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NEWS

LPA Lobbies for Stimulus
 Lighting The Sky for Heroes
 Group Technologies' GTX

REGULARS

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CX NETWORK

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Death knell for Live Performance Industry without targeted industry package

The economic stimulus package announced on 22 March was welcome and critically important for the Australian economy by providing support for workers and businesses impacted by the coronavirus outbreak.

“The shutdown of events and venues in response to coronavirus has already cost our industry thousands of jobs and hundreds of millions of dollars in lost income,” said LPA Chief Executive Evelyn Richardson.

“Australians who work in live performance or who rely on the industry for their livelihood have been the first to be hit by the coronavirus economic tidal wave and they will be the last to recover. We expect that people and businesses who operate in our industry, including our large casual workforce and sole traders, will be able to access some of the help that has been announced today, including faster access to income support payments.”

“However, many of our performing arts companies and businesses have seen their entire revenue evaporate overnight. The small business package measures announced today, while welcome, will not make a material difference to 80 percent of our companies.”

“These are businesses whose entire revenue has fallen off a cliff. Without immediate support, they won’t survive. They also have no certainty about when or if they will be able to resume operations in the future.”

“As the Prime Minister warned on March 22, this is not a two or four-week situation. We are in this for six months or more. Without a targeted, immediate and substantial support package, there will be no bridge to recovery for these companies and they will die. We are on the front and back ends of this crisis, and without immediate and substantial support for under-capitalised commercial and Not-For-Profit companies, we won’t have an industry in the next few months.”

“Following the second stimulus package announced today, our industry needs an additional \$650 million in targeted support measures to be announced in the next few days. On March 22, Australia’s live performance peak body and the Media Entertainment and Arts Alliance (MEAA) stood united in calling for a clear commitment from government that it will provide an emergency



Live Performance Australia (LPA) is the peak body for Australia’s live performance industry. Established over 100 years ago in 1917 and registered as an employers’ organisation under the Fair Work (Registered Organisations) Act 2009, LPA has over 400 Members nationally. We represent commercial producers, music promoters, major performing arts companies, small to medium companies, independent producers, major performing arts centres, metropolitan and regional venues, commercial theatres, stadiums and arenas, arts festivals, music festivals, and service providers such as ticketing companies and technical suppliers. Our membership spans from small-medium and not-for-profit organisations to large commercial entities.

LPA has a clear mandate to advocate for and support policy decisions that benefit the sustainability and growth of the live performance industry in Australia.

industry package. Otherwise, this will be the death knell for Australia’s world class live performance industry,” Ms Richardson said.

An overview of LPA’s revised emergency industry package can be found at:

<https://liveperformance.com.au/wp-content/uploads/2020/03/Live-Performance-Industry-Package-FINAL-v2.pdf>

The Music Box Chooses Powersoft T Series

Turnkey Australian event specialist, The Music Box, has purchased six of Powersoft’s T604 amplifier platforms; the latest addition to its road-tested line of touring products.

All models in the company’s T Series are flexible, cost-effective, and can deliver the same high peak voltage, allowing high SPL even with single 8/16 ohm cabinets. This high voltage is also good for sharing power between the channels for applications such as bi-amped loudspeakers or subwoofers with passive tops.

Patrick Withers, national account and operations manager / production manager for The Music Box, said: “These are the first Powersoft products we have actually purchased, although we have worked on events where they had been provided by other suppliers and event partners. We have always had a good idea of their product lines, all of which came with great reviews from our industry friends.”

The original recommendation came from Jimmy Den Ouden, who works with The Music Box on events as an audio engineer. According to Withers: “Basically he was sick

of pushing our extremely heavy amp racks around! We’re constantly talking about good replacements for the old amp stock and he highly recommend the T604 amps. Trusting his expertise, we gave them a crack and as soon as we fired up the PA we were sold. It really was night and day with the old gear.”

As well as boasting exceptional audio quality and extremely light weight, the T604 features input via Dante, AES3 and analogue, making them incredibly versatile. The Dante and AES3 solutions are optimised for daisy-chained distribution of 2-channel audio for distribution to many amplifiers without the need for external switches, repeaters or splitters.

“We now have standard amp racks and single amp sleeves with custom patch panels that allow us to use the one amplifier model for our entire PA inventory,” said Withers. “They have been flying out of the door since we bought them.”

The Music Box recently deployed all six amps on a 1,000 pax charity event, which featured three stages along a 300m wharf and 15 stacks of distributed PA.



Withers said of the event: “It was for one of our major clients, and because they happen to be a record company they have very high expectations for audio quality and coverage. The T604’s gave us the ability to control and monitor the entire system from one laptop at FOH. We also ran AES to all amps with analog back up in place, though all of the amps performed perfectly.”

He added: “As a matter of fact we haven’t needed to reach out to Powersoft at all since we made the purchase. We’re extremely happy with the product and will be looking to purchase more in the near future. Thanks Powersoft for making a fantastic product!”



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GTX – GROUP TECHNOLOGIES BRINGS THE WORLD TO MELBOURNE

by Jason Allen

Wednesday 26 February saw Group Technologies takeover Brunswick's capacious Wick Studios, turning it into the world-class GTX mini-expo dedicated to their brands. Highlights included the Australian debut of DiGiCo's Quantum 338, a demo of Nexo's new workhorse P+ range, Austrian Audio's innovative OC818 microphone, and RCF's formidable range of powered loudspeakers.

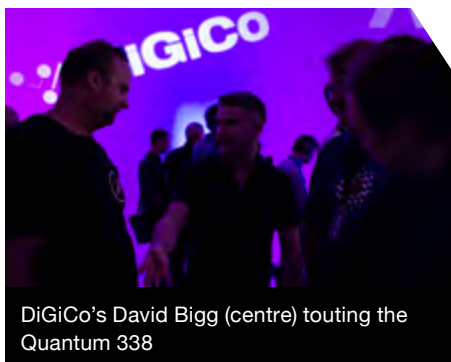
Being the excellent hosts they're renowned to be, Group Technologies ensured the drinks were flowing, the food trucks were sizzling, and the assembled professionals from around Australia and NZ were treated to entertainment into the night. It was a lesson in how to run a trade event and inspire your guests in an industry that fails to be engaging surprisingly often for one full of event professionals.



RCF's Emanuele Morlini and a tiny fraction of the RCF range

Amongst a huge display of loudspeakers at pretty much every market-point, RCF's Emanuele Morlini was singing the praises of their ART 745 and HD-35A powered two-ways. Both run 1400W peak, and produce 133 and 132dB max SPL respectively, but the main talking point is their low crossover point of 800Hz. This is a phenomenon we've seen from major manufacturers of both line arrays and studio monitors in the last year

or so, and it leads to better vocal clarity and midrange performance. We've tried to get the secret to the new trend, but no-one would talk until Emanuele – it's all about new, bigger compression drivers. The ART 745 is rocking a 4" and the HD-35A a 3".



DiGiCo's David Bigg (centre) touting the Quantum 338

David Bigg, Product Specialist at DiGiCo, was surrounded by eager punters at the new Quantum 338. It started shipping two weeks ago, with the unit at The Wick already sold and two more on the way into the country. There's brighter, bigger, capacitive touch screens, HD scribble scrip screens, the Quantum engine originally from the SD7 Quantum, and a new control computer. Klang immersive mixing, which became part of the DiGiCo family last year, is integrated into the console, so engineers don't have to leave their mixing environment and go to a separate computer. The new Klang DMI card, also on show, has increased the available channel and output count while reducing latency down from 2.68 milliseconds to 250 microseconds.

Nexo's Joe White hosted a comprehensive listening session on the P+Series, running us through the coaxial P8, P10 and P12 models, with and without subs. An update to the classic PS Series, which were based on



Nexo's Joe White

technology now 30 years old, the P+ are a convincing successor, with Swiss-Army-Knife features including adjustable dispersion and multiple mounting options that make them a flexible investment for production.

Austrian Audio's extremely entertaining CEO Martin Seidl was beaming with pride as he demonstrated the remarkable OC818 large diaphragm condenser microphone. Made with a ceramic capsule that is so consistent it can be stereo-pair matched with any other



Austrian Audio's Martin Seidl with the OC818 and its control app

OC818 or its less featured sibling the OC18, it can also be remotely controlled via Bluetooth, meaning you can change polar patterns settings without bothering the artists as you experiment during the recording process.



World-class Digital Experience for Fitness Fans at Les Mills

Les Mills Auckland City - a mecca for fitness devotees from all around the globe - goes digital!

A large format VuePix Infiled screen has been installed in one of Les Mills key Group Fitness studios. The new screen provides a unique experience for all their members, adding to the excitement of their renowned Virtual Classes, which are being recorded here and utilised by gym enthusiasts all around the globe.

Australasian Audio Engineering (AAE) is an independent Audio-Visual solution provider for Les Mills and has worked in close conjunction with the team from Les Mills and ULA Group to ensure that the solution meets Les Mills' exacting performance standards and delivers an outstanding experience to their members.

"At AAE customer satisfaction is paramount. We pride ourselves on our attention to detail, by utilising best of breed products which are supported by experienced trusted partners, we are guaranteed to deliver on our promises every time. The VuePix QE3 screen is the

perfect fit for Les Mills," says Steve Smith, Sales Manager at AAE.

Les Mills built their unique position in the market by producing dynamic Virtual and On Demand content for fitness centres around the world and for those who want to exercise at home. With an extensive library of 800+ Les Mills on Demand fitness videos available online and six million people working out with Les Mills programmes at home and in a gym each week, they understand that keeping up with the latest technology and providing their audience with an immersive experience is what keeps them ahead of the game.

The VuePix QE3 screen – 5.5m wide and 3m tall - has been installed behind the instructor stage, providing a perfect digital platform to play the videos for Les Mills Virtual classes. The team at AAE worked closely with the in-house team at Les Mills to build a support structure from which to hang the screen.

With a 3.9mm pixel pitch and a native resolution of 1,408 x 768 pixels, the LED screen delivers superb visual performance and the perfect balance of contrast and brightness in an environment where there is a lot of natural light coming through the windows all around the studio. The system is also equipped with an ambient brightness / light sensor, which adjusts the brightness of the screen throughout the day as required. When not being used, the screen automatically switches to black and fades into the background.

All content is driven off an iPad with Les Mills custom video playback software. A NovaStar MCTRL 600 Controller and RGBlink X1 Scaler provide a perfect control solution for the digital platform.

"It was a pleasure as always working with the team at AAE, who always strive to produce an outstanding result for their customers," comments Garth Reynolds, Branch Manager of ULA Group NZ. "This project was a great example of their attention to detail and commitment to their customers. We are very proud to see yet another VuePix Infiled LED screen installed in New Zealand."

Barco ClickShare Conference takes centre stage at ANZ Roadshow



ClickShare Conference took centre stage at the Barco Roadshow ANZ, which kicked off in Brisbane in the first week of March before heading on tour to Sydney, Melbourne, and Auckland.

The Roadshow events offered an opportunity for Barco AV and IT partners, consultants, resellers and customers throughout the region to get hands-on experience with the latest ClickShare product. Announced in January 2020, ClickShare Conference offers wireless conferencing to take away the friction points that many people experience while hosting video meetings and web conferences.

The workplace in ANZ has changed significantly over the last decade, and recent events like the bushfires in Australia and the impact of COVID-19 globally have changed the way people work. With a focus on flexible working, expectations of seamless business technology that enables communication and collaboration are higher.

Connecting with any conferencing software,

camera brand and laptop, ClickShare Conference's agnostic and flexible offering is revolutionising the workplace experience. It connects wirelessly to AV meeting room equipment, allowing customers to start a remote meeting faster from their own device and own tools.

"The unanticipated events over the past few months have been a catalyst for workplace transformation. For businesses to continue operating at their peak, they need to be flexible and enable collaboration and communication with partners, suppliers and customers wherever they are working from. With ClickShare Conference, we're enabling seamless communication so that people can quickly and easily connect with meeting room technology, using any platform and device of their choice," commented Claudio Cardile, Barco Managing Director Australia and New Zealand.

"It combines powerful remote communication with easy-to-use wireless collaboration, in any

meeting space. You can start a meeting from your device, use your preferred conference tool and automatically connect wirelessly to room cameras, microphones and soundbars for a more immersive meeting. In less than seven seconds you can conference, collaborate and click with our secure, connected and cloud-managed solution. The response from partners and customers to the product has been overwhelming, and we look forward to seeing the product transform the workplace."

At the Roadshow, Barco product experts hosted product demos, showcasing unique applications and enhanced functionality for specific use cases. Attendees at Barco's Roadshow experienced ClickShare Conference CX-50 and CX-20, which brings premium wireless conferencing and remote collaboration to huddle spaces, meeting rooms, and boardrooms. Also on show was the XMS cloud management platform, which enables cloud monitoring, management and analytics for workplaces.



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Clair Brothers kiTCurve Loudspeakers In J Noosa Community Theatre

The J Noosa opened its doors on October 27, 2006 and quickly became a functionally and versatile youth and commercial event space for the Noosa Community and the Sunshine Coast. Positioned perfectly in the heart of Noosa, The J offers flexible meeting spaces, conference rooms and facilities for hire, complimented by covered outdoor decks and stylish open foyers. But the true soul of this place lies in The J Theatre, a multi-use auditorium and theatre space that highlights everything, like music and comedy festivals, full theatre productions, kids shows, musicals and concerts, dance and ballet performances, film, religious celebrations, business conventions, dinners and award ceremonies. This is where the newly installed Clair Brothers kiTCurve12 system is outperforming expectations and giving The J a noteworthy boost to all of its live productions.

The project was commissioned and designed by Wayne Grosser, Clair Brothers' expert audio consultant in Australia, who worked directly with preferred integrator Jason Howley from Distinct Audio & Production for the install. The complete upgraded system in the theatre's 338-seat main floor and its 64-seat mezzanine section consists of four kiTCurve12s on the left and four on the right as mains, two CS218 floor subs, four 5CX front-fills and two FF2-HX as delays for the mezzanine. The recent addition of another mezzanine seating area made the upgrade

to that section readily apparent, because while the sound from the old P.A. was able to reach the mezzanine, coverage was poor, so reinforcement was required.

According to Guy Harrison, technical manager for The J, the new gear has definitely helped in a big way. "There had never been adequate audio coverage for the front rows," says Harrison, "so installing the four 5CX's as front fills massively improved this area. The mezzanine also was poorly covered and the two FF2-HX as delays have also sorted that problem out quite well." Room aesthetics were a large part of the overall equation in the theatre, which meant that achieving optimal room coverage using the four kiTCurve12 boxes per side was the goal. Continues Harrison, "Being that the venue is a theatre, massive hangs seem out of place in my opinion. When we have a musical or stage play, the idea is that the PA should disappear – a hard sell when you've got six or eight boxes hanging on each side. On the flip side of that, however, when we have a rock show, I get our lighting guy to light the P.A. so it has a slightly ominous look. It's very Spinal Tap! I'm joking but you get my point!"

When Ottavio Iacobucci, who runs audio for the Hillsong Noosa local church service on Sundays at The J, was asked in what ways the new gear improved sound in the room he didn't hesitate: "Every way!" He says.

"Now we have even consistency throughout. Compared to the previous PA, which was like driving a vehicle where the performance is compromised because it was built without considering every detail. There were holes in our previous audio system. With these kiTCurve12s, every detail has been carefully considered with the outcome being a full sounding performance – with no holes."

Adds Cameron Elias, local FOH/System engineer who mixes regularly at The J and the person responsible for recommending Clair Brothers, "For anyone who's attended shows before the kiTCurves were installed, the scale of improvement is unmistakable." According to those who live in the area, it's been well known that Noosa is in need of a good entertainment venue. "The audio upgrade at The J is a purposeful effort to meet that demand," points out Elias. "Noosa has long been a food and shopping destination, but with all the venue upgrades at The J it may well offer a level of theatre production that will bring a new style of tourist, while also satisfying local thespians and lovers of music and dance." So far so good. The Clair Brothers system is already wowing those who visit The J and shows no sign of letting up. "Honestly, I'm so glad it's here. The whole system performs effortlessly, and the more I use it the more I realize how natural it sounds. Amazing!"

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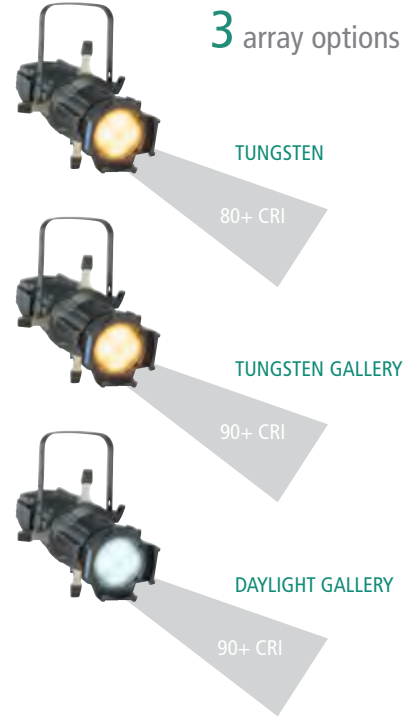
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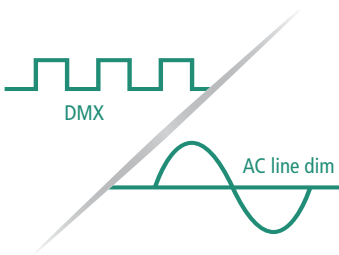
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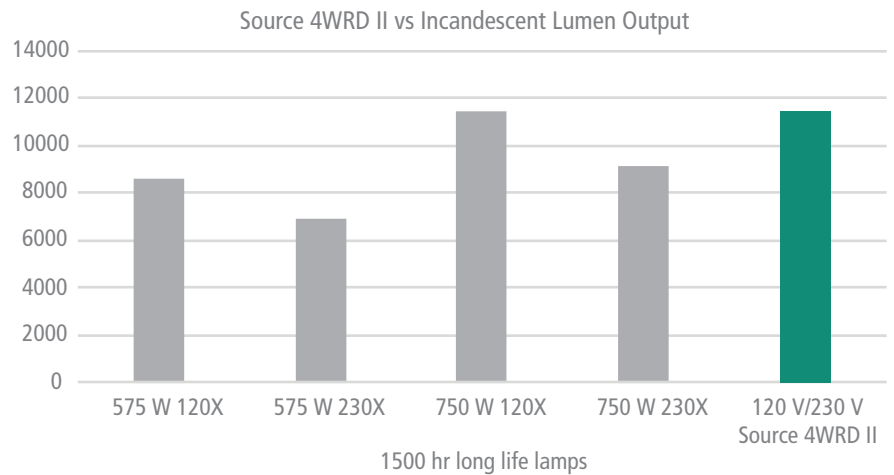
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NEW GEAR



Australian Monitor PICOBLU

Australian Monitor PICOBLU is a compact 30-watt mixer amplifier designed for small space applications such as cafes, restaurants, small retail environments and classrooms. This half rack mixer amp has either 100 volt or 4-ohm output, and the three channel mixer uses Input 1 - MIC/Line, Input 2 - 3.5mm/Line and Input 3 - Bluetooth/Line. External mute contact closure included and optional rack or desk mounting kits available.



Australian Monitor ISP Amplifiers

Australian Monitor's network controllable ISP series of multi-channel power amplifiers feature both high and low impedance outputs on each channel. They all have Ethernet control, full DSP and Dante (via an expansion module). The embedded ALMA Control Software is accessible using any HTML5 web browser. The range includes: IS2120P: 2 x 120 watts, IS2250P: 2 x 250 watts, IS4120P: 4 x 120 watts, and IS4250P: 4 x 250 watts. Software controllable IOs (x4), dedicated external standby contact closure, open control interface for third-party integration and expansion card options round out these units.

Australia and New Zealand: Amber Technology
www.ambertech.com.au or 1800 251 367



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NEW GEAR



Chauvet DJ Festoon 2 RGB

Festoon 2 RGB is a décor string lighting system for that vintage event look. Each 15m string comes with 20 RGB LED Bulbs. Both the string and individual bulbs are IP54 rated for temporary outdoor use. This effect is completely pixel-mappable and can be strung in series of three per controller, giving 45m. The Festoon can run stand alone or DMX controlled, and the built-in automated programs offer many looks.

Australia: AVE www.avecorp.com.au
or (03) 9706 5325

New Zealand: M.D.R Sound & Lighting
www.mdrlighting.co.nz or (06) 355 5073



ChamSys MagicQ MQ70 Compact Console

MagicQ MQ70 is the latest offering in the Compact Console range of small and lightweight consoles. The console features a 10.1" multi touch display, with illuminated encoder and fader tracks. This unit supports 24 universes with an option to expand to 48. It has three network ports enabling ArtNet and sACN direct from the console and four assignable physical DMX ports supporting RDM. Quick connection to ChamSys MagicQ Remote focus application through WiFi, and an inbuilt UPS protects both the console and the Ethernet switch in case of power fail. It has low power consumption and is fanless for silent operation on any show. The MQ70 runs the same MagicQ software as other consoles in the range, so shows programmed on it can be loaded and run on any other MagicQ console (within the universe limits). Options for integration with show control and audio systems include built in MIDI input and output, LTC, and audio input for synchronisation.

