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The 2024 Showguide

Your personal guide to all of the gear, brands, and people travelling around Australia with ENTECH Road Show!

FEATURING: ALLEN & HEATH / AMBER TECHNOLOGY / AUSTRALIS AUDIO BRANDS AUSTRALIA / CLEARLIGHT / CMI / EPSON / EVENTEC FACTORY SOUND / JANDS / LSC / MADISONAV / MEYER SOUND / NAS PANASONIC / PAVT / QSC / RIEDEL / SHOW TECHNOLOGY / THE P.A. PEOPLE / ULA GROUP / NW GROUP'S ENTALKS SEMINAR PROGRAM

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- / Brian Coleman: The Gaffa Tapes

RoadTest

- / Peavey Aureus 28

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MadisonAV has recently deployed the cutting-edge JBL Professional VTX A-Series line array system at various Australian festivals and events, such as Tina Arena's "Love Saves" tour, Star Struck 2024, Hoodoo Gurus at Enlighten Festival, and St Kilda Festival.

Scan the QR code to read testimonials from Australian promoters, production companies, and audio operators regarding the system's performance, and get in touch if you would like to discuss a demo or rental for your upcoming event.



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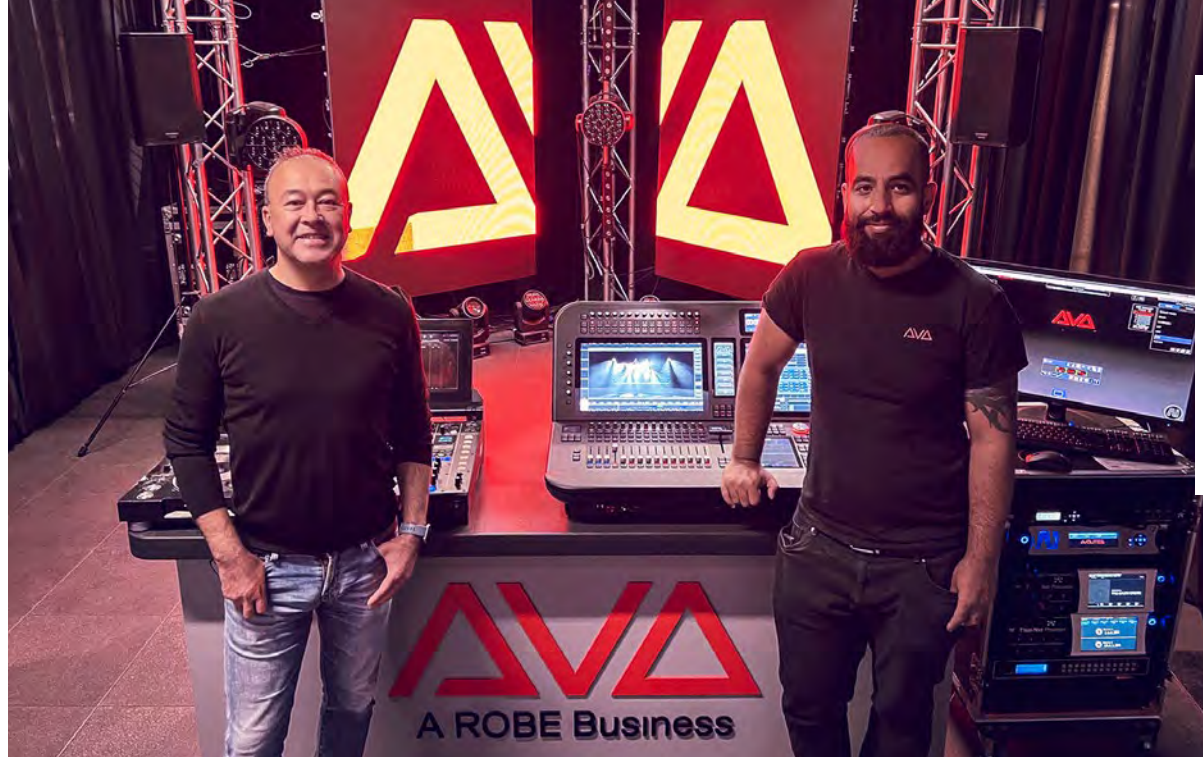
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Avolites' Paul Wong and Ron Carrington

LSC and Avolites Announce Partnership for Australia and New Zealand

Two of the best-known brands in the global entertainment lighting technology industry have announced an exciting new partnership destined to change the landscape of the market in Australia and New Zealand. In effect since 1 September, Melbourne-based manufacturer LSC Control Systems are now the Australia and New Zealand distributor for UK-based lighting controls and visual systems manufacturer, Avolites.

Both companies are owned by Czech Republic-based moving light and LED manufacturer, Robe lighting s.r.o.

This significant development will be mutually beneficial to both brands in Australia and New Zealand, and to the market as it signals a new period of opportunity for the region's professional lighting industry.

It also brings these two renowned brands full circle. Although in robust competition for more than 30 years, the two enjoyed a successful partnership back in the 1980s, when LSC provided certain products under OEM license to Avolites.

Acquisition has changed the outlook once again.

As Robe businesses, both companies can now draw on each other's strengths together with the resources and dynamics of the wider Robe group, to offer a new level of solutions and support to the thriving Australian and New Zealand markets. With LSC's role as a provider of world-leading power and data distribution solutions, complemented by Avolites' renowned visuals and lighting control products, the future is visibly bright.

Avolites' Managing Director Paul Wong is thrilled by the development: "We're all very happy to welcome LSC as our representative for Australia and New Zealand. Their years of industry experience and strong relationships

will strengthen Avolites in the region. We all take great confidence from the natural alignment between the two brands!"

Gary Pritchard, LSC's Founder and Managing Director, agrees: "This is incredibly exciting news that allows us to provide a very attractive turnkey offering to the customers. Two manufacturers working together in their respective fields of expertise can only benefit the market."

He adds, "Just a few short years ago, we wouldn't have imagined that an opportunity like this was possible. But now, I'm delighted to say that some big, bold moves in this incredible industry have made it a reality!"

This new reality continues the long and interwoven stories of both brands and presents an optimistic future.

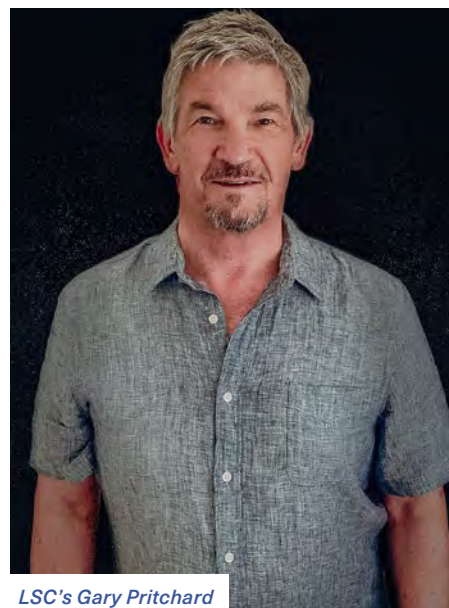
"Avolites' latest range of lighting control consoles and media servers perfectly complements our product portfolio," says LSC's business development manager, Darren McLanders, "It's a powerful synergy and we're looking forward to passing it on to our customers here in Australia and New Zealand."

Darren continues, "The Avolites team has done an amazing job over the years, establishing a real presence, particularly in the UK, supporting and training console users at festivals and shows. It's a model we'll follow here, with regular training and direct product

support from industry professionals, giving users the confidence and support they need to grow an advanced range of products."

The Avolites brand will be officially relaunched to the Australia and New Zealand market during the 2024 ENTECH Road Show events, set to visit Sydney, Melbourne, Adelaide, Brisbane and Perth during October.

<https://www.lsccontrol.com.au>
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LSC's Gary Pritchard



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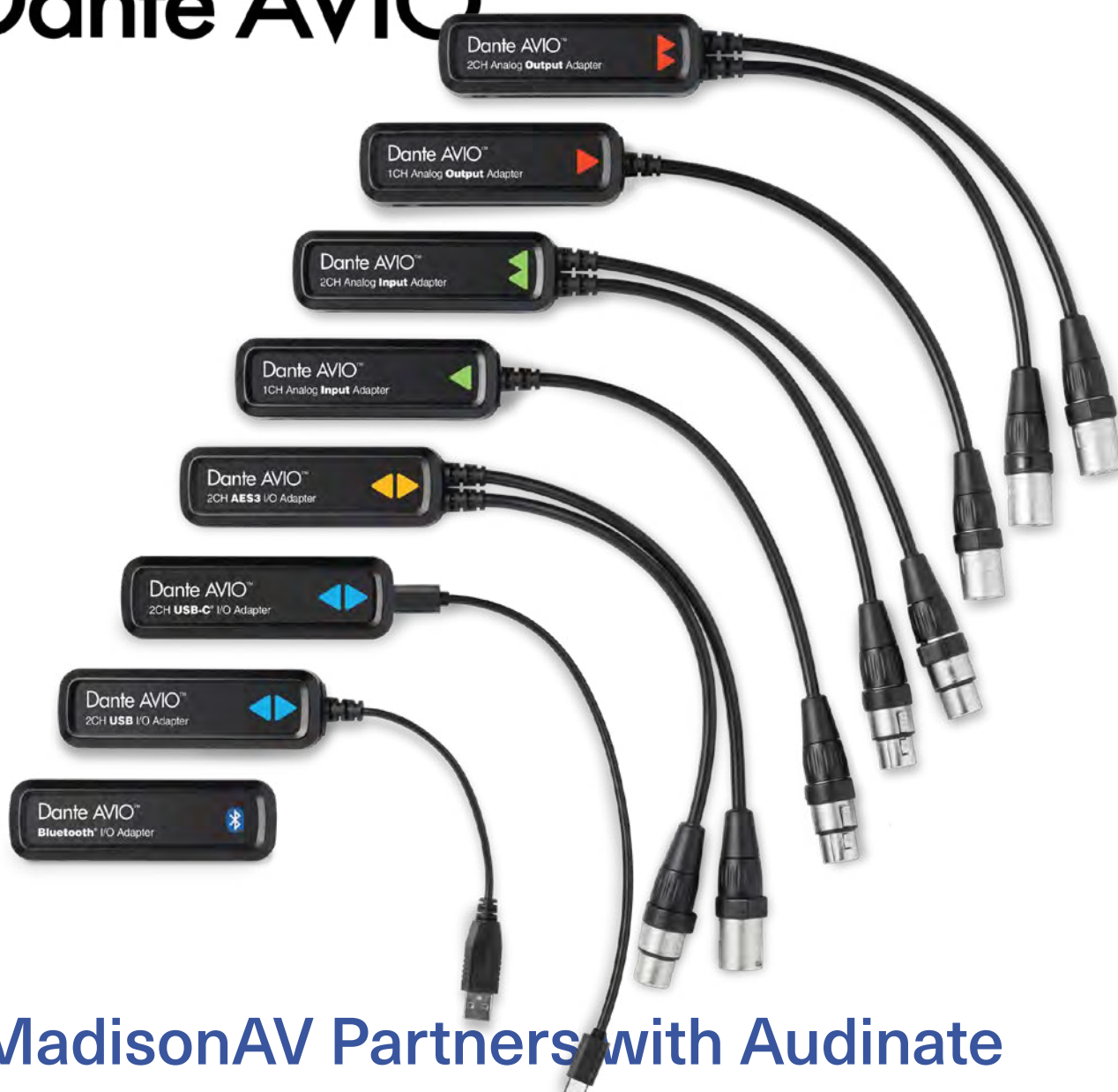


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Dante AVIO™



MadisonAV Partners with Audinate to Distribute AVIO Adapters in Australia

MadisonAV have announced a new partnership with Audinate, the global leader in digital AV networking technologies. MadisonAV is now officially distributing Audinate's Dante AVIO line of adapters in Australia.

