out, and get it packed up ready for next venue. We’ve toured shows in Australia, South Africa, New Zealand, Singapore, Taiwan, China, and Korea.”

After 35 years with the same employer, which is not unusual at the workshop, I asked Mike why he and others have stayed on so long. “It’s unique and interesting work,” offers Mike. “If I was working in a normal job as a machinist, it’d be doing the same thing all the time. For example, in one of the Australian Ballet shows we built recently we had to create a giant three metre high carved hand modelled on a Greek statue. It had to tip forward and allow the dancer to stand on the end of it, striking a pose. I’ve never built one before and I doubt I’ll ever build one again! No two things we build are the same.”

Each new show brings technical challenges that the workshop staff learn from. “Phantom of the Opera was a lot of automation and things we’d never built before, like floor traps, floor winches, and the system for the giant falling chandelier,” continues Mike. “Wicked had the big levitator system to make Elphaba fly, which itself was so large it was a challenge to integrate. Billy Elliot was physically challenging. The set featured a two-storey house and kitchenette with a small staircase which rotated while lowering completely into the floor. It had to go all the way into the basement, and contractors had to come in and dig a hole two and a half metres deep in the basement floor to fit it all in.”

In the vanguard of automation and construction for years, the workshop crew have seen a lot of advances in technology, as show designers keep trying to go bigger and better. “Designers often want you to create something that sometimes seems mechanically impossible,” Mike wryly observes. “Floors are always getting lower



Duncan Barton and Mike Price

and lower to fit more automation in, and sets have to travel at faster and faster speeds. Sunset Boulevard had a 14 tonne mansion that drove downstage. In our current show, Moulin Rouge!, there’s a house set that weighs four tonnes that travels downstage and rotates. Quite often when you’re building shows that have come from other productions, information comes slowly and you don’t often have a lot of time for R&D. You just have to make it work. On Moulin Rouge! we’ve been using 3D printing and Computerised Numerical Control (CNC) routing for finishes and repetition work, and the show has an amazing look.”

With the theatre world in Australia firmly centred in Melbourne (sorry Sydney, but it’s true) why does Mike think that his workshop still gets the lion’s share of set builds? “It’s our staff, our managers, and the rapport we’ve developed with our clients,” posits Mike. “But it’s mainly the skill-sets of our staff and quality of the work they do. Once we’ve done good work for people, they keep coming back. Everyone says our scenery is unique in terms of quality. I’ve seen some builds from the US and the UK that I’d call substandard, but in the dark of the theatre and from out in the audience, they get away with it. But a set has got to put up with being taken apart, shipped, put back together, and still look the same. I like to think we’ve got the right people building the right sets. And we’ve been around so long, a lot of people from our workshop are now running shows in Sydney and Melbourne, so they have a strong connection to us.”

Does Mike have any concerns with TSA getting involved with the workshop? “Having TSA onboard is fantastic,” states Mike emphatically. “Stuart’s approach is brilliant, and he’s a switched-on guy. Getting us up to date with technology like CNC and TSA’s Raynok automation systems gives us the ability to do more. Collaborating with TSA on things like trussing, chain motors, and flying is good for both organisations. Our clients are excited.”

### The New Blood Duncan Barton - Production Development Officer

With 20 year’s experience working on London’s West End for set builder TMS on shows like Phantom of the Opera, Les Miserables, The Lion King, and Mamma Mia!, Production Development Officer Duncan Barton relocated to Australia with his wife and three children three years ago. His first job with the scenery workshop was technical drawings for Billy Elliot, and he’s worked his way up from there.

“The Adelaide Festival Centre Scenery Workshop has an international reputation; in London I was aware of them as the biggest and best in Australia,” relays Duncan. “My day-to-day until recently was technical drawing and production management, but now with TSA at the helm, I’m doing more scheduling, meeting customers, bringing new work in, quoting, and then handing over projects to the workshop foreman. TSA are opening new people and markets to us. Previously, the theatre world knew of us, but that was about it. We are already talking to new people.”

While the workshop still does the same building and refurbishing of sets, and runs departments for carpentry, engineering, and sculpting, they now have a goal to create a new business infrastructure around them. “Industry in Australia isn’t really set up to support theatre,” explains Duncan. “We often have to bring in specialised equipment from the USA or UK, and we don’t like doing that. We want to start building up companies around us by feeding them work so we don’t even have to go interstate, let alone overseas.”

It’s not just supply that Duncan wants to diversify, it’s also their client base. “TSA allows us to go out and offer our services to more markets,” outlines Duncan. “The doors are now open, and we are finding work in schools, for architects, and with building firms, which wasn’t possible under the previous structure.”

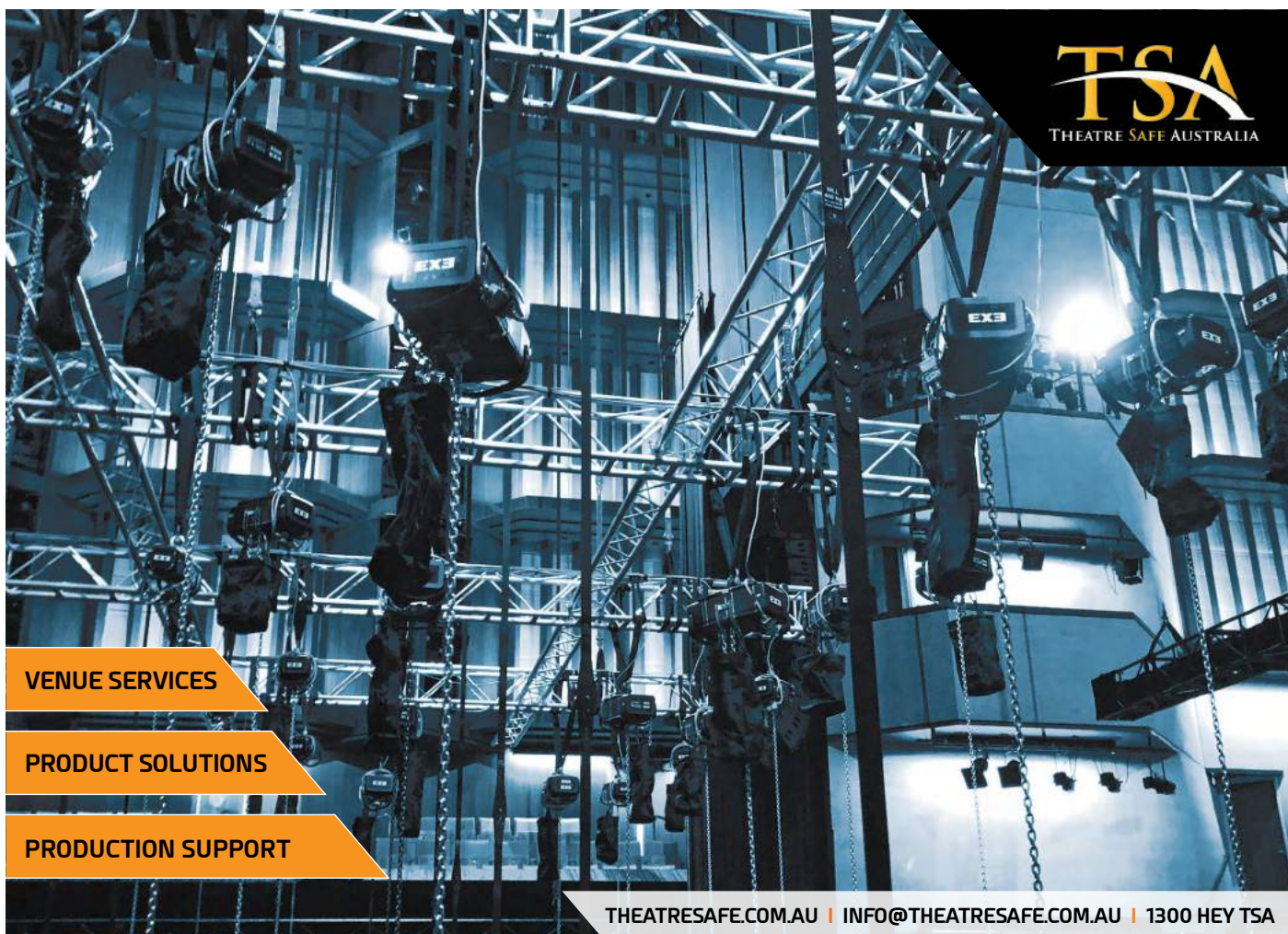


Inside the workshop

For the schools, the workshop can now offer set building and hire, rigging and automation via TSA, and maintenance programmes for school theatres. “Part of that is about educating schools about safety in their theatres, including issues like cloth fireproofing, and having regular safety checks for winches,” Duncan elaborates. “Architects can come to us for special projects and one-off pieces. For example, if a customer wants a sculpture or feature wall, we can do that. Last year, a school had a refurbishment and wanted a sculptured tree for their library. The architect contacted us, and we designed and built it. We’re the ‘arty’ side of architecture.”

There’s also more theatrical customers opening to the workshop. “We’ve built versions of Cabaret and Mamma Mia! for the University of Adelaide, and will be doing Urinetown for them as well,” says Duncan. “After these productions have been run, we can then hire the sets out to schools. We’re building relationships with schools and educating them about what goes into a theatrical production. We have schools come in for two-hour tours around the workshop, showing students what we do and how we do it. Theatre can be a black art to some people, and most of them don’t know what we do behind the scenes.”

With an updated one-stop-shop for production managers, the workshop is catching the eye of Film SA and the television industry. “We like mixing it up!” enthuses Duncan. “We’re looking at film and TV and it’s very interesting. Companies like Film SA are realising they don’t necessarily have to bring in crew from overseas or interstate. There are some TV projects that will keep our team excited and on the ball. I find if your crew are interested, they do quality work. Every day is different here, working with different materials and different people. It’s a unique place!”



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# THE CARAVAN MOVES ON...

by Andy Stewart

**It's a travelling tale that seems quite the anomaly in the Australian music industry right now.**

Early last year Melbourne's well-regarded, long-established venue, The Caravan Music Club, moved to regional Victoria to the tiny town of Archies Creek. No-one could have foreseen what was to transpire next, but regardless the Caravan has survived. How?

As luck would have it, the Caravan's new permanent home is officially in 'Regional Victoria,' not metropolitan Melbourne (coincidentally, about three miles down the road from my recording studio, The Mill.) It's remoteness from the city alone was

probably the difference between the Caravan going under or staying afloat in 2020. While Melbourne suffered from appallingly lengthy lockdowns during large periods of last year, the regions outside the metropolitan area were less impacted.

But there's been far more to The Caravan Music Club's survival than that.

Behind the scenes, in the summer before COVID really took hold, and throughout the darkest parts of last winter, the new owners of the Archie's Creek Hotel, Peter Foley and

Mary Howlett, who had for the 15 years prior run the Caravan in three separate Oakleigh venues, physically moved their entire business lock, stock and Midas Heritage to the unsuspecting town of Archies Creek (actually, the Midas, which had been the central ingredient of the all-analogue Caravan system, is owned by Brett Doig.) Who would have guessed that the word 'caravan' would eventually become so prophetic in their business name.

Peter and Mary also took with them the Meyer Sound speakers, the tables and chairs, the curtains and signage, and all the looms and power distro, unloading it into their recently acquired pub and the Community Hall next door before they'd quite had time to digest what it was they'd really done.

## Cool To Cold

For a business model that thrived on being 'cool,' as well as renowned for its quality boutique shows and long-established relationships with bands and their managers (musicians seem to treat Peter and Mary like long-lost relatives) the switch to a one-horse town in the middle of what was (for them at least) 'nowhere,' must have, at times, felt like utter madness. In their darkest hours Peter and Mary surely mused; 'What the hell were we thinking? Who on earth is going to come all the way out here to see a gig?'

But loyalty goes a long way in the music industry it would seem, even amongst the patrons of certain venues. So as circumstance would have it, in some kind of twisted way, the horrendous combination of COVID lockdowns, a decimated music industry, and desperate musicians eager for a chance to play and earn a dollar, meant that when things finally opened up again last summer (remember that?) punters flocked to the Archies Creek iteration of The Caravan Music Club in droves, desperate as they were for live entertainment. It quickly became, statistically speaking, the most successful venue in Victoria, featuring acts like Mark Seymour, The Black Sorrows, Ella Hooper, Tex Perkins, The Jazz Party, Kutcha Edwards and Kate Ceberano to name but a



Brian Cadd



Mark Seymour and the Undertow - Archies Creek Hotel Outdoor - Photo Rob Miles



Indoor at Archies Creek Hall with the SQ7

few. This statistic may seem like a somewhat disingenuous fact, given that most places in Victoria were locked down or closed during last year, but nevertheless according to Premier Artists at least, the Caravan topped the charts!

Since then, of course, the Australian music industry, and society in general, has lurched from lockdown to 'open,' from 50 per cent occupancy with mask wearing, back to snap lockdown. It's been a diabolically unpredictable time for everyone; an anxiety inducing, hyper-stressful prolonged period of quasi exile, where no-one has been able to see each other consistently, and even when they have, there have been no handshakes, no mouths visible, no hugs. It's been bizarre.

But rather than dwell on all that, here's a snapshot of what has taken place in the last 18 months or so in one very small regional town with its new group of 'muso' residents.

Backing up to 2019 momentarily, the local pub down the street from me, known simply as 'Archie's Couch' at the time, was being run by a younger couple, John Reid and Ami Wallace. However, no sooner had they established the place as a vibrant pub where you could eat, drink and see live music, than they suddenly pulled the pin! John and Ami's focus had changed to looking after their growing family, so the place went on the market, which disappointed many locals for whom the pub had become their second lounge.

A few months later, some 'townies' took over: a guy in a hat, his wife and some 'extras', whose relationship to the new owners no-one could quite work out. But very quickly all was revealed, and names finally stuck to the new faces in town. Jon von Goes of RRR fame moved into the street (there's only one), from where he has since broadcast most of his RRR shows during lockdown. Singer Tracey Miller (mother of The Jazz Party front woman, Loretta Miller, and sister-in-law of Lisa Miller) bought the house two doors up, Peter Gow the house across the road, and so on. Music industry types were suddenly flocking to Archies in droves. The sleepy hollow was awake!

### Outside Install

Last winter, with the aid of Victorian Government funding, a new outdoor stage was built in the beer garden of the Archie's Creek Pub, predominantly by Peter Gow on hammers and saws, Jon von Goes steering wheelbarrows and Peter Foley pointing out things that weren't quite right, in an outdoor area that can accommodate several hundred people, either sitting or standing.

The outdoor stage, which closes up at night locking securely away, has a new Meyer Sound PA comprised of two Ultra X40 wide-coverage loudspeakers aside, and two 900 LFC single 18-inch subs. A dbx Driverack 260 deals with time alignment duties of the speakers and 32 channels of Allen and Heath DX-168 converters send all the stage signals digitally via Cat5 to an Allen and Heath SQ7. There's also a permanent and comprehensive lighting system setup (that we may detail in a future article).

The outdoor system, which was all set up by Brett Doig, sounds exquisite, and both myself and James Wilkinson have mostly run the venue sound in the last year or so. There have been lots of great gigs at Archies Creek, nearly all of them sold out, and for my part it's been quite surreal to see queues of people lined up in the street outside the pub waiting to get in. For the 15 years I've lived here, I can say with some certainty that there has never been a queue in the street down at Archies, ever! During COVID it's been doubly unbelievable to witness.