Australia and New Zealand: ULA Group www.ulagroup.com
or +61 1300 852 476 / +64 9 889 3363

Elation DARTZ 360

The DARTZ 360 from Elation is a compact, narrow beam 360° Pan/Tilt luminaire driven by a single source 50W RGB LED engine. This is focussed into a tight 3° aperture with motorised focus. Features include: RGB Smooth Colour Mixing, 14 static-stamped metal gobos, 6-facet linear and 8-facet independent rotating prisms, 0-100% linear frost filter for wash effects, high speed electronic shutter and strobe, electronic dimming and variable dimming curve modes, adjustable LED refresh rate and gamma brightness for flicker free operation, DMX, RDM (Remote Device Management), Kling-Net, Art-NET, and sACN protocol support, Elation's E-FLY internal wireless DMX transceiver, full colour 180° reversible menu display with multi-button control panel, and battery backup for display power. Connections include: 5pin XLR, RJ45 etherCON, and powerCON TRUE1 in/out connections, and a multi-voltage universal auto switching power supply (100-240v).

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Full information about the complete monitor line at www.neumann.com

Hitachi 4K LCD commercial flat panel displays

Hitachi's new range of commercial flat panel displays are available in 55", 65" and 75" sizes, all in UHD 4K for clear and detailed display. The narrow bezel and slim profile make them ideal for a multitude of digital signage applications, including retail, education, corporate meeting areas and hospitality. 4GB on board memory, screen saver and media player help with signage. They ship with 4 HDMI inputs and one HDMI output, LAN port and RS232 for control, an OPS slot (on selected models), a wireless option and a built-in media player to play music, videos, photos and images directly on screen from a USB drive, SD card or internal memory. This range of panels are backed by a three-year On-Site warranty.

Australia: Hitachi Australia www.hitachi.com.au or 1800 448 224



GLP impression FR10 Bar

The GLP impression FR10 Bar features a row of 10 x 60W RGBW LED sources, all colour matched to the impression X4 and FR series of fixtures. Each individual source has full range colour mixing and a homogenized Fresnel lens. The FR10 Bar also contains a series of built in colour macros and range of colour filters. Each zoom lens can be controlled individually and independently. The 10:1 ratio zoom range produces output angles from 3.7° to 35°. At the narrowest angles, the batten produces flat sheets of light or arrays of pin point beams of light. At wider angles, the impression FR10 Bar can wash areas and surfaces of stages, walls, cycloramas and more. With the same physical construction and length as the impression X4 Bar 20, the FR10 Bar fixtures work well together.

**Australia: Showtools
www.showtools.com.au or (02) 4646 1199
New Zealand: Kenderdine Electrical
kelpls.co.nz or (09) 302 4100**

Prolight Eclipse PanelTWC

Prolight's Eclipse PanelTWC is an LED soft light panel which provides a wide range of soft colour washes and is targeted at the TV market. It has a full range white reproduction from daylight through to Tungsten tones, with High CRI, TLCI and TM-30 (CRI > 94; R9 > 92; TLCI > 94). It uses a 740W RGB+ Warm White LED source and features adjustment via three local knobs with two fully featured modes: CCT with +/- green and magenta shift, and HSI for total control of hue, saturation and intensity. It comes with onboard driver and built-in power supply and is designed for easy rigging and cabling.

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

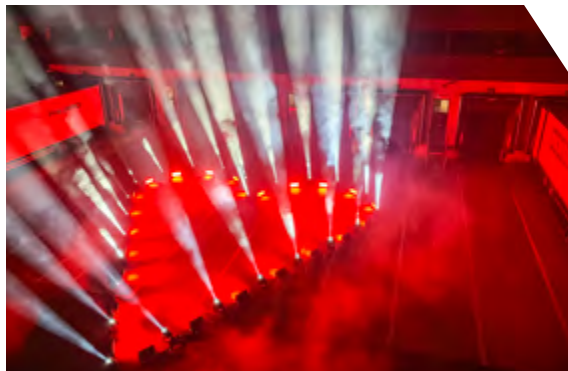


SGM G-7 BeaSt

The G-7 BeaSt is a dual-purpose moving head specialised in aerial beams and high-power blind / strobe effects. Using a glass parabolic reflector to produce a coherent beam of light, the 360W array of white LEDs and 440W SMD array deliver a high-power beam. The beam is rated at 85,000 lux at 10 metres, and a strobe blind effect rated to 50,000 lumens. IP66 rating makes it versatile for outdoor use and the two colour wheels, CTO filter, and 6000K colour temperature, three rotatable / indexable aerial gobos, two rotating split colours, Frost, and 18 static colours give plenty of options. Wireless DMX and RDM controllable.

**Australia and New Zealand: ULA Group
www.ulagroup.com
or +61 1300 852 476 / +64 9 889 3363**

NEW GEAR



Lighting The Sky for Heroes

On Sunday 22nd March, for half an hour, a number of Benelux lighting rental companies and individuals – in fact anyone with access to a light – were invited to point it upwards and #LightTheSky in support of all the key workers, heroes and heroines on the frontline of fighting the Coronavirus pandemic.

#LightTheSky was an idea originated by a Dutch rental company, which then became a clarion call taken up by numerous entertainment rental companies, venues, broadcasters and others, by people working in every segment across the whole Benelux Region, with some extremely creative results, as is the nature of our industry!

Heart shapes were a popular choice and many of the lighting schemes utilised Robe products – MegaPointes and Pointes were a favourite for their brightness – however other products and brands were also involved in this spontaneous and imaginative expression of solidarity. It highlighted gratitude for essential workers in the health service, transportation, law enforcement, supermarkets, education and many more sectors who are keeping our countries going

during the Coronavirus pandemic.

The photos here are a selection submitted by different Benelux rental companies, all of whom also observed the strict rules now in place throughout Europe on social distancing and other safe working practices during the crisis.

Robe’s CEO Josef Valchar comments, “It’s heart-warming to see the entertainment technology community energised and engaging in actions like this and showing its support for everyone. We’re all affected, and by standing strong together we can help each other survive and deal with the huge challenges our incredible industry faces in the immediate and longer-term future.”

Also over the weekend 183 radio stations across Europe and including the UK – from

Spain to Slovakia, Luxemburg to Latvia – conducted a synched play-out of the classic 1963 hit “You’ll Never Walk Alone” by Gerry & The Pacemakers.

Galvanising actions like these are taking place all over the world while people embrace the spirit of community and help each other get through the pandemic.

Robe will be producing special content for press, their website, and across their social channels during the Coronavirus pandemic. Please send your uplifting stories or ideas to them for potential development.

We WILL come through this together.

All editorial content / ideas for consideration can be sent to pavel.nemec@robe.cz, louise@loosplat.com, bram.declerck@robe.cz, bryan.matthews@robelighting.com and julian.vondenstemmen@robe.de.

ENDTECH! CHAOS ON THE ROADSHOW

by Julius Grafton, unemployed events guru

ENTECH had the best three shows of its long history, with 15% more people at Perth, Adelaide and at the Hordern Pavilion in Sydney early March. And then the virus caught up, with the Melbourne and Brisbane shows cancelled for the last week.

The show had some new features; the ENTECH THEATRE on the floor, managed by CX's Jason Allen, welcomed as a place for short educational sessions. Each visitor was given a small FM radio and a pair of AT enclosed headphones so that audio could be delivered without interruptions. The two theatres had around 18 sessions at half hour intervals.

At 10 a.m. the first 'AV Hour of Power', also hosted by CX's Jason Allen, was a knockout in Sydney and worked well out west too. With vendors given a few minutes for an 'elevator pitch', trade were advised and updated ahead of the trade floor opening at 11 a.m. We added warm pastries to elevate the excitement - and the blood sugar.

Out at the rego desk, my partner Kate and right-hand guy Steve James dished up the business assisted by some Tech Sisters. This group are a thing - we hired a bunch to help unload the tour trucks at the end, and can safely say that of all the things happening, at least now we have a channel of greatly supported female technicians - and that is brand new. The Tech Sisters came about at the start of January 2018 when Sydney-based audio tech Jess McCloughan founded the group on Facebook. The vision is to 'Empower, Encourage & Equip' all Tech Sisters round the world through networking and support. Jess and her team have created a thriving community with more than 700 members, which is growing every day.

On the floor we put CrewCare, Support Act and Tech Sisters together facing the ENTECH

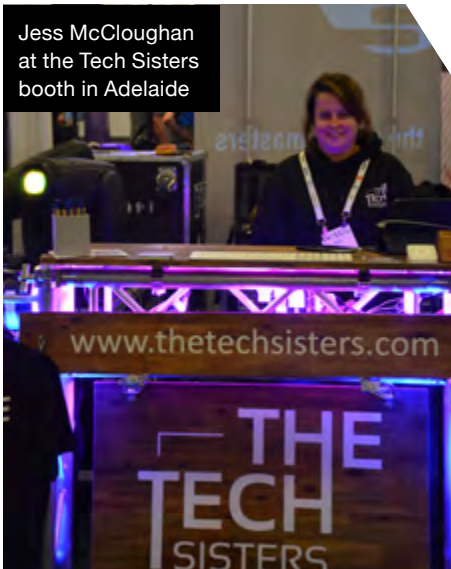


Sydney PA Showcase



Beams at The Hordern Pavilion, Sydney

Jess McCloughan at the Tech Sisters booth in Adelaide



Show Technology's Harold Hassapis and Creative Productions' Dave Jackson in Sydney

Cafe - and we had a village square. Around that we allocated the 60 stands on rotation - someone at the back in Perth was closer to the front later. Had we done the whole five cities it would have worked out very fair. The alchemy of placing whom where was funny - there were a few 'specifics' where people wanted their brand next to another (which if they agreed was fine) or out of sight of someone. We don't ask why.

Showday for us is tea in bed at 4 a.m., then workup that includes downloading all the registrations up to the minute and arranging an SMS blast at 8.45 a.m. to remind people the show is actually, like, today. Then a check through on arrangements, grab the venue

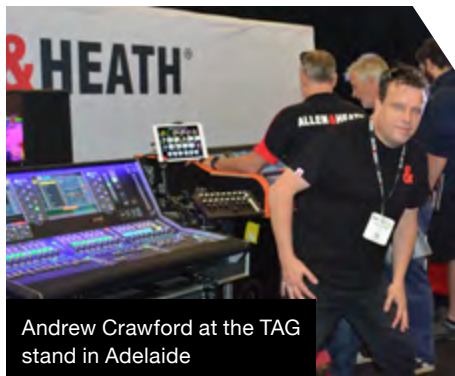
contact details, and meet Simon Byrne in the lobby before 6 a.m. which is our venue GO time.

Simon had a touring crew manager from Show Support with us - Ben Albrecht - who managed the state-by-state crew calls. Using one supplier nationally gave us some consistency in what can be a patchy market. It mostly worked better this year over the three shows and two truck loading/unloading days, but freelance crewing is a fast moving and vexed business in Australia.

The four ATS semis were marshalled in, and the unload started while Kate, Jess and I marked up the show floor. Where there are 1m

square carpet tiles this is easy. Without them (Hordern) takes 20 minutes longer. By 7-ish the floor is marked with exhibitor names and spaces, and the 600 cases slowly roll in.

Alex Hughes powers up, we had 12 three-phase distros. At 8.30 a.m. (and usually earlier because they can) the 140 exhibitor crew turn up to set up. It has so many moving parts - but it usually moves at the same trajectory. Most first-time venue events staff have never seen anything like it, because we are a unique event where everything travels except chairs and catering. We even tour with 50 Bunnings fold-up plastic trestle tables, and our own cloths, because venues have different sizes - and they like to rent them to us. Those



Andrew Crawford at the TAG stand in Adelaide



Astera at ULA Group, Sydney



AVID, Sydney



Audio Visual Distributors in Sydney



Clair Brothers' Australia Wayne Grosser (right) hosting Scott Mullane (left) and Integrated Audio Solutions' Kostas Psorakis

Bunnings plastic tables are also brilliant truck pack fillers when you have a small gap - shove in some tables!

Our touring rego system is running by 9 a.m. or earlier. Empty cases are parked in the boneyard, we tidy up the floor, the cafe churns out free beverages and the show always opens at 11 a.m.

But Monday March 16 came with storm clouds. The government had announced an events limit of 500 people, and we could not guarantee that all day. We peak and

trough, Sydney easily had 800 in the room at one point. We'd had a weekend of 'are you continuing?' and we knew this was a storm day. We hit the gym early and the cascade became an avalanche of calls, emails, FB messages and texts. The trucks were in Melbourne, 22 local loader crew booked from Show Support. Our team of eight were there or booked to fly down that afternoon. But exhibitors were pulling out.

Many of the global brands had cancelled all travel, some simply had the travel department cancel flights, so the local staff were stranded.

Others had company meetings and made policy. As we ticked towards midday, the remaining two venues were locked in



meetings. They called us and were somewhat ambiguous, we assumed they were either unable to commit or acting under lawyer instruction.

We called it off around 1.30 p.m.

If you can imagine an avalanche hurtling down towards you, it was almost like it stopped and started to inch backwards. A few people had been trolling us about the irresponsibility of everything, we were really aware of the power of social media. A bunch of exhibitor crew were in the air. The chaos was palpable. We

told the trucks to come home to Sydney.

So it came to pass. On that Thursday, when our iCal was telling us we were doing the show in Brisbane, we were instead unloading the trucks at the ATS depot in Sydney.

With our exhibitors and our industry devastated by the complete collapse of everything, the way forward is to take small steps which for us means that ENTECH 2021 will - for the first and only time - only show on the East Coast. Our friends in SA and WA can take consolation that they got the show

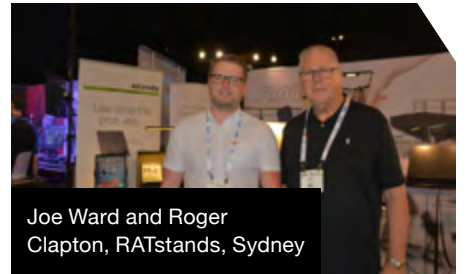
in 2020 while Melbourne and Brisbane didn't. None of this is how you want it to be, but friends, these are crazy times indeed.



Haze Bubbles! At ULA Group in Adelaide



Showtools' Eli Malka and Davey Taylor in Adelaide



Joe Ward and Roger Clapton, RATstands, Sydney



Jands are turning 50! And that's Jands' Brett Johnstone at right

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Fire Fight Australia by Cat Strom

By the end of 2019, we were all stunned by the immense loss of wildlife, bushland, and human life due to the horrendous bushfires that ravaged Australia.

It just so happened that on February 15, Queen + Adam Lambert was slated to play Sydney's ANZ Stadium as part of their global Rhapsody Tour and the promoter, TEG Dainty, saw this as an ideal time to deliver a Live Aid-style bushfire benefit the following day.

With Queen agreeing to perform again the next day, the acts willing to donate their time started to roll in. Leading international and local acts, including Queen + Adam Lambert, k.d. lang, Michael Bublé, Alice Cooper, Ronan Keating, 5 Seconds Of Summer, Amy Shark and more, soon signed up. ANZ Stadium made a generous offer to provide the venue for free the day after Queen + Adam Lambert's full concert.

What was amazing is that this nine-and-a-half-hour, one-off concert was only five short

weeks in the planning due to the generosity and kindness of hundreds of entertainment personnel. Whilst the 22 artists and bands received plenty of praise and accolades in the press, let's not forget the 1,400 workers on the day – a very long day for most – without whom the concert would never have happened.

The production crew of stagehands, riggers, audio, lighting, video and backline personnel, stage managers, volunteers; the suppliers and drivers of 35 trucks; the providers of numerous hotel rooms and suites; the 23 media and marketing companies, 22 production companies, eight catering and food and beverage companies and seven car companies that donated staff, products and services.

Video

TEG Dainty approached Big Picture to provide video production and equipment for the event and they were more than happy to service the concert. The fact that Dainty is also one of their biggest clients made it a bit of a no-brainer!

"We supplied all the gear and servicing for free but paid our crew a discounted rate," commented Anthony Cairns, Big Picture's Operations and Projects Manager.

The most pressing challenge for Big Picture was turning everything around in such a short time and working out how to integrate 22 acts and their individual visual packages in ten-minute change-overs.

"Trying to get information out of a small handful of acts for a show is difficult enough," said Anthony. "Every band has their requirements and expectations of what they need to achieve, so trying to manage that and come up with a happy medium to meet everyone's expectations and deliver on schedule was tricky."

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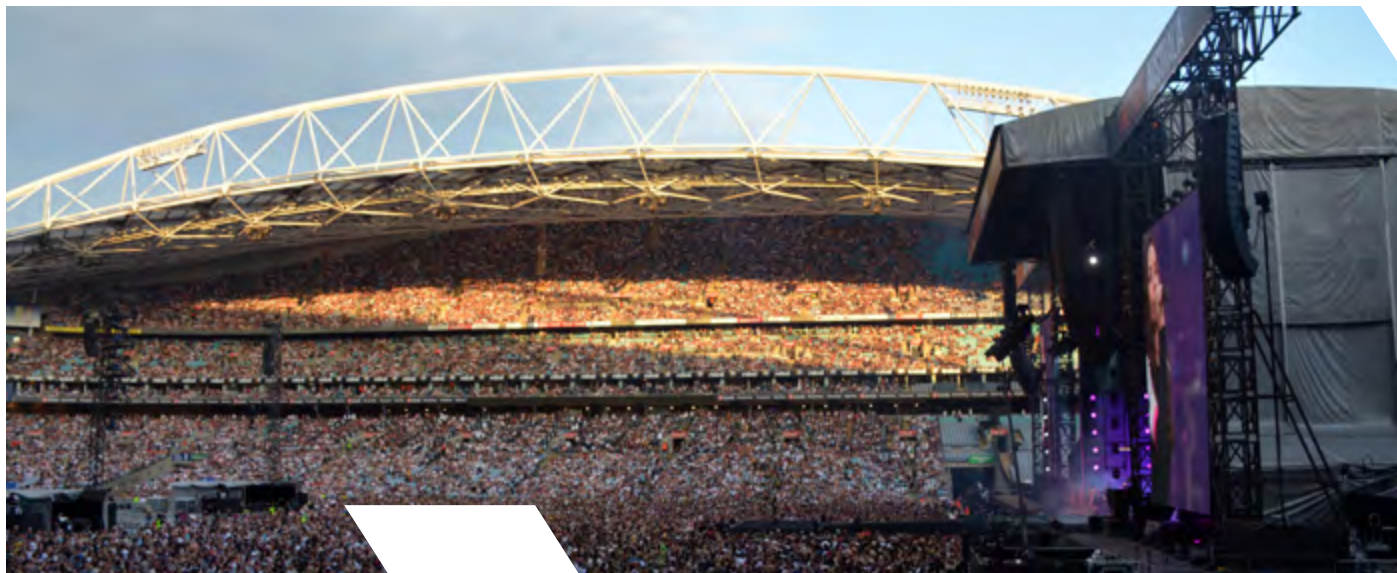
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Ronan Keating



Alice Cooper

Anthony spent a couple of weeks in pre-production along with Steve Swift and Colin Skals, and together they formulated a plan of attack to deliver the show smoothly. Then broadcast came into the picture and they worked closely with Julie Ward from ZigZag and her team, formulating a structure for the day to successfully deliver the entire package to TV.

A few bands required Big Picture to program video content for them, including 5 Seconds of Summer, programming their content package in-house.

“Their content came out of Moment Factory and we programmed it and applied a time code track so it would trigger at the right times,” added Anthony. “We also had a few bands that were happy for us to go with our default state which was the Fire Fight logo. We tried to retain the Fire Fight branding as much as possible throughout the show to remind people that it was not a festival but a benefit concert. The whole focus of the day was to put on a great event to raise awareness and funds. It was also a big thank you to the Furies and to applaud community spirit.”

The Big Picture guys loaded in at 2 a.m., as soon as Queen’s lighting and video rig had gone, and then worked straight through for 22 hours. Fortunately, their IMAG screens went in on Thursday and were then covered with Queen’s scrimms for their show.

“We supplied the IMAG screens, upstage screen, all the camera systems, and control packages - anything video was done by us!” stated Anthony.

The Roe MC7 7mm IMag screens were 10.2m wide by 12.6m high whilst the upstage screen was Roe CB8 8mm measuring 15.6m by 9m high. Brompton Processing was used to drive the screens and a Barco E2 was used to manage all of the integration with the bands and switching between broadcast, bands, cameras – basically all screen management. A Sony MVS camera package with four HD camera chains and two PTZ Robo chains for the cameras was used. A StageSmarts power distribution system managed all of the power.

Anthony’s main highlight of the day was simply getting through the event with no issues! It was one of the most challenging events he has ever been involved with during

his seventeen years in the business, within Australia and internationally.