The Dante AVIO line enables customers to connect legacy analog and digital audio equipment to Dante networks. Dante is the industry leading, easy-to-use AV-over-IP platform that offers best-in-class audio, video, control, and management features. This partnership will allow Australian professionals in education, corporate, broadcast, and live events to easily integrate legacy audio devices into modern, networked systems.

"We're excited to expand our portfolio with Dante AVIO adapters, which are perfectly suited for integrating legacy equipment into Dante networks," said Ken Kyle, CEO of MadisonAV. "These products enhance our existing offerings and enable us to deliver even more flexible and reliable solutions to our clients."

"MadisonAV's strong portfolio and market expertise make them an ideal partner to expand our Dante AVIO products in Australia," said Eric Armstrong, Executive Vice President of Sales at Audinate. "Their commitment to delivering top-tier AV solutions aligns with our goals and will greatly benefit Australian customers."

Dante AVIO adapters are now available through MadisonAV. For more information, visit www.madisonav.com.au/audinate or contact them at 1800 00 77 80.





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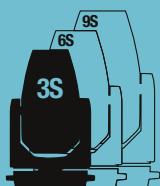
Lumens
28,000

Beam Aperture
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Front Lens
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IP Rating
IP65

Weight
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TAG Builds Dedicated Q-SYS Australia Team to Accelerate Growth

QSC APAC Pte Ltd. and TAG announce a new dedicated business team to support the growth of Q-SYS in Australia.

This team will be dedicated to delivering focused solutions and exceptional support for Q-SYS end users, backed by sales coordination and customer support with QSC headquarters in Costa Mesa, California.

"TAG is widely recognized as one of the premier AV systems distributors in Australia and we have full confidence in their ability to strengthen the Q-SYS business" says Duncan Savage, Vice President and General Manager, APAC, Q-SYS. "Leveraging their exceptional technical capabilities, TAG's Q-SYS Australia team will benefit from unrivalled direct access to Q-SYS product development, roadmaps and advanced technical support. This increased level of engagement uniquely positions TAG to accelerate the development of the Q-SYS business in Australia."

This new team, led by Giles Brading, Q-SYS General Manager – TAG, and Ewan McDonald, Q-SYS Director of Technical Services – TAG, will provide comprehensive logistical, technical and financial services for customers, with a singular focus on Q-SYS products and solutions. This hyper-focused approach will enable the local team to provide direct and immediate market and customer interface in Australia.

"This partnership combines the long-term distribution expertise of TAG with a dedicated team of Q-SYS professionals to deliver the highest level of support, training, service and integration," says Brading. "It is a significant waypoint on the Q-SYS journey in Australia and the best way to serve Q-SYS and those deploying and using it both now and in the future."

For more information, visit qsysaustralia.com.au



Martin Viper XIP Australian Launch events

A launch event for the new Martin Viper XIP drew amazing crowds to Show Technology's Sydney showroom on August 22. Clients came to Sydney from across Australia and New Zealand to take part in the event, which showcased exciting new products from the Martin lighting stable, but the main attraction was the Viper XIP, a new legend in the making.

After a much-anticipated wait, the successor to the industry standard MAC Viper arrived on these shores in time to be part of MAC TO THE FUTURE, a dynamic show designed and programmed by well-respected lighting designer Paul Collison, ably assisted by Show Technology's Technical Director, Vince Haddad. "The legend certainly has struck again; the new Viper is best of class in many ways and a worthy successor to the original, which is still working away today in many applications, some 12 years after its release!" says Vince. "The new MAC Viper XIP is a high-output, full-featured outdoor moving head that will set a new benchmark for performance in its class."

The MAC TO THE FUTURE show also featured the hugely popular MAC One in abundance, the Aura XIP and PXL in huge quantities, and support from the uber rare MAC Ultra in what many people noticed was a nod to the old days of huge lightshows which were preprogrammed to great soundtracks, while also looking forward with new technology on show. "The whole show was run via P3 through a single network switch and one power

distro," said Vince, "in the old days, a show this size would have been a tangle of DMX cables, data distribution and huge power consumption."

The MAC TO THE FUTURE theme was designed, developed and adopted by the Show Technology team in-house as a way of reflecting the storied and successful history of the Martin brand not only in Australia, but worldwide. "We have been part of the Martin world since the very early days and we appreciate there are many loyal fans out there today who needed to see their favourite brand in a different light" says Emmanuel Ziino, Show Technology's Managing Director. "It's exciting to see Martin releasing such game-changing products, and we very much look forward to the future". Present for the launch were members of the Danish R+D team Peter Skytte, Henrik Kristensen and Wouter Verlinden; as well as Hanslee Lim, Head of Martin APAC in Singapore and his right-hand man Javier Tan, also from Singapore. More than one hundred industry professionals made their way through the company's Sydney showroom.



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Standalone system configuration

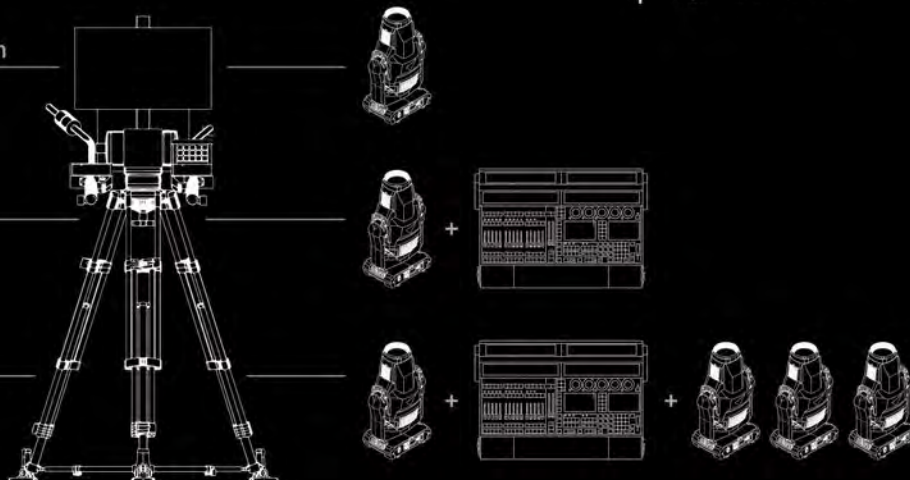
One Primary Fixture with the camera mounted -
All controlled directly from Macula

Primary fixture configuration

One Primary Fixture with the camera mounted -
Split control from Macula & Lighting console

Multi fixture configuration

One Primary Fixture with the camera mounted -
Split control from Macula & Lighting console
With the option to control more than 48 fixtures
as slaves on different universes



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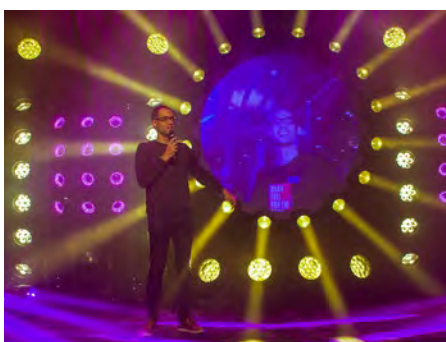
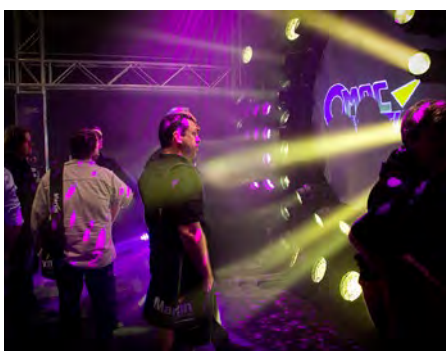
"The legend certainly has struck again; the new Viper is best of class in many ways and a worthy successor to the original, which is still working away today in many applications, some 12 years after its release!"



Martin team with Vince

"I'd like to thank PC personally for programming such an amazing show for us," says Emmanuel, "he is a busy man and gave up his valuable time for us and Martin to make this event a success."

Show Technology repeated the event in its Melbourne showroom 29 August. "We knew we simply couldn't satisfy demand in Sydney in one day, so we always planned to split the launch across the two offices" continues Emmanuel, "we got to do it all over again, which was so exciting!"



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JBL VTX A-Series



MadisonAV proudly deployed JBL VTX A-Series speaker systems at four prominent venues during Brisbane's BIGSOUND 2024 festival in early September.

The JBL VTX-A Series delivered outstanding sound quality and coverage across Blute's, The Sound Garden, Eclipse, and the JBL Live at BIGSOUND stage, elevating the live music experience for artists and audiences alike.

BIGSOUND, Australia's most influential music conference and showcase, took centre stage in Fortitude Valley from September 3-6, 2024, attracting thousands of music enthusiasts, industry professionals, and emerging talent. MadisonAV partnered with BIGSOUND to ensure that the sound systems at these key venues matched the exceptional talent performing at the event.

MadisonAV held two private JBL VTX A-Series listening experiences in two venues, allowing guests to personally experience the A6 and A8 system performance, as well as to learn about configuration, rigging, transportation and deployment of the systems. Guests included audio engineers, venue operators, system integrators and production companies that

were interested in hearing the systems for themselves.

In the evening, the venues hosted live bands and performers during the BIGSOUND music showcases – with the venue or the band's own audio engineers mixing each performance on the JBL VTX A-Series system.

JBL Live at BIGSOUND Stage

A new initiative for BIGSOUND this year was the creation of a feature stage in the central location of Brunswick Street Mall. Known as the "JBL Live at BIGSOUND Stage", it was decked out with the VTX A12 system and was a public focal point for the event.

The JBL Live at BIGSOUND stage featured dynamic performances from a variety of genres, including pioneers of a new flavour of "bogan funk", Playlunch, newly signed solo artist ISHAN, and emotive country performer Bella Mackenzie. It also hosted JBL's own supported emerging artists including Athanasia, Sophie Edwards, Nicole Issa and Brittany Jacinto Garcia.

In this busy city thoroughfare, the JBL VTX A-Series provided unmatched audio fidelity, bringing these performances to life with

power and precision under the care of FOH engineer Jeremy Bellis from IJS Productions. Jeremy commented that the A12 system was a "Solid PA! Full range and sparkly" with "great coverage and punchy subs".

Peter Kubow, Head of Tour Sound at MadisonAV, summarised the performance of the JBL VTX A-Series at BIGSOUND. "There were many comments about the performance of the JBL VTX A-Series across all four venues. The venues themselves were full of praise, and we were happy to hear positive feedback from all the audio engineers using the systems at each of the venues. A couple of the venues provide quite challenging environments, but the VTX A-Series performed exceptionally, delivering fantastic clarity, coverage, and power straight out of the box, allowing every artist to shine and every audience member to enjoy the music to its fullest."

Peter continued; "showcasing the sub-compact A6, the mid-sized A8 and the larger A12 format in three venues of different size and acoustic characteristics was the ideal way for us to prove the performance of the systems in personalised listening sessions, as well as in live music scenarios during the live band performances".

BIGSOUND & Beyond

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*6 year limited warranty on manufacturers defects. Only applicable to products that have been inspected and tested as per the requirements of AS3760:2022.