### Hall Install

Somewhat remarkably for the town, and as if one new venue in a hamlet with only one horse wasn't remarkable enough, a similar PA and lighting setup has been installed next door at the Archies Creek Community Hall, again with the aid of Government funding. Combined with the acoustic treatment that yours truly put on its walls about five years ago to improve the sound of local gigs that took place there from time to time, the space now includes a decent sized stage (albeit a temporary one that was kindly donated

by Peter Foley), two Meyer Sound CQ1 wide-coverage loudspeakers, with USW1P double-15 subs, and a pair of UPA-2C narrow coverage in-fills. An identical combination of two Allen and Heath DX-168 converter boxes and an SQ7 console complete the system. This mirror-imaging of the digital elements of the neighboring systems effectively provides both venues with redundancy, should one or other venue suffer a sudden catastrophic failure. With no shop within cooee of the two venues, identical systems make for safety in numbers. They also sound great.

### Winter 2021

So now here we are again. Like some demented Groundhog Day, Regional Victoria is enduring substantial COVID restrictions (this week at least – who knows what will happen next week!), and Metropolitan Melbourne is in severe lockdown once again. NSW is in total disarray and most of the rest of the country seems destined to follow suit unless a dead-set miracle occurs. Countless gigs at Archies Creek Hall and the hotel next door have been postponed or cancelled, in many cases repeatedly. And the story is the same nationwide.

The future of the Australian entertainment industry, which looked somewhat positive last summer, is now once again cloaked in a cloud of uncertainty. This time around though, there's a strange sense of déjà vu mixed with a vastly diminished tolerance (or economic resilience) for lockdowns. How much longer individuals and businesses within the wider entertainment industry can endure this biological fiasco without going to the wall or choosing a different path altogether, no-one quite knows.

But endure we must.

\* Vale Frank Guillen, a close family friend of my wife's, who died of COVID in California literally while I was writing this article. Rest in peace, sir.



Andy Stewart

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@themillstudio.com.au](mailto:andy@themillstudio.com.au) or visit: [www.themillstudio.com.au](http://www.themillstudio.com.au)

# A taste of the ETNZ Tradeshow that wasn't

by Jenny Barrett

**Many exhibitors were already en-route to the Entertainment Technology New Zealand (ETNZ) Conference to be held in Wellington this June, when organisers were forced to go virtual due to the extension of Lockdown.**

To support tradeshow exhibitors, a tradeshow scavenger hunt replaced the normal tradeshow passport challenge, encouraging participants to visit company websites. CX Magazine also offered support with the opportunity for the suppliers to share what would have been their 'star of the stand'.

But first, the stories from on the road. There's Graeme and Diane from John Herber who

were on the ferry from Christchurch when they found out the conference was moving online. They just managed to get a ferry back before all ferries were cancelled as Wellington did what it does best and whipped up a seven metre swell.

Rob Carpenter from Show Quip; "being an old fella I had to think of the risk" had pulled the plug on his own trip a few days before but his

team were just about to board flights when they heard the news. "Our freight was already there so we just got it sent back and sucked it up. What do you do? Those are the times we are in!"

A sentiment shared by Garth Reynolds, ULA Group NZ, "I received the call on Sunday afternoon confirming that the conference had been cancelled. We were due to fly out on Monday morning and the truck with all our gear was already in Wellington. However, that is the reality of the world we live in today. So, we connected with our customers and produced a range of exciting online material showcasing our latest technology. We had some great responses."

Here's a rundown on the wares they would have shared.

## Metro

**James Killen - Technical Manager**

*What was going to be your 'star of the stand'?*

The PROTOS load cell system. It is a wireless load reporting system that has long battery life, handheld readout, as well as a USB dongle to use the Protos load monitoring software. The great thing the system does is create transparency around the loads that are being placed upon venues by incoming productions. It is also a good accuracy check for those who do the calculations.

*What makes it of particular interest to the ETNZ audience?*

With health and safety guidelines in a state of continuous evolution, we believe that load cells for every rig as standard (if not legislated) is not far off. We at Metro very much believe that one day we're going to look back at today and wonder why we ever allowed ourselves to load tonnes of equipment without having accurate reporting. We hope that ETNZ members



are looking ahead and will try to spread the costs of having load cells between now and then, while slowly getting everyone on the same page about load monitoring.

*Where is it in action?*

It is regularly used in our roofing systems

and has been used at the World of Wearable Art for critical components in both scenic and human flying elements.

*More information*

[www.metro.net.nz/currentspecials](http://www.metro.net.nz/currentspecials)

## ShowQuip

**Rob Carpenter - BDM**

*What was going to be your 'star of the stand'?*

ShowQuip's focus at this year's tradeshow was on the superb Global Pre-Rig Truss which has been a very well received product. ETNZ was an opportunity to actually see the product firsthand. And to get a peek at our SRS motor controllers.

*Where are they in action?*

Oceania Lighting and AC lighting have purchased considerable inventory here in New Zealand. This unique truss has been in use on the LAB concerts over the last few months, playing to record crowds. And we are proud to have supplied the new Christchurch Convention Centre Te Pae with an SRS AHD8-WLV-H6 hoist



Oceania Pre-Rig

controller with wireless hand pendant. This product can now be found in virtually every major performance venue throughout New Zealand, such is the quality of this product.

*More information*

<https://www.showquip.com/product/truss/>

## John Herber

**Diane Philip - Director**

*What was going to be your 'star of the stand'?*

Motorized Trac-Drive and control system which is a continuous loop track mounted motor with either two or three grooved pulleys (depending on curtain weight and speed). It is available with fixed or variable speed motors. The control system is a G-Frame variable speed application. The

Motorized Trac-Drive and G-Frame control system is used on the Joker 95 and Trumpf 95 track systems.

*What makes it of particular interest to the ETNZ audience?*

Theatre technicians love this stuff – an opportunity to see what is available for the theatre industry.

*More information*

Photos and links to catalogues can be seen on our website [www.johnherber.co.nz](http://www.johnherber.co.nz)



## LSC Control Systems

**Jeff Morgan - AU & NZ Regional Sales Manager**

*What was going to be your 'star of the stand'?*

APS power distribution. APS is our rack mount or wall mount power distribution that solves inrush currents, nuisance tripping and power protection.

The other item we were going to show was our UNITOUR Power/Dimming system. This is brand new and is just now going through its last testing before release. Its 48-channel modular system can be fitted with power switching modules for audio and video users or with dual-mode TruPower dim/switch modules for lighting operators.

*What makes them of particular interest to the ETNZ audience?*

The money invested in today's audio visual systems is huge. The latest audio console, speaker array, LED wall, video projector and intelligent lights all amass to serious amounts of money. Yet, do we invest in the right equipment to power and protect this investment? The APS is a solution for the

ever-increasing demand of power control for LED walls and LED fixtures that require reliable power.

And the UNITOUR Power/Dimming System means safety for both the operator and the attached equipment.

*Where is it in action?*

A good example is NIDA in Sydney where they have a mixture of both GENVI dimmers and APS units around their various venues. In NZ they have been sold through our dealers, so I don't always know where they end up, but we supplied a lucky draw prize



APS (Advanced Power System)

to ETNZ and the Meteor Theatre is now the happy owner of a Rackmount APS power distribution unit!

*More information*

[www.lsccontrol.com.au/product/13/aps/](http://www.lsccontrol.com.au/product/13/aps/)  
[www.lsccontrol.com.au/product/22/unitour/](http://www.lsccontrol.com.au/product/22/unitour/)



Power and protection are the keywords with dimming and distro and Sydney's National Institute of Dramatic Art (NIDA) now has both thanks to LSC Lighting Systems

## Show Technology

Nick Reeves - Technical Sales NZ

*What was going to be your 'star of the stand'?*

Martin Mac Ultra Performance

*What makes it of particular interest to the ETNZ audience?*

Martin's new framing profile unit with a huge 46,500 lumen output. The MAC Ultra Performance has raised the bar for extremely bright moving lights. It features benchmark output across the zoom range, a true next generation framing system, higher definition optics and astoundingly low noise levels.

Built to support the biggest live events, this powerful workhorse is based on Martin's all new 1150 W, 6000 K proprietary LED light engine and the fixture pushes an

incredible 46,500 lumens in projection. The 50,000+ hour light engine also provides high resolution dimming, strobing and Martin's unique Animation effect.

A 1:7 zoom-range and precision focus-control is provided from the refined optical system. The extensive feature package includes uniform colour mixing, variable CTO, additional colour and spectral correction filters, Martin's innovative Extended Framing system, two layers of rotating gobos, full function animation wheel, iris, frost and prism effects, and truly responsive and accurate pan and tilt. And these features are all packed into a compact, sturdy and legendary Martin design.

*Where is it in action?*

Brand new on the market but making waves overseas.

*More information*

<https://www.martin.com/en/products/mac-ultra-performance>



MAC Ultra Performance

## ULA Group

The team at ULA Group NZ

*What was going to be your 'star of the stand'?*

The ULA Group stand was to showcase plenty of exciting new lighting and visual technology, including the popular Astera wireless lighting range, VuePix Infiled digital displays, Elation's professional theatrical fixtures, ChamSys lighting consoles, the atmospheric effects generators by MDG, NovaStar's H series Video Wall Splicer, Acme and ADJ's latest luminaires, and much more. It is hard to choose a 'star' so we'll highlight three!

Firstly, the Astera PixelBrick, the new-generation multi-purpose light by Astera, featuring the Titan LED engine. This battery-powered uplight and spotlight with five different beam options offers great

flexibility and meets the highest demands of film, TV & stage clients. Multiple PixelBricks can be connected to form clusters and shapes.

Then the PROTEUS LUCIUS – Elation Professional, a powerful yet compact IP65-rated LED profile fixture offering outstanding projection and beam qualities in any environment. With a fast zoom range from 5.5° to 50°, the PROTEUS LUCIUS has the power to cut through and make a statement on any stage.

Lastly, the NovaStar H series, their flagship all-in-one video processors, designed specifically for large LED display applications. The H Series greatly simplifies LED system integration, image processing and managing multiple inputs, offering the latest image processing technology in the industry.



NovaStar H Series

Proteus LUCIUS



PixelBrick in action



The team at ULA Group NZ

# Powersoft Drives Immersive Doctor Who Show in London

Photos by Mark Senior  
and Helen Maybanks

Although the words ‘TARDIS’, ‘Dalek’, and ‘Cyberman’ are perhaps unfamiliar to those outside of the remit of the BBC, such language, pulled from the lore of decades-spanning sci-fi TV series, Doctor Who, is practically ingrained in British culture, whether you are one of its devoted legion of fans or not.

This alone is a testament to the show’s cult status and enduring influence, and perhaps one of the main reasons why the Doctor Who canon has recently become the basis for one of London’s most talked-about new immersive experiences, Doctor Who Time Fracture.

Chief creative officer for the project (and producer at Immersive Everywhere), Brian Hook, has been on board since the first meetings with the BBC nearly two years ago, and continues with the production to this day.

“My team generated the brief for the show, which was to create a Doctor Who experience unlike any other,” he said. “Eventually, that took the form of immersive theatre that placed the audience in the beating heart of the story.”

As well as finding the right creative teams to deliver the concept and sticking to the budgetary confines of the show (global pandemic-permitting), Hook also had to guide the development of the narrative concepts from an idea, through a lengthy BBC approvals process, and finally to the finished product.

“This project started in the heady days when it was still possible to go for a beer and sit late into the night talking over the projects, without the mandatory masks, scotch eggs, and seats. I’d already identified Tom Maller and Dan Dingsdale as being two of the creators I

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

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

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



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

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

Supporting the mental health of Australian entertainment industry workers



would like to lead the teams, having worked with both of them for many years.”

“We presented our concepts to the BBC on the set of Jodie (Whittaker, Doctor Who actress)’s TARDIS in Cardiff and, with the help of the BBC team, wrote out the narrative. The concept of Doctor Who Time Fracture was born there, right by Jodie’s console, and the hero moments, monsters, and story arc all took shape. Then the world entered a global shutdown and we were forced to push back the project by many months.”

Doctor Who Time Fracture allows visitors to become key players in the story (just the small matter of saving the universe, as it happens) and immerses them in the action using a combination of intense audio, vivid visuals, and live action actors and props. Including the backstage space, this covers an area of around 3158 square metres, consisting of three spaces that contain the entire audience and 14 additional worlds that hold between 1% and 20% of the show’s capacity.

With the audio being so key to the fidelity of this experience, director Tom Maller brought on sound designer Luke Swaffield of

Autograph to design the sound system for the entire site, which necessitated an impressive inventory of Martin Audio, KV2, and Meyer Sound loudspeakers, and 20 Powersoft T Series amplifiers running 80 channels.

“The T304s we chose are really great value for money,” said Autograph’s sound designer Luke Swaffield. “They provide so much power across four channels in just one rack unit, which was a real selling point for me as rack space was at a premium. Being able to load the different presets for the different loudspeakers and also taking advantage of gain sharing across the amps made them ideal. Having Dante on board also saved a huge amount in the budget by not having to hire lots of Dante-to-analogue converters.”

The Powersoft amplifier platforms’ power sharing allows the unit’s full power to be used across the four channels. This allowed the team to pair, for example, a power-hungry subwoofer with a lower power speaker on one of the other channels, which gives the necessary headroom.

“The combination of using this and bridging some outputs meant I could use a single

model of amplifier (T304) across the entire production to power all of my passive loudspeakers,” said Swaffield. “This means we only need to carry one spare to support the entire production.”

QLab was Swaffield’s go-to for playback, while Yamaha DM64s took care of the processing. This provided him with a matrix, level, delay, and EQ for every speaker in each position.

“We use ArmoniaPlus to load the presets onto the Powersoft amps,” he explained. “Due to the mixed different manufacturers of loudspeakers, I use the DME for the individual processing and timing of the loudspeakers, and ArmoniaPlus takes care of the individual voicing of the loudspeakers, thus leaving the DME free for me to do the fine tuning in the space to account for timing difference and room EQ.”

“I found the ArmoniaPlus software very clear and user friendly. While I’m not using the full power of it on Doctor Who Time Fracture, I can see a lot of use cases for it on other productions, including the 4x4 matrix. As a hire company I can see us using the T304s

a lot as we can create a preset for each loudspeaker in our inventory and load it as the speaker EQ in the warehouse and still leave our clients' DSP to make their own fine tuning on one of the several other DSP points."

Most of the audio content for the show was created by Swaffield, though some of the more iconic sounds from the Dr Who canon, such as the TARDIS, were provided by the team at the BBC. The original music in the show has been created by a variety of Swaffield's regular collaborators including Daniel Nolan, Barnaby Race, and Louise & Zands Duggan.

"As you can imagine there's a huge amount of content that needs generating for a show of this scale," he explained. "I also had a great deal of help from our assistant sound designer, Raffaella Pancucci, and some of my colleagues at Autograph when we were in the throes of rehearsal."

As much of the show was being created during national lockdowns in the UK, a number of former cast members were able to record themselves on home setups or at the Bond Street and Autograph studios.

Swaffield added; "We also engaged Nicolas Briggs, the modern-day voice of the Daleks and Cybermen, as we really wanted that authentic voice the audience instantly recognise and are terrified by!"

In addition to the reproduction of recorded sound, the audio system also had to accommodate effect microphones that are used throughout the show and a live singer in a later section. These inputs also feed the DME network and are processed and fed into the matrix, levelled, EQd, and heard in the space. These inputs are faded up and down by MIDI cues from QLab in to the DME.