Despite the stress leading up to the event, the day was ‘organised chaos’ and a fantastic testament to Australian production personnel.

“It all ran seamlessly and flawlessly on the day. In fact, it was fairly easy, which no one was expecting,” said Anthony. “I guess when you have that many bands with so little time to turn around, you just steam ahead as it’s a big machine that can’t stop from start to finish. No one in any production department had to communicate much as they all knew what they were doing and what was needed to be done. So it just happened, with everybody focussed on the goal that needed to be achieved.”

Lighting

Creative Productions donated the entire lighting rig plus all the preparation expenses and crew wages for the concert.

As well as an extremely short planning period, getting the gear up and working in the short time frame allowed was always going to be challenging. This was made worse by a ‘truck



Dave Jackson and Brad Alcock



Craig Gordon



5SOS



Nicholas Beachen and Dane Boulton



Anthony Cairns



Jeremy Moore and Stuart Anderson



Adam Lambert - Queen

incident' on the way down from the Gold Coast that resulted in the gear arriving two hours later than the scheduled 2 a.m. With the stage booked for Queen at 8 a.m., this meant there were only four hours to set up all things lighting, but the guys smashed it, handing over ten minutes early.

"Extracting information out of the artists was also difficult," said Dave Jackson, managing director of Creative. "Originally no one was going to be bringing LDs with them, except Queen, but it turned out to be a few more than that! We didn't know this until the day when they turned up – starting with the first band to play!"

The lighting rig needed to be fairly simple and straightforward to set up and run, with versatility the key to the design. When it was announced that the gig would be televised, more gear was added for the cameras.

"The design was based around what Queen required which was fantastic," said Dave. "They could have been quite painful but thankfully they weren't. I also had to look at what we had available at the time. We had a show going out four days after the event

so I pretty much used all of that inventory. I just made it as clean and simple as possible, whilst getting the best looks I could for a daytime show and into the night."

Naturally, the lighting had to work with the large upstage LED screen plus left and right IMAGs whilst still having plenty of punch for the daylight performances. Dave opted for 36 Robe BMFL Spots, 36 BMFL Wash and 18 BMFL Blades, as he believes that BMFLs are the only moving light where colours are accurately perceptible in daylight. Added to that were 30 Robe Spiiders, eight GLP JDC-1, five GLP impression X4 Bar20, six LightSky AquaBeam, 20 8-Lite, 18 4-Lite, and MDG atmospherics.

Control was an MA Lighting grandMA3 full size which was the main event 'house' console, with a grandMA2 full size for backup. A High End Systems Hog 4 was provided for LDs preferring to work from that, and a grandMA3 light was available for any LDs who wanted to take advantage of pre-vis time during the day.

LD Brad Alcock was doing Tina Arena, Guy Sebastian, Delta Goodrem, and Ronan

Keating, but being a seasoned Hog user (although there was one available there had been no time to pre-viz) he had a 'mini-meltdown' with the MA3 and so Dave took over under Brad's guidance. Together, with Brad running strobes, blinders and content for Tina and Guy, they got the job done.

Jeff Pavey finished the event lighting k.d.lang, Icehouse and John Farnham with Olivia Newton-John. Dave reports that on the day it was all quite relaxed and pretty flawless in all departments.

Audio

Fortunately for audio provider JPJ Audio, the Clair Global PA used by Queen the night before was retained for the concert with a control set up from the Sydney office arriving at 6 a.m. for load-in.

The large PA comprised 32 Clair i5D, 32 Clair CO-12, 18 Clair CP-218 Subs and 20 CO-10 front fill. Delays were handled by 64 Clair CO-12.

JPJ knew that planning and preparation was the only way to get through the concert and so they installed an A, B, C, and D split

system and A/B control system to give them the ability to line check all the acts backstage before the 10 minute changeovers. All band files were loaded and line checked back at the shop.

At FOH there were DiGiCo SD10s, Avid S6Ls, Avid Profile with four Waves Server setups and a Digico SD11 for broadcast feeds. At monitors, there were Digico SD10s with Waves Servers and an Avid Profile. Broadcast also had A and B consoles to match JPJ's system.

Communication is key on these sorts of events, so JPJ installed a Riedel Artist Comms system and had all JPJ stage crew wearing their wireless Bolero beltpacks. They integrated their system into the broadcast system, which made communicating with the broadcast trucks and show directors a breeze. With 800 input channels to line check, both back of house, then on the stage in the changeover, it needed to work, no questions asked.

Radio spectrum maestro Peter Twartz offered his services as Spectrum Manager for the event, along with John Buckley, in a pro-bono capacity. With over 300 frequencies under management across the stage, broadcast, media, communications, camera links and back of house requirements, this was no simple feat.

The 'house' wireless mic systems supplied by JPJ were Shure Axient Digital, four ADX2FD Dual Frequency Diverse handhelds, four ADX1 Beltpacks, four ADX1M Micro Packs, and 12 AD2 handhelds. Queen with Adam Lambert, Alice Cooper, and 5SOS all brought in their touring systems which comprised a mix of Shure Axient, AD and ULXD. There were four Shure UHF-R and one Sennheiser 3732ii receivers for three acts that brought their transmitters with them. The A/B duplicate festival format so the next act could be line checking whilst the current was performing was critical to achieving ten-minute turn

arounds but doubled the number of compatible frequencies required.

JPJ provided Axient Digital and Shure UHF-R guitar systems for backline to assist acts, some of whom arrived with a motley collection of wireless systems, suitable for a local pub, but not in front of 75,000 people and competing with 300 other frequencies.

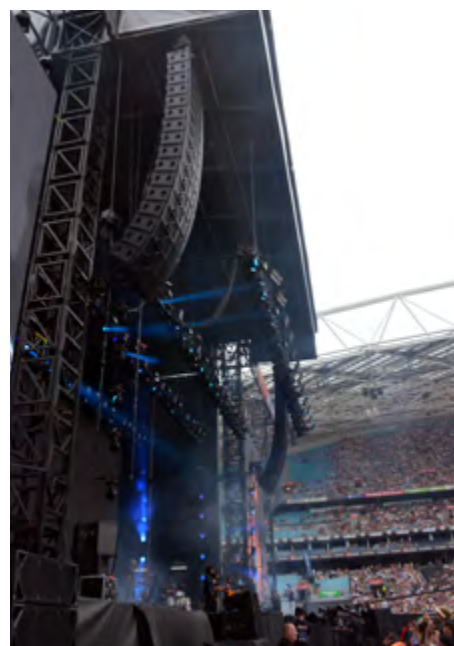
"One of the big differences between a cheap wireless mic system and a top-end one is the RF filtering and the ability to reject unwanted RF noise," commented Peter.

The IEM system was 20 sends of Shure PSM1000 in an A/B split and then touring systems added a further 30 channels of PSM1000. The wireless spectrum between 520 and 694MHz was comfortably full, to say the least!

"It would not have been possible to achieve so many clean channels on the one stage without Axient Digital's advanced capabilities," added Peter. "Especially critical was the ability to change a frequency on-the-fly if interference was detected. The Axient Digital's ShowLink gives remote control of the transmitter even whilst it is out on stage in use, and the ability to tight pack the digital signals ensured space was left for intermod-free frequencies for the PSM IEMs, and the analogue mics."

According to JPJ, over 800 inputs were coming off stage, going through 896 channels of passive transformer isolated splits, 500+ mixes leaving monitors over the day, 2250+ input channels being mixed, 66 band mixes being pulled on 14 consoles all with no rehearsals or sound checks going live to TV for 10+ hours. A few of the stage guys walked over 36,000 steps; that's around 27km.

CX wish to acknowledge all of the crew that banded together to make this incredible event happen. Crew who jumped at the opportunity to help others, yet are now probably without work.



Crew	Jarrold O'Brien Shaw	Dane Boulton	Kellie McKee
Big Picture	Rishi Sheldon	Matt Doherty	Kieran Morris
Anthony Cairns	Adrian Kristoffersen	Dylan Hines	Lara Smith
David Horscroft	Brandon Batten	Nathan McLure	Matt Whitehead
Chris Irvine	Simon Cadman	Maddy Murphy	Murray Lewis
Lucio Gionta-Lane	Rodney Apps	JPJ Audio	Paul Kennedy
Jeremy Moore	Creative Productions	Ben Northmore	Peter Twartz
Emma Cusack	Scott Black	Cameron Elias	Ryan Fallis
Cam Richards	Jeremy Dehn	Chris Robinson	Wayne Mulder
Aaron Bush	Daniel Callaghan	Dean Stander	Tim Jones
Michael Gearin	Tony Hall	Harry Philpot	Bianca Martin
Zachary Burton	Luke Hall	James Grant	John Buckley
Loughlin Walsh		Joel Larsson	
Kayn Biddle		Joel Pearson	



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A BOLD REVOLUTION OF AN INDUSTRY STANDARD

WINTER HAS COME

by Simon Byrne

Early in March with the Coronavirus top of mind, I planned to base this article on running a production small business, the likely recession, strategies to get through it, and how to emerge from it stronger, as well as the small business handouts that the government announced.

But then things got worse. Much worse. The ban on mass gatherings literally decimated the live event industry overnight. We are in a full-blown crisis.

I endured the 2008 global financial crisis, the September 11 aftermath, the Dot Com bubble and the 1987 Black Monday stock market crash and recently, the bushfires. For our industry, none of these are anything like what we now face today.

The banning of events of 500 people or more. The reasoning for the ban is to slow the spread of the Coronavirus and is grounded in maths and science. It had to be done so that our health system has some hope of coping with the projected influx of patients. We get that.

But never before has there been a threat that forced the complete shut-down of basically all events in this country. The live production industry is on its knees.

For production industry freelancers, it is an especially tough time. The Federal Government's economic stimulus package (announced before the event ban announcement) has completely bypassed our freelancers and casuals. There is literally nothing in it unless you are already receiving a social security, veteran's or other income support payments, or hold an eligible concession card.

Despite this terrible omission, there are a couple of programmes that you might be able to take advantage of.

If you are forced to isolate yourself as a result of the Coronavirus, you may be able to get a payment from the government if you can't

work because you're isolated at home. Refer to the link at the end of this article.

You may also be eligible for a hardship payment from the Federal Government. Once again there is a link at the end of this article.

If you have superannuation, there is a small chance that you have some income protection insurance which may help too. Worth checking out.

That, as far as I know, is it for freelancers and casuals! Pathetic in my opinion.

But don't rule out the Jobseeker Allowance (Formerly Newstart) either. You paid taxes up until now and you are legitimately unemployed and in an unprecedented crisis. You have every right to put your hand out to the government for support.

Pick up work where you can, including outside the industry. Casual drivers, for example, are still in demand.

For employers there is some mild relief if you employ staff between 1st January 2020 and June 2020 and you withhold tax on your employees' salaries and wages. You get payments of 50% of PAYG withheld up to \$25,000. So if you withhold \$8,000 in PAYG, you get a credit of \$4,000. That will hardly touch the sides but it is better than nothing.

For businesses that own equipment, there is additional immediate depreciation available on assets purchased between 12th March and 30th June 2020, and the instant asset write-off has increased from \$30,000 to \$150,000. This is a major incentive to invest in equipment for your business, provided you have the cashflow

and profitability. Just one very big problem though, all the events, and therefore the work for that new equipment, has been banned! However, if you have work and income coming up, this is a fantastic opportunity.

When this crisis will end, no one really knows. There have been estimates ranging from eight to nine weeks, right out to six months.

So what do we do to get through this? Bunker down and use the down time to ensure we come out of it stronger and well positioned to take advantage of the opportunities that will come when this is over.

Ongoing fixed costs - this is what will kill you when revenue has cratered. If you can closely align your costs to your income you are always better off. Cancel whatever you can, subscriptions, plans, and memberships.

Reduce your debt - debt is okay when you are profitable and the interest is tax deductible. Equipment finance and leases are great when the business is ongoing. However, when it dries up, they kill you because you need to fund the finance payments from sources other than normal revenue. Control your costs, especially long-term ongoing commitments.

Maintenance - there won't be a better time to get on top of your maintenance and the projects "you will get to when it is not busy". Employ your crews to help you do these jobs. They can paint, repair, and do stuff.

Sell your non-performing inventory - get rid of the equipment that is costing you money to store and maintain, but is not contributing to your income (everyone has some). You can make better use of the cash and put it where it can really work.

Avoid long term investments until the work is coming through the door. There is nothing wrong with cross-hiring equipment to solve short term needs, and trust me, there has never been a better time to get deals on cross hires.

Negotiate with your bank and landlord. They don't want to have the hard conversations either and will undoubtedly not want to move on the previously agreed arrangements. But,

we are in unprecedented times and it is in their interest to keep your business alive too. They can't extract money from you if you don't have it, or a way to get it, so at the very least, ask for deferred terms.

This is especially important if you cannot pay your bills. It is far better to engage with your creditors early and keep them informed than to keep them in the dark.

Talking of rent, I've always considered it to be dead money because a space serves a purpose, but doesn't actually contribute to your income. Therefore I would rent premises to suit my needs, but nothing more. It is nice to have luxurious offices and plenty of space, but not if your first two gigs every month are to pay the rent before you make any money yourself.

Fix that sadly neglected website - it is the calling card for your business and it is the first place your new prospective clients will go to. You have the time as a result of this forced break, a great time to make it something to be proud of.

Improve your skills - When the work returns, skilled operators will be in demand. You could improve your skills with such areas as wireless frequency management, specialist hardware knowledge, IP networking, lighting programming and so on.

Seek professional advice - I know cash is valuable, but spending a few hundred dollars with your accountant may give you strategies that you have not thought of, and save you a lot of money. Your accountant will also know of all the government programmes that could assist you.

Cast off your problem clients - you know who they are. The really slow payers who weren't

paying that much anyway. You can no longer afford to keep funding them.

Be the business that pays its bills quickly. Suppliers, especially freelancers, really appreciate it and when the business recovers, they will be first there to support you. Come to think of it, they'll be there in the tough times too!

This is unprecedented. We all need to work together and be flexible with each other like never before. Be accepting of less-than-ideal work offers. Any deal you do in this environment is a good deal. Look after your people, friends and colleagues. You'll learn who your real friends are, and this crisis will end.

Places and organisations for support

Jobseeker Payment (Formerly Newstart)

<https://www.servicessaustralia.gov.au/individuals/services/centrelink/jobseeker-payment>

Commonwealth Coronavirus payment for casualls

<https://www.servicessaustralia.gov.au/individuals/subjects/affected-coronavirus-covid-19/people-who-dont-get-payment-from-us-coronavirus-covid-19>

Commonwealth Hardship Payment

<https://www.servicessaustralia.gov.au/individuals/topics/asset-hardship-provisions/27496>

Tech Checks on Facebook

<https://www.facebook.com/groups/1179643328866204/>

A Facebook group started by Steve King is a place for everyone in the events industry to keep in check.

Too many of us have been affected by loss of colleagues and mates due to depression and mental health issues. Tech checks is a place for us all to know that we of the industry have each other's backs, even just for a short friendly word of support.

The Tech Sisters

<https://www.facebook.com/groups/thetechsisters/>

A global community of Tech sisters, who are committed to working hard and supporting others, in their own pursuit for career and personal success, doing the journey together.

Crew Care

<https://crewcare.org.au/>

CrewCare is all about supporting technical and backstage personnel and their loved ones working in the Australian live music scene.

Support Act

<https://supportact.org.au/>

Support Act is Australia's charity delivering crisis relief services to artists, crew and music workers as a result of ill health, injury, a mental health problem, or some other crisis that impacts on their ability to work in music.

Lifeline

<https://www.lifeline.org.au/>
Ph 131114

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<https://ilostmygig.net.au/>

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TECH SUPPORT FOR DUMMIES

“Life on the end of a phone.”

by John O'Brien

The tech we all use every day is pretty amazing. So many little parts, so many lines of code, so incredible that it works at all, let alone consistently. Mostly it does work but when it fails, we need help straight away. Enter the tech support personnel.

Looking after those in the field

From the outside, tech support is all troubleshooting 101. Having spent years on the other end of the phone, I can attest that it is so much more.

It's not really about tech - it's about supporting people who are having tech problems. Often, they are experiencing the same issues that you have seen and supported others on. Sometimes the issues are completely new or unexpected. Either way, the customer in need is your main focus and you are helping them to solve their problem.

Respond quickly but calmly. Above all, don't forget to breathe. If you are not calm, you may miss the crucial part of the puzzle. Further, a good part of your job is reassuring the person on the other end of the phone that you are there to help them out of their current pickle. If you sound flustered, that will come across. Remember that the caller is potentially onsite,

in front of an exasperated client, due to head to another job, or under any manner of stresses.

The next step is to try and identify the actual problem. Basic troubleshooting steps are a start. This is where you have to ask some leading questions. The most elementary of these is "Have you got a green light?". Depending on your relationship with the site tech, it is hard not to be condescending when saying this. I carefully asked this once and heard "Gotta go. Urgent." as a response. I knew that he'd forgotten to do the most fundamental thing and flick the power switch, but I let him save face on the day and when we next caught up in person, had a good laugh about it. We all do dumb stuff occasionally so it pays to cut some slack.

Empathy and patience

In support, you're helping users to help themselves. In this context, soft skills are as important as any hard tech skills that you may

have. When it's minutes to home time and you are faced with what seems simple to you, it's tempting to just tell them to "RTFM / Google / FAQ / Wiki" the answer. That won't keep you employed for long.

Effective support staff put themselves in the user's shoes. Picture yourself in front of a non-functioning system. What would you do, how would you feel?

Asking the client to "please humour me and try XYZ?" can break the ice and buy some time for parties at both ends of the line. The classic "have you turned it off and on?" can work wonders too. Often, one of you will "ahah" the answer as you're talking and working through options.

Another approach when sussing out what is going on is to ask if you can "check on a few things and call back?" This buys time to research the problem and see if it is a known issue or a new beast. You can do the hard work of the Wiki-search (or relevant method) then respond with a workable answer.

Ideally, you find a good solution and get time to both step the user through the fix and document it for other support staff and users.

Impressions count

The more time I spent in support, the more I found that letting the customer know that you have their back is half the battle won. If you can find a remedy immediately, great. Everyone moves on and, if you are lucky, the

field tech sings your praises to their boss.

More complex or peculiar problems can take days or weeks to resolve. When this occurs, it is wise to call back every day or two on pending cases to provide reassurance that you are still on the job and haven't forgotten them. This was one thing that I stressed to new support staff - "Keep the customer in the loop".

Sometimes, the appearance of having done something is enough. Working for a residential integrator, I received an urgent Saturday night call from a client holidaying in Europe. Turns out the poor fellow couldn't turn on his spa in Toorak from the other side of the world. Calmly, I logged into the online console for the control system running his house and flicked the virtual switch for the spa to make it appear active. Called him back and his gruff response was "Good, now I don't have to sue you on Monday." Your rewards may vary...

Inevitably, you'll end up with some self-important person calling in with one of the following gems:

"Surely you've seen this problem before."

"You're just saying that you've never come across this."

"How come you don't have an instant fix?"

"Manufacturer X never has this problem"

It's tempting to tell them where to go but patience, diplomacy and calm firmness are required. If you are clear and positive in your answers, including "I don't know but will find out", you might quell even the grumpiest know-it-all.

Firmware

A favourite peeve from a support perspective is field techs 'upgrading' firmware just

because a new version has been released. The system that previously worked fine is now borked because someone didn't read the release notes. The golden rule of thumb for firmware upgrades (and site fixes in general) is: "If it aint broke, don't mess with it." The exception is when the manufacturer / distributor recommends it. Then it's on their head to find the fix if things go awry.

Distributor / manufacturer constraints

Part of tech support is towing the company line. When you see the same problem recurring, or have to support some flaky kit and no fix is forthcoming, it is frustrating at best. Particularly so when you have to deliver the bad news to the field tech that you don't have an answer nor any timeframe for one. Remember who signs your pay cheque each week - and pay the price of corporate life!

Warranties can be a real pain too. With many local distributors sourcing most product from overseas, you are constrained by:

- a) how much spare stock is on the shelf at any one time
- b) lead time on restocking if shelves are cleared
- c) differences in manufacturer (OS) and distributor (AUS) warranty terms
- d) batteries (produced on Y date in X country, shipped on Y++ date, stored locally for Z months, shipped to integrator for install, then up to 18 months after manufacture finally used by the end client, who expects them to be flawless and limitless.)

Where to next?

It's not all tears and anxiety though. When you've answered the immediate calls and cleared the backlog, it's time for R&D. One

great aspect to a support role is pulling equipment apart and assessing it. You get to disassemble non-functioning products and poke around. Being paid to release the magic smoke is fun.

If you enjoy doing all of the above and hang around for long enough, you can rise to a senior support level. Here, you get to trial the beta and new stuff first before any slick sales guys can demo it in the market place. With luck, you can help keep their promises to customers in the realm of the possible. You might even be fortunate enough to visit the manufacturers' facilities, pick the brains of their senior staff and see all the real cool gizmos.