Venues & Highlights



Blute's



The Sound Garden



Eclipse

Blute's

A hub for intimate and impactful performances, Blute's hosted a private VTX A-Series listening event as well as a diverse range of artists, including the quirky and genre-dynamic styles of Lucy Sugerman, the unfiltered emotion of Neptune, and the "lyrical assassin" Rowena Wise. The compact JBL VTX A6 system helped these artists deliver performances that resonated with clarity throughout the venue.

Audio engineer at Blute's, Kayla Stew, commented that "the walk-in engineers were happy with the PA. Some of them thought it was quite bright but just altered the graphic to their liking. The PA was more than enough coverage for the venue."

The Sound Garden

Branded as the Goolwal Garden during BIGSOUND, this venue operated as the First Nations House, home to thought-provoking panels, electrifying showcase performances, and exclusive events. Downstairs was equipped with a JBL VTX A8 system to support the beats and rhythms of First Nations performers. BIGSOUND Production Co-ordinator and local Music Producer, Nell Forster told us that there was "limited space in there to set it up so it ended up being quite wide but sounded great.... bands have sounded really good, and the system is visually attractive too".

The essence of indigenous culture and creativity intertwined with standout performances by Sunny Lew, J-MILLA x Yung Milla - Same Blood and Kiss-inspired Mulga Bore Hard Rock. Upstairs the venue offered a sanctuary of calm, where guests could unwind with a cuppa, engage in workshops, and explore captivating art displays. This experience was supported by the use of a single VRX 900 series element and subwoofer for background music, and as a public address system.

Eclipse

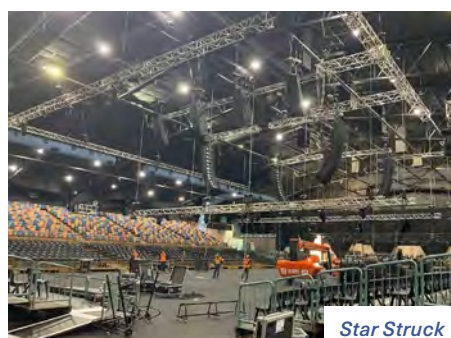
Fortitude Valley's newest nightclub, Eclipse, joined the BIGSOUND venue roster and was equipped with the A8 compact line array system that complemented the venue's already premium technology and guest experience.

Hosting a private listening event as well as evening showcase performances, Eclipse hosted some big names at BIGSOUND, including live-techno duo Hellcat Speedracer, indie pop duo Juno, as well as nu metal grunge artist, Stocker. These electric performances benefited from the precise sound reproduction and consistent coverage provided by the JBL VTX A8 Series.

Beyond BIGSOUND



Star Struck



Star Struck



Star Struck

Tina Arena's 'Love Saves' Tour

Danny Olesh, known as one of Australia's most renowned FoH audio engineers, has been taking care of acclaimed artist, Tina Arena, for several years. With decades of experience in live sound, he's been touring Australia on her 'Love Saves' tour, and managing the system designs for the performances. At the Home of the Arts (Gold Coast) leg of the tour, Danny and the team utilised a JBL VTX A-Series system.

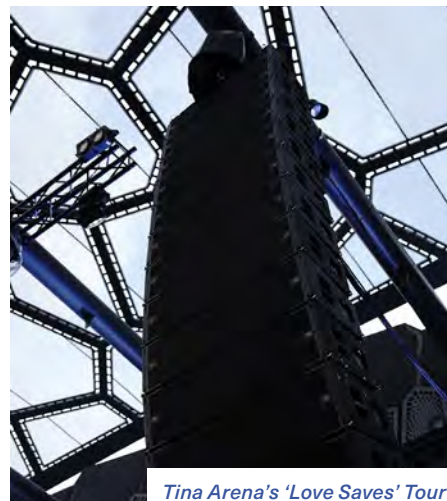
Tour System Engineer John Hall commented; "The system really exceeded my expectations. The stereo image was just so clear, you heard every little detail in the mix, it was so present with full coverage up and down the hill and across the seated area."

"Working with Peter Kubow on the venue design was easy – we designed the system, put the PA in place, sent the file to it, then had to do very little to tune it on site, maybe take four little lumps out of it in the obvious spots and that was kind of it. Peter and I just looked at each other and said, 'That's great! Let's go to lunch'. There wasn't anything else to do. It was very impressive. I think the great thing about that system is that I didn't have to do anything drastic to make it work for Danny, which I've had to do on some occasions. Its voicing was very musical!"

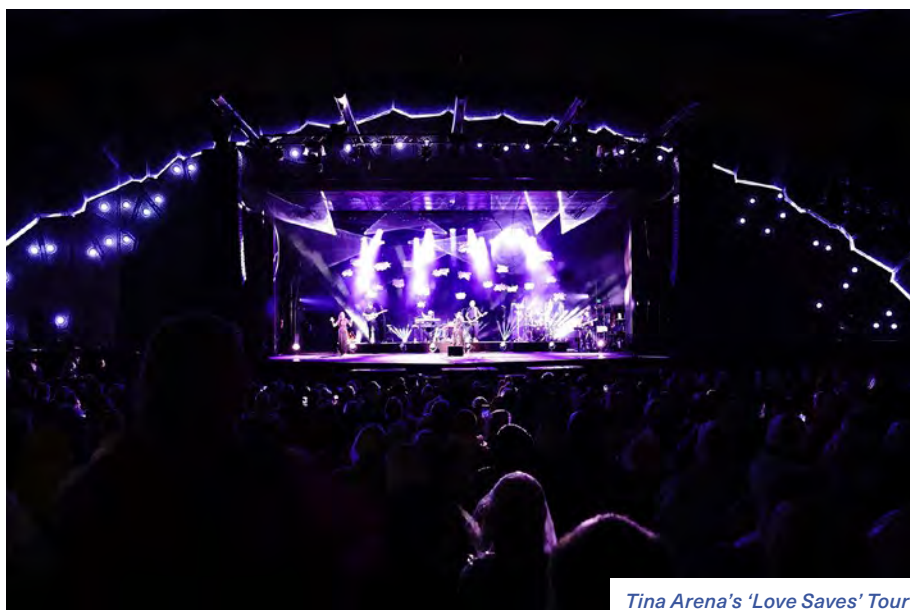
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Tina Arena's 'Love Saves' Tour



Tina Arena's 'Love Saves' Tour



Tina Arena's 'Love Saves' Tour

Star Struck

MadisonAV also had the opportunity to showcase the impressive JBL VTX A-Series system at this year's Star Struck 2024 school production held at the Newcastle Entertainment Centre, in collaboration with Chris Neal and Eclipse Light and Sound.

The PA included 20 x A8s at FOH with 8 x B18 subwoofers, 8 x A6s as side-fill/delays, all powered by 3 x VRacks, 6 x Crown I-Tech 4 x 3500HD amplifiers and 3 x Crown I-Tech 12000HD amplifiers.

Allan Doyle, Systems Engineer for Eclipse, said, "The A8 was great especially in the top end, very clear and well defined, lows were good and punchy. The surprise for me was the A6, with so much poke for such a small box."

"Everyone I spoke to about the PA thought it sounded great. We're all looking forward to using it again. The rigging is exceptional, so intuitive, simple and fast. The system was really easy to rig, pack up and wheel around with the system transport design."

"We were able to adjust any system design changes with ease on-site, using Venue Synthesis. Hardly any system design tweaks were needed to improve the sound. It's a great all-round system."



Like a Phoenix... A community theatre reborn with a professional setup

Nestled in behind the Whitehorse Civic Centre in Nunawading, Victoria, sits 'The Round' - a new arts and cultural centre opened in September 2023. It features a 637-seat main theatre with fly tower and a 203-seat black box studio with a retractable door. This venue replaces an earlier performing arts centre that council found was no longer fit for purpose.

CX talked to theatre technician Cameron Canobie about the choice of d&b audiotechnik speakers, processing, and amplifiers as PA for the performance spaces.

Having worked with the Council for a long time, he came on permanently about six months before opening the new venue and was consulted closely about system design and configuration. The venue looked at all the major players but, for Cameron: "I chose the d&b system. Obviously, it's very rider friendly, with d&b probably being the most common brand to go on any rider." It also stacked up "in terms of price to performance as well as capability and being the appropriate size for the venue."

The main theatre system is centred around d&b Y-Series line arrays with 40D amps. Each

array consists of 4 x Y8s, 2 x Y12s and 2 x Y-SUB cardioid subs. There are also 6 x 44S boxes for fill around the motorised orchestra pit. They opted not to go with a centre cluster. Cameron found it "unnecessary, because the coverage is incredibly even." He's "done some measurements in the space, and there's actually only about a half a dB difference from the centre of the auditorium to my next position at the rear of the auditorium." As he points out: "honestly, it's exceptional."

Because the orchestra pit can be reconfigured to orchestra height, auditorium height, extended stage or extra seating, they required great flexibility in how audio reinforcement was handled for that zone. The genius in their design is using the 44S boxes permanently installed in two layers "one in the front edge of the stage proper, and then when the orchestra pit comes up, there's another layer in that front edge of the pit." With the press of a Q-SYS button, they can "turn off the one in the front edge of the stage and turn on the one in the front edge of the pit." This macro also recalls appropriate DSP settings so that each configuration is optimised for each stage scenario. Not having to re-rig boxes between shows is "absolutely fantastic. It's so good" for Cameron and the other tech staff.

Foldback Without Feedback

Regardless of configuration or style, most acts require foldback on stage. The Round theatre has two rows of Quest HP125 monitors permanently flown overhead for discrete

reinforcement. When hirers require it, this is supplemented with 8 x d&b MAX2 monitors. Cameron is a great fan of these boxes. "They're absolutely fantastic. They're super transparent and they get loud without getting harsh. They are some of the best wedges I've used in terms of just getting gain before feedback, because they're super flat. They are not getting resonances at weird frequencies."

This frequency response is similar to the FoH arrays. Cameron finds the d&b rig response extremely flat. "I remember the first day that I walked out front with a wireless handheld mic and started tuning it. I walked directly underneath and directly in front of the array, and it didn't feed back. The fact that it is so flat and so transparent means that it can just adapt to whatever the source is." This is extremely important in a venue that caters to such a wide variety of user types. "It doesn't matter whether it's rock and roll, whether it's theatre, or whether it's doing doof doof dance music, it doesn't have those resonances and spikes that create problematic frequencies."

Venue clients range from community groups right through to professional touring acts. "At one end of the spectrum are the schools and musical theatre, at the other end we've had Daryl Braithwaite and Marcia Hines. We've hosted acts from the Wharf Revue, Opera Australia with La Bohème, and the MSO." The rig has to cater to all of their needs and remain powerful but useable.

Front of House

One crucial factor in these requirements is the choice of FoH console. The Round went with dLive (S7000 with DM64 MixRack) from Allen & Heath. Cameron has been a “big fan for a long time. We had an iLive in the old theatre, and the dLive here now in both spaces.” He finds them “super quick to work on, but also super customisable.” It is easy to configure



for a touring act but has plenty of power to accommodate cued theatre shows. “We program it like a lighting show now, and they have recently added functionality where you can add point queues in between queues and things like that. When you need to go through and make updates, you can just go back and record it straight in as an intermediate scene.” This flexibility is very much appreciated by venue and users alike. As Cameron says, “there’s the freedom of workflows and the power of the desk is really important to us.” It also adds a layer of redundancy if the operator is sick or unavailable for a cued show. “Having programmed a show in this fashion, as long

as the next operator that comes in can read off a script, and all they have to do is hit Next. Anyone can do that.”