"The input, be that QLab or a mic via a Yamaha RIO rack, feeds into the system on Dante," said Swaffield. "That signal goes in to a DME64N on Dante where it is matrixed to an output for each loudspeaker. Each loudspeaker signal leaves the DME on Dante and feeds the local Powersoft T304 and then it's a straight copper run from the amplifier to speaker."

"This is really useful with the singers as we don't have a sound operator in the space throughout the show," said Swaffield. "We run a daily sound check with them to make sure everything is still sounding as it should, but the biggest challenge is always predicting how the space will respond when we have an audience."

"We all know spaces sound different when you bring in lots of bodies, but the particular challenge in immersive is that the audience don't just sit down and be quiet. They are actively encouraged to get involved and talk with the actors. Balancing the sound between what we want to do creatively, and immersing the audience in the world, is

balanced against the need for the actors to safely be able to deliver their lines and be able to communicate with the audience. It's always a tricky balancing act that we work on during open dresses and previews when we bring in test audiences."

The team encountered a number of challenges during the creation of Doctor Who Time Fracture, most notably a five-month delay to production: "It was profoundly impactful for every individual and department," said Hook. "The show was broadly conceived over weekly Zoom calls, and although it was possible to access the site, it was under ever-shifting guidance, without a clear date by which we could start the show. I don't think we will ever face more pressure."

The team also contacted Powersoft for tech support at one point, when the subwoofers mysteriously appeared to be underperforming: "I was able to share my ArmoniaPlus project file over email and discuss with the tech support team the details of the power sharing. With a little tweaking of the limiters I'd set, we were able to take full advantage of gain sharing and use the full power of the amplifier to get the subs really singing again."

The installation of the show was led by Autograph's senior production engineer, Jim Douglas, working mostly with a skeleton team overnight for several weeks to ensure social distance could be kept from other departments. With the show now open, everything on site is looked after and operated by the venue's head of sound, Harry Johnson, while Autograph Sound's service department provides tech support for the production.

"Although the project had its difficulties, we got through it by talking, and by being incredibly open and honest about the challenges ahead of us and about how we thought we might navigate them," Hook said. "To have any kind of show at the end of this is a remarkable achievement, but to have a show that commands these production values, which was made with such kindness and generosity from the designers, suppliers crew, cast, general managers, press and marketing teams, and ticketing partners, is nothing short of a miracle."

"Andrew Bruce and his team at Autograph, Dan Large from Electric Foundry, and Dominic Yates from White Light should also be singled out for praise as they worked closely with our designers. When we were completely up against it, they chose to support us throughout the mounting of this show. I and the producing team feel personally indebted to the generosity of those companies and their championing of our craft when we needed it most. We keenly know the pressures those companies themselves faced and to rally behind us all gave us more energy, time, and resources to get the show across the finish line."

## 25 YEARS

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The timeline features a vertical blue line with circular markers. Key milestones include:
 

- 1994:** Worldwide 1. Certified VBG-70 System. Image of a control console.
- 1996:** Founding of CHAINMASTER GmbH. Image of a control console.
- 1998:** Premiere of VarioLift Series. Image of a motorized lift.
- 2009:** XYZ-Control acc. to EN 61508 SIL3. Image of a control console.
- 2020:** New D8Plus Ultra Series. Image of a motorized lift.
- 2021:** Launch of CHAINMASTER Image film. Image of a motorized lift.

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# BRINGING BACK THE ROCK TO THE HARD ROCK CAFÉ

by Jason Allen

**The Hard Rock Café brand has always struggled a bit in Australia, with the Melbourne branch closing in 2007. With its spiritual home in Surfer’s Paradise and a venue at Sydney’s Darling Harbour, the brand has never taken off like it has overseas, where you’ll find an astonishing 185 cafes, 25 hotels, and 12 casinos. New owners Tandem Capital plan to bring it back to life by doing the seemingly obvious – bring back the Rock!**

Unlike most other countries, the Hard Rock franchise in Australia has never really done what it’s famous for elsewhere, which is host live music. This is a fundamental underpinning of the brand and what has been attracting people to the venues since the first branch opened in London in 1971. Thankfully, the new owners ‘get it’, and have embarked on a new fit-out designed to host live music, loud and proud. They even plan to bring the Hard Rock back to Melbourne and expand to Darwin and Perth.

Starting with the iconic Gold Coast venue, Hard Rock approached Brisbane-based production and installation company IJS

Productions Australia to implement a PA that would provide the power they need. “They’d already spent considerable money on the refit, and done some interesting acoustic treatment to the stage,” relates Scott Mullane, Business Development Manager at IJS Productions. “The stage itself had been filled with rockwool batts, creating a deep acoustic trap. The stage’s rear wall had been covered in batts, then panelled with 3cm wide strips of beautiful hardwood, spaced apart by 3cms, creating a kind of diffuser. It looks great, and radically improves the stage sound.”

The five metre by four metre stage is built to

hold a rock band, as per the venue’s heritage. “The Screaming Jets originally played at the opening of the Gold Coast branch back in 1996,” Scott continues. “The aim is to get that level of gig back in the room. It’s about full bands, and they have full backline, making it easy for any band to get in and out. They want to run four nights a week of proper band work. In the current environment, we need more of that!”

With a rough PA design already in place based on other venues within the organisation, Scott got in touch with CMI Music & Audio’s Brian Vayler, the Queensland-based Product Specialist from their Audio Solutions team, to discuss system design.

“Scott and I put our heads together and came up with a solution that met the client’s requirements,” reports Brian. “Because of height restrictions, the circular design, and the width of the room, a point source PA was going to be the best option. We decided to go with loudspeakers from Adamson’s IS-Series.”

“Hard Rock Gold Coast hosts about 350 people in a circular room, so you can’t shoot straight,” outlines Scott. “We had to spread the horizontal dispersion to the sides. Our solution was to use one Adamson IS10p per side for the main left-right, splayed out.”



“Thankfully, the new owners ‘get it’, and have embarked on a new fit-out designed to host live music, loud and proud.”



The IS10p is a two-way, full range cabinet with two 10” drivers and a 1.4” exit compression driver, part of Adamson’s IS-Series, designed for installation. Available with either 70° x 40° dispersion or 100° x 50°, the horns are rotatable, allowing Scott and IJS Productions to get the coverage they needed.

Joining the IS10ps was a single IS7p (two-way dual 7” and 1.4” exit compression driver), flown above the stage and functioning as down and front fill. Two Adamson IS219 subs were fitted under the stage, coupled in the centre. On stage, four Adamson M15s handle monitor duties, running a single 15” and 1.5” exit compression driver. All loudspeakers are powered by Lab Gruppen installation amps with Lake processing. The in-house mixer is a Soundcraft Ui24, which is standard in Hard Rock Cafés the world over. Brian Vayler put the finishing touches on the system by commissioning and tuning.

Meanwhile, in Sydney, the building housing the Hard Rock Café, Harbourside, is slated for demolition in three years. While Hard Rock management still wanted to duplicate the capabilities of the PA at the Gold Coast, they wanted to pare the budget back a bit. This didn’t phase Scott and Brian, who knew they could get major SPL out of a smaller Adamson rig.

“In Sydney, they’d enlarged the stage to support a band, so we used the same number of M15 monitors,” Scott explains. “For the FOH PA, we knew that, despite their size, a pair of Adamson IS7ps would make a killer left-right. We installed one IS7p a side and three IS118 subs clustered at centre under the stage, which are teeny; I can lift one by myself. We also added an Adamson Point 8 single 8” outfill for about 20 people off to one side of the stage.” With a tight turnaround on the job, Brian made sure the whole rig was shipped in time for local contractor Brad Law to get the system in.

Legendary Aussie pub rockers The Choirboys were the first band to use the PA. “We knew we’d done alright when I got a call from the Hard Rock Cafe’s Mark Spillane,” retells Scott. “He said, ‘When I saw the size of the left-right boxes, I was nervous, but I was absolutely floored. Not only did it sound clean and clear, the SPL was like a much bigger system. I was standing towards the back of the room and could feel the air moving.’ That was the big tick for me. We saved some money, but with zero sacrifice. It’s a tiny system, in a serious venue, performing very well. The techs from Norwest Productions are in-house in Sydney, and the feedback from them has been very good. Having worked with Adamson for a few years, and knowing what it can do, even I was impressed with what we managed to achieve in Sydney.”

Back on the Gold Coast, Brian chats regularly with sound techs who have mixed on the Adamson rig at the Hard Rock. “The locals love it,” he extols. “Everyone who mixes there walks away very happy, and the client is exceedingly pleased with the result.”

With Scott often out touring with a regular roster of top-tier Australian acts, he’s developed a clear preference for his choice of PA. “Adamson is number one on my rider at the moment,” he reveals. “I believe objectively that they have market-leading power to weight ratio. Subjectively, I prefer their voicing. One thing I find outstanding about an Adamson PA is its pattern control, which I believe rivals other brands, but Adamson don’t seem to talk about it as much as its competitors. When I put problematic sources like headsets and lecterns behind an Adamson PA, I find I’m carving them up less with EQ because I’m getting less rear bleed off the back of the boxes. As for the voicing, I find that vocals hover in the phantom centre like they would on good studio monitors. I’m not driving the vocal so much as letting the mix sit below the vocals naturally, which makes me feel like there’s more dynamic range.”

[ijs.com.au](http://ijs.com.au)

[adamsonsystems.com](http://adamsonsystems.com)

[cmi.com.au](http://cmi.com.au)



# First Astera NYX Bulb Installation in Australia

**The first Astera NYX Bulb installation in Australia has been completed by Elite Event Technology at One22, a brand-new music-driven bar and night entertainment concept in a meticulously reimaged space that has long served night and party people in Canberra.**

Owned by the same team who also run the popular and successful Fiction Club and Fact Bar, ACT's largest club, One22's new lighting design includes 60 Astera NYX bulbs in an individually mapped ceiling art piece.

Formally Mr Wolf nightclub, EET had supplied a previous long term rental audio and lighting rig in the space and also have a sizable installation in Fiction and Fact, so there was already a strong connection with both the new owners and the landmark Sydney Building (as it is named).

EET's Darren Russell was invited to create a fresh new lighting look to match the eye-catching raw industrial chic of One22's interior design, and integral to this is the NYX bulb roof installation.

"The client wanted to be able to change the mood and dynamic of the venue instantly and drastically but without having any roof trusses full of lighting and rigging," explained Darren. They already had the idea of multiple hanging pendant style lampshades around the room, so Darren took that as a starting point and developed the NYX bulb installation, which can change colour and be chased creating beautiful fluid kinetic effects.

Having invested steadily in Astera products over the last year, all supplied by Australian & New Zealand distributor, ULA Group, Darren



NYX Bulb and a different, random, retro-styled shade.

The NYX Bulbs are controlled via a ChamSys MagicQ PC with data fed to the bulbs via a LumenRadio wireless network. The club has an iPad in an iPort ruggedised induction charging case which is running on a dedicated enterprise-class mesh Wi-Fi network also installed by EET.

The ChamSys remote app on the iPad is used to access pre-programmed pages so the duty manager can select a variety of different lighting looks and effects to suit the mood and the music of the moment.

“NYX Bulb was a perfect solution in this scenario,” stated Darren, “providing enough flexibility and control to create great effects without having to fill the roof with trussing and theatrical style luminaires.”

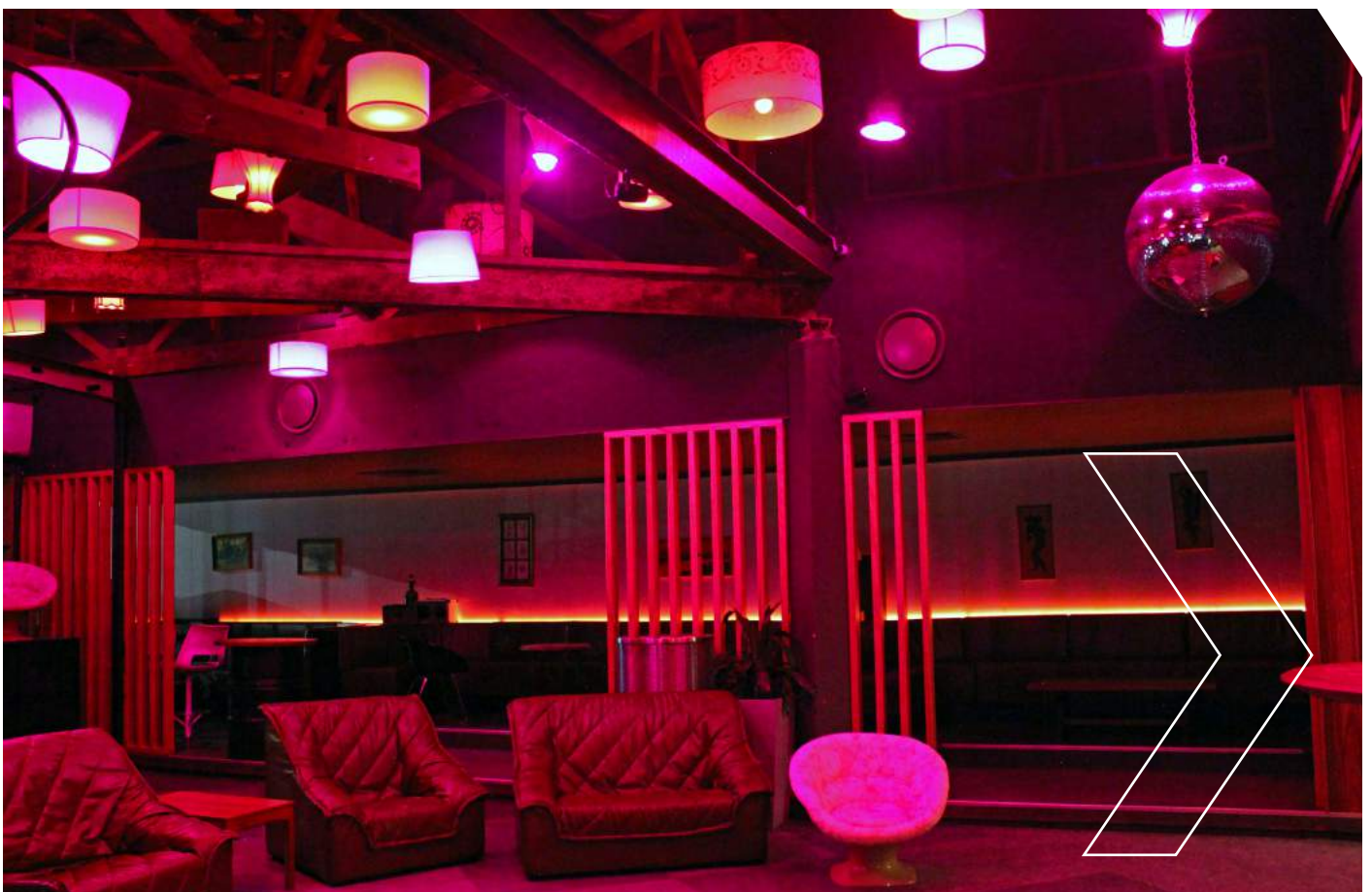
Everyone is blown away by the NYX Bulb installation and its impact which is getting plenty of attention.