For the personable, supporting the Sales team at trade shows is also a boon. Setting up all the gear on top of your normal support role is the payoff.

The complexities and constant updates to all our widgets mandate ongoing training. Often seen as a poor cousin to field work, training is a skill unto itself and an entirely valid career path for the right tech person. All support staff need to keep their chops up and regularly attending or running a training session assists this.

Just rewards

As with many other multi-disciplinary roles in modern life, good technicians do not necessarily make good support staff or trainers.

Supporting people who are up against it can be very stressful. Doing it remotely, with only a few pieces of the entire puzzle, all while staying calm is a skillset requiring as much emotional intelligence as raw tech knowledge. When it all comes off though, it is also incredibly satisfying.

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COVID-19: Nine Tips For Business Survival

Remember The Good Old Days Back In February 2020?

by Ian Whitworth, the co-founder of Scene Change. He writes about the business owner experience each Tuesday at his Motivation For Sceptics website - ianwhitworth.net

We're right amongst some serious end-times shit for our industry, and it's probably the same for you. Thanks a lot to whoever ate that original pangolin. Now the tab for their exotic dinner is in the billions per week.

Three weeks ago was the Savage Setback era, this week we're into the Survival Not Guaranteed times. I literally answer my phone now with "What fresh bad news have you got for me?"

Plenty of SMEs will not see the end of this financial year. There are no easy answers, and for some businesses, no answers at all.

From someone who's gritted through some bad times before, here are a few things you can do to make it less horrendous.

They'll increase the odds that you'll be one of the businesses still standing when the vaccine reinforcements arrive in twelve months or however long it takes.

1. Do Your Cashflow Forecasts *Now*

Honestly I can't believe I have to write this. It's like asking airline pilots if they checked the fuel. Yet I've spoken to half a dozen business owners lately who have done no more than a revenue forecast, then checked their bank balance plus A/R less A/P.

That is not good enough with entire packs of wolves at the door. You need details: wages, rent, tax, supplier payments, documented down to the day they're due. That's the moment you go from 'might be ok' to 'oh my God I must act now'.

If people in your industry are saying 'if you can survive X months COVID-19 will all be over and demand will take off again', assume it will be at least 50% longer than that.

And when they say 'but we'll emerge from this stronger than ever', remember those are just words they say to make you feel better and it's

not necessarily true.

For us, the cashflow hellscape has entered a new realm. Normally you can look ahead and go: mmm, terrible revenue months coming up, better take precautions. Now that booked revenue sits there, offering a glimmer of hope, then evaporates a week out. All of it.

So on that topic:

2. Update Your Terms and Conditions

My new full-time hobby is the cancellation clauses in our terms and conditions. I recognise that doesn't sound cool, but it's all that stands between us and extinction.

Not that we're all about black-and-white enforcement of contracts, even our hardest negotiations are done by talking like reasonable people. But in times like these you need a place to start that conversation.

We hadn't checked our terms and conditions for a few years, and we'd grown a lot. They left us wide open to danger. A cancellation on a \$5,000 job isn't terminal. A few \$200,000 ones are.

Plus they were written on the olden-days assumption of a few random cancellations every so often, rather than every single client rushing for the exits.

Sorry but we're too small to underwrite the commercial risk management decisions of large companies. So we updated our cancellation clauses with more realistic lead times and fees that accurately reflect the hard losses we will incur.

We did that a month back and it's been an essential part of our survival plan. Check you're not exposed. While we're on T&Cs, every so often we quote clients who are regular middle managers, but they quite fancy their contract law skills. They go through your terms (and ours is only two pages long) and send you a long series of proposed amendments, drawn from the ancient legal principles of Things They Reckon.

Here's our response, and it should be yours: No.

Anyone who does it is a maniac who will only get worse once you start working together. Imagine the nutbag diligence they'll apply to querying your invoices. If you need to say no to the work, do it.

Almost all terms and conditions are drafted on the assumption of both sides being reasonably fair. Amateur lawyer mate's assumption that you're trying to conceal secret confidence tricks reveals a level of paranoia that you don't want to be working with, even in the starvation times.

3. Have The COVID-19 Chat With Suppliers

You will owe money to two sorts of organisations: the business suppliers you work with every week, and large ogres like landlords, banks and the tax office. The first cares about your ongoing survival, the second ... not so much. Talk to your regular suppliers and be honest. I've written a lot before about not screwing suppliers out of their last cent, because one day you'll need them. Did you do that? Because now is that time. Ask them to help you survive, in whatever way they can, so you can be a good, ongoing customer in future.

We started our business about ten minutes before the last global financial crisis. There was a core of suppliers who really helped us out back then and that gratitude lingers to the present day. You can have a shot at landlords and banks, sometimes it works. Just this morning we got a deal out of one landlord to push part of our rent back into the second half of the year. Commercial landlords are, as a general rule, total dicks. But try it.

4. Talk To The Tax Office

When the grim reaper comes for a doomed business, it's almost always the Tax Office under those black robes.

Because a lot of businesses are either hopeless at understanding their tax obligations, or treat it as something that can be permanently kicked down the road while they pay suppliers who are screaming louder. Trading your way out of tax obligations is a bitch, because more trading means more of at least two sorts of tax, probably four. Sooner or later they will come for you and frankly a lot of businesses deserve it. Here's what you do: call the tax office and tell them honestly about the state of your business. Ask for a payment plan. We've done this a few times over the years for some of our smaller businesses and the tax office has never been anything other than reasonable. I think they're so used to scams and denials that they find honesty quite refreshing.

Now is a good time to be asking them for more time, they'll be expecting your call. They've even made it official, info here on what they can do for you - <https://www.ato.gov.au/Individuals/Dealing-with-disasters/In-detail/Specific-disasters/COVID-19>. Be grateful for this reprieve and take paying it off very seriously. Or it's Reaper Time for real.

5. Don't Wait For The Government To Rescue You

A lot of business people like to complain that the government doesn't do enough to help them. This is a dangerous, cargo-cult mentality because you're waiting for them to do something.

The whole point of owning a business is control over your own destiny. Deal with your own affairs as if there was no government help coming. If it does come, it will be less and later than you'd hoped. Treat it as an unexpected bonus but there is no governmental superhero coming to save you in the final scene of your COVID-19 movie. It's up to you.

6. Come Up With New Ideas For Your Pricing And Terms

Think about how you can get paid up front. You want the work so bad but now is the time to tighten up your payment terms, not loosen them. Do a sweet deal for payment upfront. Get payment in stages rather than at the end of a project. Companies with purchasing budgets will still have to spend that cash by the end of financial year, COVID-19 or not. The further up the management ladder you can contact on the client side, the better chance you'll have of getting some business out of them.

7. Is There Something Else You Can Do For A Bit?

Today I heard of an exhibition stand constructor which is being smashed by cancellations, they're turning their cabinetmakers, carpenters and equipment to do kitchens and wardrobes for a sweet deal. People are happy to put the word out to help in desperate times. What else could you do to get a bit of cash in and keep your team together?

8. Service Those Surviving Customers Like Nothing Else

There are still people with money. And you have a ton of excess capacity, both in staff and whatever else it is you do. Now is the time to throw in the free dessert, the room upgrade, the matching belt, something to thank them for being a lovely person and spending cash with you instead of wasting it on another half-pallet of toilet paper. Now is the time you can make them a customer for life.

9. Laying Off Staff

And now we get to the elephant in the room. How long can you hold onto your staff? It's an ugly question, but being in charge means facing up to ugly things.

If you just use this as an excuse to punt people to boost your executive bonus, which happens, you are scum and people know it.

If you have no revenue and no prospect of any revenue, you have to be realistic. No matter how much you say your people are your

greatest asset, no matter how much you love them as people, their long-term needs are not served by your business going under. Then they're all unemployed, and you're not going to be starting a new business any time soon.

You can start by seeing if they're OK about agreeing to a reduced number of days per week so everyone keeps their job. This is easier in smaller places. Some specific advice from Fair Work Australia on that here: <https://www.fairwork.gov.au/about-us/news-and-media-releases/website-news/coronavirus-and-australian-workplace-laws#let-employees-go-reduce-hours>

The other option is that you probably have people on your team who are a bit underperform-y. You might be keeping them because you can't find anyone better, or just because you are nice. If you make them redundant, it's tough but it will lift everyone else, because your good people can spot an underperformer quicker than you can.

I know it goes against the generally humane vibe of this blog, but when it's time, you have to act quickly. It's awful but people will survive and you don't destroy all you've built over years of personal sacrifice.

That's all I've got for now. Got to go and do more cash flow calls. Be careful out there. And lay off the pangolins for God's sake.

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NAS Steps Up

During this unprecedented time, NAS has extended their heartfelt thoughts to their valued friends. They fully appreciate that the current situation surrounding COVID-19 will continue to impact all businesses across our industry and wish to expand the services they provide you, to help where they can.

The below new initiatives and offers are available to the industry, effective now:



Warehouse

Free Advance Replacement on ALL NAS products for 12 months.

Should a NAS product fault within 12 months of purchase, to reduce the impact and time on site, all products purchased from NAS will now include advance replacement.

Free Product Configuration, Off-site Installation and Termination.

NAS is proud to represent a large range of products, which allows them to offer a complete turn-key solution for your installation requirements. Until further notice, NAS would like to offer you extended service on the following:

- Pre-loading racks with equipment goods purchased from NAS for installation
- Pre-terminating cables for specific installation requirements
- Pre-Configuring electronics products, such as DSPs & Wireless Systems

Contact sales@nas.solutions with your requirements.



Marketing

Free Custom Marketing Assistance for your business.

NAS's Internal Marketing Department are ready to assist you with any custom advertising or marketing requirements you may have including;

- Provide you with custom advertising artwork for web or print
- Provide you with marketing collateral for your website / webstore

Contact marketing@nas.solutions with your requirements.

Free Design Support for your installations.

Our Projects, Product Management and Integrated Systems Account Managers are available to provide you with design assistance for jobs of any size.

Contact sales@nas.solutions or your local NAS Representative with your requirements.

NAS Training Videos: Free Online Training and Webinars on NAS Distributed Products.

We are in the process of preparing training courses and materials, which will be made available to you in the coming weeks.

We also plan to host a range of live training webinars over the coming months, which will be starting soon.

We will continue to keep you updated on this new initiative as we prepare the content and sessions and times are available.

More than ever, NAS are here to assist wherever they can and thank you for your continued support in return.



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SHOW SUPPORT GO LATERAL

Show Support, the Australia-wide quality crewing company, has launched Megacrew, a budget version of Show Support, with the same management team, processes, and in many cases the same top crew. Supply and demand dictates the market, and crew can choose to work for either Show Support and Megacrew, depending on the circumstances.

Clients are feeling the pinch, so Show Support has created an emergency discount plan through Megacrew to keep their employees as busy as possible. This is the cheapest rate you are likely to find for crew and in this respect, companies can still maintain compliance and good service through these troubled times on a low budget. Megacrew is offering 'cost price' rates for labourers from \$32.50 per hour.

Whereas Show Support specialises in live performance work, Megacrew provides labour hire in any industry, especially Expo crew, but also warehousing, promotional staff, front of house staff, road traffic controllers, MR and Fork operators, and any general labourers.

This is an emergency measure to keep Show Support's operations active, provide clients inexpensive labour whilst safeguarding their compliance requirements, and provide industry crew regular work.

Megacrew is advertising vehicle hire, deliveries and storage space as potential services in cooperation with its partners and is expanding services into home office set ups and video conferencing installations.

Industry professionals keen to sign up should apply below as Show Support will prioritise them where possible.

crewgo.net/megacrew/recruit-signup.php

Call 1300 973 016 24/7 or email ops@showsupport.com.au

CrewGo – Personnel Management Platform

CrewGo is a complete HR package that can combine multiple softwares into one easy system and is used successfully by Show Support, Megacrew, many AV companies, and companies in other industries. It integrates perfectly with the widely-used RentalPoint inventory management software.

Companies could potentially save thousands per month by rolling everything into CrewGo and switching to cheaper providers that integrate with CrewGo such as MYOB AccountRight which handles large pay runs, balance sheets and invoicing for only \$109.00 per month.

The CrewGo Staff App enables crew to log in, check in and out, add multiple breaks, update availability, mark themselves On Call, see all their job details, and meet their employment obligations with ease.

The CrewGo App and Client Portal is where clients and project managers can see all of their bookings, headshots and details of their crew, give them star ratings, leave feedback on their service, upload a crew shot and approve or edit all timesheets of staff. Multiple staff can be signed in simultaneously, with breaks and finish times updated as the gig runs. Everything is accessible via the smartphone app and is vastly superior to paper timesheets. The rollout has been a real hit with Show Support's Crew Chiefs.

CrewGo Integrates with RentalPoint, MYOB, Xero, Keypay, VEVO (Working Rights Checks), ABN Lookup, Online Tax File Number Declarations, and more.

Work Health and Safety System

Immediately reduce costs by utilising the CrewGo WHS module included in your subscription. Mobile responsive Inductions, Safe Work Method Statements, Worksite Inspections, Incident Reports and Risk Assessments are pre-filled in each job for your staff and supervisors to complete easily as required. WHS forms are emailed to admin on completion and stored in Crew Profiles and the Forms Matrix.

For more info see <https://crewgo.co/>

Software Development

Whether you need a website, apps, ecommerce or your own platform to assist with working from home arrangements, get in touch today. Show Support have an extremely agile team of software developers who can get your job done under budget and fast.

They can also on-hire web and app developers to work directly with your team. Website landing pages from \$199 based on customer sketches and designs.

Please get in touch to discuss software development on 1300 973 016 or email sales@crewgo.co



‘GET PAID TO TRAIN’ PROPOSAL – HELP GET THIS UP!

On 18 March, the peak body ACETA (Australian Commercial and Entertainment Technologies Association), announced a proposal to lobby government to fund a ‘Get Paid to Train’ programme for Australian entertainment industry workers. In their words:

“Production crew, technicians and sole traders ‘Get Paid to Train’ proposal: think of this like Newstart Training. Manufacturers, distributors, service providers or any other capable party would provide free on-line

product or system training to those out of work. ACETA and other allied bodies will lobby government to provide direct payments to those who participate in the training program.

If successful, this proposal will assist our vital production crew, technicians and sole traders to increase skills, provide a potential pathway into other established and evolving career streams, whilst supporting them financially. “

If this programme can be established, it would provide much needed assistance to our sector in crisis, boost skills, and give dignity and purpose to thousands.

ACETA will need help to lobby, collate, and organise this programme. If you have training programmes or materials, make yourself known. To find out what you can do to help, please email info@aceta.org.au

Complicated Mixes: Where To Start, How To Finish - Part II

by Andy Stewart



Some of the greatest studio mixes on the planet took four hours to wrap up, but others took days – weeks, in some cases. Complicated mixes often involve a lot of screwdriver work, as well as the standard process of developing cool sounds that work harmoniously together. The extra workload of such a mix can sometimes wear you down until finally you run out of steam. But chances are your mix is not over the line yet. Here are a few more things to consider before you wrap.

Last issue I talked about the various ways to tackle complicated mixes – how to start them and how to wrap them up. We talked about starting positively, with an open mind, no preconceptions, and the self-confidence to tackle a song's many tasks in any order you choose. We then jumped to the end of the project, and talked about revealing the small details of musical performance that can often lie hidden just beneath the surface of a song's overall volume. Revealing these gems right at the last gasp can vastly improve a mix just when you thought you already had it nailed.

This issue I'd like to go into more detail about how to make mixes shine, stay vibrant and feel dynamic, particularly towards the end of the process, where things have often become crammed with instruments and effects, and flattened by compression and look-ahead limiting.

Despite what you might think – particularly if you look at your two-track output meters for guidance – there's still room to manoeuvre, and space for all those small details to have their moment in the sun.

The Tipping Point

Most mixes eventually reach a tipping point where things start to settle right down. Everything is sounding pretty impressive to both you and the other significant stakeholders involved, and what's coming out of the monitors feels more like a finished product than a work-in-progress. The music might have been laboured over for many hours at this point, sometimes even days, and there are fewer things left to address – if any. Barring a few small tweaks to EQs and vocal rides, it feels like maybe you're done!

So are we done?

Possibly... but if you're still playing the song over and over, looking for something to do, it might be because the song is sounding a little lifeless and boring... organised and balanced, sure, but lifeless and boring nonetheless. Has

something lost its vibe?

You might be tired, you might be sick of hearing the song, or the mix might just be what you think it is: great sounding, albeit a tad boring. It might be that all of these issues are converging on you at once: you're worn out, sick and tired, and just now realising that you're not over the line.

So now what? How do you get back up off the canvas to improve on something you've possibly been working on for days? An hour ago you thought you were finished; now you're not so sure.

Break Time

Now is the time to take a break. You need clarity here, and you won't find it by hitting 'play' yet again with no specific task in mind. Go out to dinner; kick a ball around... whatever it takes to properly disengage from this mix. Think about it, sure – just don't listen to it for a while.

When you eventually do sit back in the chair, (hopefully) refreshed and raring to go, you need to act fast and follow your instincts.

Back In The Chair

What you're trying to identify right now are those passages in the song that disengage your interest – any point where you feel like the song is just drifting along, and nothing is particularly 'speaking' to you. It could be a single bar here and there between vocal lines, instrumental passages or whole verses. These flat periods, be they short or long, should be more obvious to you now that you've had a break.

Somewhat perversely, your fatigue and hyper-familiarity with the song is now your greatest asset. It was the opposite at the beginning of the mix – knowing very little about the song was your strength back then! Now knowing too much somehow works to your advantage as well? How?

Because your fatigue with the song engenders in you a bored-witless response – you've heard it all before 500 times – which forces you to seek out new ways to provide the music with more entertaining features. That's a good thing because if the mix interests you after the 500th listen, chances are the new listener will be floored by it!

The good news is that there are numerous ways to add this fresh detail to your mix without upsetting the applecart. You don't

have to change things much to make a big difference at this point. You've done all the hard work; your sounds are all working beautifully. The main problem now is that they're all mostly just sitting there, waiting for that extra layer of orchestration, that extra push into the limelight.

Five Ways

There are countless technical ways to go about orchestrating this fresh layer of musical dynamics. Here are some of my favourites.

First and foremost, wherever I hear the music sounding static – i.e. not adding melodic licks, percussive hooks or harmonic detail etc – I stop the song right there, highlight the passage, and loop it with a bit of space either side. Then I ask myself: what is the musical arrangement doing at this point, and can I find something interesting amongst these performances that, with automation, I could poke out of the mix – something that's currently hidden just under the surface that will make the song more engaging?

Nine times out of 10, when I scrutinise the various performances in this way, I discover something about one or two of the instruments – a cool riff on the guitar, or a phrase on the Hammond etc – that I barely knew was there before. After all these hours with the song, a new discovery is made! It just goes to prove the point: listening to a song for days on end does not necessarily make you hyper aware of every aspect of the performances. You might know every compressor setting, but do you know every piece of the music? Probably not.

These musical moments don't have to be earth shattering either, especially if they're brief. They just need to add fine detail here and there to add interest – catch your ear momentarily to stop the mix sounding flat. This creates a sense of dynamic even though, from a technical standpoint at least, the song is as compressed as it was before.

Another technique is to highlight, in new ways, things that are already featured. By this I mean: can (for example) that cool guitar riff get a little louder in this passage; could that supportive second guitar drop in level by 2dB; could the riff pan slightly to the centre (or go wider); could the effects become more engaging with automation; could the instrument's EQ be pushed a little in the midrange perhaps with plug-in automation, rather than the whole

instrument just being turned up. Or can I do a bit of all of these things to bring the instrument into more detailed focus just for those eight bars? Absolutely, I can!

Do that 10 times in the song and it will be musically transformed, and twice as engaging.

And what about effects? If they're all sounding amazing, why does the mix still seem a little lifeless? Do the effects need to change at the point where you stopped the song? Could you not add four bars of heavy delay to the main vocal there, or pump up the one you've already got by say 10dB? Is the vocal delay shy in level only because certain words trigger a really cool response, while the rest sound terrible? If so, why not automate the send, or duplicate the vocal channel, chop it up so that only those words (or syllables) that sound cool through the delay trigger a response. That way you get more impact from the responses you do like, which allows you to be more emboldened with its use.

The options here are literally endless... you've just got to re-engage with your imagination and add a new layer of interest to your already very good sounding mix.

Next up, could the passage suffering from this musical malaise be transformed by widening

things a little? Maybe you could really 'pull open the curtain' with more effects here, or even use a widening plug-in on the mix bus. Particularly if it's a chorus, is the passage jumping out at you, or is it just floating statically out of the verse like a wet blanket? It might be that an instrument needs to be emboldened with a level push, or more effects, or a different EQ. It's even possible that the entire chorus needs to be turned up one or two dB. Try it and see. You might get a shock at how effective that simple manoeuvre is.