Major gear decisions were also made to accommodate common rider requests. It is so much easier to stage a production if the equipment is what the incoming operator is requesting (or familiar with). d&b (or equivalent) is a very common industry rider request. Consoles are a little different with Cameron finding “DiGiCo being the main rider spec. But, as soon as they find out that there’s a dLive there they go: ‘That’s fine. Don’t worry about getting us the DiGiCo.’”

NOVASTAR 5G SOLUTION

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With the rise of UHD media, the demand for ultra-large LED displays is soaring. However, the traditional 1G bandwidth transmission poses significant challenges, burdening projects with numerous cables, multiple devices, and complex system structures.

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Control and Routing

To keep the system powerful yet flexible, Q-SYS has been added in to control configuration and routing of audio around the building. Audio can be picked up and routed where it is needed with a couple of button pushes. "All of our relays to back of house, and all that routing is controlled from Q-SYS. So whether we use relay marks or take a split directly off the front of house sends, it can be sent to pretty well anywhere in the building." This includes dressing rooms, performance spaces and even the foyer area.

This was setup and programmed by installer CI (Corporate Initiatives) who just happen to have their office directly across the road on Maroondah Highway. d&b distributor NAS

Solutions also sent their system expert Max Hedrich in to commission the arrays and DSP, ensuring optimal performance and reliability.

The new fitout includes an extensive fly system for drapes, scenery and lighting. 43 lines (plus four panorama lines) offer great flexibility for productions. Dedicated stage management facilities are included with paging, stage monitoring, house light cueing, and comms all run from an SM desk located on the prompt side corner.

Lighting and AV

LSC Gen VI dimmers (x 30) provide power for the extensive range of PROLiGHTS lighting fixtures. 32 x EclProfile CT PLUS are complemented with a variety of lenses and

gobo options. 14 x EclCyclorama 050 cyc washes are available to light up sets and 14 x R3 Wash from ShowPRO form the moving components. Robert Juliat followspots round out the package. These are all controlled through an MA Lighting Grand MA3 Light CRV console.

Video and other AV requirements are well catered for with 4K matrix switchers and a Mac Mini running QLab5 to feed a Panasonic PT-RQ25KE, 3-Chip DLP, 4K Laser projector.

Audio

Primary Mixer

Allen & Heath dLive S7000, dual redundant MPS16 power supply, dLive DM64 MixRack, GX4846 audio expander (floating)

Amplifiers

4 x d&b audiotechnik 40D amplifier
1 x d&b audiotechnik 5D installation amplifier
2 x d&b audiotechnik D20 quad channel amplifier

2 x Quest QA1004

EQ: A&H dLive S7000

FX: A&H dLive S7000

Compression / Limiter: A&H dLive S7000

Speakers

FOH speakers (left and right):

8 x d&b audiotechnik Y8

4 x d&b audiotechnik Y12

Front-Fill/In-Fill:

6 x d&b audiotechnik 44s

Subs (left and right):

4 x d&b audiotechnik Y-SUB

Foldback speakers:

4 x Quest HP 125 overhead monitors on line 4

4 x Quest HP 125 overhead monitors on line 26

8 x d&b audiotechnik MAX2



Lighting

Total Dimmers (30):

LSC Gen VI 12 channel x 10amp

House Lights

Independent control by Dali

Profiles

32 x Prolights EclProfile CT PLUS

6 x Prolights Zoom EclProfile Lens 15°-30°

9 x Prolights Zoom EclProfile Lens 25°-50°

7 x Prolights EclProfile Lens 19°

10 x Prolights EclProfile Lens 26°

6 x Selecon SL 15°/32°

Gobo holders B size

Cyc Wash

14 x Prolights EclCyclorama 050

Movers

14 x ShowPRO R3 Wash

Follow Spots

2 x Robert Juliat OZ LED GT 4000R stand

Production Desk

MA Lighting Grand MA3 Light CRV





Studio Equipment

Audio

Primary Mixer

Allen & Heath dLive S5000,
dual redundant MPS16 power supply,
dLive DM64 MixRack,
GX4846 audio expander (floating – shared
with Proscenium Theatre)

Amplifiers

1 x d&b audiotechnik 30D amplifier

EQ: A&H dLive S5000

FX: A&H dLive S5000

Compression / Limiter: A&H dLive S5000

Speakers

FOH Speakers (left and right)

2 x d&b audiotechnik E12

2 x d&b audiotechnik E12-D

Subs - 2 x d&b audiotechnik E15X-SUB

Lighting

Total Dimmers (10):

LSC Gen VI 12 channel x 10amp

Profiles

12 x Prolights EclProfile CT PLUS

8 x Prolights Zoom EclProfile Lens 15°-30°

8 x Prolights Zoom EclProfile Lens 25°-50°

Movers

14 x ShowPRO R3 Wash

Production Desk

MA Lighting Grand MA3 Compact

Studio Space

The smaller Studio space also features audio gear from d&b, a dLive S5000 console and PROLIGHTS luminaires. Lighting control is via an MA Lighting Grand MA3 Compact. This theatre includes a dedicated control room and multiple catwalks for rigging or access.

Both spaces also offer an extensive range of mic solutions using industry standards and favourites from Shure, Sennheiser, Rode, AKG and others.

In the Round

All of the design decisions and gear selections were made with both performance and rider-friendliness in mind. This is one of the reasons that the venue is already fully booked well into next year. Cameron summarises well: "A lot of that is due to the fact that we are now fit for purpose, to be able to provide for everyone from entry level community groups all the way through to Pro level touring acts. We're able to meet that spec and provide opportunities for all of those events."

SET THE MOOD, SHAPE THE EMOTIONS.



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SENNHEISER



*The Spectera
SEK bodypack*

Unveiling the world's first wideband, bidirectional, digital wireless ecosystem

At IBC, Sennheiser ushered in a new era of digital wireless audio transmission with the world's first bidirectional wideband solution: Spectera. Using the ground-breaking WMAS (Wireless Multichannel Audio Systems) technology, Spectera greatly reduces wireless system complexity, while at the same time considerably increasing capability, enabling time-saving workflows and offering full remote control and monitoring, including permanent spectrum sensing. Spectera features bidirectional bodypacks that manage both digital IEM/IFB and mic/line signals at the same time. The solution is remarkably resistant to RF fading and allows for flexible use of the wideband RF channel, for example, for digital IEMs with a latency down to a spectacular 0.7 milliseconds.

"We are thrilled to see years of technological development and spectrum policy work turn into a digital wireless ecosystem that will solve many of the issues that users of wireless multichannel systems are faced with today," say co-CEOs Dr Andreas Sennheiser and Daniel Sennheiser. "Our wideband solution will be ideal for large productions, whether in the touring, broadcasting, or theatre fields, or in any other area that requires multichannel audio setups. Spectera satisfies our customers' chief desires and needs regarding ease of use, operational reliability and flexibility. It offers less hardware, drastically reduced frequency coordination, redundancy, and the flexibility of an ecosystem that grows with your needs."

Powered by WMAS – The Wideband Approach

Bidirectional digital wideband transmission addresses many of the typical challenges that users, operators and owners of wireless audio systems experience today. These challenges include overly complex frequency coordination and complicated rack cabling for high channel counts, and the large footprint that a multichannel wireless system still has – in the warehouse, on tour and backstage, both for space and the amount of time required for load-in, load-out and setup.

Sebastian Georgi and Jan Watermann are the inventors of the specific Sennheiser approach



Bidirectional wideband transmission solves many typical problems of multichannel wireless. For example, large backstage racks with IEM transmitters and microphone receivers can be replaced with a single smart Base Station

to WMAS. The technology they developed is a proprietary variant of OFDM-TDMA, specifically tailored to reliable multichannel, bidirectional, low-latency communication. They succinctly compare this wideband approach to standard narrowband technology: "Instead of many individual 200kHz narrowband RF carrier frequencies, we use a single wideband RF

channel for audio transmission – bidirectional transmission of audio and control data, to be more exact. In Sennheiser's approach, the wideband RF channel is a TV channel of 6 or 8MHz, depending on local regulations. The WMAS system organises its audio links within this channel. Every audio link, be it a mic or an IEM, is assigned specific time slots for transmitting its audio information – for the first time, it is possible to have IEMs and mics in the very same TV channel instead of two channels separated by a guard band. Thanks to the fact that all audio links use the full width of the RF channel when it's 'their turn', RF fading is greatly reduced. It corresponds to 40-fold diversity for an 8MHz RF channel and 30-fold diversity for a 6MHz TV channel. Also, the spectral density is low, which makes it easier to reuse frequencies, for example on a larger festival ground, between neighbouring theatres, or in a broadcasting complex."

Greatly Reduced System Complexity

One of the most stunning innovations in the Spectera ecosystem is certainly the Base Station, which, in a single rack unit with 32 inputs and 32 outputs, replaces a rack-full of wireless mic receivers and IEM transmitters. An entire production could be accommodated in a single wideband RF channel (6 or 8MHz). The lower footprint continues to the bodypacks, which handle mic/line and IEM/IFB requirements simultaneously. "Having just one pack is not only a great asset for performers," says Bernd Neubauer, Spectera product management, "it also makes the work of the sound engineer easier, who has just one type of pack and can, if required, quickly add an IEM to a mic. Warehousing also becomes less complex, with just one Base Station and two frequency variants – UHF and 1G4 – for bodypacks and antennas."



An entire production with mics and IEMs in a 19" 1U rack space. Below the Spectera Base Station is an L 6000 charging station with charging modules for the BA 70 rechargeable battery pack. Spectera uses the same batteries as Evolution Wireless Digital

SPECTERA

In quick need of a monitoring link in the broadcast studio? Simply add a bodypack to the running system

NEW GEAR

The Future of Wireless Pro Audio is Here – and It's Bidirectional

Spectera represents a total shift in control and monitoring: it doesn't just offer a back channel, but continuous two-way communication throughout, for truly complete remote control. Via the permanent control data stream, audio settings can be adjusted, IEM and mic levels adapted, RF health and battery status monitored, and much more. AES 256 encryption (AES 256 CTR Mode with >10k years expiry) for both audio and control data ensures the necessary data privacy.

Also, all units help in continuously sensing the spectrum, meaning they scan for potential interference from other RF sources. With Spectera, it is possible for the first time to see "behind" the RF channel that is actually being used and detect interference.

Excellent Audio Quality

Spectera delivers signature Sennheiser digital audio quality for mics, instruments and IEMs, employing different application-optimised audio codecs, which are all internally processed with 32-bit-float precision.

11 Audio Link Modes allow for selectable control of audio quality, latency, channel count,



and operating range for each and every audio link, flexibly throughout a production. The operator can always use the RF channel to the maximum, either by giving fewer audio links high quality or by allowing more links and reducing the quality accordingly. No matter which Audio Link Mode gets selected, Spectera offers incredibly clear sound, which "will be a revelation for IEM users especially", says Neubauer. "With Spectera, you get stunning digital IEM clarity and accuracy with ultra-low latency down to 0.7 milliseconds. Dual Mono transmission ensures a clean separation of the in-ear channels, enhancing the sound stage for optimal performance."

Benedikt Euen, Spectera product management, adds, "Spectera is very respectful of spectrum resources by enabling IEMs and mics to be in the very same TV channel. It also simplifies frequency coordination among engineers at festivals, and enables faster workflows. For example, if a large band is waiting for their gig at a festival, it will only take a simple unmuting of their RF to get the entire band 'on air'. Where narrowband systems tie you to a fixed set of frequencies and features, Spectera allows you to handle your show or production totally flexibly. An additional IEM is needed? No problem! You need to fit another artist within your 64 audio links? It can be accommodated!"