The new venue, welcome news to the hospitality and entertainment industries battered and bruised by the coronavirus pandemic, features a selection of house and guest DJs playing live and is now open Wednesdays through Saturdays from 4 pm until the early hours. It offers a superlative mash of sounds for ravers, dance enthusiasts and night owls embracing a heady mix of funk, soul, jazz, hip hop, disco, house, and techno, to smooth in the sunrise.

had been keen to use the NYX bulb since its launch mid-2020. Now was his chance!

The entire 400+ square metre venue is lit with the 60 NYX Bulbs plus LED strips which accentuate the walls, coves, and other architectural details.

The Sydney Building in which One22 is housed is heritage listed and one of Canberra’s original landmarks. It has exposed timber roof trusses which are already striking looking, so 60 individual E27 thread lamp bases of varying lengths have been installed and secured from these, each fitted with a





# LSC POWERS REDLAND PERFORMING ARTS CENTRE

**The technical team at Redland Performing Arts Centre (RPAC) in Cleveland, Queensland recently decided to install LSC Control Systems' GEN VI dimming and power supply system in its Concert Hall, Events Hall, and Auditorium.**

The supply and installation of the GEN VI distro and dimmers was carried out by Sam Walter, Dean Capraro and Arthur Szilagyi from Brisbane Sound Group (BSG).

"The LSC GEN VI hybrid dimmers were an easy recommendation as RPAC needed a mixture of wall-mount and rack-mount products for their Concert Hall. They are simple to install, and the built-in touchscreens make configuration a breeze. LSC had all 20 dimmers manufactured and delivered to us on time and being Australian-made meant we didn't have to deal with any COVID-related international shipping delays," says BSG's Sam Walter.

RPAC Technical Services Manager, Monique Silversides, was also impressed with the completed project. "BSG carried out the successful installation of our new LSC GEN VI dimmers. We chose the GEN VI system for the intelligent dimmer and power distribution combination. In particular, we love the simple-to-use touchscreen which gives us the ability to set each channel individually, control outputs and view any external fault conditions," she says.

The safety provided by the RCD per circuit and the ability to set each channel as either a dimmer or a relay controlled power supply were the primary reasons for selecting the



Redland's Trent Neilson and Kelly Hollett



LSC product. The GEN VI complements their existing LSC PowerPoint power distribution, as well as a number of LSC MDR data splitters that provide the DMX distribution for the venue.

RPAC is a cultural meeting place on the traditional lands of the Quandamooka people. The centre presents a rich and diverse program of local, national and international events which appeals to a broad cross section of audiences and participants.

The magnificent RPAC Concert Hall is one of the most acoustically pure venues in Queensland. It was completed in March 2008 as an extension to the original Events Hall and Auditorium (which first opened in June 1982). Seating 550 patrons, it provides an ideal environment for orchestral, dance, drama and musical performances.

There are also two smaller venues on site – the Auditorium seats up to 196 patrons and is designed for cabaret shows or sit-down functions and the Events Hall is a multipurpose space seating up to 240 patrons for functions, performances, meetings and events.

[www.lsccontrol.com.au](http://www.lsccontrol.com.au)

# Sometimes it all gets too much...



The *Support Act Wellbeing Helpline* is a free, confidential counselling service that is available to anyone working in Australian music who needs to talk to someone about any aspect of their wellbeing.



THE SUPPORT ACT WELLBEING HELPLINE IS MADE POSSIBLE WITH THE SUPPORT OF:



# Salty's Hangs Ten With EAW

**When the prestigious, family-owned Millett Group hospitality and tourism group opened Salty's restaurant and bar, owner and operator Christian Millett wanted to create a venue that paid tribute to the history of surfing culture in Australia and Bondi Beach in particular.**

Millett's vision called for a more relaxed and fun environment with a serious PA system capable of handling its various audio needs. Millett turned to Pro Audio Video Technology (PAVT) who designed a custom audio system from Eastern Acoustic Works (EAW) for the venue.

The Millett Group and PAVT have a long-standing history, with EAW having installed EAW PA systems in the company's various venues around the region for the past 10 years. "I have always been impressed with the quality and durability of EAW's equipment,"

says Millett. "Our venues operate seven days a week, year-round, and our EAW gear has always stood up to the test. With our new venue, Salty's, we did not consider any other option. For us, having a restaurant and bar with amazing sound quality and entertainment was going to be our point of difference and we knew we had that with EAW."

In designing the PA system, versatility was key for the team. Salty's is open for lunch daily, so the venue needed to have a system for background music that allows patrons to carry on conversations. Salty's features

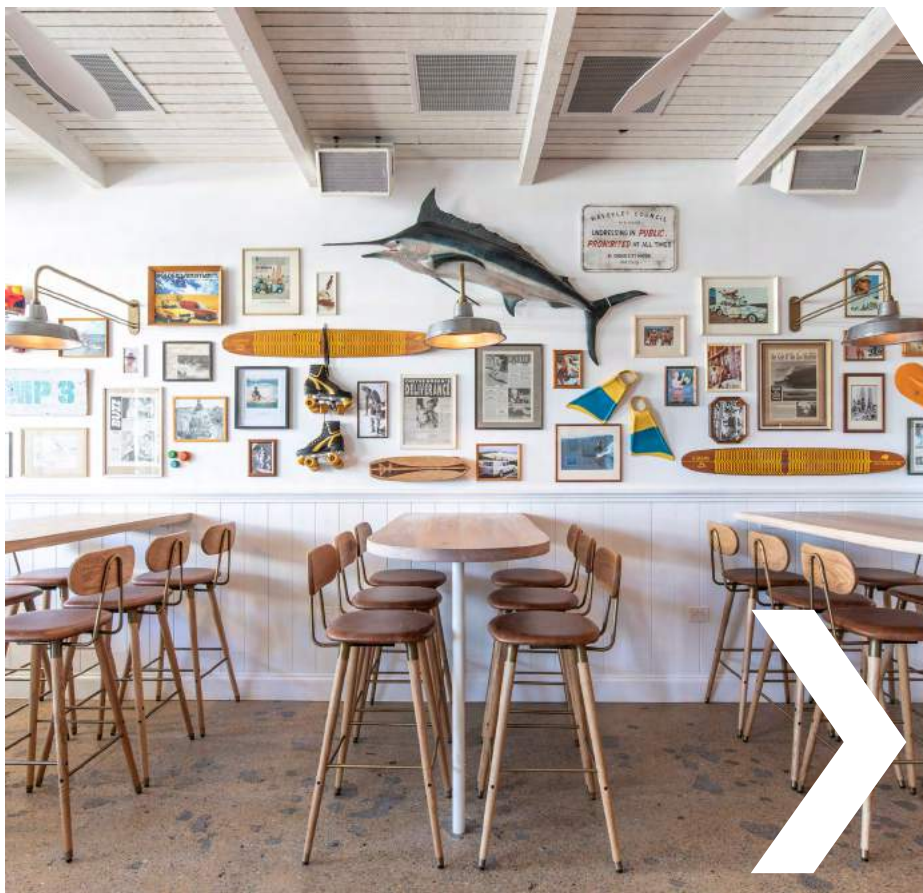
DJs playing music seven days a week, so the sound volume changes dramatically not only throughout the day, but from set-to-set. It was also important that the system had zone controls to raise the audio levels in parts of the venue. With EAW, the audio quality was clear regardless of the sound level. In addition, all management staff have an app on their phones that enables them to walk the venue ensuring the levels are just right.

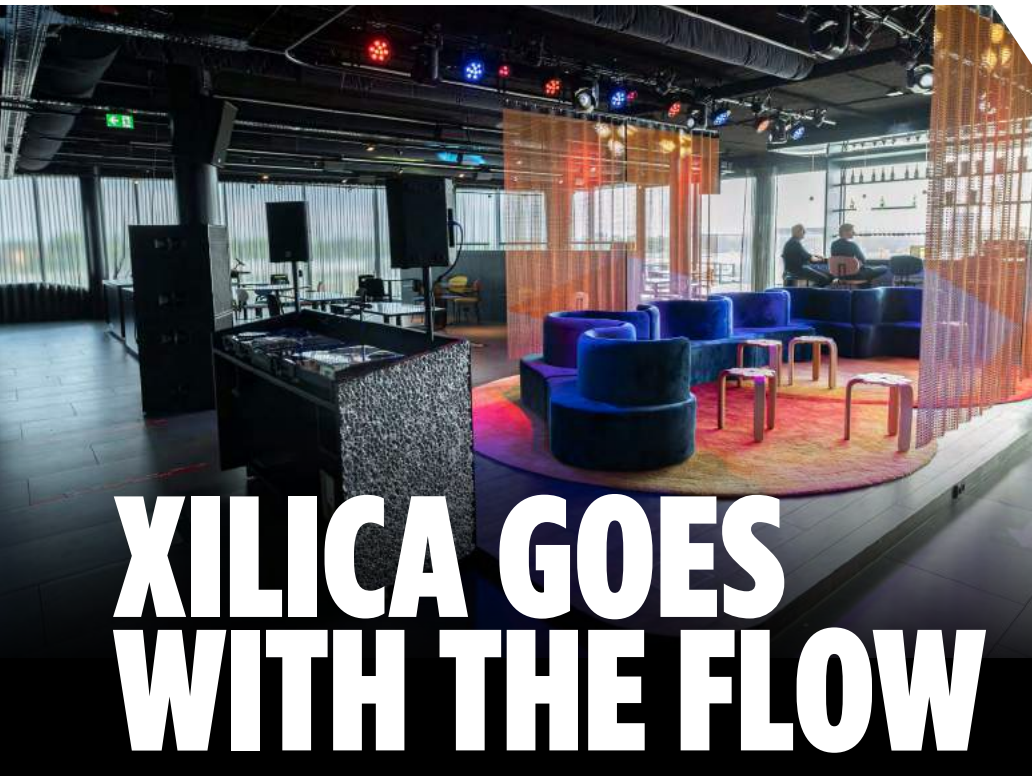
The bar is very deep, but it is not wide, so in designing the audio system, the PAVT team broke the bar into four separate zones. The main zone/DJ/dance floor is covered with six EAW MK8196 passive two-way loudspeakers and two EAW SBK250 subs that are all flown. The bar area is covered with a line of EAW VFR89 passive, two-way loudspeakers, and the entry area is covered with six VFR89 and four SB120 speakers. The annex area off to the side of the main area is filled with a pair of VFR89 speakers.

Millett continues to be impressed with his EAW PA system. "EAW has a very solid distributor in Australia with PAVT," adds Millett. "PAVT has had the EAW line for many years and this instills confidence that should any parts be required down the road there will be continuity of supply. Dave Coxon has been excellent, as usual, in helping us with the commissioning and tuning. Since getting it dialed in during setup, the system has been perfect. Salty's looks and sounds great."

[www.pavt.com.au](http://www.pavt.com.au)

[eaw.com](http://eaw.com)





# XILICA GOES WITH THE FLOW

**Located in the historic Amsterdam neighborhood of Houthavens, Flow encapsulates a modern workplace where corporate and lifestyle co-exist.**

The first office building to receive WELL certification in the Netherlands, Flow utilises the convergence of AV and IT technology to support the productivity, creativity and employee retention strategies that are hallmarks of the global building standard.

With public and private workspaces housing multiple business tenants, systems integration firm Sinus Audiovisual needed a networked architecture to route and distribute video and audio signals over five floors. That included a dedicated large conference space called the “war room” that was built for high-profile events such as product launches, company presentations and sensitive private meetings. This would require a highly reliable and secure AV solution that also optimized audio quality for voice intelligibility.

Flow’s emphasis on lifestyle and well-being makes audio an essential part of the workspace experience. Sinus specified a core Xilica DSP solution built into the central IT infrastructure that could be shared between locations. A separate VLAN was added for AV and control signals, with some interconnectivity to Flow’s main network.

“We have interconnections with Flow’s network for streaming radio, most of which originates from four Sonos audio players,” Peter Kaandorp, Sinus Audiovisual. “Sometimes, the Flow principles want to control more of the sound in various zones

around the building. Xilica Solaro DSPs play critical roles for processing these and many other audio signals moving around the building, as well as meeting audio within the war room.”

Xilica Solaro FR1 DSPs are integrated in IT equipment racks on the first, third and fifth floors. Each 64x64 matrix reliably processes and manages analog and digital music sources coming in and out of the frames, with all signals converted to Dante for distribution through the building. Xilica’s flagship Solaro FR1 DSP offers flexible, modular expansion options for Sinus should more capacity be required.

“We first considered integrating everything into one large matrix but then split the DSP functions into more localized racks for the sake of simpler maintenance,” said Kaandorp. “The Xilica Solaro FR1 brings immense processing power in a 1RU frame, and it’s incredibly straightforward to program and integrate. The clean interoperability with Dante makes the audio networking aspect so much simpler.”

A fourth highly secure unit is dedicated to the war room, with an emphasis on acoustic cancellation and noise reduction to optimize meeting and presentation audio from Sennheiser microphones. The Solaro FR1 DSPs also work flawlessly with Crestron IP video encoders and control systems for seamless AV interoperability over the IP

3Sixty meeting space



XILICA Solaro Series

network, with pre-built integration from Xilica.

**Impact**

The Xilica Solaro QR1’s networked design eliminated much of the traditional cable and clutter common with legacy audio systems. Xilica’s partnership with Sennheiser ensures exceptional audio and quality inside the large conference room, which is often a substantial hurdle due to surface reflections and other acoustical challenges.

The broad array and density of signals handled by the Xilica Solaro FR1 DSPs outside the war room make the manufacturer’s integration with the Crestron control solution an enormous benefit for overall ease of use. Users of any skillset in the workplace can easily adjust volume and manage zones without learning curve or delay. Xilica’s overall ease of use also simplified the programming and integration for the Sinus team.

“Xilica makes the integration process with third-party equipment very painless,” said Kaandorp. “We could also create the audio matrix design within the Xilica DSP, and replicate that in the central control system. That made everything seamless and interoperable from the programming stage forward. Dante audio networking with Xilica then made it very easy to serve all five floors with great sounding audio.”

“We are confident this deployment is exactly what Flow and their tenants need today, with plenty of additional opportunity to serve future requirements.”

**xilica.com**

**www.ambertech.com.au**

# Q-SYS Certified for Teams

## QSC has expanded its portfolio of Microsoft Teams Rooms certified meeting room accessories with the addition of several new Q-SYS products.

This completes the certification of its existing portfolio of collaboration devices for high-value spaces, including classrooms, executive boardrooms, divisible rooms, flexible spaces, immersive video conferencing rooms, and training spaces.

The certified solutions include additional Q-SYS Core processing options, the Core 8 Flex, Core Nano, and NV-32-H (Core Capable), which provides more options to rightsize processing needs for a particular room size and I/O requirements. For video camera streams, the certified Q-SYS PTZ-IP conference cameras integrate with the Q-SYS Cores or newly certified Q-SYS I/O-USB Bridge to deliver professional-quality conference feeds, as well as the unique ability to add multiple conference cameras for a more natural, inclusive engagement for remote web conferencing participants. In addition, users can utilise the newly certified CX-Q Series for additional amplification options.

“We understand high-value spaces require enhanced capabilities and features to effectively deliver a flexible and scalable video conference experience,” says Jason Moss, Vice President of Alliances & Ecosystem, QSC. “As we continue to invest in our relationship with Microsoft for our ever-growing portfolio, we are pleased to provide integrators and IT end users with additional Q-SYS options to deploy the experience in these rooms.”

Like the other QSC Teams Rooms certified solutions, users can take advantage of QSC software innovations to help simplify the integration process, enable full room control and Teams Rooms control over online meetings onto a single device, and unify the experience for the end user.