Another thing to scrutinise now are the song's various musical transitions. Like skateboarding, song transitions get you from one place to another – verse to chorus etc – with accelerated intent. These, by rights, should catapult you into the next passage of the music either subtly or overtly; they should rarely sit idle in your mix.

You can do this in many varied ways: with additional effects that target only these areas in particular (a big delay on the last vocal phrase of the verse perhaps?); with level rides of both instruments and their existing effects to push their impact (even if only for half a bar); with the addition of extra backwards elements of things like piano chords, percussion sounds or random noises – anything that might add tension and a heightened sense of anticipation to the transition; or even by cutting out some of the verse's last beats or effects – which can make the first downbeat of the chorus

have more apparent force. All these types of techniques also have the knock-on benefit of allowing you to turn up the whole chorus at the mix bus without it sounding stepped or clunky, by adding a sonic rush that propels you into the chorus with both volume and tension.

Conversely, if these areas in your mix are left static, limp and unremarkable, you can hit a chorus out of a verse without so much as a hint of acknowledgement from the mix itself – and that's a wasted opportunity. This can sometimes be an issue you fail to recognise for hours or even days during a mix session, while you've been justifiably hard at work on all the millions of other tasks at hand. That's okay; they're all done now. Now's the time for working on things like this – the fun stuff!

Go forth and make that mix shine! All your hard work sits poised ready to knock your socks off. Don't waste it! You'll be surprised how much things improve with that final inspirational push on your part. And from the client's perspective, you'll look like a magician – "...nothing has changed much, and yet somehow everything has! Incredible!"

Andy Stewart owns and operates The Mill on Victoria's Bass Coast. He's a highly credentialed producer/engineer who's seen it all in studios for the last three decades. He's happy to respond to any pleas for recording or mixing help... contact him at: andy@themill.net.au

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Chauvet's Ovation lighting and Adamson Systems impress at ToiToi

by Jenny Barrett

MDR Lighting and Intec Systems took out the opposition to win the opportunity to be involved in the high profile \$17.8 million upgrade of the prestigious Hawkes Bay Opera House, now known as ToiToi. On Saturday February 29, the theatre opened its doors, turning on its new full LED lighting rig and line array system to rapturous feedback from the local community.

The iconic 105-year-old category one historic Opera House building, along with its neighbouring category one Municipal Building, was closed in 2014 after it was deemed earthquake-prone. After extensive consultation with the local community, work on the multi-million dollar project began in August 2017.

Dane Fletcher, Technical Manager, has been ten years in his current role and involved with the arts and events centre as a casual member of staff since 2000. He was the only member of the technical team who stayed on following the closure and he led the procurement process for the sound and lighting, "We had retained all of the hard cabling, upgraded back in 2005, as it wasn't part of the scope of works but we were determined to move from tungsten to LED

fixtures, to cater to our clients' needs, to keep up with industry standards and to meet our commitment to sustainability."

The sound and lighting went out through the Government Electronic Tendering Service (GETS) and Dane was pleased with the response with eight submissions for lighting alone, "As far as lighting went, our decision to use MDR was very easy. Brodie could see what we wanted to achieve as a venue, and guided us on what would work."

Managing Director of MDR Lighting Brodie Noon recalls, "There was a thirty percent weighting on product support so I suspect that we won over other businesses because we could provide a comprehensive back up system and warranty. We are based centrally in Palmerston North, have a full-service

workshop with technicians on staff, and we hold large stocks of spare parts and have spare fittings if an urgent swap out is required mid-show."

Brodie proposed Chauvet Professional Ovation lighting, "Every single fitting has the same colour engines, so all your lighting matches, which is critical for theatre lighting. The technicians only have to create one colour palette and then they can roll it out across all the theatre fixtures regardless of the type." Brodie believes price was also a factor, "The Ovation series is very cost effective for what you get."

The Ovation series is proving a popular choice across New Zealand theatres, with MDR Lighting, the exclusive Chauvet distributor in New Zealand, recently supplying Chauvet Professional Ovation lighting to the new \$10 million Kāpiti Performing Arts Centre, to Te Auaha – NZ's Institute of Creativity, utilised by Whitireia and WelTec, Wellington's Polytechnics, and to Toi Whakaari, New Zealand's oldest drama school.

MDR Lighting's solution also included two very high power LED long throw follow spots, made by US company Strong lighting. With a 600W LED engine, they are a first for a New Zealand theatre, with most other suppliers not believing it was possible to provide an LED solution, "We are now at the stage that we can do a full LED theatre lighting rig with no dimmers required. The technology is here and proven, and the advantages are numerous,



notably a significant reduction in fixtures as a single fixture does so much more than a single traditional lamp fixture. The Maverick MK2 profile LED mover is a proven winner with theatres too with its fantastic variable CTO and framing shutters.”

The audio was also procured through GETS. Key requirements were a small format array offering even coverage and tonal consistency

across all seating areas, exceptional clarity for speech and a full range system with sufficient headroom for music around the 100db range, from a recognisable brand that was rider acceptable. Intec Systems won the contract with Adamson Systems. Dane expands, “We had already heard the Adamson line array at Bay Court Theatre in Tauranga and Napier Municipal Theatre and we liked the sleek

looking PA. We thought that it would fit in with the style of our theatre and it does hang perfectly.”

Mike Hughes, Managing Director of Intec Systems recalls, “Toitoti left things fairly open when it came to design, and we spent considerable time modelling the space to ensure the objectives were met. Having completed a number of installations with the

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Adamson IS product, we knew it was an ideal candidate for the job and set about designing the system.”

Intec Systems took a different approach, “With two steep balconies it quickly became clear that single array hangs would leave large areas shaded by overhangs. We split the array, with eight elements flown high to cover the two balcony areas, and four elements flown low to cover the stalls. The under balcony area in the stalls receives a subtle top up from some PC5 under balcony delays, and fill at the front of the stalls from IS7PXs and PC5s.”

Intec were responsible for a full ‘turn-key’ solution, from custom-engineered hanging brackets, motors and rigging, cabling, through to a bespoke control system, “We appreciate that venue techs want to get things done quickly so we added features to make the day-to-day operation of the system straightforward. Our controller enables single button push recall of amplifier data for different input locations and configurations, the ability to isolate the balconies, and a simple system to handle basic events without a mixing console and dedicated audio engineer.”

Dane is really pleased the outcome, “We are loving it. The theatre’s acoustics are amazing and the Adamson line array makes the most of it.”

Serving the Community

A key objective for the team at Toitoti is to become what has been coined ‘a fourth generation performing arts centre’, part of an international movement towards venues taking a more active role in arts and culture in the communities they serve. Steven A Wolff, CMC, Principal of AMS Planning & Research, an American arts management consultant, defines this as being, “A learning environment through which new experiences are generated and new knowledge is created that enhances cultural awareness, expression and understanding.”

The intention is that Toitoti’s new AV rig will provide not-for-profits and community organisations such as dance schools with the opportunity to take advantage of and learn how to use the latest technology. Dane and the team also have plans to undertake the new suite of Skills Active entertainment technology qualifications, and potentially become assessors themselves, “We already encourage Gateway students from our local colleges to come and train on the job, and we intend expanding those professional development opportunities across the community.”



KEY STATISTICS:

More than 500,000 hours spent, including engineering and architectural design, project management and construction

More than 100 tradies

620m2 carpet laid in the Opera House

5,900 litres of paint used in the Opera House and Functions on Hastings

163 tonnes of structural steel

37 tonnes of reinforcing steel

85 trucks of concrete

Toitoti has hired nine permanent staff and 32 casual event crew

660m2 new floor size in Functions on Hastings

Functions on Hastings has capacity for 500 guests theatre-style, 450 for dinner and 800 for cocktails.

Opera House capacity of 979 people, with a 240m2 stage

Cushing Foyer, 219m2, fits 80 people for theatre, 48 for banquet and 100 for cocktails.

THE GEAR:

100% LED powered lighting system

16 x Chauvet Professional Maverick Mk2 Moving Profiles

30 x Chauvet Professional Ovation F-915FC full colour LED fresnels

20 x Chauvet Professional Ovation E-910FC full colour led profiles with zoom lenses, 8 x Chauvet Professional Ovation B-1965FC High Power Cyc lights

16 x Chauvet Professional Ovation P-56FC full colour theatre pars and a Chauvet AMHAZE Whisper Hazer

2 x Strong Lighting iChip Mirage LT 600W LED follow spots

Adamson Systems IS-Series:

24 x IS7 line array elements

4 x IS118 subwoofers

6 x IS119 subwoofers

2 x IS7PX point source (infill)

10 x PC5 point source (front fill and under balcony delay)

Lab Gruppen D series amplification and processing

Yamaha MTX matrix processor





Blue Man Group's North American Tour in action. Photo credit: Evan Zimmerman

Blue Man Group Drums Up Excitement With L-ISA Hyperreal Sound

The singular, award-winning Blue Man Group has taken to the road, and is taking immersive sound along with it for the first time. The group's current North American Tour officially opened this past September at the Hollywood Pantages Theatre in Los Angeles, after developing the production at Fayetteville, Arkansas' Walton Arts Center. The Pantages show marked the first of more than 50 cities across the continent that will ultimately welcome the tour in its first season.

Showgoers will also experience L-ISA, L-Acoustics' remarkable immersive-sound technology—also an award winner—which Blue Man Group North American Tour Sound Designer Tony Pittsley says literally puts the audience onstage with the show's three ironically comic and palpably percussive performers. "With L-ISA, the sounds of the

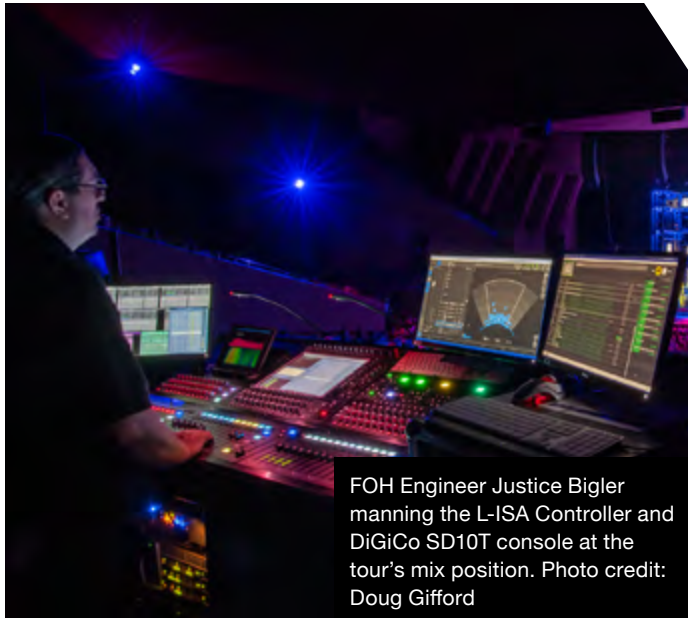
show can move around the stage and the room and appear to come from where they're supposed to originate from, which engages the audience way more deeply," he explains. "You don't feel as though you're sitting there watching a show as much as you're feeling enveloped by the experience."

With L-ISA, audio elements are now literal

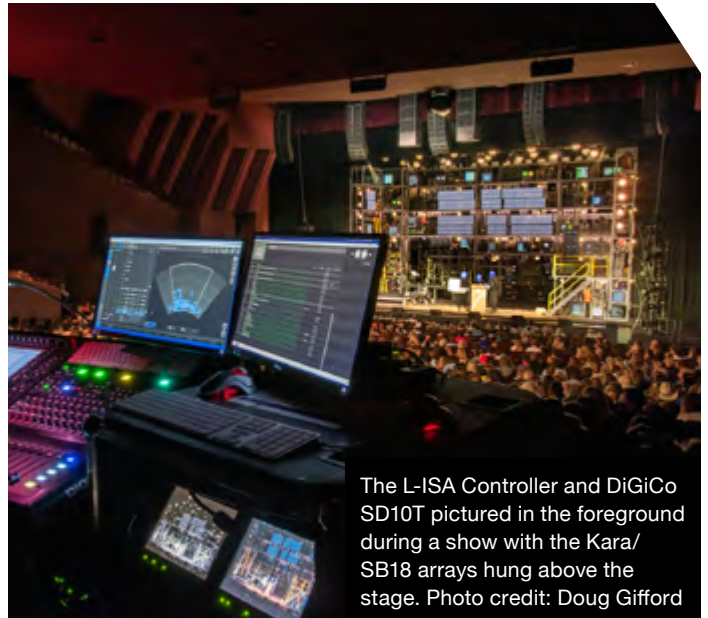
objects that can seamlessly move throughout the performance space along with the performers and the narrative. The L-ISA Controller provides key parameters for each object: Pan (horizontal location), Elevation (vertical location), Width (the size of an object), and Distance (perceived proximity and reverberation), and L-ISA can manage up to 96 objects and up to 64 physical speaker outputs at a sample rate of 96 kHz.

To bring this to life, L-ISA Immersive Hyperreal Sound utilises a specialized configuration of speakers in order to achieve precise localisation within three dimensions. For Blue Man Group's trek, the system comprises five hangs of ten Kara for the frontal system, with two hangs of four SB18 subs each deployed in cardioid configuration flanking the central Kara cluster, as well as eight X8 coaxials as frontfills, eight more X8 as underbalcony speakers, and four ARCS as outfills. Twelve LA4X amplified controllers power the main hangs and frontfills, while eight LA8 drive the underbalcony speakers and subs.

Pittsley, who programmed the L-ISA technology, says it's incredibly intuitive, and that that's what makes L-ISA such a pleasure



FOH Engineer Justice Bigler manning the L-ISA Controller and DiGiCo SD10T console at the tour's mix position. Photo credit: Doug Gifford



The L-ISA Controller and DiGiCo SD10T pictured in the foreground during a show with the Kara/SB18 arrays hung above the stage. Photo credit: Doug Gifford



Two of the eight X8 frontfills are visible on the stage lip in the background. Photo credit: Evan Zimmerman.

for both the engineers who operate it and the audiences who enjoy it. "With a typical left-right or left-centre-right PA system, if you move, say, a vocal slightly to the left of centre, you'll notice it move from speaker to speaker by the change in volume from one side to the other," he says. "With L-ISA, the sound isn't dependent on speaker location; it's moving around in the entire space. So it's connected to what's taking place onstage as that action moves, and not to the speakers."

Pittsley says that lets the mixer move any of Blue Man Group's percussion instruments not only right and left, but also up and down and forward and back. "So if the drums are in the right-hand corner of the rear of the stage, we can move the sound of the kick and snare upstage to exactly where they appear on

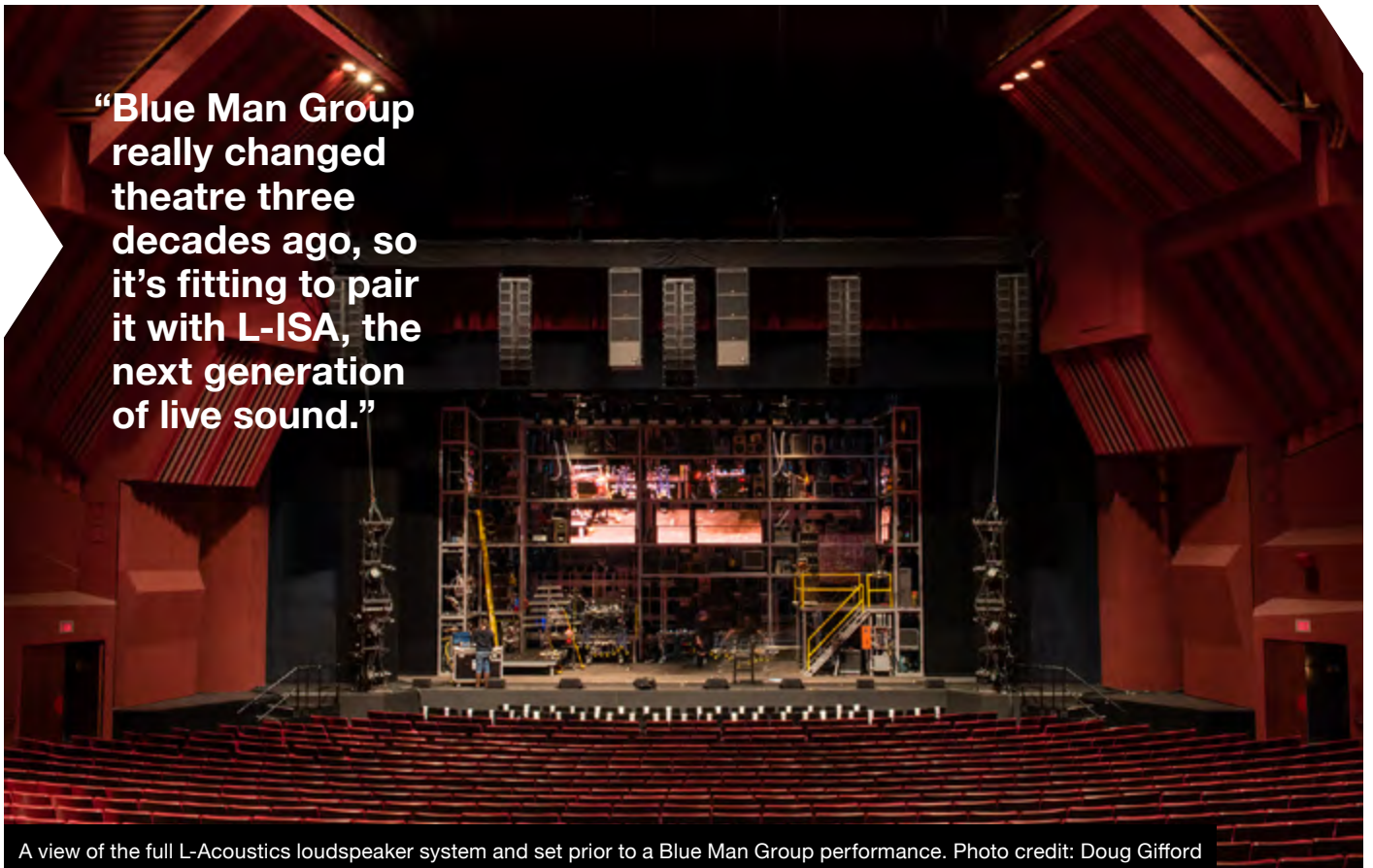
stage without changing their relative volume. I can walk through the house and the image holds together. This isn't traditional panning; this is a great leap forward from that."

The combination of the L-Acoustics Kara PA system and the DiGiCo SD10T mixing console creates a powerful and flexible ecosystem for the tour, one that can translate to any performance location. The show at Blue Man Group's original venue, Manhattan's Astor Place Theatre, where the group debuted in 1987 and where that production has been ever since, uses a DiGiCo SD12 console. Pittsley notes that the show's settings were able to be transferred from that desk to the touring SD10T seamlessly, adding another level of authenticity, something that touring versions of shows strive for.

This ecosystem also makes the mixers job easier. "The L-ISA Processor and the console can talk to each other via L-Acoustics DeskLink; for instance, they can exchange updates to the channel-structure process. And the L-ISA GUI is very representational, just like the SD10T screens, so they're all very intuitive to use. It all makes the entire process much more efficient."

The current tour is FOH Engineer Justice C. Bigler's first encounter with Blue Man Group, as well as his first encounter with L-ISA, and he was happily surprised at how quickly and easily he became familiar with both. "The L-ISA Controller is very well designed and I was able to set up quickly and become familiar with it while Tony and [Blue Man Group Sound Designer] Marcus Ross

“Blue Man Group really changed theatre three decades ago, so it’s fitting to pair it with L-ISA, the next generation of live sound.”



A view of the full L-Acoustics loudspeaker system and set prior to a Blue Man Group performance. Photo credit: Doug Gifford

were programming it,” recalls Bigler, who was previously head of audio for the Tulsa, Oklahoma Performing Arts Center. He says that L-ISA gives theatrical mixers a way of enhancing a stage narrative that they’d never had before.

“Blue Man Group shows don’t have any dialogue—the action tells the story,” he explains. “L-ISA lets me put the sounds where they need to be to reflect where that action is taking place. It lets me build a soundscape

that matches and complements the show itself, and put the audience in the sweet spot no matter where they’re sitting. And Kara is one of my favourite sound systems—easy to carry and rig—so they’re hearing great sound, too.”

The Blue Man Group North American Tour is a brand-new show, with mostly new music. The ability of L-ISA to interact with the SD10T console via L-Acoustics DeskLink and be a part the automated production being scripted

by QLab automation and SMPTE time code also helps to make it an inflection point in theatrical presentations. “This wasn’t a case of taking an immersive sound system and putting it on top of an existing show,” Bigler stresses. “The show was literally built with immersive sound and L-ISA in mind.”

Adds Pittsley, “Blue Man Group really changed theatre three decades ago, so it’s fitting to pair it with L-ISA, the next generation of live sound.”