A Closer Look at the Spectera Components...



The Base Station – 1 U

The rack-mount Base Station is the heart of the Spectera ecosystem, and is a true space-saver. It handles up to 64 audio links, meaning 32 inputs and 32 outputs, in a mere 19", 1U format. One Base Station accommodates up to two RF wideband channels. The Base Station is frequency-agnostic; activation of the respective local license for the Base Station will automatically load the authorised frequency ranges.

Redundancy has been key in the design of the Base Station. It features two PSUs, primary and secondary Dante connections, two slots for optional redundant MADI connections (optical or BNC) and four antenna ports, which not only allow for redundancy, but also for extended, synchronised antenna zone coverage or higher system capacity by using additional frequency ranges. The cascade ports on the unit will be activated with a future firmware release. Worth noting: there are no RF components in the Base Station, so there is no interference with other wireless equipment in the rack.

The SEK Bodypack – Mic And IEM

The SEKs, too, are space-savers because the very same bodypack can handle both IEM and microphone or instrument requirements, and this can be flexibly determined and changed during a show.

The bodypack features a 3-pin connector for a lavalier or headset microphone (select from a wide range of acclaimed Sennheiser models) or an instrument cable (such as the CI 1-4). The 3.5 mm headphone jack connects

to Sennheiser's range of professional in-ear phones and features an impedance-matching high-power headphone amplifier. The SEK is fitted with a persistent display, where device information is retained on the display even when a unit has been powered down.

The bodypack is available in a UHF (470 – 608MHz and 630 – 698MHz) and a 1G4 (1350 – 1400MHz and 1435 – 1525MHz) frequency variant. It is powered by a BA 70 rechargeable battery (the same as for Evolution Wireless Digital) and can deliver up to seven hours of operating time depending on the selected configuration.



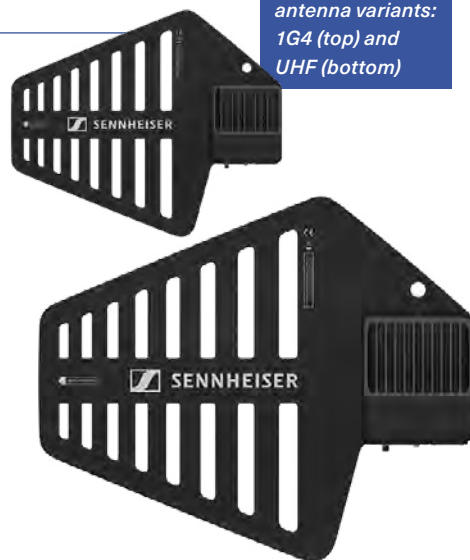
The Spectera SEK bodypack can be a mic/instrument transmitter and IEM receiver at the same time

The DAD Antenna – An Antenna Quite Unlike Any Other

The IP54 protected DAD antenna is a transceiving antenna that manages mic/line signals, IEM signals, and control data at the same time. The antenna carries the RF components of the system, eliminating the need for boosters, splitters and combiners. The RF is digitised here, therefore the DAD antenna does not use a BNC connector and co-axial cable for connection to the Base

Station, but a ruggedised RJ45 connector and CAT5e cable instead, which are much easier to handle, more cost-effective, and not prone to cable losses like co-axial cables. The antenna is powered by the Base Station via PoE.

Sennheiser offers high-quality CAT5e cables with lengths of 10m, 25m, and 50m. It is also possible to use Layer 1 media conversion to fibre to cover larger venues.



The Spectera antenna variants: 1G4 (top) and UHF (bottom)



Spectera is an ecosystem that will be constantly expanded; for broadcasters, ST 2110 implementation is planned

Availability and Advancing The Ecosystem

Spectera can be pre-ordered now. The date when shipping commences will be announced during the first half of 2025. All through 2025, special introductory pricing will be in place.

Spectera will evolve over time with continuous hardware, software, feature and service enhancements. On the hardware side, the next addition will be the SKM handheld transmitter. Regarding features, the implementation of the SMPTE ST 2110 family of standards for the transmission of professional media signals is planned which, in the meantime, can be achieved with Merging Technologies' Hapi.

"The Spectera ecosystem is a tool for the industry that will help combat the issues that have made the use of wireless so complicated until now," says Neubauer. "We will be collaborating closely with the industry on the new technology, and get valued customer input on system performance, usage scenarios and future updates."

LinkDesk Software

If the Base Station is the heart of the Spectera ecosystem, the all-new LinkDesk software is its backbone. The desktop application runs on Mac or PC and turns it into a remote control and monitoring centre.

Here, the operator can flexibly choose between the Audio Link Modes with their varying levels of audio quality, latency, possible audio links and range, as well as fully remote control, and monitor the entire system, with visibility of all audio settings and RF statuses.

Euen explains, "Setting up a multichannel wireless system can be a true challenge on the software side, too. Therefore, we introduced assistive behaviours to make system management as fast and intuitive as possible. LinkDesk also stores productions, so operators can quickly recall their system configurations and save time at the event." Smart notifications offer additional assistance.

The LinkDesk software also handles the activation of the Base Station via single node-based licenses. By entering the specific local license code, the software ensures that the system operates within the local regulatory requirements for frequencies, RF channel bandwidth, and transmission power, putting operators on the safe side regarding compliance.

The LinkDesk software turns a Mac or PC into a control and monitoring centre



New Applications on the Horizon

"Spectera will not only revolutionise multichannel wireless audio, but also open up many new opportunities," says Andreas Sennheiser. "3D immersive audio is one such opportunity. Thanks to its synchronised word clock for all audio over RF, Spectera will be the first solution that is able to capture phase-coherent wireless audio for immersive recording and reproduction."

"With the new workflows that this ecosystem facilitates, we will certainly see new creative uses of wireless audio technology," concludes Daniel Sennheiser.



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NEW



Calrec Argo M

Argo M use features from the larger Argo Q and Argo S consoles in a compact 24- or 36-fader footprint. Designed for small to medium applications, Argo M is a plug-and-play SMPTE 2110 native console. Includes built-in analogue and digital audio I/O and GPIO, 3 x modular I/O slots for further expansion, and a MADI I/O port via an SFP. It supports interoperable networking and stage-box interfacing via AES67/ST2110-30 with ST2022-7 dual-network/packet merging redundancy with either 1G or 10G connectivity. Argo M supports 5.1.2, 5.1.4, 7.1.2 and 7.1.4. immersive paths for input channels, busses, metering and monitoring as standard, and the same familiar Calrec Assist UI for remote control on a standard web browser. It is available with 304 or 356 internal DSP processing paths, while external ImPulse and ImPulse1 processing cores can expand processing capacity to 432 DSP paths.

Australia: D2N Technology Solutions d2n.com.au 02 9837 6748

New Zealand: Protel protel.co.nz 09 414 0477



Calrec ImPulseV

ImPulseV is a cloud-based DSP processing core, providing a virtualised Calrec audio mixing engine in a cloud native AWS environment. Using x86 CPU optimal core processing (OCP) technology to operate in a virtualised Linux environment, ImPulseV is optimised for low latency throughput, providing real-time responsive, efficient and deterministic audio processing, control, routing and mixing.

The standard 128 DSP pack provides up to 128 Channels, 16 Groups, 8 Mains, 32 Tracks, 32 Auxes, 64 Direct Outputs, 128 Inserts and path delay on all Channels, Groups, Mains, Tracks and Auxes. ImPulseV supports stereo, 5.1 and full immersive formats up to 7.1.4 with 9.1.6 monitoring, and any channel or bus can be mono, stereo, 5.1, 5.1.4 or 7.1.4.

Australia: D2N Technology Solutions d2n.com.au 02 9837 6748

New Zealand: Protel protel.co.nz 09 414 0477

Calrec Tru Control 2.0

Calrec's True Control 2.0 builds on Calrec's RP1 True Control implementation to provide expanded levels of control in two key areas. Firstly, it provides users with far greater levels of remote control without the limitations of mirroring or parallel controlling, with control of an expanded feature-set including EQ, dynamics, routing, direct outputs and delay. Second, it gives broadcasters the ability to scale their remote productions as needed. True Control 2.0 is available on Type R, ImPulseV, Argo M, Argo Q and Argo S, allowing any of these products to remotely control any other True Control 2.0 enabled product. Moreover, any one of these controller consoles can access up to five other consoles simultaneously.

Australia: D2N Technology Solutions d2n.com.au 02 9837 6748 | **New Zealand:** Protel protel.co.nz 09 414 0477



Infinity Raccoon W40/4 Wash

The Infinity Raccoon W40/4 is a wash light with 40 RGBM LEDs of 15W each, producing up to 41,000 lumens. It has five individually controlled sections, with 10-degree beam angle and uses a 12,000Hz refresh rate. Four internal dimming curves are available. The unit is IP65-rated.

The fixture can be controlled wirelessly via DMX (LumenRadio G3, G4, CRMX), via wired DMX (5-pin XLR) or via manual controls and the on-board OLED display. It supports RDM and provides bi-directional communication with the lighting console. Optional accessories include a top hat, a barn door, a range of diffusers with 20°, 40°, 90° and 15 x 60° beam angles.

Australia and New Zealand:

Clearlight Shows

clearlight.com.au +61 3 9553 1688



DiGiCo Compact Quantum 326 Console

Based on the Quantum 338, the Quantum 326 audio console has one less screen and a dozen fewer faders, offering 128 input channels with 64 busses and a 24x24 matrix, all with full channel processing. 26 100mm touch-sensitive faders are laid out in two blocks of 12 fader banks, plus two dedicated user-assignable faders, each with high resolution metering.

The desk also features a pair of 17-inch, 1000-nit high-brightness multi-touch screens, plus 58 individual TFT channel displays. Extras include 32-bit ADC and DAC conversion, six single MADI connections, and dual DMI slots. Optional Pulse software update increases the number of standard input channels to 156 (from 128), busses to 72 (from 64), Mustard Processors to 48 (from 36), and Nodal Processors to 72 (from 64). Pulse upgrade also adds Mix Minus functionality.

Australia and New Zealand:

Group Technologies

grouptechnologies.com.au

+61 3 9354 9133

NEW GEAR

DPA 2061

Miniature Omnidirectional Microphone

DPA Microphones' 2061 lavalier features a simplified 5mm capsule construction targeting superior performance in the 8Hz – 16kHz frequency range with 128dB peak sound pressure level (SPL).

It has a 1.5 meter-long Kevlar reinforced cable, with long and flexible strain relief for resilience against physical stress, as well as advanced sweat-repelling capabilities and IP57 certification for exposure to water, dust, and makeup.

The 2061 has a fixed cap and includes permanent connector options that are compatible with 3-pin LEMO, TA4F, and Mini-Jack. Using an omnidirectional pickup pattern, the 2061 has a flat frequency curve with a soft 3dB boost. Available in multiple colours — black, white, beige, and brown.

Australia: Amber Technology ambertech.com.au 1800 251 367

New Zealand: Amber Technology amber.co.nz 0800 4 AMBER





KLANG:technologies :vokal+

KLANG:technologies have released a software upgrade for its :vokal immersive in-ear monitor mixing system. The :vokal+ upgrade increases input channel count from 24 to a full 64 channels for all 12 binaural mixes. The new feature set allows up to 12 musicians to pick up to 24 mono or stereo channels out of 64 Dante and MADI inputs. For example, mixes can be sent out via MADI to a console or via Dante to KLANG:kontroller. Based on KLANG's new generation FPGA core, KLANG:vokal offers 12 mixes of 24 mono or stereo inputs at 48kHz and 96kHz.