“For the System Integrator, investing the time to learn Q-SYS makes perfect sense because that knowledge is scalable across every size of installation, from restaurant, to theme park, and everything in between,” says Giles Brading, head of the QSC business unit at Australian distributor, Technical Audio Group.

Created from the ground-up, Q-SYS is a software-based platform built around an open IT-friendly ecosystem. It uniquely leverages the power of Intel processing, the robustness and mission critical reliability of a Linux operating system, and the interoperability of IEEE networking standards.

This IT-centric layered approach allows QSC to easily migrate the Q-SYS Ecosystem to other Intel platforms as they introduce new, faster chipsets, and other commercial off-the-shelf hardware. Furthermore, its usage of IT standard protocols makes the Q-SYS Ecosystem highly extendable for future IT functions and platforms.

A single Q-SYS Core processor, such as the Core 110f, can handle nearly any small to medium installation in hospitality, venues, education, houses of worship, retail, or fitness studios, etc. It includes local inputs and

outputs, audio and control processing, video conference camera routing, USB endpoint bridging, audio players and recorders, advanced echo cancellation processing, EQ and more.

For bigger and more complex systems the option is to cookie-cutter each room or group of rooms with a series of Core 110fs, with Core-to-Core streaming if necessary, or employ a single Enterprise Core, such as the Core 5200, with the power and channel count for the whole system.

Typically, mega systems like company-wide business or campus-wide education, stadiums, transportation terminals, theme parks, or cruise ships will deploy audio, video and control (AV&C) processing from the data centre with an Enterprise Core. This concept allows IT to centralise all processing, control and monitoring of every piece of technology in the entire system, while offering full redundancy on nearly every Q-SYS component, just as you would for any other IT service on their network. This is the full experience of AV/IT convergence!

Coming back to scalability, Q-SYS is scalable both vertically and horizontally. Vertically in the sense of system size, from mini to mega, from Core Nano to Core 5200, but also horizontally as the Q-SYS ecosystem expands into video and control. Whereas Q-SYS was first launched as audio DSP the vision was always to expand horizontally and now includes video, cameras, touchscreens plus the capability to control it all plus 3rd party devices. Effectively if a device is IP controllable, Q-SYS can control it: network microphones, lighting systems, projectors, screens, blinds, cameras, coffee ordering and so on.

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# Australian National University Trusts Renkus-Heinz

**The Australian National University (ANU) in Canberra touts an impressive resume, not just due to its seven robust academic colleges of study, but because it is also uniquely connected to the Federal Government by way of its position across the river from Capital Hill.**

The university often hosts a number of high-profile meetings in the Mills Room, an ornate conferencing space featuring Tasmanian blackwood woodworking and capable of hosting up to 54 people. Located in the ANU Chancery Tower, these meetings can even include high ranking members of the government, making the Mills Room a premiere location of importance on campus. In fact, due to both the room's unique design and the fact that it has served as the location of significant ANU meetings since 1964, the meeting space is deemed by the university to have heritage significance.

However, after decades in service, the room was due for an AV upgrade. And that required a premier audio offering from Renkus-Heinz.

"Because the space was deemed to be of heritage importance we were given the directive of no substantive changes to the room," said Christopher Watson, consultant with Alder Technology, the firm that designed and specified the system for ANU. "The space itself is roughly 17 by 12 metres in size, and it

has a massively vaulted ceiling. It's also made of solid concrete, with a floating wall existing on one side. Simply put, the acoustics in the room were very poor and would present a challenge."

Watson said the need to precisely position audio in the space, coupled with the need to install as little as possible to ensure the space was architecturally preserved, led him immediately to Renkus-Heinz.

"Renkus-Heinz is a great audio solution for any space because of its quality, but when you have a lot of challenges in an install, the products they make really show their strengths," Watson said. "With Renkus-Heinz we're now looking at a room that looks aesthetically balanced and has sound characteristics that are performance worthy. No need for pendants or ceiling speakers, just perfect sound with two steerable arrays."

The installation makes use of two Renkus-Heinz IC8 digitally steerable line array loudspeaker systems installed at the front of the room on the "floating wall." Part of the

ICONYX line, the IC8s make use of Renkus-Heinz' industry leading digitally steerable technology, allowing venues of all size and type to digitally position sound exactly where you want it: on the audience. By programming the arrays digitally, the sound stays off the peculiarities of the room, and is directed entirely toward the audience's ears.

Further, thanks to their compact footprint, and utilisation of Dante, the loudspeakers were installed without impacting the historically important architecture in the space.

"We really like to talk about the audio capabilities of Renkus-Heinz," said Lucas Catanese, Project Manager at MNGD, the integrator on the project. "But we also know there are installations where architects want to maintain a certain look and feel. This location, obviously, had a very important reason to do that. Renkus-Heinz allowed us to still integrate a system everyone loves while balancing the needs of the heritage space."

The results of the Mills Room installation were so impressive, Catanese said, the university has declared the Renkus-Heinz IC8 a standard for audio upgrades in the future.

"We've already installed it in two additional spaces," Catanese said. "They're installed in a theatre and an operations centre where they'd had challenges with audio in the past. With the upgrade to the Renkus-Heinz loudspeakers, they sound great."

[www.renkus-heinz.com](http://www.renkus-heinz.com)

[www.ambertech.com.au](http://www.ambertech.com.au)

# A Tale of Two Systems - Adamson and Monitor City

by Jason Allen

**Melbourne's Monitor City rely on Adamson loudspeakers, whether it's a simple cranking left-right for an outdoor country music festival, or a complicated distributed system run indoors over AVB for a high-end corporate event.**

## The Complicated Corporate Gig – Adamson CS Series

Monitor City's director's Adrian Barnard and Matt Dufty are no strangers to running complex distributed PA systems for major events, including The Australian Open. They take the same considered and design-focused approach to their corporate work as well, which served them well with their recent work for Japanese auto giant Toyota.

With the occasion being Toyota's National Dealer's conference and the launch of their new model Kluger SUV, the marque brought in dealers from around Australia to experience a hybrid event. The first part saw 480 guests in a dedicated room at The Melbourne Convention and Exhibition Centre featuring huge LED screens and a sizeable PA. The next stage of proceedings had the guests bussed to Toyota's Centre of Excellence in Altona (formerly their factory) and broken into groups for tailored experiences, a concept car reveal, and speeches.

"The event was just one room at the MCEC," relates Matt Dufty, "but there was no carpet, and huge LED screens we needed to keep clear of. It took a lot of design work in both Vectorworks and Adamson's Blueprint prediction software to arrive at a design that worked, while we worked closely with the lighting designer and video techs to stay out of their way."

Monitor City's solution hinged on their recently acquired Adamson CS Series powered and networked loudspeakers, specifically the CS7p dual 7" mid-high box and CS118 subs. All fitted natively with AVB for simple networked audio signal distribution, and running their own DSP and amp, the granular control afforded by CS Series meant that they could be rigged and placed just

about anywhere, and tuned with surgical precision.

"It was a localised design with lots of CS7ps, and all of the subs flown," continues Matt. "The result was that our operator said that the audio in the audience and seating area was crystal clear, while two metres away out of the intended coverage area, it was the expected jumble that the room would cause, which is exactly what we were after."

After the introductory proceedings, the event moved to Altona. "The Toyota Centre of Excellence is a very impressive space," enthuses Adrian. "They've done an absolutely beautiful job renovating the old engine plant. We were working in one massive space made of steel and glass where we had to localise sound. There were three stages in the main space, but the whole system had to work as both one stage and three separate stages for speech, BGM, and video content. Then there were another three separate locations that each needed a stand-alone system. The whole system was complicated, and showed off Adamson's CS Series in all its glory."



"Altona was all about the cars," adds Matt. "We had a lot of conversations in pre-production about what would look good. We don't want any cables visible, for example. A lot of time was spent ensuring that every part of the tech build was hidden, to the point that all of our control was behind a moving wall and cable was run additional distance to get there. This is where Adamson's CS Series shined. While you've got total control, all you need to do is send it power and signal, which is quite easy to hide."

It wasn't just visible cabling that Monitor City had to take into account. "Toyota had shipped a concept car to Altona for the event," recounts Adrian. "We were told 'don't go near it, don't even breathe on it'; it was really precious. So, anything we could do in terms of rigging and prep before that car turned up, we did. We rigged our CS7ps in the roof and ran power and signal all before the car came in, at a good distance from it. In the main display room, we had CS7ps up on trusses above the cars, and that worked well. Rigging all these CS7ps was easy, as they're quite light, and two people with ladders can place and cable to them with ease."

"We did have a quite large amount of loudspeakers in the main room," admits Matt. "But we had a Kubuki drop on the main truss to account for, a domed roof, and MCs wearing lapel mics who can and did wander everywhere. It was a difficult environment, but we got good results everywhere. It also helped having great operators who understand localisation and what they can do to mitigate any issues."

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## The Meat and Potatoes Left-Right – Adamson E, S, and CS Series

In late April 2021, in a merciful hiatus between Victorian lockdowns, 5,000 fans converged on Gippsland’s Berry Creek for the Lee Kernaghan headlined Gippsland Country Music Festival. Organised by Gippsland locals Red Hill Entertainment, who were also responsible for festivals The Hills Are Alive and NYE on the Hill, the gig took place in Mossvale Park, which Adrian describes as “a beautiful site.”

“It was really a great little gig,” recalls Matt. “We hung Adamson’s flagship E Series line array eight a side, with Adamson’s S Series eight a side as sidefill. We supplemented this with Adamson E Series subs, CS Series CS10

dual 10”s as main front fill, and CS7ps as outfills, as it was quite a wide site. This was a meat and potatoes job, but a joy to hear after being away from big PAs for so long.”

“Brian ‘Hendo’ Henderson, who looks after FOH sound for Kernaghan, loved it, and had a great time,” relays Adrian. “The coverage for the 5,000 punters was great, and could have easily covered another 2,500. Our system tech Dan measured the rig at just over 100db at 3 min Leq, which was not even tickling it, as it still had 25dB headroom.”

With three different series of loudspeaker combined into one system, Adrian confirms that there’s no issues with tonality. “It’s the Adamson family voicing,” he puns unintentionally. “There’s no issue making hybrid systems using E, S, and CS. There’s

also no issues getting any of it in the air. I really like the ease of rigging across all three series. Both CS and S are not very heavy, so with two people on set-up, no-one’s at risk. E is heavier, but easy and stable. We flew the E Series arrays off the downstage edge and at no point was any of it unsafe. It all goes up quick and comes down real fast. In addition to that, the amp racks don’t take up much room, our Blueprint prediction was accurate even though it was a new site, and the acts were really happy, as was the client. It was a ripper gig.”

**Adamson loudspeakers are distributed and supported in Australia by CMI Music and Audio: <https://cmi.com.au/adamson-cs-series>**

**[www.monitorcity.com.au](http://www.monitorcity.com.au)**



Adrian Barnard



Matt Dufty

# SOFTWARE VISION SWITCHERS

by Benjamin Powell, founder of BetterCast

**As COVID-19 drags on and lockdowns and travel restrictions change endlessly, event producers are struggling to find a way to deliver their events. It means that AV teams are doing what they can to enable these producers to provide some sort of experience that people will pay money to attend.**

When the thought of producing even a tiny event seems terrifying, committing to a date and venue with the constant uncertainty of it even being able to go live, going virtual is the only option remaining.

Some teams had delivered live streaming events before the pandemic, and a considerable number have started in the last 18 months. However, it's safe to assume that not every producer has live streaming available as a service, and this means that it's money on the table that you could be benefiting from if you create a package for your clients.

Given the typical readership of this magazine, we can assume that everyone reading this will have all the appropriate gear like cameras, mics, and so on to be delivering some level of live streaming. We will also have to assume that the risk associated with using a computer to do the vision mixing instead of hardware is one that everyone is willing to take.

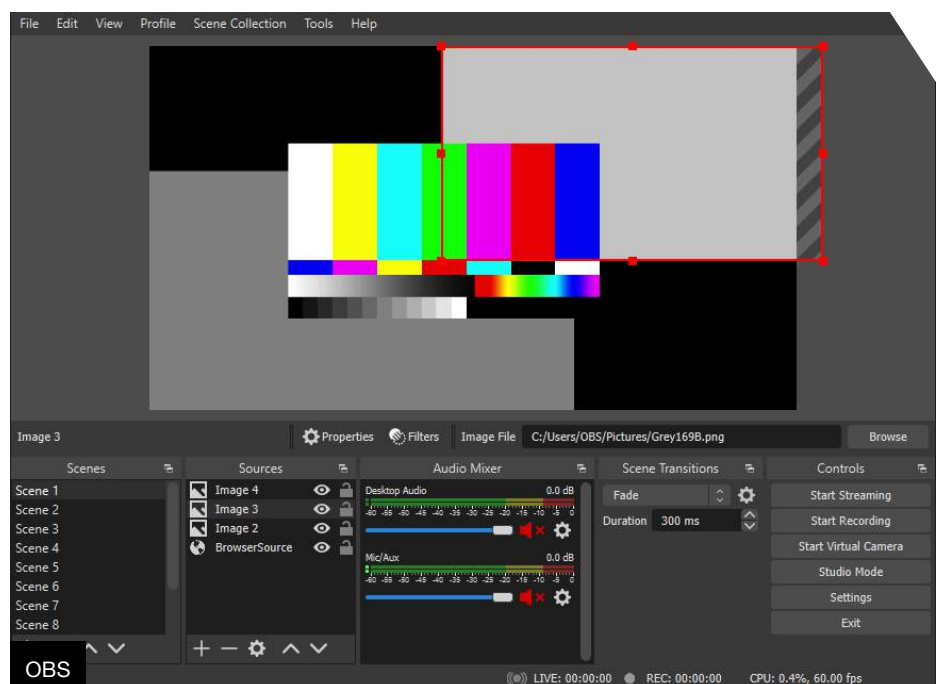
However, once you've committed to taking that risk, the question becomes one of choosing which platform to use. Each has its advantages and disadvantages, which we're going to take a look at.

## OBS

Even those who are relatively new to live streaming will almost certainly have heard of

OBS. It is widely used by Twitch streamers and YouTubers, not least because of the simple fact that it's free. The clue is in the name; Open Broadcaster Software, with the "open" meaning that it's open source. Rather than being funded by purchases or subscriptions, OBS Studio is funded through Patreon and Open Collective.

Aside from the price (or lack of one), the other aspect of this system that makes it popular is its relative simplicity. Go onto YouTube, and you'll find tutorials taking viewers from complete beginners to broadcasters within less than half an hour. And, being YouTube, at least 10 minutes of that is intro waffle and requests for likes and subscribes (not forgetting to "smash that bell icon", of course).



OBS isn't just for gamers, either. Despite being free, it can be linked to many inputs, including pan-tilt-zoom (PTZ) cameras and network device interface (NDI) inputs. As a bonus, it works on Windows, macOS (10.13 or higher) and Linux, though it's worth noting that it's usually the Windows version that gets updated first and foremost.

Of course, part of the reason why OBS is so well known is the fact that it gets mentioned a lot by streamers and rarely in a positive light. Few would willingly bring up the back-end software they're using unless it explains to their viewers why something is going wrong. Just go to their forums, and you'll see recent posts complaining that almost every aspect of the system is glitchy and unreliable. And, being open-source, support is not a priority for the developers.