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TOOL

by Cat Strom | Photo Credits: Ashley Mar

Tool is a band that doesn't do anything by half measures. It had been 13 years since their last album before they released *Fear Inoculum* in 2019, because it had to be just right. This perfection carries through to their shows where a top-class team of personnel has been with the band for many years.

I turned up at the second Sydney show where the band had decided that day to add a song that they have never performed before, a song that lasts 16 minutes. Consequently, the FOH design team of lighting designer Mark Jacobson, video director Breckinridge Haggerty and laser operator Scott Wilson were busy chasing that famous perfection.

Mark "Junior" Jacobson has been with Tool for 23 years since he became their LD at the start of the *Ænima* tour in 1996. The *Fear Inoculum* Tour came with a big surprise for him as suddenly, after all these years, lead singer Maynard James Keenan decided he did want to be lit after all. He'd spent the previous decades hiding in shadows, shunning the light.

Mark describes the lighting for Tool as traditionally murky with big moments. The show is a complicated merging of light, video, and lasers, like no other show I have seen.

In Australia, the majority of the lighting rig was from Chameleon including 24 Ayrton Perseo-S, 24 GLP JDC-1, 20 GLP X4 Bar20, 57 Ayrton MagicBlade FX, 13 Martin MAC Aura, 24 Robe Pointe and 36 MegaPointe. From Delicate in LA, the band toured 12 Ayrton MagicRing, 24 High End TurboRay, eight Ayrton Wildsun, and seven Ayrton MagicDot.

The Ayrton Perseo-S were substituted for the Khamsin fixtures Mark usually uses but are not yet available in Australia.

"They are very similar in feature sets, so it was an easy swap-out," he commented. "They are mostly used as back keys for the band members. I've used MagicBlades before as they create a great shaft of light that can be similar to a beam sneaking through window blinds, I suppose. They are also changeable in shape by using selective elements. The fact that there are seven elements is no coincidence as the band has used "7" as a recurring theme over the years."

Mark has been a fan of Ayrton products for several years but this tour is the first time he has incorporated Robe fixtures into his design. He has Pointes lining the downstage curtain track saying that there are other compact beam fixtures on the market, but the Pointes added features that others didn't have.

"I'd seen the MegaPointe at LDI a few years ago and felt they could add the punch and dominant beam needed in their roles," added Mark. "To be able to cut through everything else that is going on, we cue them in white light, often going over the band's heads."

For the front light, Mark used the good old Martin MAC Aura also using the 'Aura' feature in blue as a between-song work light.

"It creates a nice moonlight glow on stage - even from nearly 14 metres in the air - and isn't reliant on focus position or the setup cue to still do that job," he said. "The GLP JDC-1s have been on my (and most peoples) radar for a few years now. It's quirky but

quite impressive. I like that you can use it in a traditional strobe role and also as a big wash. Adding tilt to the picture just takes it over the top. We have some on the moving pods and also a row across the DS edge of the stage. They can be blinders and also serve as a solo upright for special moments. The X4 Bars replaced some of the Blades in places where they didn't need to pan and took up less of a footprint because of that."

The 12 aforementioned pods are automated to create a variety of lighting looks above the stage. Each has an Ayrton MagicRing R9, two TurboRays, and a JDC-1 strobe. They are all addressed identically and each occupies a DMX universe. The MagicRings take 256 channels, so each pod is approximately in the 400 channel range. The crew hangs them the same every day, but the pods are all interchangeable as long as they get plugged into the correct cable.

"I've always liked having a large format light that messes with your scale perception," explained Mark on his choice of the AyrtonRing R9 fixtures. "I think I first saw that with one of Steve Cohen's designs for Don Henley in the late '80s and further down the road with Syncrolite and such.

It's a modern take on that format and having individual control of the 61 elements gives you so many beam shapes. It's a goofy light, but so cool at the same time."

The *Fear Inoculum* Tour is the first arena tour to use the High End TurboRay, a fixture Mark had had his eye on since early 2019 when he first saw a demo of it.

"I'd not had any High End fixtures in a Tool rig for several years and had recently rekindled my relationship with them," he remarked. "The first automated lights Tool ever had in 1996 were CyberLights (and Vari*Lite VL5s), and we'd used a number of their fixtures over the years from StudioColors and StudioBeams to x.Spots, StudioCommands, ShowGuns, and ShowBeams."

This is the first tour that Mark used MDG hazers. Originally he had seen the purple Atmosphere range at some festivals and wanted to get those. Delicate Productions, their US vendor, suggested The One and he wasn't about to argue! Describing them as very versatile, Mark was delighted that Chameleon purchased a couple in preparation for the Australian tour.

Mark used his own MA Lighting MA3 at FOH although still running in MA2 mode.

"I was going to make a purchase and couldn't see any reason to buy an MA2," he said.

"The MA3 platform is going to add a lot to the game once it's ready. I'm looking forward to what it will become. We are running on 37 universes (about 18,000 MA parameters) over MA Net to the stage where NPUs and Nodes are distributing the signal. We carry a grandMA2 as a spare (and as a test console for the mornings before FOH is set up), and I have a rack-mounted PC at FOH running MA2 OnPC that serves as my immediate backup during the show."

Like his video and laser compatriots, Mark uses no timecode at all, as the band doesn't play to a click. As he doesn't have a bitstream to latch onto, he's responsible for making everything happen on time the old fashioned way. However having worked as part of the same team for many years, Mark says they can now anticipate each other and much of the show control between the three of them comes naturally.

Chameleon also supplied an Intercom Master, four Intercom Substation, 24 PDS 12 GPO Distribution, four Stagesmart Mains Distribution and eight DD8 Data Distribution, as well as truss, cables, and motors. Montreal's Show Distribution supplied 32 automation controls and motors.

"The Chameleon crew were great," Mark commented. "Great work ethic, as always. Our universal crew chief, Graham "Db" Jelly, is Australian and has done a lot of work with Chameleon, so he already knew all of them.

Over the years he had been the crew chief on nearly every Australian tour I'd done with Tool and several other bands (dating back to Jands and Bytecraft) and we made him our worldwide crew chief in the summer of 2019."

Video

Projection surfaces are a must for the design team and this tour, they came up with the idea of string curtain to envelop the band for the first few songs. A traveller track system provided by All Access wraps the stage in 270° of Rose Brand custom string curtain. With the curtain closed, but with the band illuminated, you can still see them playing behind what is projected on the string making for a unique effect.

Video Director Breckinridge Haggerty joined towards the middle of the *Ænima* tour in 1998. He describes the video concept as "a living backdrop and sometimes cocoon for the band".

The video content has been created over the last 25 years mostly by friends of the band. The music videos that Breck remixes live were all directed and produced by Adam Jones and friends. Adam was in the monster makeup business before Tool became successful, so the music videos were created by his friends from that world. The rest of the content comes from a few extremely talented artists such as Dominic Hailstone, Matthew Santoro, Meats Meier, and Camella Grace.

As well as the creative elements, Breck has developed new video technologies for Tool over the years. He is the owner/operator of all the video equipment at FOH at this point, developing various parts himself. This includes the new NEV9 Universal Controller that he's built with Bill Hewlett.

"I started working on ways to control video with a lighting desk in '99 which resulted in a serial control system called the NEV," he explained. "It made it possible to control existing broadcast-quality video equipment with DMX and a fixture profile - the same

methods as automated lighting. Nothing of the sort existed at the time. I knew what I wanted to do, and using real video equipment was the only way to see quality results. PCs and Macs weren't up to the task yet. The predecessors of the media server were strained to blend two 320x240 videos."

Last year, Breck needed to find a new media server platform and after researching his options, he decided to embark on a journey to build his own with the Derivative TouchDesigner toolset. The results are a platform called LUPO.

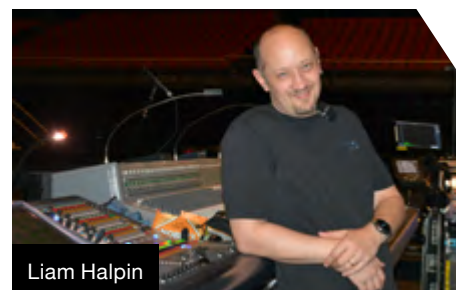
"To me, it's the greatest media server ever created," he said. "I didn't have to conform my way of working into someone else's idea of a media server. Its tailor-built for me and the show. My experience with TouchDesigner and the Derivative team has been very positive."

All of the video work is controlled with an MA2 lighting console that allows Breck to control the video in different styles depending on the song. Songs like Fear and Pneuma are cued out, meaning Breck runs through a sequential list of cues, so each moment of the song can be edited, stored, and then easily repeated each night. Other songs like Descending are more free-form across multiple handles where things might go different ways each time. Breck remarked that the MA2 console is a great video sequencer, allowing a blend of sequential and parallel operating styles.

For several years now, Australia's Big Picture has looked after the band's video needs including the rear LED wall of 750 x ROE MC7 panels in ACASS touring frames, eight Barco UDX 4k32 projectors with .4 lenses and two Panasonic AW-HE130 PTZ Camera with AW-RP50 remote.

The Brompton LED processing feature 'Dark Magic' enables Breck to maintain a balance in brightness on the LED wall between the lighting and curtain projection levels without getting banding and noticeable quality loss.

"There is a feature on the Brompton LED



Liam Halpin



Alan "Nobby" Hopkinson

processor called 'Dark Magic' which helps reduce the quality loss on the really low level and dark video content - which is most of the show," explained Nathan Barnier, Video Crew Chief and another Aussie on tour with the band. "In the past, you would have to run the LED wall at higher levels which would impact the lighting and our curtain projection, but with the feature turned on Breck can run the video at extremely low levels while maintaining a nice quality, smooth gradients and no noticeable video banding that would occur with other processors at low levels."

Audio

Sound engineer Alan "Nobby" Hopkinson, who has been with the band for 20 years, was using an audio system from Eighth Day Sound. In Australia, he had a d&b audiotechnik J-Series PA although elsewhere he has been using the newer GSL system.

"I'm loving using the J Series again," commented Nobby. "It has some nice characteristics that suit this band. It's a very loud rig, the new system is all about cancellation behind the rig so there's not so much noise pollution but this is plain loud, everywhere!"

It's a fairly standard arena rig with the main hangs 20 deep, 16 J8 and four J12, with the side hangs all made up of J8s, 16 boxes per side. A third hang of 12 V8s was used on each side even though they were not doing the full 270° wrap.

"Although we don't require the width of three hangs I decided the coverage would be improved by having a third hang to take a bit of the pressure off the side hangs," explained Liam Halpin, the band's system tech.

There were eight J-SUBs up in the air each side as well as 18 B22-SUBs on the floor in a distributed cardioid sub-array to give control with the low end. A pair of Y10Ps in the centre kept the most intense fans happy. Finally for fill, there were V10P and V7P point source cabinets.

"A lot of people tend to use line array and lip fills where you try to cover almost to the barrier with the actual hangs and then just pick up spot fills right across the front but I've never really liked it because from an imaging point of view it's quite distracting if you're stood four or five metres away from the barrier," added Liam. "If you're watching the band in front of you on stage but you're hearing it from above

you, it feels unnatural. By using the V10Ps and V7Ps on the corners of the stage, I've gone back to when we used to use point source clusters; you'd have a flown PA and a ground-stacked PA. Even with a standing show, they still manage to drag the image down so you feel like you're listening to a band rather than a PA."

The PA was driven by d&b D80s with the entire system Dante over a network that Liam designed. DS10 Audio network bridges were used to feed the AES signals into the amplifiers and the entire system was set up so that there was a main and a redundant drive system.

For this tour, Liam and Nobby introduced an overhead speaker system to add an extra dimension to the band's soundscapes.

"The problem I have with a more traditional surround sound system is how to deliver that experience to the people in the upper levels, bearing in mind we're running on a single day load-in schedule," commented Liam. "To try install surround speakers in those upper levels would just be completely impractical plus they would obstruct sightlines. The concept

I came up with was to do surround sound for the lower bowl with two hangs of d&b V-Series back-to-back almost in a U shape. These hang in traditional left-right surround hangs that fly in the lower bowl, toward the rear of the arena, and fire back toward the stage. To add the height dimension, we've got seven cabinets of d&b V-Series firing from the middle of the arena to cover the back half of the lower bowl to about where front-of-house is. Directly behind those, closer to the stage, is another hang, flown off two frames so that I can get a lot of down-tilt. That covers from the front edge of the stage to the middle of the arena."

Liam further explained that he then uses four d&b Y-Series (V-Series in Australia) to do an upper level fill. The two ceiling hangs are each flown off a single piece of truss, on the centre line, so he came up with the idea of having a side-firing hang flown from the same truss. Two more hangs on the back corners of the arena cover the rear section of the upper bowl and the section behind the surround hang.

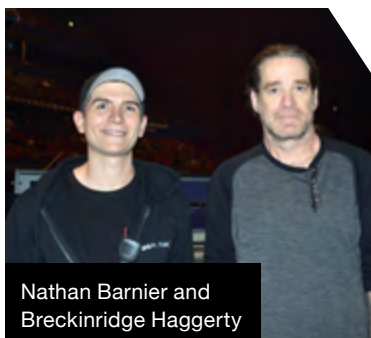
This "effects PA" is loosely based on the concept of Dolby Atmos which is a lot more prevalent in home theatre and cinema sound.

Liam uses a TiMax SoundHub to do the processing and the surround system is driven off a Midas Pro2.

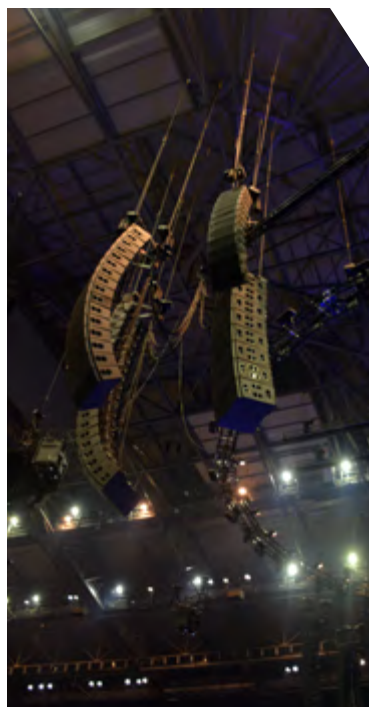
Nobby was mixing on a Midas XL4 saying he is lucky the band allows him to keep using one, happily shipping its heftiness all over the world.

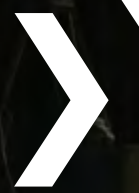
"In fact, we have two of them so they can be shipped around the world and take a while to arrive whilst the racks are air freighted," he clarified. "Tool is one of the last bands I do on an analogue console, we did try digital but it didn't suit them. So we stay with the 400 kilo lump of metal because, at the end of the day, it sounds good and is right for the band!"

Effects wise, Nobby had a TC Electronics 2290 as the main vocal delay with another for vocal modulation. A TC Helicon VoiceLive Rack does all the harmonising for Manyard's main vocals, a TC Electronic D-TWO delay was used primarily for slapback delay, a dbx Subharmonic Synthesizer adds that extra depth to the kick drum, a Leslie Effect Simulator is used as an effect on vocals for one of the songs, and a Klark Teknik Graphic Equaliser is across the left and right.



Nathan Barnier and Breckinridge Haggerty





SINDY CROW

by Toni McAllister

If there is a person in our industry that understands the need for giving and receiving support, it's Cindy Crow. Cindy, a freelance lighting designer, has had a challenging journey, starting her career as her assigned gender of male and having over the last three years transitioned to her true female gender. In an industry where it is all about who you know, re-making a name for yourself is no mean feat. But here is a woman who has come out the other side wanting to extend the support she has received to others. She wants to be the glue that holds us all together. Her positivity and attitude is nothing short of inspirational.

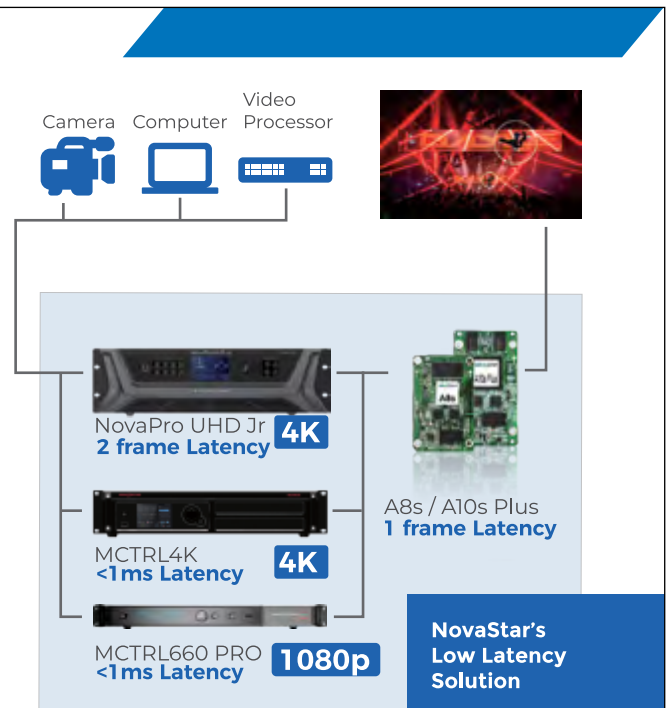
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MCTRL4K	<1ms latency	4096x2160@60Hz
MCTRL660 Pro	<1ms latency	1920x1200@60Hz

EXPERIENCE THE BEST



“Try to find that first person who is supportive, who you can talk to. That gives you an ally. They’ll help you follow your journey...”



How did you get your start in AV?

When I was 15 my friend was doing audio with a church group and that’s how I got my start. Then when they needed someone to do lighting, I jumped on to that. After school, I found a job at a company called Magnum Entertainment. I worked there for about nine months and met a guy who moved to Chameleon. He called me and offered me work. I started as a warehouse hand. I stayed with Chameleon all up around 10 years, mostly as a moving light tech.

Where did you learn your skills?

Chameleon were very focused on training so I went to courses at Jands and Show Tech and learnt how to do repairs. I learnt how to use consoles when I was getting stuff ready for shows. That’s where I got most of my hands-on experience to start with, hanging around, trying things out.

What was next for you?

I started to do more onsite work for Chameleon but was still running the moving light department. It got a bit too much. I couldn’t give 100% to either of the two jobs. I needed a bit of a change. So, I did a brief stint at Staging Connections (now Encore Event Technologies). I was there for about 18 months as a lighting tech and operator doing lots of corporate shows. From there I went to Bytecraft, which became PRG. Again I was running their moving lights department. They had a really good cross-section of regular shows; fashion week in Sydney, Defqon music festival, School Spectacular in Newcastle and Wollongong, plus some rock ‘n’ roll tours. I would do the occasional lighting design and operate for the support acts. This gave me more experience and got me more excited about moving from being a lamplie to more of a console operator and designer.

How did you go about finding more of that kind of work?

Back then you’d give your support act your business card. Ask around if anyone knew any work going. I’d email theatres looking for work.

Do you think that’s changed much?

Possibly a little bit. In the console operating and design world it seems to be more who you know than what you know. I know because it’s happened to me in the TV world more recently. Someone knew me and asked me if I wanted to do this one night in television and that just progressed onto more and more work. So I try to do the same thing for other people coming through. I put out on Facebook groups if I know of work coming up. I try to make those introductions.

You’re a big believer in paying it forward aren’t you?

Absolutely. Whenever young people are coming through I try my best to help them. I’ve known Jess from The Tech Sisters for years now. Recently I joined her group predominantly as a LGBT mentor and also as

a lighting mentor. It’s a good community that I’m proud to be part of. I want to be able to give back to other women in the industry, to people in the LGBT community. I’m not famous or anything. But people do know who I am. If I can help people get more work or their first job or support and empower them to go further - that’s really important to me.

Have you been embraced by the AV community?

On the whole, it feels like I have. It’s the other women in the industry that have been the most supportive. Every female I’ve met in the industry since I came out has just accepted me instantly as a woman. I don’t know if I’d still be around in the industry if I hadn’t had that sort of support. There’s not many of us. But I feel like the ones that we do have really try to stick together and look out for one another.

And how was the reaction from your employers after you transitioned?

I felt they were supportive. One of the people in the management team where I was working has a relative who is trans. That really helped because they knew what was going on and could explain it to other people in management that might not understand. I did find that there were some clients whose shows I didn’t end up being booked on anymore.

You’d made a name for yourself before transitioning, in an industry where it’s all about who you know. That must have been challenging.

Sure. But at the same time I’d rather re-make a name for who I really am than pretend to be someone who I was not any more. When I’d finally decided to come out it was sort of risking everything. I didn’t know how work, my colleagues, my family, and my partner at the time would react. It was a really big thing. But I got to that point in my life where I needed to be who I really am or there was no point in getting up in the morning.

Any advice for others making that transition?

Try to find that first person who is supportive, who you can talk to. That gives you an ally. They’ll help you follow your journey. Definitely go and seek out a counselor or psychologist, someone independent. That’s a big help. Yes, it will be hard. People will slip up but I’ve found that if I correct them, a lot of people will respect that. Surround yourself with friends and supportive people as best you can.