Australia and New Zealand: Group Technologies
grouptechnologies.com.au +61 3 9354 9133

NEW GEAR

Martin Exterior Dot Pro Outdoor-Rated RGBW LED Dot Family

Martin Exterior Dot Pro are a family of outdoor-rated RGBW LED dots. Exterior Dot-1 Pro, Exterior Dot-4 Pro, and Exterior Dot-9 Pro can be run standalone or linked together in strings. Each model offers full configurability in Dot count, distance between Dots, and lead-in cable length. Control can be via Art-Net, sACN, Martin's P3 protocol or stand-alone. P3 PowerPort Power+Data distribution components can be used for power and data delivery to the Dots.

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

L-Acoustics HYRISS

HYRISS (Hyperreal Immersive Sound Space) is a 3D listening system from L-Acoustics. The package includes software to integrate L-Acoustics speakers with L-ISA processing hardware. It will allow users to localize, spatialize and separate immersive audio content, setting up customizable soundscape presets for different listening scenarios. From basic stereo to Dolby Atmos. Common scenarios include Wellness, Music, Cinema, Entertainment and Sport.

Australia: Jands jands.com.au 02 9582 0909
New Zealand: Jands jands.co.nz 09 941 9780



Vectorworks 2025

Vectorworks design and BIM software suite is getting an upgrade. 2025 components include Architect, Landmark, Spotlight, Design Suite, Fundamentals, ConnectCAD, Braceworks, and Vision software modules. There are many updates and enhancements to tools and workflows included. Lighting, scenic, rigging, and event specific users get a new previz mode (Showcase), available directly within Vectorworks, and automatic GDTF fixture mapping. Documentation quality has also been enhanced.

Australia: Vectorworks
vectorworks.net.au 02 8338 8622
New Zealand: Vectorworks
vectorworks.co.nz 09 610 6990



Sonos Era 100 Pro speakers

Era 100 Pro and Era 100 Pro Surface Mount are speakers specifically designed for professional installation. Dual angled tweeters and a single mid-woofer reproduce audio from WiFi, Bluetooth or wired inputs of USB-C or 3.5 mm auxiliary cable. Three Class-D digital amplifiers are built in. They are powered by Power over Ethernet but optimised for PoE+. Era 100 are energy efficient and constructed from 48% post consumer-recycled plastics. Inbuilt far-field microphone array uses advanced beamforming and multichannel echo cancellation.

Australia: Sonos
sonos.com/en-au 1800 476 667
New Zealand: Sonos
sonos.com/en-nz 0800 423 747



Sennheiser EW-DX EM 4 Dante receiver

Sennheiser's EW-DX EM 4 Dante receiver is a network-ready, 4-channel receiver (19", 1U, designed for large multichannel systems in live audio, touring, broadcasting, theatre, and system integration applications. Connectivity is via Dante (including AES 67 support) for audio over IP, balanced XLR-3 audio outputs and unbalanced ¼" jacks. The switching bandwidth of 88MHz leaves room to manoeuvre in a congested spectrum and can accommodate up to 146 channels in standard mode (600kHz spacing) or up to 293 channels in LD Mode (300kHz spacing).

EW-DX uses the proprietary Sennheiser Performance Audio Codec (SePAC), ensuring a latency of 1.9ms. Once the receivers have been set up, a quick frequency scan can be initiated via one EW-DX EM 4 Dante. The receiver will auto-deploy free frequencies across all connected receivers.

Australia and New Zealand:
Sennheiser sennheiser.com





When Your Sounds Stop Working

One of the hardest aspects of mixing music is knowing when the sounds you've created stop working in their overall context. Being able to hear when this occurs is crucial to landing a great mix. So how do we spot these moments, and what can we do to fix them? Let's investigate.

When it comes to this singular aspect of mixing, the most important thing to be conscious of while you work is that sounds often require some sort of modification along a song's timeline to remain consistent for the duration of a track.

As a song unfurls its musical arrangement, certain sounds will always appear to change as their musical context changes. Even though these sounds may themselves be static in the mix, the shifting arrangement around them can alter the way they're perceived: either in volume, tone or spatiality, and at this point they're no longer the sound they once were. In the same way that colours influence one another, sounds can appear to change when their context changes.

Being mindful of this fact is crucial if you ever hope to spot the moments when a sound goes off the rails in your mix. Embedded in this understanding is the deeper mindfulness that for any sound to appear static or unchanging in a track, it nearly always requires adjustment along the way. In other words, sounds that appear unchanging in a mix almost never are. Like so many aspects of this mixing caper, things are rarely as they appear at 'face value', and almost everything is influenced by its context.

Masking and Disguise

One of the main ways a sound goes off the rails during a mix – whether it's a core snare

sound, a rhythm acoustic guitar, an organ, or even a main vocal – is when another sound (or group of sounds) is introduced into a song's arrangement.

At that point, it's often the case that one (or more) of the core mix element's sound is thrown into question or knocked off its stable axis. This destabilisation can be subtle at times, depending on the circumstances, and often this is why the problem at first goes undetected – sometimes for hours, occasionally even days.

When it does finally dawn on a mix engineer that something about their mix isn't quite right, often it's not clear what's causing the disturbance. In many cases the problem tends to be 'sensed' initially, rather than discovered; recognised more by your subconscious without ever being quite grasped by your more logical, problem-solving faculties. In these circumstances, it's often then the case that you're sent up the proverbial garden path in search of a solution.

This is why it's so important during a mix to be mindful of how often these insidious disruptions occur in relatively static mixes. So, for example, when you do finally twig that your chorus lacks power because the snare's crack has suddenly disappeared beneath a blanket of guitars, it's important to understand that while in some cases it's indeed the newest element that's causing the destabilising effect – the guitars – 'fixing' this newly introduced element is not always the solution. Sometimes the fix (or at least part of it) involves a modification to the sound of your established core element – in this case, the snare and its associated reverb – so that it appears not to change (even though it has).

Sounds Unmasked

Of course, in other circumstances, the opposite holds true.

At some point along a song's timeline an instrument in your mix, which earlier seemed perfectly embedded in the song, can be

unexpectedly hung out to dry by a changing arrangement. Sometimes this is caused by the absence of a sound (or group of sounds) or by the re-arrangement of voicings in a chord structure, pitch or melody.

When this occurs, the tone, volume or depth of a certain sound might suddenly be exposed in ways you hadn't foreseen: a drumkit suddenly too over-the-top with explosive reverb, a guitar too hard in the upper midrange (the tone for which might have been established earlier to fight through competing elements that are no longer present), a backing vocal too loud or out of tune... you get the picture.

Regardless of what's changed, it's now clear that what was once a perfectly reasonable tone, volume or level of effect for a particular instrument, is incongruous in its new context. This might occur for the remainder of the song or only a fleeting moment – two beats in a single bar perhaps – before reverting back. Take note of the changing context here. The arrangement might revert to its earlier form on the other side of that middle eight, or something else might influence the sonic landscape that causes you to think outside the box for the third time in as many minutes on this one instrument.

The destabilisation or 'unmasking' of an instrument's sonic fingerprint can also occur when a song's arrangement is modified, either by a structural change or tweaks to the musical arrangement. Sometimes these edits are subtle, and the knock-on effects are similarly minor, but when they're substantial, or even radical, the disruption to your already well-developed mix can be severe, and in these circumstances, it pays to remain emotionally detached from your earlier work. If you hold onto well-crafted sounds that no longer suit this latest iteration of the song out of sheer stubbornness or an inability to accept that the sounds you established earlier no longer make sense with the song, then you're gonna go down with the ship.

Take The Pressure Down

Sometimes all your hard work seems to be for nothing when circumstances change during a mix, and that's understandably hard to accept at times, but the key emotional state to adopt under these pressures is always flexibility.

Not all mixing flows towards a natural conclusion in some idyllic, linear fashion. We all know this, of course (or perhaps we don't!) but it's good to reflect on nonetheless, remembering that sometimes mixing is about controlled chaos and herding cats, rather than straightforward methods and perfect outcomes. Flexibility is a healthy mixing mindset to adopt, and I can't think of a circumstance where it ever hinders good outcomes. Obviously the same can't be said of stubbornness.

In nearly every mixing circumstance, you don't know what's around the corner or who's about to walk through the control room door, literally or figuratively, so remain open-minded... always.

You may have a client's partner walk in late one night and throw a spanner in the works with their loose (albeit well-meaning) comment about the drum machine's harsh tone and level, or your own partner mightn't like that horn section that's playing "instead of the vocal." Who knows what unhelpful, disruptive (or conversely, insightful) comment is just about to drop. Irrespective, your reactions will determine the outcome.

So, remain flexible and see the glass half full wherever possible. Failing that, lock the control room door!

Shake It Up

Of course, sometimes none of these circumstances arise, and your mix sails across calm seas to the finish line. The arrangement remains rock solid and very little changes other than the sonics of your mix. But even then, sometimes a realisation slowly dawns on you: that your mix has lost its dynamism and power, sparkle or magic.

In this situation, while it may seem that everything's been working well, something, or perhaps lots of things, now need to change. This can be a daunting crossroad to arrive at, and in some cases a soul-crushing disappointment, particularly if you felt certain that your mix was already over the line.

Now is a great time to take a break. Get up, make a cuppa tea, walk the dog, clean the kitchen, listen to a podcast... anything to clear your head. Don't walk back into the room until your mind is clear, and you're ready to judge – with fresh ears – only what's coming out of the speakers, nothing else.

The key to mix success at this juncture is to stand back, listen to the big picture, and spontaneously mark in real-time the points along the timeline where you feel something needs to shift in your song's arrangement, power or focus.

Now repeat the process, only this time, while listening to the track, write down a couple of ideas about what might need adjusting, exaggerating or addressing. Spend the next hour or so making these changes, then 'Save As' and, once again, walk away.

When you go back to the mix later with fresh ears, you may hear other adjustments that need attention... or you may not. The trick here is to be honest and to some degree fearless, but not reckless. Make the changes as you instinctively see fit, each time 'Saving As...' so that later you can compare the versions. This isn't something I generally do I hasten to add – I commit to changes and only 'Save As' when I've sent a client a new mix. But each to their own.

Mixes are often unstable, cantankerous beasts, and it's helpful to remind yourself that you're probably pulling these elements together for the first time ever. There's no formula for the unique combination of elements in front of you, and there's no one way or perfect outcome. Do your best, stay flexible and trust your instincts.

Andy Stewart owns and operates The Mill in the hills of Bass Coast Shire, Victoria. He's happy to respond to any pleas for recording, mixing or mastering help... contact him at: andy@themill.net.au

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Tungsten Projects deliver sci-fi dystopia with 80s rock undercurrents



We Will Rock You premieres in Wellington

Tungsten Projects, a Wellington-based company specialising in lighting design and systems as well as event production and management, was founded by Will Smith in 2020. He joined forces with Sam Lovell, who had returned to New Zealand from Macau, following the closure of renowned production The House of Dancing Water, "As with many in the industry, we lost our jobs due to the pandemic, so we combined our strengths and passion for lighting technology and systems, and we haven't looked back."

Recent highlights for Tungsten Projects have included heading up lighting and video at the New Zealand Arts Festival in Wellington and associated lighting design on the spectacular digital light show Gumbaya Dreaming in Melbourne, running through June and July this year. Just as Gumbaya got underway, Will got the call from Director David Adkins about designing the lighting for Capital Theatre Trust & G&T Productions' first production of the Queen musical We Will Rock You, and its premier in Wellington.