## vMix

The Australian-made vMix, by StudioCoast in Robina, is very definitely a step into the big leagues. Unlike OBS, it works only on Windows (specifically Windows 7 or later) and is best with Nvidia graphics cards. However, it comes with a remarkable array of features, including the ability to incorporate social media content, instant replay for up to eight HD cameras, a comprehensive title designer, built-in virtual sets, transitions and stingers, excellent audio mixing, colour correction and plenty more - few of which are available on OBS (some are, with the right plugins, though these can be buggy).

vMix is more explicitly intended for live video rather than video games. It can simultaneously support up to 1,000 cameras with the proper hardware, including PTZ cameras and 4K HD. Among its customers, you'll find NBC Universal, BillOReilly.com and VIVA Creative.

Of course, all of those features mentioned above don't come for free. vMix is available for a scaled choice of lifetime packages, with the number of cameras supported and maximum resolution the most important of the differences between each. At the lowest end, the Basic HD package costs US\$60 and only supports four inputs and 1080p resolution, while the US\$1,200 Pro package hits all the maximum numbers. If that's too much for you to pay out in one go, there's also a US\$50 monthly subscription option, which gives you the same capabilities as the Pro package.

The greatest strengths of vMix include:

- Its audio mixing.
- Support for a vast range of inputs (including running multiple separate streams simultaneously).
- The fact that it is Australian-based.

Not having to deal with a massive gulf in time zones makes getting difficulties resolved by the developers significantly quicker and easier. Among its weaknesses is the cost, as mentioned above, and the rather steep learning curve. Of course, any professional-grade system is inherently more complex, but vMix turns the complexity right up to 11.

## Wirecast

Like vMix, Wirecast is more specifically designed for video production. However, where vMix's most impressive feature is the wide range of supported inputs, it's the outputs where Wirecast shines. You can simultaneously broadcast across various platforms, including YouTube, Facebook, Twitch, and others. It's easy to set up, too. In fact, some say Wirecast is even easier to use than OBS.

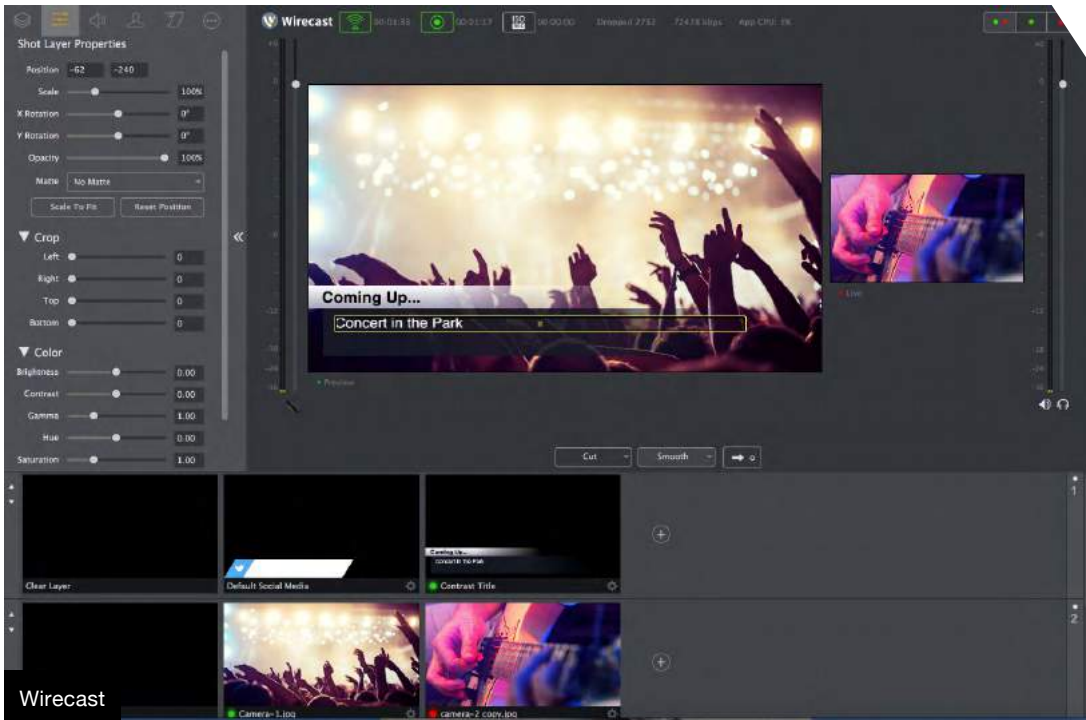
The rest of the features list hits all of the notes you'd expect of a professional-level tool, including built-in chroma key and 3D graphics, good video and audio editing options, and support for multiple different types of input, including PTZ cameras. One stand-out feature is the mobile app, Wirecast Cam, which means that you can also use an iPhone or iPad as a wireless input.

Wirecast comes in two versions, both of which are Windows and Mac compatible. Wirecast Studio costs US\$599 but lacks some significant features, including PTZ camera control, instant replays, and multi-track audio recording, among others. The Pro version has all the bells and whistles but also a US\$799 price tag.

## Studio 6

Uniquely, Studio 6 is a live streaming system run by an online video platform; Vimeo. It is very far from being a half-hearted token entry, too. While the feature list is not as comprehensive as Wirecast's or vMix's, it can





Graphics: Gigabyte GeForce GTX 1080 Ti 11GB or better

Memory: 32-64GB DDR4 Memory

Storage: 2TB SSD

Motherboard: Intel-compatible motherboard

Video capture: External capture/encoder is preferable here, so ATEM pro is your best bet.

OBS is more than satisfactory enough for the early adopters and users starting live streaming for smaller events. Its relatively shallow learning curve and lack of cost make it the perfect entry-level solution. Additionally, it's a pretty robust system despite that approachability and should allow you to run a simple but impressive show.



For a more professional service, go with vMix. It's significantly more robust and is more functional for a professional event. In addition, it's the only option listed here that allows multiple simultaneous streams, making it the best (arguably only) option for virtual conferences.

It is more complex and expensive than its competitors, but that's generally the rule for any top-of-the-range solution. Just make sure that you have plenty of time before you run your first commercial event to get some practice in and learn how it works. With the developers being locally based, getting your

questions answered should be a relatively smooth process.

beat OBS in colour correction, titles, input support, audio mixing, and more. Compatible with both Windows and Mac, it's effectively the prosumer option among live streaming software.

It's important to note that while Vimeo develops it, Studio 6 does work with other platforms. Of course, it undoubtedly works best on its native platform, and it doesn't play quite so nicely with its competitors, but it can be done. In addition, it's a lot more friendly with inputs, integrating with web browsers, Mevo, and mobile devices. Its user interface is one of the more straightforward and easier-to-master options, too.

Price wise, Studio 6 maintains the middle ground, costing US\$75 per month. However, the value for money is arguably worse than paying for vMix by the month as the number

of inputs you get for that price is limited to 25 - 975 fewer for US\$25 more.

On the other hand, vMix is a bit like using a sledgehammer to crack a peanut for smaller events and entry-level AV teams. Studio 6 is more user-friendly than vMix, cheaper than Wirecast, and significantly more stable and capable than OBS.

### My recommendation

No matter what you choose to use, please make sure you have an appropriately powerful computer. vMix has a minimum specification list, but it will be the same sort of setup regardless of what platform you use.

Recommended Minimum Desktop

Processor: 6 Core Intel i7 6th Generation Extreme Edition or better

**“When the thought of producing even a tiny event seems terrifying, committing to a date and venue with the constant uncertainty of it even being able to go live, going virtual is the only option remaining.”**

**“If you want an affordable, all-in-one video splicing processor to simplify working with high res LED systems, the NovaStar H9 series is your answer.”**



NovaStar H9

# NOVASTAR H9

by Dave Spark

**We have a range of NovaStar products like the MCTRL4K, 660s, VX6s and the N9 video processor, which is the earlier version of the H9 all-in-one solution. When we saw the online demos of the H Series we could see the potential for us as a business. No more mucking around with the challenges of interfacing equipment from different manufacturers. We had been looking at other manufacturers' solutions for a long while but the return on investment was just too hard to justify. This is an affordable solution that offers a huge amount of flexibility.**

We did our due diligence and made sure that the H9 would do what we needed it to. ULA Group worked closely with the NovaStar team to do some pre-testing and were happy to send us video clips demonstrating the H9 SDI deinterlacing, and answer questions about layer capacities and pre-set playbacks. All our boxes ticked, we took receipt of our H9 three

months ago.

We were excited by the layer capabilities. With other processors we have run out of layers. Not the case with the H9. With sixteen 2K layers per output card, we've the option for sixty-four layers with our current configuration. And they are fully mixable, no need to use fade outs. The layers can freely

cross different output loading areas while keeping layer size the same. Layers can be in any position, overlapped, or unlimited scaled.

We have been loving the ease with which we can now work with and above 4K resolutions. We've predominantly used it at corporate events such as TRENZ 2021, Local Government NZ Conference 2021 and NZ Merino Conference, amongst others. All required large backdrop screens around and over the 4K wide mark, lots of picture-in-picture, PowerPoint and IMAG, as well as Zoom presenters. We've been able to use the customised EDID settings in the H9 to be able to take inputs to higher than 4K wide with ease. We just push the actual LED screen size to the input connector and the computer can output at that specific resolution. It's great to be able to run at native pixel sizes all the way through.

We've also really appreciated the all-in-one factor. The H9 uses modular mainframe connectivity to integrate splice processing and display control. We've driven stage confidence monitors, Live Stream sends and even Stage Manager monitors with a stage feed, an image preview and a timer in the top corner. We are no longer having to configure multiple devices for all these ins and outs, we just bring it all through the H9. We have

a large quantity of hi-res LED screens and the 4K and above realm has always been a real challenge in terms of time spent testing that everything will run smoothly when we need to interface with another system. With connection options of HDMI 2.0, Displayport 1.2, and 12G SDI (depending on your choice of input cards) we now have confidence in dealing with most things that will show up. In addition, the H9's output capabilities are impressive. We've no concerns when sending content over multiple 4K cards. They are all synced, we can easily define a large wall as one output, and don't have to worry about screen tearing.

Other benefits are simple but significant. The H9 processor saves space with one customisable multiview monitor giving the operator a complete overview. It enables multiple users, with a second technician able to programme pre-sets for example with remote preview over IP, whilst you run the live show. It also has a very modular set up so you can just choose to get what input and output cards you need.

And it has been easy to 'plug and play'. I watched a couple of online demos and I was away. The user interface makes sense with the outputs and inputs laid out well. If you know your way around NovaStar products, you'll immediately be dragging layers around no problem. Where there have been the inevitable quirks that you get with a new product, NovaStar have fixed them in the next release.

Garth and the team at ULA have also been a real pleasure to work with, extremely responsive and offering a fast turnaround of pricing and information. They are always happy to field a call with a query or an 'I'm stuck' moment, and if they don't have an answer immediately at hand, they normally have one in the next couple of hours direct from the supplier. We've been really happy with the level of service we have received.

As for downsides? Minimal. Just the usual UI stuff you get with a new gadget which I am sure they'll fix once I get the time to send through the feedback! For some businesses who are looking for a console style control, it doesn't have the big desk interface that some users might prefer. But who knows what may be released down the track?

For some traditionalists not having a pre-set load and preview before hitting the take button may be an issue. Like me though, you may find you prefer this way of doing things.

To summarise, if you want an affordable, all-in-one video splicing processor to simplify working with high res LED systems, the NovaStar H series is your answer. And it is scalable with an H2, H5, H9 and H15 processors available in the range too.

**Product Info:** [www.novastar.tech](http://www.novastar.tech)

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

Dave Spark is the very hands-on co-owner and director of Pixel, a Christchurch-based video solutions and production design company. With a background in lighting, Dave transitioned to video, started messing around with graphics and content creation. Over the past twenty years he has worked for several companies and on high profile events around the country, before starting Pixel five years ago.

## NovaStar H9 – The Specs

Chassis: 9U

Max Loading Capacity (LED 4K Sending Card): 65 million pixels

Max Input Cards: 15

Max Output Cards: 5 / 10 (Enhanced model)

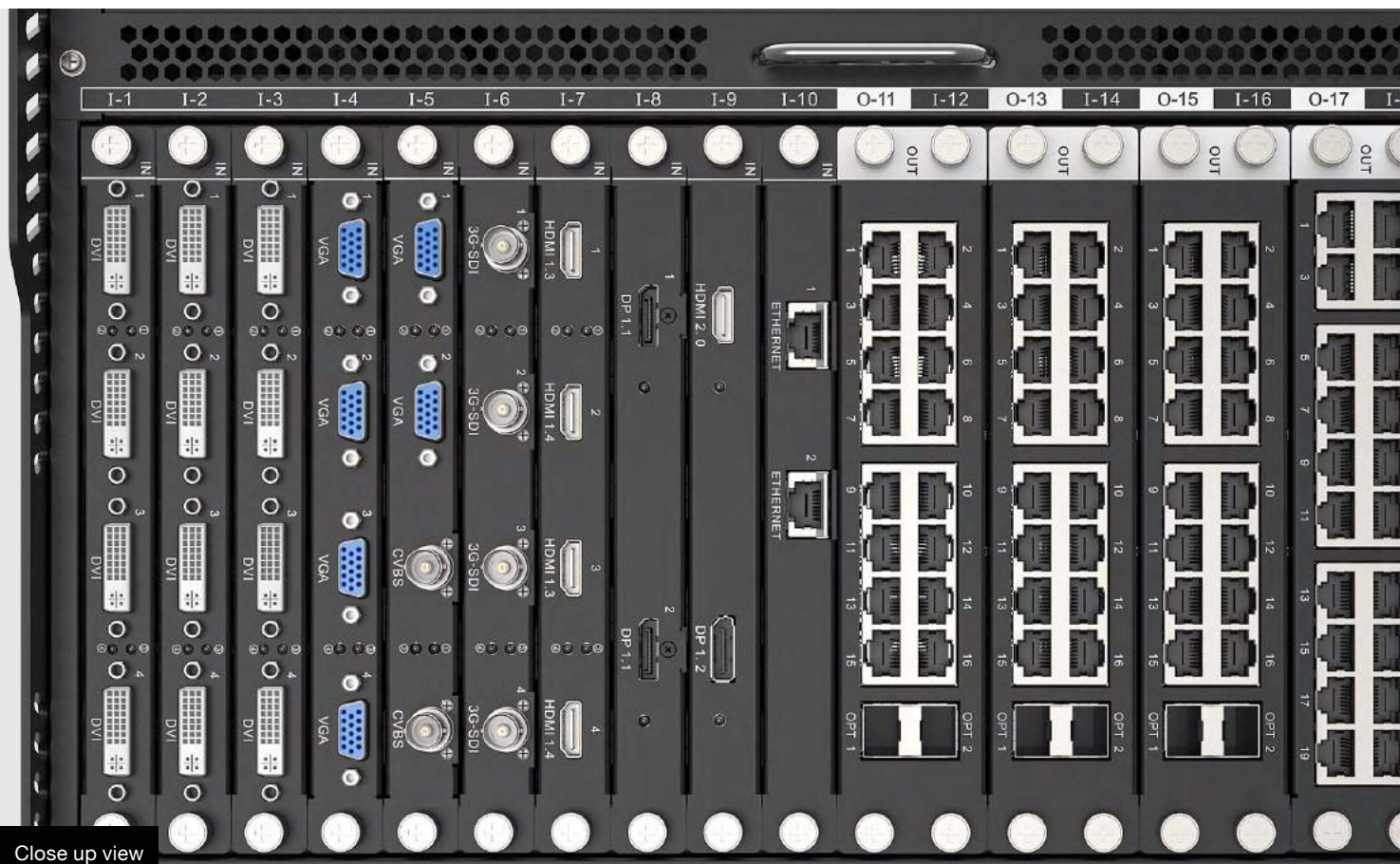
Supports irregular screen configuration

Max Layers: A single card supports 16 layers

Max Presets: 2000

10bit, HDR, 3D

Redundant Power Optional



Glenn Thompson is the director of Brisbane's XConnect Services. Starting his career at Creative Audio, the Sydney Olympics was his first project as an engineering graduate. Glenn later contributed to Creative Audio's Control Matrix product line before it was sold to Biamp and became Vocia. After stints of part-time work maintaining stadia audio systems, Glenn started XConnect, which provides engineering and integration services to venues including schools, churches, and stadia.