Women in AV are always promoting the concept that you can’t be what you can’t see. What are your thoughts on this?

It’s important to be as visible as you possibly can for other people. The difficulties that we have now won’t be as hard for the next generation. I was in the Mardi Gras this year and you’d see a young person off in the crowd with a Trans Pride flag and when they see the Trans Pride float this smile comes over them, they know that they’re not alone, that they can do whatever they want to do. It gives



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them hope. To be out there and visible for me is hopefully showing other women and LGBT people that we can do this job, this career and we can do it just as well as anyone else can.

Have you had a role model?

When I started out my boss and friend Luke who now lives in the UK, he was my technical mentor. He always gave me a chance and taught me stuff. He would encourage me to stay back after my shift and try things out. That's something I would encourage younger people coming through to do. If you want to learn something, definitely ask, stay back and whatever it takes try to work it out. Later on, a huge role model was Kerry Paff at PRG. She showed me how amazing, strong, talented and equal a woman could truly be in our industry.

The formal pathways into the AV industry are fairly limited. It's primarily an industry where a lot of skills are learnt on the job. Do you see more value in either path?

I think a bit of both. I think that the best training is on the job training. But I'm a bit old school like that. In the industry that we're in there is a lot of pressure to get stuff done on time every time. Doors are always at six. Whether you start at two in the morning or midday you've always got that deadline, which can be the best training for some people. I can see that there needs to be more training and pathways into the industry. Some people will do an entertainment course at high school, or they'll go to NIDA or WAAPA and then come into different parts of the industry and they struggle a bit, like "what do you mean we have to unload the truck?"

Have you seen any notable changes in the industry over the years?

From a lighting point of view the LED revolution has been massive. It's the way of the future. From a TV lighting perspective, as that's where my focus is at the moment. How to operate a console is becoming more and more important because everything is now LED. The old guys that just get there and push up single dimmers, that's on its way out.

Any advice for others wanting to keep up with these changes?

You can download the programs for a lot of the lighting consoles for free. You need to buy some bits to make it output DMX. But you can download MA2 and MA3 and you can play on your computer at home, you can program the entire show. You can visualise it and see what it should be doing. That's a great easy way to practice. Download as many different consoles as you can.

What would you say has been the highlight of your career, your proudest moment?

There have been so many shows... As painful as they were to put in, a lot of the Defqon festivals would be the highlight. They looked fantastic, you walked away and were on a high. They were so painful... but they are the ones I am really proud of. Also, the current season of Big Brother. We've just installed it, it hasn't aired yet. Putting that in melted my brain, but when we walked away after that first day of shooting and we saw what everything looked like, it was "wow, this looks so good, this has been worth it".

What is it that gives you a buzz working with lighting?

I like seeing the end product. When something has been difficult and you've had to think and plan your way through it and you come out the other side and you think "we did that". That's what drives me. Whether you were the designer, the operator, the dimmer tech, the lighting tech. Just to be able to go "look at what we did, that was worth all that heartache, sweat and stress".

If you weren't doing lighting what would you be doing?

Sleeping. That's something you don't get in this industry! Coffee is your friend.

Do you have a super power?

Trying to be that friendly and encouraging person. For me it's about building a team and a family - that's the super power I want to have. To be that person that glues everything and brings everybody together. You work crazy hours and there is a lot of hard physical work and hard mental work. If you're out there on your own it's almost impossible. But if you have your family with you, you can do anything. No matter what the chaos you always make doors at six because you and your family are there.

Any parting words?

For me it's important to be visible and open. You don't have to be open if you're not ready. From an LGBT point of view, never let anybody force you to be out and open, if you're not ready then you're not ready and that's fine. You just have to be happy and comfortable with yourself. If you're ready to let people know, then be out there, be visible, be proud.

TDC HELPS CELEBRATE TALENT

Every year for the past 36 years, the NSW Department of Education has presented The Schools Spectacular, and every year for the past nine years, TDC – Technical Direction Company – has provided the video technology and broadcast record support to deliver a spectacular entertainment event that lives in the memory of those who take part.

“Our role is to design, install, program and operate all video production for the project, such as LED screens, floor and stage mapped projection, broadcast cameras, media servers

and playback, real-time tracking and Notch generative content, in-room cast and crew monitoring systems, in-room IMAG cameras, CCTV systems, and OB facilities,” explains

Matt Teale, technical project manager at TDC.

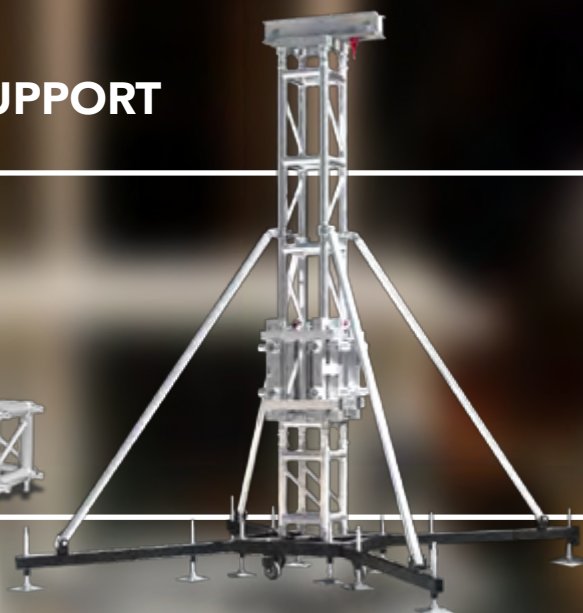
Based on the belief that every child has a talent that should be celebrated, The Schools Spectacular holds the Guinness World Record for ‘Largest Amateur Variety Act’ with over 5,500 performers including singers, dancers, drama performers, poets, aerialists and circus acts.

Challenging scale

The 2019 event took place at the Qudos Bank Arena. Originally built for the Sydney 2000 Olympic Games, it is ranked in the top ten arenas in the world and is the largest indoor entertainment and sporting arena in Australia. Capable of accommodating up to 21,000 visitors.

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“The scale of the performance and the venue meant that the layout of equipment was spread across a large distance, the main control was at front of house – while the server racks, IMAG control and LED systems were behind the main stage 150 metres away,” recalls Steve Cain, head engineer and media server specialist at TDC, “the OB truck was another 150 metres away. Then, there were more system racks 35 metres up in the air on the roof catwalks, and screens and cameras distributed throughout the venue.”

In response, TDC used its extensive fibre optic transport solutions, ranging from products such as Riedel MediorNet and MicroN frames, Arista Systems 4K solutions, Lightware point-to-point optical links, and a mesh array of Ubiquiti and Luminex nodes to deal with the 11 VPN networks needed to run the complex system.

“Each year we’ve supported The Schools Spectacular, we strive to make it even better than the previous year,” continues Steve, “and we managed it again. TDC provided BlackTrax real-time motion tracking and automation technology for the first time, which enabled us to use Notch generative content to track performers and set pieces. In addition, we deployed disguise media servers to run everything, which meant TDC were really able to have total control of all elements; all content was pixel accurate, which resulted in better image quality.”

Learn, grow

“At TDC, we try to learn and grow from every show we do,” he adds, “refining process, gaining more experience in using the gear in new ways, trying new things, and always trying to create efficiencies while delivering a superior result for our clients year on year along with offering our clients more options both from a creative point of view and in terms of the technical systems.”

He notes that TDC is able to take advantage of its purpose-built disguise previsualisation

studio where the entire show can be pre-programmed ahead of time, on this occasion allowing the NSW Department of Education Arts Unit executive producers to see a complete, detailed run-through and gain an understanding of how everything would work – even using 3D VR headsets to walk around the venue, and looking at sightlines from any seat in the arena. This allowed any changes to be made before going on-site – another first for TDC with The Schools Spectacular!

“Our client was absolutely over the moon with the improvements that we made with the systems, and especially in the preproduction side of the project, thanks to the disguise previsualisation capability that TDC delivered,” says Matt.

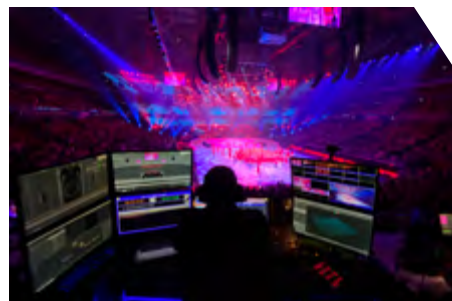
Moment to shine

For the show itself, TDC rigged 19 LED screens in a variety of positions – ground support, flown off-truss or attached to Kinesys moving motors that moved and changed location throughout the event.

Using an array of carefully positioned Barco UDX projectors, the entire arena floor, main stage and ramps was seamlessly blended and mapped or projected content. TDC supplied a standalone Sony HD camera and Grass Valley Kayak switcher for in-room IMAG, with keying in around 200 name titles as performers had their moment to shine.

In addition, an extensive CCTV system of monitors and PTZ cameras was put in place for conductors, choir masters, performers, producers and technical operators, all scattered around the venue.

Control of the show was provided by two d3 4x4pro and two gx2 servers from disguise, creating an enormously powerful total of 24 main server outputs and 24 backup server outputs. Also in use were BlackTrax real time tracking servers, cameras and beacons; Notch real time generative content; disguise OmniCal cameras; NAS drives; capture of HD-SDI



broadcast feed capture: audio in and out – all run from GrandMA 2 lighting consoles.

Each of the four shows of The Schools Spectacular was broadcast on prime time TV to an estimated one million viewers in Australia. This saw TDC provide its extensively equipped HD01 OB truck, into which video packages and graphics were fed by the disguise servers.

The theme for this year’s The Schools Spectacular was ‘Stars’, and this was reflected throughout the show’s design, with the lighting truss in the shape of a giant star, use of mirror balls, stars in the content of the screens, tracking shooting stars under performers’ feet and so on.

“Most importantly,” concludes Steve, “it was our responsibility to understand the producers’ dream to make the kids feel like superstars, giving them massive hero moments in the show. We think we helped them turn that dream into a reality.”

Project credits:

Technical solutions provider TDC – Technical Direction Company on design, install, program and operate all LED Screens, Floor and Stage Mapped Projection, Media Servers and playback, Realtime Tracking Technology, Content & Real Time Generative Content, Cast & Crew Monitoring systems & In room IMAG Cameras. TDC also provided Full Outside Broadcast facilities (OB) and Web Streaming solutions to Gravity Media.

Key TDC personnel:

Matthew Teale – Technical Project Manager

Steve Cain – Design, Media servers, Tracking, Content & Projection.

Isaac McKenzie – Lead Systems & In room IMAG Cameras & Monitoring

Pier Galetti & Adam Fiddler – LED Screen Systems

Hannah Anderson-Reid – OB Coordinator & Broadcast Production Manager



New York-based lighting design firm works with the fashion event agency Shades of Grey and creates a dynamic visual statement using Robe Lighting PATT 2013 and picklePATT luminaires

First run in 1943, New York Fashion Week (NYFW) is a semi-annual gathering of renowned and emerging fashion designers seeking to unveil their latest collections to buyers and media members from around the world. As a featured participant in the highly anticipated event, the Australian clothing brand ZIMMERMANN, led by designer Nicky Zimmermann, enlisted the assistance of fashion event agency Shades of Grey to create a guest experience that would leave a lasting impression. Held at SIR Stage37, the event production team wanted to implement a unique visual statement, so they worked with the multi-discipline design firm ENLUMEN who created a lighting design using Robe Lighting PATT 2013 and picklePATT luminaires supplied by 4Wall.

“The original design brief was to create a hanging sculpture of light in a gold room that enhanced and warmed the tones of the treated walls and custom carpet,” began Shawn Kaufman, ENLUMEN. “Over the years, ZIMMERMANN has really looked to evolve their show and create dynamic thoughtful designs that are cohesive environments, so

we didn’t want to create something that was derivative of what had been done in the past. We’ve often thought of using the PATT 2013 and picklePATT fixtures for other projects and we realized they would be perfect for this design due to the warmth of the light and their form-factor that would create a unique visual experience to enhance the show.”

Moving forward to realize the experiential lighting design for the February 2020 fashion showcase, Kaufman and the ENLUMEN team began by visualizing the layout of the space and where the fixtures might work best. Needing a hanging structure that would give them the impact desired, they worked with the scenic and fabrication team at New York-based SBI to execute a configurable rigging system.

“We first looked at hanging the fixtures above the audience as traditional house lights, but we felt that wouldn’t give us a strong enough statement,” continued Kaufman. “We ultimately decided to hang the fixtures on the back wall, so we worked with SBI to develop a Unistrut system that would allow us to adjust

or remove fixtures if needed once onsite. The PATT Series worked great in this system due to the large size of their yoke, which meant the lights would be perfectly perpendicular to the wall. Their light weight meant we didn’t need a tremendous amount of ballasting to physically support the design.”

Ready to bring the PATT 2013 and picklePATT luminaires into the design, Kaufman began to look for a lighting vendor who could supply the quantity desired. Knowing that there was no shortage of available rental houses within the New York City area, he wanted to make sure that the partner chosen would be able to stock the full number of luminaires themselves.

“We have a long-standing relationship with many of the suppliers in New York, but we chose 4Wall Entertainment specifically because of these fixtures,” admitted Kaufman. “We knew they had them in stock and having offices in many cities meant they could get us the 44 needed without having to source them from various different suppliers.”

The 750W PATT 2013 was the first in a series of Robe retro-style lighting fixtures designed to provide a warm, tungsten, eye-candy solution for stage, set and film lighting. The picklePATT luminaire is a compact addition to the classic, tungsten family, utilizing a 575W lamp to combine traditional aesthetics and modern-build quality.

“The PATT Series luminaires were essentially the hero on the project,” commented

Kaufman. “While we had lighting in the design to specifically illuminate the models, the PATT 2013 and picklePATT luminaires were used to emote and create the energy throughout the showcase.”

With showtime approaching, Kaufman worked with programmer Mo Epps to bring the design to life. Wanting to create a fully immersive lighting environment, the Robe retro-style luminaires would be called upon to implement a number of different and dynamic looks.

“When writing the cues and setting up the project, everyone was excited at the look of the lights in relation to how it complemented the overall design,” explained Kaufman. “As

we settled the house, we faded down to just the effect of the wall seemingly breathing in and out, which boosted the excitement, but gave the whole room a collective cleansing breath. We also used them as flashing charms, or jewels of light, as the music went to a more electronic theme. For the Finale, they acted as a graphic EQ, boosting the energy of the song before the parade of models, and then they became an audience blinder bank to welcome everyone back to the runway.”

Now wrapped, the 2020 NYFW and the ZIMMERMANN fashion showcase were a complete success. Looking back on the production design and the reaction of those

in attendance, Kaufman couldn’t be happier with the visual experience created and the performance of the Robe Lighting PATT Series luminaires.

“The warmth and colour temperature of the reflector and the open face created the perfect feel and colour in relation to the set,” concluded Kaufman. “The housing created a nautical and bespoke feel where many asked if these were custom fixtures that we had made specifically for the event, and the fashion design team commented that the lighting was exactly how the show was meant to be lit. We can’t think of a more perfect compliment.”



ZIMMERMANN F20 Fashion Show Credits:

Fashion Designer: Nicky Zimmermann	Syma Birenbaum Associate Designer
Event Producer: Shades of Grey	Scott Carpenter Master Electrician and systems consultant
Creative Director: Michelle Jank	Mo Epps Programmer
ENLUMEN Team:	Lighting Supplier: 4Wall Entertainment
Shawn Kaufman: Lead designer for ZIMMERMANN	Scenic Supplier: SBI
Pamela Kupper: Partner, ENLUMEN	Audio Supplier: ADI

CLEARING UP THE FOG

What's the difference between a Haze, Faze and Fog Machine?

We all know fog and haze are crucial atmospheric effects used in a wide range of entertainment lighting shows to enhance the effects of lighting. So what is the difference between them all?

Traditionally, liquid based atmospheric effects were limited to fog or smoke machines which ran on glycol-based fluid to produce a foggy to smokey atmosphere. The term "smoke machine" has been phased out to eliminate people's concern of the term "smoke". Today, more commonly we hear the terms Hazer and Fogger machines. Fog machines seem more common as they are relatively inexpensive.

Of late, there has been a proliferation of machines called haze machines that actually run on glycol-based fog fluid to produce a similar effect to traditional compressor-based haze machines. Unfortunately, this has led to confusion and some very expensive mistakes

due to users putting the wrong fluids into the machine.

The term Faze machine was originally coined by Antari, a company who has been manufacturing quality special effect products since 1984. It describes a machine that uses glycol-based fog fluid to produce a similar effect to a compressor based haze machine. The machine employs the same principle of a fog machine, using a heater element to heat up the fluid and vapourise it, but also uses a fan or fans to allow the fog to be dispersed more like haze. The density of the mist that a faze machine produces is less than that of a fog machine but more dense than the

haze output from a compressor-based haze machine.

So, what's the difference between a fog, faze and haze machine?

Simply, fog and faze machines run on fog fluid and use a heating element to turn the fluid into fog. Having a heating element means machines generally have a heating time of around five minutes or more before they can be used. Some machines may require time to warm up again after use which can be a problem in professional applications. Machines built for the professional market tend to overcome the issue of reheating by managing the heating and flow of fluid to produce either a constant flow of fog or fog on-demand at all times. The main advantage of fog machines is the ability to produce short sharp bursts, or long bursts of fog that can quickly fill a space. Fog machines create a heavier denser fog compared to a light haze. Think "foggy morning when you can't see further than what's in front of your hand."

Are you concerned about your mate's mental health?

FACT: Most Australian tech crew and roadies have attempted or considered suicide¹!

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www.entertainmentassist.org.au

Supporting the mental health of Australian entertainment industry workers

¹Passion, Pride, Pitfalls Dec 2014

HOW TO

Every manufacturer tells you to only use their fluid in their branded machines, and never to mix or use fluids from other manufacturers or brands. There is a very good reason for this, and it isn't just to keep on selling you their consumables after the purchase of their machine. Different fog machines are made to different specifications, and as such, the fluid each manufacturer makes is tailored to the machines they produce. Specific fluid formulas require a specific temperature range to optimise the vapourised output the machine produces. Using fluid optimised to a different machine can result in incomplete vaporisation and result in wet fog where unvapourised fluid remains. This is not only detrimental to the machine but can be downright dangerous leaving slippery wet residue on grounds or in the worst case the machine ejecting boiling hot liquid with the risk of coming into contact with people causing severe burns.

A compressor-based haze machine uses oil-based or water-based haze fluid which is broken up into small particles using a compressor which then exit the machine usually through a filter to keep the particles small. The major advantage over a fog machine is the fact there is no warm-up time meaning haze can be instantly produced at any time. However, to fill a large space, the hazer would have to be turned on early to create the desired effect. You may also find in the specifications for a haze machine, that it will refer to an air pressure figure which is an indication of the power or output of the machine.

The thickness of fog is due to its particle size. Particle size of fog is relatively large compared to other molecules in the air which



Fog and haze fluids

is why the effect appears more like a fog or smoke. With haze, the particles are much smaller. As a result, haze can be difficult to see until light shines through it. For this reason, haze is the preferred choice for theatrical applications as it does not obscure performers, yet it allows the effects of lighting to be enhanced. The smaller the particle, the less visible to the eye the effect is without light, and then more dramatic as the light beam shines through.

Next comes the question of oil and water-based haze fluid for compressor-based haze machines. Yes, compressor-based haze machines can use either, however once you use oil-based fluid in a compressor based hazer, the unit will always have oil residue in its tank. Therefore, it would not be advisable to switch to water-based fluid after using oil-based fluid. If you use water-based haze fluid at the first, then chose to switch to oil based, it will not be as much of a problem, however manufacturers including Antari generally recommend against switching fluids.

So, why do people use water-based fluid over oil and vice versa? Firstly, due to preference, but most commonly, some venues have certain rules about oil-based fluids so they have no choice but to use water-based haze fluid or foggers and hazers. Sadly though,

the water-based fluid does create a different looking haze and provide a lower volume of mist based on the same amount of oil-based haze fluid. Oil-based haze fluid has a longer hang time but can, over time, leave residue around a venue and on equipment, which depending on the amount of use can be an issue. If at a venue or event where there is an orchestra using wind instruments, oil-based haze fluid cannot be used as oil-based particles in the air can cause wind instruments not to work properly. In this case, water-based fluid would need to be used.

Here's where the problem and confusion lies: there are machines on the market that are called haze machines that use heater blocks like fog machines and therefore require glycol-based fluid to create the effect, as opposed to mineral oil or water-based fluid that compressor-based haze machines use. When purchasing a machine, or using one for a production or event, it is imperative to know which fluid will be required.