The brief was interesting, "The lighting design needed to support the very dramatic and futuristic story which traverses numerous different locations, and also be able to transform the stage into what is essentially a Queen tribute concert for the last 20 minutes of the show. We wanted the set to look theatrically beautiful whilst ensuring we still did the end justice with a punchy rock 'n roll style lighting rig."

David and Will took their inspiration from the songs, "We felt we had to include a nod to the Pizza Oven style PAR Can rigs of the Queen era and also encapsulate the stark corporation dominated future that the show is set in." Will's Wellington based lighting supplier MJF Lighting duly pulled an almost fully LED rig together using primarily Ayrton Perseos, Euris, Aura XIPs and Chauvet Colorado PXL16 Bars, "I was keen to include Ayrton's new Perseos moving heads, having used them recently and being impressed with both the speed and power. They are really versatile and I knew I could quickly shift from a dramatic moment to a powerful rock 'n roll set."

The set comprised a proscenium archway with four trusses, three flown verticals and the horizontal flown independently, "I feel we took full advantage of this flexibility and created a whole range of different shapes for the different locations, using silver toned trusses to achieve the look we wanted. All the truss



Gear list

- Ayrton Perseo
- Ayrton Euris
- Chauvet Colorado PXL 16
- Martin Mac Aura XIP
- Martin Mac Viper Wash DX
- FusionPar Q XII
- FusionPar H XII
- eProfile FC
- Molefay 4-Ways
- Unique 2.1 Haze
- ZR45 Smoke
- Control - grandMA.3 Mode 3

Fixtures Supplied by: MJF Lighting Ltd

Control Supplied by: Tungsten Projects Ltd

Designed and Programmed: William Smith, Tungsten Projects Ltd

Head Electrics and Show Operator: Jordan O'Neil, Reflex Lighting Systems

moves were undertaken by a team of three sometimes very busy operators."

For once, time was not of the essence, "We had two weeks to pre-vis the whole show in our own studio, so we had eighty percent of the time coding done prior to accessing St James Theatre. Then we had the luxury of a full week onsite. Control was fully in the grandMA3 system and Jordan O'Neil from Reflex Lighting Systems did an amazing job as our Head Electrics and Show Operator."

Opening night bore witness to the hard work and time spent in production with minimal refinement required, "All the time coded stuff was spot on alongside the live band lead by Musical Director Zac Johns. It was wonderful to see the audience getting so into it."

A standout moment? For Will it was 'Now I'm

Here', "All the trusses come down into a steep stagger, creating a rear wall to work with. We used the Chauvet Colorado PXL 16 bars and a deep red to create the first big impactful moment of the show."

The musical received rapturous reviews and with most of the cast, crew and production team being the capital's own, this was proudly and frequently remarked on, "It was a highly talented local team. With input from Vicki Cooksley as Stage Manager and Andrew Gibson as Technical Manager, alongside MJF Lighting, I do think we achieved that late 70s rock feel without losing the essence of what is essentially a sci-fi story."

Next up for Tungsten Projects is the Upstage Festival in the Bay of Islands, with a summer season that is looking strong.



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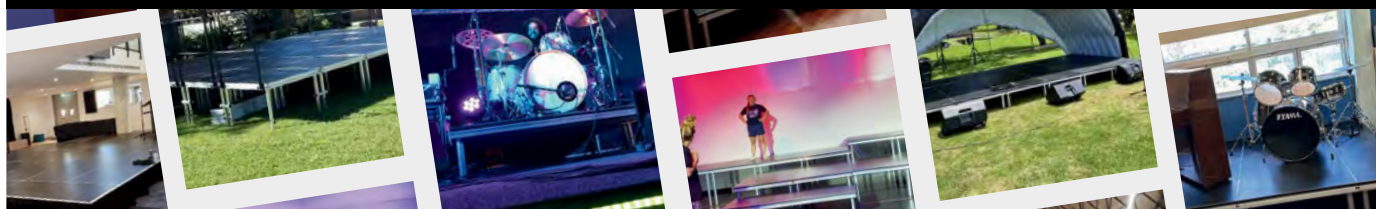
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Show Guide 2024

We've pulled together all of the gear, companies and people travelling to all five cities at ENTECH Road Show 2024, creating your guide to what to see in your town.

ENTECH rolls into Brisbane Showground Tuesday Oct 8, Sydney's Hordern Pavilion Thursday 10 Oct, Melbourne Showground Tuesday 15 Oct, Adelaide Showground Thursday 17 Oct, and finishes up in Perth at Claremont Showgrounds on Tues 22 October.



Registration, parking, the enTALKS Seminar programme, Happy Hour, and more, are all free! If you haven't already registered, [scan this QR code](#), and we'll see you there!

ALLEN & HEATH

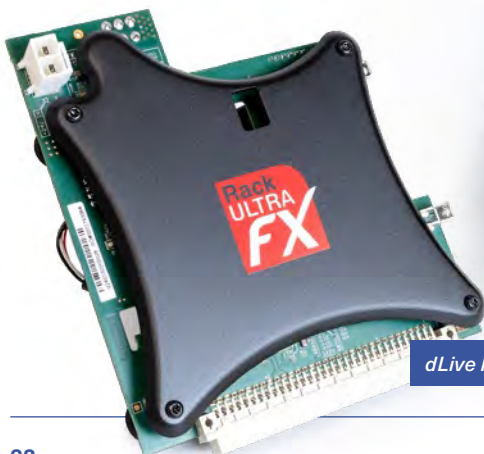
This year the Allen & Heath Australia stand will be showcasing the latest in world class mixing.

From the compact CQ series, the workhorse SQ range, Avantis and Avantis SOLO, through to the flagship dLive systems, come and see our extensive range of 96khz mixing solutions! We will be featuring the new dLive 2.0 which includes many new features and the amazing all new UltraFX processing.

You won't want to miss our training sessions in the enTALKS theatres hosted by our very own Andrew 'MixWizard' Crawford and a special guest. Come and check us out and see where FX and workflow innovation sets the scene.



Avantis Solo



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ALLEN & HEATH

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Tuesday May 13 - Geelong Norlane Arc Auditorium

Thursday May - 15 Newcastle NEX Arena

Tuesday 20 May - Gold Coast Convention Centre

Thursday 22 May - Townsville Entertainment Centre

Very cost effective opportunity, smaller scale, will sell out

Back to the usual Entech run of capital cities in 2026!



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Radial Engineering

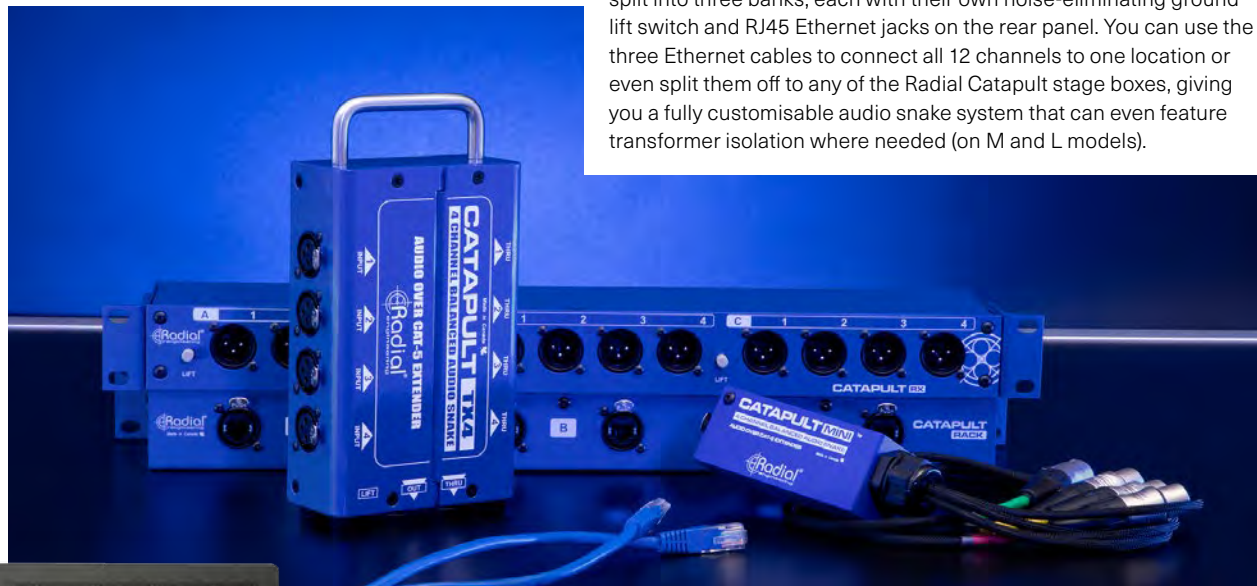
Power-1

The Power-1 from Radial has become one of the top selling Power Conditioner/ Surge Protection units in the US and EU markets over the past few years and we are super excited to announce it will soon be launched across Australia and New Zealand. Featuring a Made in USA MOV, three always-on front panel outs, 10 switchable rear panel outs, front panel USB-C charging port and high rejection RF interference filter.



Catapult Audio over Cat 5

Radial Engineering's Catapult Rack RX and TX are the new additions to the best-selling Catapult Range of Analog Audio over Cat5 analog audio snakes. These rackmount versions feature 12 XLRs on each, split into three banks, each with their own noise-eliminating ground lift switch and RJ45 Ethernet jacks on the rear panel. You can use the three Ethernet cables to connect all 12 channels to one location or even split them off to any of the Radial Catapult stage boxes, giving you a fully customisable audio snake system that can even feature transformer isolation where needed (on M and L models).



Solid State Logic

S400 Broadcast Audio Console

S400 is the latest control surface for SSL's System T range, providing the key benefits of dedicated per-fader displays and metering in a compact, cost-effective frame. The new S400-16, 32 and 48 can be combined with the complete portfolio of SSL's ground-breaking System T consoles, control interfaces, Tempest Processing Engines and Network I/O options. It can be specified as part of a larger System T installation, including as a remote surface for flypack or cloud-based systems, or in stand-alone configurations for smaller broadcast facilities or OB vehicles.

SSL Pure Drive Quad

The PURE DRIVE QUAD harnesses Solid State Logic's renowned SuperAnalogue PureDrive microphone preamp technology, originally featured in the ORIGIN console. This advanced unit introduces a new DRIVE mode, comprehensive connectivity, and state-of-the-art digital conversion, all within a compact 4-channel 2U rackmount format. The ORIGIN recording console, a contemporary-classic from SSL, first introduced the groundbreaking PureDrive microphone preamplifier. This innovative preamp maintains the clarity and punch of SSL's previous designs while also offering the flexibility to switch its character to a warm, harmonically rich, and driven tone that varies with gain.



Rocknroller

The Original and the Best! Rocknroller Multi-Carts are a range of nine different, 8-in-1 transformable multi-carts capable of carrying between 90kg to 315kg. Use as a hand truck, a dolly, hand trailer or even multi-media portable display unit, Rocknroller Multi-Carts all feature Tubeless, No-Flat pneumatic wheels with models available for a range of applications including hard and flat surface, all-rounder and even specific for off-road, all-terrain use. Amber Technology will have several Multi-Carts on display featuring some of the fantastic optional upgrades available.