# JBL CBT 70J-1

by Glenn Thompson

CBT 70JE -1 with grill



CBT 70J-1 with grill

**The JBL CBT 70J-1 is a passive, column speaker line array. It's reasonably simple, with two physical controls to select between music or speech mode, and between broad and narrow dispersion. With 16 dome tweeters running straight down the middle of the column, the width of the HF coverage is impressively broad, at 150 degrees. This means that in small venues like school halls, you can mount a single JBL CBT 70J-1 above the middle of the stage and cover the entire space for speech. The narrowness of the vertical dispersion, at either 25 or 45 degrees, keeps sound from reflecting off the roof.**

The horizontal dispersion stated at 150 degrees is a real 150 degrees. When you look at some loudspeakers specs that quote 150 degrees at 1kHz, you look at their dispersion graphs and find they're dropping off dramatically at 4kHz at 90 degrees. I find you can stand well off to the side of a CBT 70J-1 and still have good, clean high frequencies.

### Application

A school installation we completed recently saw us having to project into a covered-in area at the end of their otherwise open

assembly area. The customer described it as their "acoustical nightmare." Before we installed the JBL CBT 70J-1s, they were running their assemblies by bringing out a pair of standard powered 12 and horn boxes, with a fairly common dispersion pattern of 90 by 60 degrees. The slapback from the covered-in area was shocking. The real source of the problem is that they were throwing sound into the roof. I explained that the CBT 70J-1s would solve that, and after we installed and tuned them, there was no slapback whatsoever, which was quite incredible. Their pattern control and horizontal dispersion

meant that we could cover the assembly area, at over 50 metres wide, with just two units.

We have installed CBT 70J-1s as a left-right into school halls designed for 500-600 people. The school with the covered-in area I mentioned can hold 1000, even though its usually used for 300. I find that the CBT 70J-1s provide exceptional coverage for speech. Now, you're not going to run a rock concert with them, but they certainly achieve what I like to think of as the 'golden target' of 95dB and great intelligibility, and most jobs we achieve that with just two columns. Sometimes the horizontal dispersion can play against you depending on the space, but the CBT 70J-1s are brilliant for wide halls.

### Brackets and Accessories

The 70J-1s are 8 ohm out of the box, but if you need to run 100V line, there's a transformer module option that bolts onto the back. There is a low frequency extension unit available called the 70JE-1. It contains four 125 mm drivers that pattern control the LF even further while increasing output. They're the same length as the main array which doubles the space you need, but if you're mounting them on the side of a proscenium or onto a pillar, that doesn't matter.

There are both flush mount and swivel-tilt installation brackets available. The brackets are easy to use and well thought out. The swivel-tilt bracket has angle guides on it for ease of installation, giving you five degree increments up to plus or minus 15 degrees to play with. There are ten M6 rigging points on the rear of the column if you want to fabricate your own brackets, which gives you a lot of flexibility.

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## ROAD TEST

With an aluminium grille and IP55 rating, you can happily install the 70J-1s outside and not worry about rust. To protect the cabling and terminals, they're compatible with JBL's MTC-PC2 and MTC-PC3 weather resistant panel covers. This is a major selling point for me, as while there are other speakers on the market that can do what the 70J-1s do inside, few can do it outside.

### Reliability

I'm often visiting CBT 70J-1 installations for service and scheduled maintenance and I've never had an issue, which is notable when you consider the treatment they can receive in schools. I've installed a pair into a school hall with subs, and when I tuned them, the school said "We'll never run them that loud." Well, every time I've been there during a concert they've been much, much louder than I tuned them, and they're still going strong.

### Conclusion

I find the CBT 70J-1s provide a high-quality sonic result for both music and speech. They're affordable considering what they're capable of, and quite loud!

**Product Info:** [jblpro.com](http://jblpro.com)

**Distributor Australia:** [madisonav.com.au](http://madisonav.com.au)

**Distributor New Zealand:** [www.jpro.co.nz](http://www.jpro.co.nz)

## JBL CBT 70J-1 – The Specs

**Components:** Four 130 mm LF drivers, sixteen 25 mm HF drivers

**Frequency Range (-10 dB):** 60 Hz – 20 kHz

**Coverage:** Vertical (selectable via switch).  
Narrow Mode: 25° (2 kHz - 16 kHz) ( $\pm 10^\circ$ ).  
Broad Mode: 45° (750 Hz - 16 kHz) ( $\pm 10^\circ$ ).  
Horizontal 150° (500 Hz – 8 kHz,  $\pm 20^\circ$ )

**Nominal Impedance:** 8 ohms

**Max SPL:** Narrow: (speech mode) 125 dB cont. av. (131 peak), (music mode) 120 dB cont. av. (126 peak), Broad: (speech mode) 123 dB cont. av. (129 peak), (music mode) 119 dB cont. av. (125 peak)

**Enclosure:** Fiberglass reinforced ABS cabinet, painted aluminum grille

**Colours:** Black or white

**Insert Points:** 10 M6 swivel (pan)/tilt (16 mm deep) insert points on back panel.

**Dimensions (H x W x D):** 694 x 170 x 237 mm

**Net Weight:** 9.5 kg

**Outdoor Capability:** IP-55 rated, per IEC529, when installed with optional MTC-PC2 panel cover. UV, moisture and 200-hr ASTM G85 acid-air/salt-spray resistant.

CBT 70JE-1 without grill



CBT 70J-1 without grill



Stacked with grill



Stacked without grill



Switch Panel



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# When government reports make the reading list

by John O'Brien

**One Tuesday in early August 2021, I received several messages about the release of the following Victorian report: "Inquiry into the impact of the COVID 19 pandemic on the tourism and events sectors." I've just finished trawling through 300+ pages and it makes for very grim reading ... on oh so many fronts.**

Government reports are rarely lightweight (unless purposely so for political expedience) and even more rarely on my must-read list. But this one was different. Having made a submission myself, I was keen to see what the polities / bureaucrats had cooked up.

The overarching narrative was that government and public service previously had very little understanding of the events industry. Their grasp still seems slim but at least they now know that we exist.

**Findings & musings**

There was much to wade through and even more to consider. After glossing over the tourism related content, several event related items stood out to me. I've condensed the most prescient bits of bureaucratic word salad that are relevant to my understanding of the event industry. Here are the key ones.

**"FINDING 11: Events provide economic, social and cultural value to Victoria."**

Well, no shit Sherlock. Who woulda thunk? Why has it taken a parliamentary enquiry to work out this nugget? This correlates with FINDINGS 21 & 22, which I'll paraphrase as "government didn't understand the event industry and didn't consult well developing the Public Events Framework".

**"FINDING 15: The inability to insure against COVID 19 is a large barrier to the recovery of the events sector in Victoria."**

This I see as one of the greatest impediments to resumption of successful events. Gigs always have an element of risk; we've long known that. When that risk outweighs any potential returns, promoters won't commit.

**"FINDING 16: The loss of skilled workers is another threat to the recovery of the events sector in Victoria."**

And this one is my greatest fear. I know so many talented individuals with incredible world's best technical and stagecraft

knowledge that have already walked away from the industry or are seriously considering it. And that's just my small sample set. I'm not sure how best to retain or pass that knowledge on.

**"FINDING 26: A single peak industry body for Victoria's whole events sector would simplify consultation with the Victorian Government."**

Now to my greatest hope - that we can find some common ground and organise for our own good. I know efforts have been made in the past but what better time to try than now?

The above are what clear headed factual analysis gleaned. The next finding just plain annoyed me. Like many, I unwind watching elite athletes strut their stuff, but I bemoan the double standards that allow sporting events to continue while all other events are knobbed.

**"FINDING 20: Some event organisers feel that major events, particularly professional sport, are treated more favourably regarding restrictions and density limits."**

Oh, if only theatre, concerts, conferences, trade shows, circuses and the like were held in such esteem in the notional national psyche as the chasers of a ball.

**Further impressions**

Aside from the tedious polly waffle, this report highlights three critical issues:

1. Insurance underwriting is required at a government level to ensure some degree of certainty for event organisers, workers and

attendees. This can be state, federal or both.

2. We, the events industry, need to group together to provide a focal point for government interaction and advocacy.

3. Regrowing the industry will take time. Retaining skills during this period will be difficult.

Let's break them down further...

**Insurance backing**

To give any degree of certainty to those planning events, it is clear that insurance underwriting for Covid cancellation is essential. This has at least been recognised at a Victorian level and some tentative steps are being taken. But it really needs a national approach. Unfortunately, the federal minister for (ignoring) the arts has washed his hands of this and us again, deferring any responsibility back to the states. Now, there's leadership! How good is that?

Instead, let's look to the example of the UK, Germany, Austria, Netherlands, Belgium, Norway, Denmark, and Estonia who have just brokered a deal with Lloyds to underwrite lockdown cancellation insurance for the live music and entertainment sectors in their regions. Obviously, these domains have better regard for, and understanding of, their creative industries than ours seems to.

**Getting the industry together - the events advocate**

Here's the next tough bit - what exactly does define the 'events industry' and how do we lobby together?

While digesting this report, I've talked to many event veterans, each with decades of experience. Several have only ever done music concerts, some only business conferences, another only regional ag shows. They are all high-level professionals but have never crossed paths. Above all, each is very skilled at 'putting on events'.

There is another elephant in the room - a common theme of proud individualism across many of these sectors. In part, it's a good reason why I have been drawn to them. In good times, this has been an asset. In darker moments like now, it works against us.

So, collective action? First, define the groups affected: conference, trade show, concert, theatre, musical, circus, ag show, art show, festival, comedy, outdoor adventure, sport and any other grouping that assembles people for profit. Next, identify and corral the individual associations of each sub-sector to form an uber-body.

Workers - join the MEAA. Companies - lobby your niche association to join a broader collective and form a peak body. I don't know enough about the machinations of existing organisations but can see benefits in allying the following:

Live Performance Australia, Live Entertainment Industry Forum, ARIA, ALIA, Australian Festivals Association, Outdoor Council of Australia, Agricultural Shows of Australia, Theatre Network Australia, and more that I may have missed. The big one to bring on board would be the Business Events Council of Australia, representing a large fiscal chunk of event work.

All these sectors employ audio, lighting, video and staging techs. All use production managers, runners, safety and site crew. All engage labour hire, production or supply companies. All with confusing ASIC numbers that don't relate to their actual job functions.

Finally, a national approach is required. The Save Victorian Events team have done an outstanding job in getting the matter both tabled and investigated. This report was Victorian based, but the problems and lessons are country wide. Many shows tour across state borders. Current inconsistencies between the colonies and sudden gate-locking have only made the task harder.

I'd love to see a national events body that can lobby more coherently and consistently for a sector that provides innumerable financial and cultural benefits to our greater society and economy.

**Skills retention**

Many have left, and many for good, so how do we keep those that are left? One good friend is watching 30 years of their business go down the toilet with their life savings. I know of several production companies that sold their entire inventory at a loss and walked away. Another old friend is hanging up the shingle after 35 years and has no idea what is next. Many of you will know more horror stories than that. Many will be the subject matter of them.

The talent drain over the last 18 months is immeasurable. Natural attrition over time is normal but this trend has gravely accelerated in recent months. How do we keep the skills alive and passed on to the next generation?

I know of those who have found related gigs in film and TV. Maybe they'll come back in time. This report suggests some TAFE courses and apprenticeships. These might help over a longer period, but I fail to see who will be teaching them, beyond the generation that just had their careers wiped. Perhaps instruction might be a career path for those in this boat.

Some government initiatives have commenced. As I write, Support Act has received \$20m in funding. While this is awesome, it is but a very small Band-Aid over a gaping, bleeding wound. If you haven't received any prior C-19 assistance, you could be eligible for a whopping \$2k. Let's see how long that lasts someone who has effectively been out of work for a year and a half.

**Where to next?**

This predicament is a first for our industry. Traditionally, we just got on with shows and ignored the government; we never collectivised because we never needed to; and we've been so bloody busy entertaining and keeping everyone else happy, that we've never allocated the time to organising ourselves.

With no shows to stage, time is currently plentiful. Now that we are facing an existential dilemma, we have little choice but to band together ... or disappear.

How the currently disparate groups might find a common ground, I'm not sure, but now is a ripe time for a national Events advocacy body.

Take some of the anger and disappointment and get up your local MPs. As many as possible. Hit them with a weight of numbers. Whatever their political flavour, they all respond to anything that might bring or cost them votes. I've had surprisingly good reactions from my reps and I'm a hardened cynic.

We, as individuals, companies and associations need to continue to lobby hard for state and federal governments to underwrite cancellation insurance. Only then does the risk of committing to putting on an event become worthwhile. This is crucial.

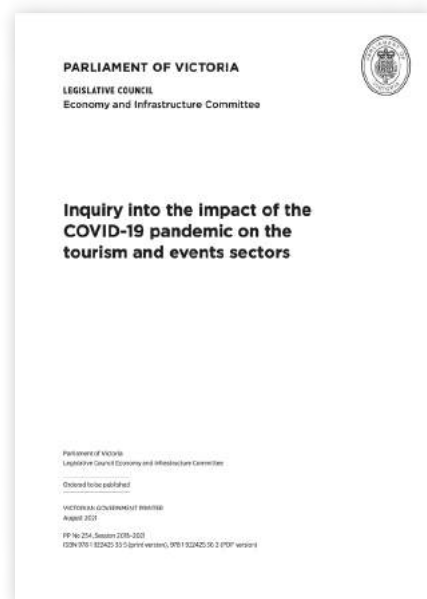
Frustrating though it can be, apply for whatever handouts are available. If these are not available or enough, then do what ya gotta do to fill the fridge. It might be that you take a temporary transition into something else before the show doors open again. Maybe you move on for good. C'est la vie.

I certainly don't have answers to all the questions posed above but I'm willing to put my hand up for whatever I can do to help.