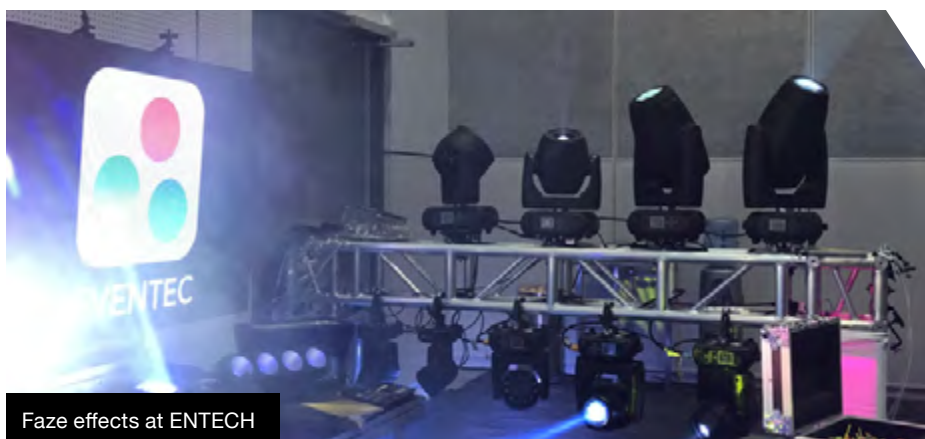
If the machine has a warm-up time, then it is most likely to use fog fluid, regardless of what the manufacturer calls the machine. If there is no warm-up time, its most likely a haze machine that requires haze fluid. Fog machines run on a variety of fog fluids, depending on how dense the fog effect is required and how quickly the fluid is needed to dissipate. A fast dissipating fluid like Antari's FLC fluid can be used to simulate the CO2 effect and dissipate quickly, while heavy denser fluid can be used to maintain a thicker cloud that will take a while to dissipate like Antari's FLR or FLG Fluids.

Mineral oil or water-based haze fluids are not interchangeable with glycol-based fog fluids. Haze fluid cannot be used in a fog or faze machine and fog fluid cannot be used in a haze machine. Use of incorrect fluids will damage machines and either void the manufacturers' warranty or result in an expensive repair bill. Using fog fluid that is not specified for your fog machine can cause major health risks. EVENTEC, exclusive distributor of Antari, describe a particular risk between propylene and glycol on their website at <https://event-lighting.com.au/blogs/hands-on/fog-liquids>.

Antari have a wide range of fluids and make it clear which fluids are for what machines in their specifications. Other manufacturers may do so, but be wary of the use of the word "haze machine" when it is actually describing a "faze machine" which produces haze like effect but uses fog fluid.



Haze effects at show



Faze effects at ENTECH

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.



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These New Puritans Create Cinematic Lightscape With Satore Studio

The art rock band's latest live project again enlisted Tupac Martir as Production Designer and Satore Studio for lighting, visuals, real-time content and re-edits.

Satore Studio is an international, multi-disciplinary creative studio with offices in London, Paris and New York. In collaboration with experts ranging from artists to architects, the studio uses its expertise in storytelling, lighting and technology to take projects from concept to activation. The studio is led by creative director Tupac Martir. Satore Tech is the Studio's sister venture, with offices in London and Paris. Its remit is to develop and deliver technology-led solutions to bring creative ideas to life for clients in the commercial and cultural spaces. The division also bolsters Satore Studio's focus on research and development into emerging technologies in order to maintain its competitive advantage.

In support of the sister release to 2019's LP *Inside The Rose*, February saw the digital unveiling of These New Puritans' (TNP) 19-track album, *The Cut (2016-2019)*. Made up of new songs, orchestral interludes, reworkings and remixes of past material, the tracks were brought to life on stage with a captivating production design.

After six weeks of preparation, the band played London's Barbican Centre, a venue chosen for its "brutality" according to the

band's drummer and Creative Director, George Barnett. In partnership with twin brother Jack, the electronic experimentalists have already enjoyed a decade of working with Satore Studio Founder, Martir.

Martir says: "George came to us with some ideas of what he wanted the show to look like. TNP are known for making incredibly beautiful videos and he wanted to bring that aesthetic to this live show.

"Video was very important in this instance. All of TNP previous shows have been primarily based around light, so we wanted to add an element of video yet not rely on it as a constant throughout the performance and allow the visuals to differ in style. The combination of pre-recorded material, visuals created in Unreal and TouchDesigner, and an intrinsic lightshow gave us the final looks desired.

"The content is made up of work by many directors," explained Martir. "All from previous music videos or content that the band has commissioned."

Satore also created a lot of content in-house for this show. "There was some trial and error in making sure that the visuals represented

the right feeling and combination of lighting."

Barnett describes the band's live ideal as "a perfectly unified band containing all extremes of our sound, and the fullest extension of TNP imagery."

He also spoke about the use of technology in such an art-led performance environment: "It enhances it, and in this case, was necessary. However, there must be threads that guide the use of technologies and techniques.

"Tupac's the best - he has a great way of zooming out, directing and guiding vision - adding massively to the conceptuality and structure of the show, both in a passionate and a meticulous way. He has a beautiful sense of modesty with lighting, leaving space and stillness where necessary and then absolutely blowing things apart. It's very rare, and I'm lucky to find someone like Tupac to work with."

Operating on an MA Lighting grandMA2 and using an array of fixtures including Robe Robin Pointes, Claypaky A.leda B-Eye K10s, Claypaky Stormy CC white LEDs, generic PAR 64 parcans, GLP impression X4 Bar 20s and Pulsar ChromaBank Mk2s was Satore Studio Event Lighting Director, Muly Yechezkel.

"Muly did a terrific job with our lighting," noted Barnett.

White Light supplemented Satore's tech rider alongside the Barbican's house lighting.

For video content control, freelance engineer Benjamin Gittos used a disguise gx 2



media server which took a live feed from Kinect Azure cameras and fed it into both TouchDesigner and Unreal Engine interactive controllers. The images were then projected onto three screens. Programming was achieved via Kinect V2.

Further bespoke video servers - made in-house at Satore - were also utilised.

Barnett continued: "Working with Satore Studio was wonderful; they have a very imaginative team. We tried a lot of different ideas, pursued what worked and really honed everything in a way we haven't before.

"Alex Leyva, a brilliant producer at Satore, is sharp, methodical and understanding; she understood our vision straight away,

making the most out of any avenue we could, maximising and perfecting what was possible.

"Having a crew that is invested is vital, there is no room for half measures in these projects. Combining and bringing together all these artists for one performance was a real undertaking - and the results felt good!"

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Compact Lighting Console

CHAMSYS MAGICQ MQ70

by Matt King



Shapeshifter were planning a New Year's Eve / Summer tour with a run of shows that went from one end of the country to the other and back. I have been LD for the band for the last 13 or so years and we have been hiring consoles for every show. Over that time, we must have paid enough to buy many consoles outright. The band has slowly been investing in gear that is critical for our production such as in-ear monitors and a monitor console, so the purchasing of a lighting console wasn't out of the question. This tour was the perfect time to save money on rental and invest.

I wanted something that would be stable as backup consoles in NZ are rare. We also wanted a console that was in the right price range as I knew the band were unlikely to

pay for a full-sized console such as a Hog4 or MA3. The ChamSys MQ70 was absolutely the best value for money, professional quality console on the market.

Why ChamSys?

I have been a strong advocate for ChamSys consoles for the last seven or so years. I first came into contact with the platform at a large festival in the UK that we were playing at. Every stage was running a ChamSys and the owner/founder of the company was onsite. I was a Hog user previous to this time and I was super impressed with everything I saw and thought this is something that I could happily get used to.

When I came back to NZ, I hunted high and low for anything ChamSys based. I managed to find a Maxiwing for sale and talked a colleague into buying it for next to nothing. I purchased a touchscreen laptop and that was my setup for a couple of years.

I later managed to talk the company I was working for into buying a demo MQ100 Pro from ULA Group and then went on to find a MQ100 Expert and purchased that as well. At that time, I had all the ChamSys consoles in New Zealand that I knew of. I later managed to hire a MQ80 when we were last in London and, although it was nice and compact, I felt that it slightly missed the mark with the button positions and ALT navigation with the button



Matt King is a long-term LD based in Auckland with plenty of world touring experience. Between tours, he spends his time working as Service and Repairs Manager for NZ with Oceania Productions. Matt recently finished yet another outing in his long tenure with ShapeShifter and used the MagicQ MQ70 console.

The Specs

Universes supported: 24, expandable to 48

Channels: 12288, expandable to 24576

Number of fixtures:

Up to 12288, expandable to 24576

Cues: 5000

Groups: 5000

Display: 10.1"

Console Display: 10" Multi touch display

External Monitor:

HDMI - supports touch screens

DMX 5-Pin XLR: 4

RDM Support, MIDI, LTC in,

Remote input port

Faders: 12, illuminated

Attribute encoders: 8, illuminated

Network ports: 3

USB ports: 5

Inbuilt WIFI

Width: 525mm, Depth: 350mm,

Height: 60mm, Weight: 7kg

without everything coming in at 100%. It's all super easy and a great FX engine.

I really like the ease of cloning and merging fixtures. Also, you can get any old showfile and run it on any ChamSys and it will be reasonably close. Being able to adapt on tour as the rig changes is great.

I like the ChamSys approach and Garth and Sean of ULA Group NZ were both great to deal with. Sean went above and beyond, managing to get me the safety documents on New Year's Eve, getting it straight from ChamSys UK, and keeping our show on.

I cannot wait for our next run of shows to get out there again and see what else it can do.

Product Info:

chamsyslighting.com/products/mq70

Distributor Australia and New Zealand:
www.ulagroup.com/

menu. The layout on the MQ70 is great and once you get used to the flow, it just seems natural.

Compact Size

Size and weight of the console was massively important for us as we fly with all our backline - all up about 2.5 ton. Any reduction in weight obviously saves us money with the airlines. The MQ70 unfortunately still has a Sealed Lead Acid battery built in for its UPS feature which shows up in X-rays and can be a hassle to get through security without the Battery Manufacturer's Safety Documents. But it is small and light compared to other options. I'm not sure that it would actually get on any planes as hand luggage as it is well over 10kg in its case.

Workflow / Visualisation

I like to use one long cue list per song. I build a show pre-tour and then modify it for each rig and venue. I set it all up in the inbuilt ChamSys visualiser. I have WYSIWYG as well but it's easier to just chuck it in ChamSys. It's also easy to just throw more fixtures in to match whatever I find onsite and the fixture library is huge. Just last weekend, I copped a rig with 40 Chinese Par cans and boom, they

popped up in the system on the first search.

For me, it's best to use one base showfile and modify it to suit each venue and rig. With Shapeshifter, I don't use any time code and keep it all on the fly. A few mistakes in there and it feels natural.

I'm used to just having 10 faders by now. There are no big screens, so I can't have lots of windows open but it works for me. On this last tour, after a software update fixed bugs and added features, it was rock solid.

Favourite Features

One new feature that I used was the remote app on my phone to do focus position palettes via the console's built in WiFi. The ability to connect to the visualiser software running my laptop via a single Ethernet cable with no need for a network switch also made it easy for pre-programming in hotel rooms and even blind programming during support acts.

It's easy to change user settings on the MQ70 and it's very customisable. They are always adding new features. You can set up macros to change layouts to exactly how you want it. The inbuilt effects are so good, just bang them in on the fly. They seem to start well too,



dB Technologies B-Hype 12

by Joe Kovac

Our inventory was getting stretched and we wanted to find a cheap and reliable portable speaker. I was willing to give the B-Hypes a go, so NAS's Garry Farmer brought down some demo units for us to check out. I was very impressed with the sound and price-point. We replaced our mixed bag of PA speakers on the spot and happily ended up with 12 of the B-Hype 12s.

We've been putting them through their paces ever since and they've been doing really well. They go out two or three times a weekend and we haven't had any problems or faults. For the price, they sound great. We can send one or two out with solo or duo acts and it's all they need. Add a sub for DJ gigs and it is "party, sorted."

Selection Criteria

There are a lot of lightweight 12 and horn portable speakers on the market and when we were researching, we looked at three things: Number 1 – we wanted sleek design. Number 2 – sound is important. Does it sound good for a plastic powered box? And, number 3 – simplicity and ease of use. The B-Hypes are a big winner on all three.

Tonality

Compared to other brands, these have a nice flat response. The 'boost' preset does give a vibrant low and high as well. They're not harsh like some portable loudspeakers can be. There's no need for EQ or fancy settings on a hire item that goes out a lot.

Connectivity

On the back - one XLR in, one XLR out and the 'boost' preset button - that's it, you can't go wrong. All the Bluetooth, RCA, jack inputs and EQs or DSP screens on other boxes can be confusing for non-technical users. The simple controls of the B-Hypes suit our market well. The DSP Preset button gives bit of a bass boost and brings back the mids a

little bit, giving the box a bit more high and bass. We set it 'on' before the units go out for some jobs.

Monitor Profile, Handling

As a stage monitor, they're great. We can move them around the stage with one finger. A while back, we compared them with some wooden wedges and they stacked up OK. For a small size stage, these 12s do fine. At less than 14kg they are very lightweight. Anyone can grab them – perfect for driveway hire. Having three handles makes handling easy, especially when carrying two at once. I like being able to carry them in 'portrait mode' (from the top)!

Reliability

We've had them running six months and they are all still in pretty good nick. No cracks, dints or anything. They are made of pretty hard plastic and we bought the optional TC-BH12 transport bags, which keep it all looking neat.

Support

We've been a client of NAS for a while now and their support is always above standard. Not that we have needed any help while these speakers have been working hard and keeping us busy!

Conclusion

The B-Hype 12 might be a basic box, but they are a great all-rounder and have seen an excellent return on investment for us. They sound good, keep looking good, are easy to handle, and easy to use.

Product Info: www.dbtechnologies.com/en/products/b-hype/b-hype-12/

Distributor Australia: nas.solutions

Distributor New Zealand: directimports.co.nz

Joe Kovac grew up with a family of DJs and musos on his father's side of the family, and hospitality and catering on his mother's. At age 10, he started going to gigs with his father, and learnt his trade on the job. At 13, he started Geelong, Victoria's JJK Entertainment, and began to DJ in the community. From 2009 his business grew, and over time, more gear was needed. JJK started hiring out gear, steadily expanding into bigger productions. Stock has now grown to include LED screens, lighting, and PA.

The Specs

Frequency Response [-6 dB]:
61 - 19,500 Hz

Max SPL: 126 dB

1" HF Compression Driver
and 12" LF

Horizontal Dispersion:
asymmetrical 85° up / 120°down

Vertical Dispersion: 85° (+25/ -60°)

Amp Class D, Power Peak 400 W

DSP 28/56 bit- 48 kHz

Signal Input Balanced 1xCombo IN (MIC/
LINE)

Signal Out Balanced 1xXLR (LINK)

Width 350 mm
Height 645 mm
Depth 330 mm

Weight 13.9 kg

ALL IS QUIET ON NEW YEAR'S DAY? NOT IF I CAN HELP IT, BONO.

by Duncan Fry

Last November I got a phone call from long-time friend and ex-roadie Jim Laing. We used to drive around in a succession of beaten up trucks, supplying PA systems for mostly ungrateful wanna-be pop stars up and down the Eastern seaboard.

Jim had recently come back from ten years living in Brisbane and was working as an occasional two-man quartet along with his brother Ritchie.

"Hey Dunk," he said, "It's Jim. 'Ol' Lizard Eyes' is back. How's the Duncan Disorderly Experience going? Got anything on for New Year's Eve? Wanna do a gig with us? Ritchie's organised a New Year's Eve gig at the Phillip

Island golf club. We're looking for someone who can warm up the audience, play some music and join in the fun during the night. So naturally we thought of you ... er, actually no-one else answered their phone!"

Well, how could I refuse an offer like that? "Thanks Jim - Let me just check my diary." I reached over and opened it up, and a family

of moths fluttered out. I looked at the date - Ah, my 1991 diary - same year as daughter Fifi Trixibelle was born.***

Still, down to business, and the pertinent details for support band arrangements. "What about the money?" I asked. He told me. "Jeez that's a lot," I replied; "You'll have to give me some time to come up with that much!" "No, you idiot, we pay you," he laughed. "Do I have to supply a PA? Do I have to load in? Or out?" "No, we've got all that. Just bring your guitar, an amp, and your laptop, and we'll plug it into the system. What could possibly go wrong?" he added optimistically.

He rang me back five minutes later "Oh, you could bring some lights if you've got any."

Woohoo - time to bring my Par 43 cans back into action. Keen readers of this page (who they? Ed) would recall that they were made from

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Older people would tend to say “Yes, but what about your real job?” the implication being that working 24 hour days and nights somehow wasn’t a real job.

Nescafe 43 cans fitted with mini fluoro globes (43 beams in every can!), and the whole rig would run happily off a standard wall socket.

I had replaced them some years ago with LED Parcans that ran all by themselves giving a slow, colour change chase, which would wash the stage nicely, but the 43s could light up the front line of mics as well, giving the impression of a mega light show.

Over Christmas I did a shakedown gig at a Christmas party, and set up outside as it was such a nice sunny day. Oops. Too sunny. So sunny that I couldn't see anything on the touchscreen of my Microsoft Surface Pro 4. Hmm - can't see the screen, can't pull up the next backing track!

Still, when the going gets tough, the tough head to the bar! I asked the hostess if she could lend me an umbrella, and then my gf sat underneath it with the laptop. It still made little or no difference though. I opened up the gig tracks folder in Explorer, then she stepped through the files one by one by pressing the Down arrow and then Enter. That worked, but the songs were as much a surprise to the partygoers as they were to me! Totally random, but at least something came out of the speakers that they could jiggle and jump around to. And, as bitter experience in doing PA work has taught me, the audience is much happier when something comes out of the speakers rather than nothing!

My custom Down, Down guitar was the hit of the day, though, with everyone wanting to put it on and get a selfie with it. Forget the music – image is obviously everything!

At the end of the party, the Surface Pro was not happy at all with getting hot, and promptly sh*t itself, never to wake up again. That's OK I said to myself - I've got the spare HP

laptop at home for emergencies. So a few days later, and getting dangerously close to the New Year's Eve gig, I fired it up ready for a quick run-through. Well, I've never seen a laptop so dead. Deader than Monty Python's famous ex-parrot. After charging it for a day, it steadfastly refused to turn on. Holy crap on a candlestick, I said to myself, I'll have to go and buy another one.

But my loss was Harvey Norman's gain, to the tune of just under a grand. But it got me a brand-new touch screen 17" laptop with a screen you could see from the moon. Or Harvey's car park, at least!

I copied the songs and the audio playlist software to it, did a quick check it all worked, chucked it in the car and we headed off to Phillip Island.

The gig went very well, with over 350 revellers counting down to midnight, and a good time was had by all. The new laptop worked perfectly, the PA was loud and never missed a beat, and the club was exceptionally happy with the bar takings!

As we were pulling everything apart, Ritchie said to me "Hey Dunk, these Par 43s are really handy and easy to set up. Where did you get them?" I didn't have the heart to tell him they were courtesy of Nescafe, so I said, "Oh, you can't get them any more - the company went out of business!"

After the load-out, Jim and I sat around reminiscing about our early times in the live sound biz.

Casual acquaintances would often ask us "What do you do for a living?" If we replied that we worked full-time doing live sound for bands, their reaction was usually one of three generic types:

Older people would tend to say “Yes, but what about your real job?” the implication being that working 24 hour days and nights somehow wasn't a real job. No matter how much you earned, if you didn't wear a suit and tie, it wasn't a real job! You could always feign deafness, cup your hand to your ear and say “WHAT? You'll have to speak up - I'm a sound engineer!” but old folks often didn't find that too funny!

Others would say “Hmm, the sound business, eh? Can you have a look at my stereo - it hasn't been working right since the cat pissed in the tweeters!” Or perhaps even worse “What sort of a stereo should I buy?” Any answer more detailed than ‘buy the one that sounds best to you’ would guarantee a night either being quizzed on esoteric hi-fi concepts, or possibly being forced to listen to Hot August Night on a 1960s HMV 3-in-1 at a level that would make a dead man's ears bleed.

“Well,” said Jim, “I gave this a lot of thought. When people used to ask me about my job, I decided I'd tell people I worked at the city morgue. Trouble was, this turned out to be worse than telling the truth. Lots of people had a morbid fascination about this sort of thing, and would ask me all sorts of gruesome details, the answers to which I just made up on the spot from what I'd learned watching CSI or Midsummer Murders! Some wanted to know if they would be able to come along and watch me. And then I hit upon the best answer. When people asked me, I'd tell them that I was a ‘Stop’ and ‘Go’ man for the Country Roads Board! The idea of leaning on that sign all day sounded so ‘interesting’ that no-one ever wanted to know more!”

*** Calendars and diaries repeat roughly every 7 years, so if you've bought a few you can use them over and over again if you don't write too much in them!

A message from
aceta



We at ACETA, whilst endeavouring to manage our own affairs, are striving to do whatever we can to support our members and the community.

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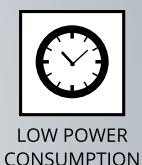
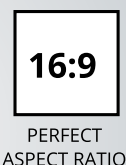
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