**PP No 254, Session 2018-2021**

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**Find the report here: <https://parliament.vic.gov.au/eic-lc/inquiries/article/4637>**



# A DAG ON THE GREEN

Snippets from the archives of a bygone era

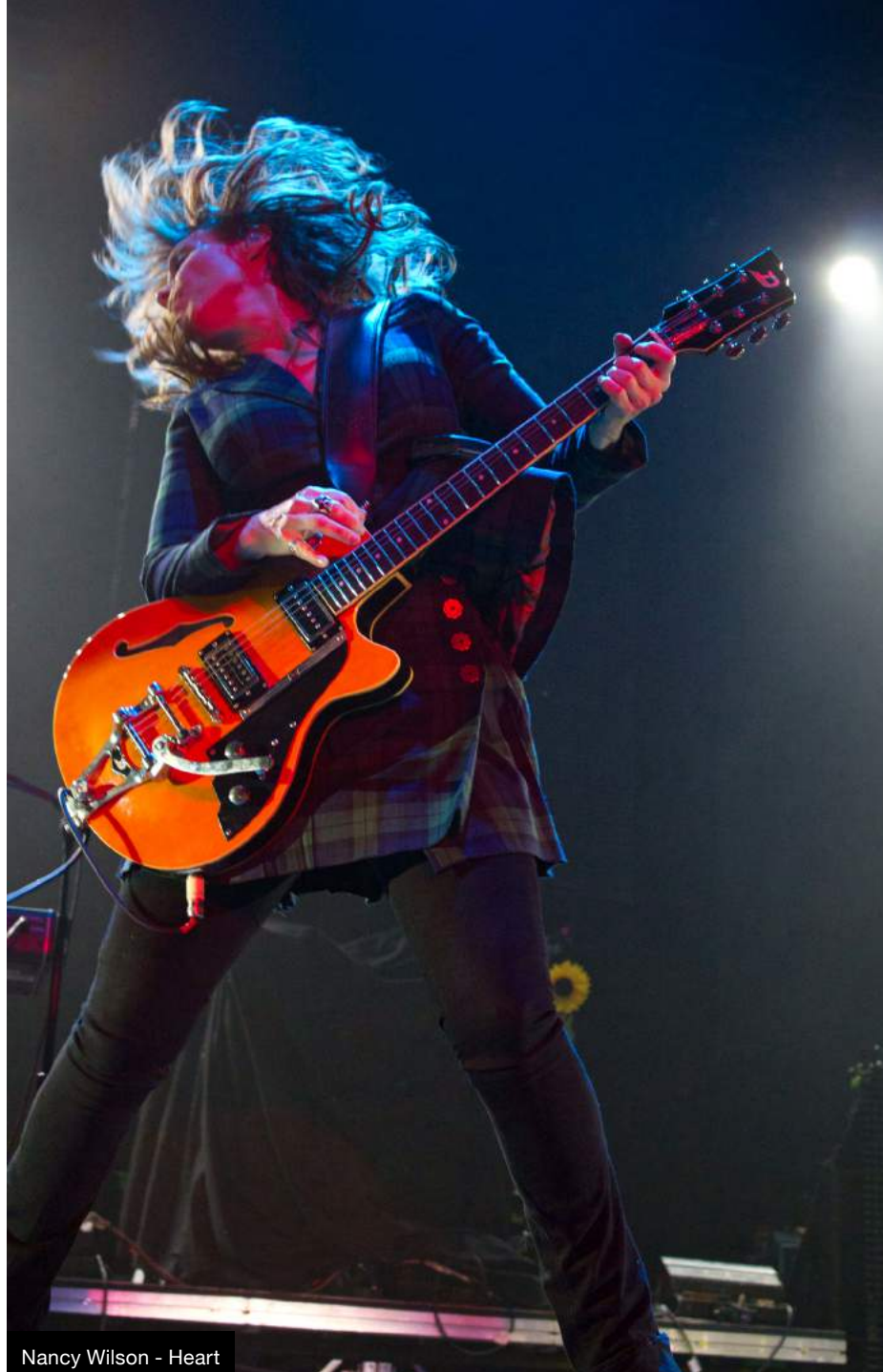
by Brian Coleman

**Call me a late bloomer, but I was still winding film onto camera sprockets in the early 2000s, and I didn't shoot my first digital concert for CX until 2011—one year before Kodak filed for bankruptcy in 2012.**

In preparation for reporting on Joe Cocker's 2011 concert in the Hunter, I phoned A Day on the Green's promoters and said, "Hi, it's just a courtesy call to say I'll be wandering around taking pictures for CX Magazine at the Joe Cocker concert on Saturday." A very polite lady replied, "You're new at this, aren't you?" Notwithstanding, I was issued with free entry and my first photo pass to shoot from the pit. Thus began my obsession to get photo passes from promoters for every concert I reported on.

## The Three Song Rule

Concert photographers are only allowed to shoot big event concerts in the pit for the first three songs. The reasons for this go back to the 80s and there are varying opinions. Some say that flash photography ruined performances and annoyed artists, but flash hasn't been allowed for eons. Some say the photographers get in the eyeline of artists and the audience; and some say that artists don't



Nancy Wilson - Heart

want to be photographed looking like Keith Richards late in the performance. The latter point is enforced by the restriction of some performers not allowing any photography from the pit at all. This was the case with Dolly Parton, Rod Stewart and others who only allowed photography from the soundboard.

Being a digital photography rank amateur, I tried to shoot the Cocker concert on semi-automatic, which kept the flash off, but the stage lighting threw my Canon EOS 550D's sensor into overload. And, after fiddling with the settings I accidentally triggered the flash and was immediately warned by security that I was on the verge of being turfed out of the pit.

Shooting music concerts on automatic is a disaster. My shots on that occasion were ordinary, but what an incredible high it was photographing Joe Cocker from the pit only three years before we lost the great singer and Woodstock legend. That high will always remain my solid excuse for driving out of

Bimbadgen winery stone cold sober on the wrong side of the road.

So you learn manual settings. To get the light you shoot 'wide open' with the aperture at its lowest f-stop that your lens will allow. You wind the ISO up to at least 1600 and set the shutter speed above 200fps so you don't blur the shot. And check out back button focus if you want to shoot like a pro. I don't shoot on continuous, but that's just a personal choice. I wait for a shot that might magically fulfil my preconceived image of the artist.

Armed with those settings, and with the right lenses, you now tell yourself you are as good as the seasoned pros, since none of them can change the lighting, the set, or the subject matter. Now it's all point-and-shoot.

Regardless of having photo pass status you still have to manoeuvre through strict security, some of whom didn't get the memo. For example, after producing my photo

**“Sometimes a single picture can be the embodiment of an entire article.”**

pass at the 2011 Elton John concert I was initially refused entry because they didn't like my camera and lenses. "Yes, I know you have a photo pass, and you're one of the photographers, but you're not allowed in with that camera," insisted the security guy. Eventually the promoter came to the gate and sorted it out.

At the Newcastle Entertainment Centre I had photo passes to shoot both Def Leppard and Heart. "You can't enter the pit with both those stickers on your jacket," said the pit security guy. So, for the Def Leppard shoot I had to peel off the Heart sticker, then replace it for the Heart performance and peel off the Def Leppard sticker. And I'm still trying to make sense of that a decade later.

I did behave myself in the pit for the Def Leppard shoot. But on re-entry with my Heart sticker re-attached I began to shoot the only remaining members from the original band, Ann and Nancy Wilson. I had bought the band's debut studio album Dreamboat Annie

in 1975, and I was a massive fan. Although Ann Wilson is the lead vocalist, it was difficult to train the lens away from her younger sister Nancy, whipping her hair about and still executing her trademark leg kicks at 57 years old. Ok, so I lost count after three songs and got turfed out of the pit!

At the Rod Stewart concert, Hope Estate, Hunter Valley, they posted a security guard with me for the entire concert. This was a shoot from the Bio Box, as mentioned, Stewart doesn't allow photography from the pit. Even then, Stewart's sound engineer Lars Brogaard wouldn't let me photograph him. After taking some shots of Stewart from some 40 metres away I thanked the security guard, telling him I was off home. After a fake in-and-out toilet stop at a row of porta-loos I snuck back through the dancing, wine-spilling fans, snaking as close to the stage as I could for the shots I needed.

Strangely enough the highlight of Rod Stewart's show happened for me prior to the main performance. In an attempt to get an interview from one of his technicians I pounced on a guy with a backstage pass leaving the Bio Box. "Excuse me, are you with the crew?" I asked. "Yes." "What do you do, Mate?" "I'm Rod Stewart's bass player," said Conrad Korsch. Not only did he console me after my profuse apology, but he even posed for photographs for me. Korsch is a legend in his own right, a recording artist who has his own albums, and who has been the bassist, not only for Rod Stewart, but for Carly Simon, Andrea Bocelli, Bette Midler, and several others.

Sometimes a single picture can be the embodiment of an entire article. At the Elton John concert at Hope Estate 2011 they only allowed photographers in the pit for two songs. The first was I'm Still Standing. The



Conrad Korsch - Rod Stewart's bass player



Elton John - Still Standing



Meat Loaf



Rod Stewart

other photographers positioned themselves for the front-on shots whilst I chose the keyboard side of the piano. At song's end Elton rose to his feet and stood right in front of me. Zap! I had the shot and the headline, *Still Standing*.

After the Elton John two song shoot all the photographers were escorted to the backstage area. "Man, this is going to be great, drinks, backstage party," I thought. No, it turned out to be an exit to the carpark. Here, we were unceremoniously stripped of our ID stickers in a formality akin to a defrocking ceremony, with access denied to re-enter and watch the rest of the show.

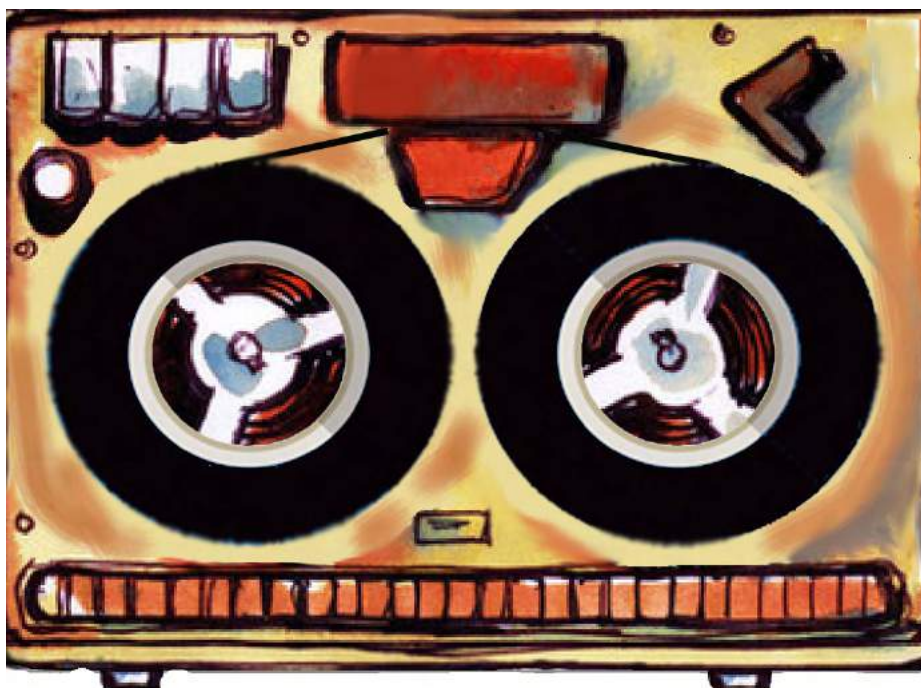
"Everyone calls him Meat," Meat Loaf's

nice-guy sound engineer George Wehrlin told me during an extensive interview following another Bimbadgen winery concert. And, at the Meat Loaf concert I followed Meat's every

move on stage, looking for the right shot. Mid-song he turned his back to talk to a musician, then he suddenly turned in theatrical rage. Zap! I had the CX cover shot for the November

2011 edition, along with a friendly "you bastard" look from one of the photographers who had missed the shot.

I have never longed for a return to a world of cassette tapes, vinyl records nor film cameras. And although my heart goes out to great inventions like the paper clip of 1867, the digital camera, with its magical little SD card that can store thousands of instant pictures, just tips the scales for me.



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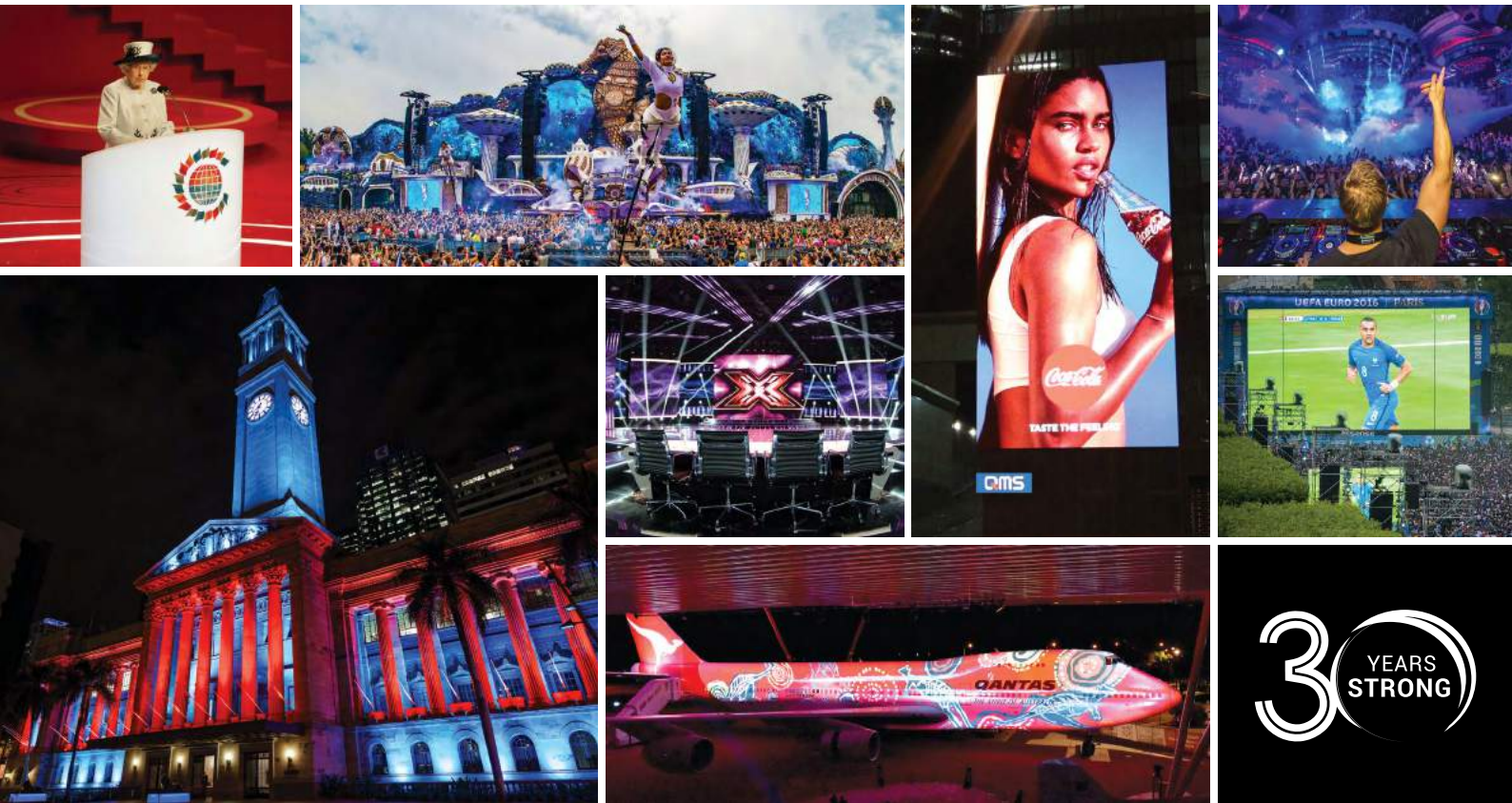


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