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Meet our Pro Audio team and get an exclusive first look at our brands' latest innovations:

- **NEW** products from Radial, SSL, DPA, and Dynaudio Professional
- Touring-grade cables from Canare and Van Damme
- Industry essentials from Neutrik, NTi, and more
- Don't miss this chance to connect with the best in the business



See you there!





Neutrik

Neutrik's popular Dante modules are back! Connect your legacy audio gear to the Dante world. The Line I/O to Dante Interface is an end of network device. It is a breakout box which allows two channels of audio to be integrated into a Dante network. Simultaneously, NA-2I2O-DLINE converts a Dante stream into analog audio signals. Hence, it is possible to use this tiny box to feed analog audio signals into the Dante network while at the same time receiving a mix from another Dante source. Line I/O to DANTE Interface is designed for harsh stage conditions. It therefore features lockable chassis connectors for both the audio and network connections. For fixed installations, the rubber protection can be removed. With optional mounting brackets or a rack panel, the box can be mounted below tables, in floor boxes, or in equipment racks.

The NA-4I4O-AES72 is a 4-channel stage box for transmitting microphone levels, analog line levels, AES3, DMX or even intercom via one single CAT cable. The device has male and female XLRs in the same housing and can be used directly as a splitter for monitoring. An additional etherCON serves as feedthrough and allows further looping of the signals to other devices. A ground lift at each input prevents possible ground loops. In addition, each input connector offers the possibility to invert the signal.

NTi Audio

The handheld XL3 Acoustic Analyzer is a must-have device for event monitoring. The XL3 Sound Level Meter indicates when level limits are being exceeded during live shows. This information is available through any browser. This makes life easier for the Front of House (FoH) engineer and gives peace of mind to the event organizers. Levels at several locations can be simultaneously monitored. Every XL3 has an online, built-in large screen (XL-View) mode, which continuously streams three selectable levels together with freely-definable limits. Warnings, when levels are near or exceeding the limits, are clearly visualized with orange or red backgrounds. The levels are available for free to display in any browser.



DPA Microphones 2061 Lavalier

The 2061 Omnidirectional Miniature Mic is a professional lavalier that meets sound engineers' need for an amazingly high-quality mic. It offers fantastic speech intelligibility combined with durable construction with sweat-repellent and water-resistant capabilities.

The 2061 offers:

- Best-in-class speech intelligibility
- Robust mechanical construction
- Advanced sweat-repelling capabilities
- Water-resistant IP57 certification
- Available in multiple colours and fixed connectors
- Fast, secure mounting with included clip (black and white variants)

AUSTRALIS MUSIC GROUP

Australis Music Group (AMG) is a specialist distributor of professional audio products to the trade only market and has been since its inception in 1972.

We are proud to provide a portfolio of complimentary products to resellers, audio visual integrators, installers, and contractors not only in Australia, but also worldwide. We work closely with consultants and integrators to offer unmatched flexibility and world-class reliability across our portfolio of respected brands. Whether you're looking to install or upgrade a PA system, fit out your conference room with the latest audio gadgetry, or ensure your emergency and public address system complies with Australian standards, our expert team has the right solution for you.

AMG will be demonstrating a combination of industry standard touring solutions, hot new products, and an unannounced ground-breaking product from an industry leading manufacturer. Australis Pro Audio will be showcasing technological innovations from world leading brands including Lab Gruppen, Turbo Sound, K-Array, Ecler, MIDAS, Behringer and Opus. Our team of experts will be on hand to demonstrate, enlighten and just say 'G'day' across the five states ENTECH participates in. We can't wait to see you there!



MIDAS HD AIR

The HD96-AIR is the latest and highly anticipated addition to the Heritage-D series. This revolutionary lightweight console is unmatched in its class, offering 144 input channels, 123 mix buses, 96kHz sample rate and 21" ergonomic touch screen.

Lab Gruppen LMX 48

The LMX 48 provides an 4 x 8 analogue I/O, 4 x 8 AES3 digital I/O, 8 x 8 Dante networked I/O and two interfaces of AES50 where up to 24 channels from the up to 96 AES50 channels can be selected and used as inputs or outputs, making the signal routing very flexible. The 16 input routers have four fully programmable priorities for redundant input operation and provide seamless failover between the inputs.



Turbosound TQ12 + TQ18B

The Turbosound TQ Series Point Source Speakers are designed to serve all touring sound customers. The 2-way full range TQ12 is a processed passive 2,000-Watt 12" loudspeaker system ideally suited for a wide range of speech and music sound reinforcement applications. The TQ18B is a compact passive single 18" 4,000W (peak) subwoofer that is a perfect partner for the TQ12 in both fixed, portable and touring audio systems.



Ecler Hub 1616

HUB1616 is a digital zone manager with 16 inputs and 16 outputs. HUB Series offers multiple possibilities, being intuitive and easy to configure. From the least experienced user to the most expert, you can set up a professional audio installation in a matter of minutes. It is the perfect solution for any type of sound that requires managing and controlling different zones.



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NETGEAR AV Line Managed Switches

The NETGEAR AV Line is a range of switches designed specifically for the AV installation and production markets. The range includes the M4250, M4300 and the new M4350 series, covering everything from small and simple boardroom or amp rack applications through to systems with thousands of devices. The NETGEAR Pro AV line is certified for use with many of the world's leading manufacturers of AV over IP end-points. Via the user-friendly UI, you simply assign each port for Dante, AES-67, Q-Sys, AVB, NDI etc. There are many additional AV friendly features of the NETGEAR line, designed to take the complexity out of configuring managed switches and multiple VLAN's. NETGEAR AV Line – it doesn't get any easier.

FBT X-PRO 112MA Stage Monitor

The FBT X-PRO 112MA is a dedicated stage monitor with a coaxial 12"/1" custom driver. The self-powered monitor is part of the X-PRO range suitable for both production companies and fixed installations. For added versatility the X-PRO 112MA can be mounted on a stand and features a 3-channel mixer (two XLR, one with stereo jack inputs plus Bluetooth 5.0). It also includes four DSP presets for when used as a monitor, on a stand, as drumfill or when used in pairs.



Linea Research ASC48

The Linea Research ASC48 is an Advanced System Controller with four inputs and eight outputs (analogue and AES3). With its 96kHz processing, the ASC48 is popular as a system management processor for many brands of speaker systems. The system can be controlled either via the front panel or the Linea Research System Engineer PC application. The DSP algorithms are designed and hand crafted in house by Linea, they are not available on products from any other manufacturer. For example, LIR linear phase crossover filters which are as easy to use as more conventional filter shapes, and have less latency than FIR filters. Also, the powerful VX Limiter suite which sports Peak, RMS and Excursion limiting, as well as multiband limiting for passive 2-way enclosures. When used as a loudspeaker management system or digital crossover, the ASC48 brings state-of-the-art facilities and performance, however the ability to receive, process and transmit audio without it leaving the digital domain makes the ASC48 an ideal central controller for large systems, even when amplifiers with in-built DSP are being employed.



Fohhn PT-70 Full-range Loudspeaker

The Fohhn PT-70 is an exceptionally powerful passive loudspeaker which can be switched between cardioid and vented operation. The 2 x 12"/1.4" speaker is available in 60 and 90 degree variants and can be used as the main system for indoor or outdoor events, or as near fill for larger systems. It is also perfectly suitable for fixed installations. It features a unique switchable cardioid mode providing up to 23dB of rear sound reduction. The PT-70 is often matched with Fohhn PS-800 (single 18") or PS-850 (dual 18") subwoofers and is powered by Fohhn DI series amplification. The horn loaded, fully passive PT-70 requires just one amplifier channel and provides up to 140dB Max SPL with a frequency range of 52Hz-20kHz.



Earthworks Drum Mic Kits

We'll be showcasing the all-new drum mic line from Earthworks. New is the Gen2 series of the popular DM20 and associated DK7 drum mic kit. Also on display will be the brand new DM17, a low-cost snare and tom mic along with the new DK6 drum mic kit.





Earthworks SR117 Vocal Mic and SR3117 Wireless Capsule

The new Earthworks SR117 vocal mic and SR3117 wireless capsule are everything you expect from Earthworks except the price. The SR117 vocal mic has the power and quality of a condenser microphone with the durability and familiarity of a dynamic. It is easy to mix right out of the box without any special corrective EQ. And its exceptional pattern control across all frequencies offers maximum feedback rejection. In addition, it features exceptional plosive protection and a balanced, natural frequency response. Whilst being rugged and tour ready, it is equally at home in the studio.

The SR3117 is a wireless capsule version of the SR117, and is compatible with Shure® ULX-D, QLX-D, SLX-D and Axient. It can also be used with the MIPRO ACT700H and ACT800H as well as with some other wireless brands.



ALFATRON



Alfatron DANTE Adaptors

Alfatron DANTE adaptors are designed to easily and cost-effectively connect analogue audio (or USB) to or from a DANTE network. Supporting DANTE and AES67, the three models include:

ALF-DAI-2XLR: Two channel DANTE input device. Converts two line-level (XLR-F) analogue channels to DANTE

ALF-DAO-2XLR: Two channel DANTE output device. Converts DANTE to two line-level (XLR-M) analogue outputs.

ALF-DAIO-USB: DANTE 2x2 channel USB device. Allows you to connect a computer to a DANTE network for playback or recording.



System Controller & Power Amplifiers

- Unique, precise, 96kHz digital signal processing
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Advanced System Controller

4-IN 8-OUT WITH OPTIONAL DANTE



Touring Amplifiers

4 & 8 CHANNELS WITH DSP & OPTIONAL DANTE



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Martin, Michael and John from Clearlight Shows

CLEARLIGHT SHOWS

Showcasing several new and exciting products at ENTECH 24, John, Martin, and Michael are looking forward to welcoming you on the Clearlight Shows stand. Products from our key suppliers will be on display including Capture, Infinity, Showtec, Wentex, LDR and Swefog. Join us for the world premiere launch of the new Infinity Furion IP Series P402 Profile which is an impressive next generation moving head that takes the reliability and performance of the Infinity Furion S401 to a new level.

From Showtec and Infinity we'll have a range of profiles, LED pars, and wash fixtures alongside the IP65 rated Furion P402 moving head. Also on display will be the intuitive Showtec Lampy lighting consoles which are easy to use and deliver high performance at a great price point, while offering class leading features which Lampy users are loving.



Raccoon P7/7

Showtec Act Profile 50

Showtec Lampy Console



Clearlight Shows Pty Ltd

For haze, we'll have our long-time supplier of smoke and haze solutions company Swefog on board with the K1 Hazer which is great for touring with it's unique 'bag in box' fluid system. And check out our innovative Wentex Pipe & Drape Systems which has flexible configuration options for almost any application and is setting the global standard for quality, innovation and sustainability in textile solutions. From our Italian friends at LDR we will be bringing the Astro 600 LED Followspot .

We have brought our most exciting products with us on the road this year and we are looking forward to sharing them with you!



Missed us at Entech Roadshow?

Book an in-person or online demo today



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CMI MUSIC & AUDIO

The company will showcase the latest technologies in the audio market with highly regarded brands like JBL Professional, Adamson Systems, Blacktrax, Innosonix, Tascam, Netgear AV, ONEstage, Pan Acoustics, Optocore, Universal Audio AGK and more.

Our team of experts will be on the floor demonstrating the capabilities of the newest products available from our brands and their use cases.

CMI Music & Audio invites all industry professionals to visit our stands at ENTECH 2024 to interact with industry experts, gain valuable insights, and explore the endless possibilities of audio technology in various applications.

To schedule a meeting or for more information about CMI Music & Audio's participation at ENTECH 2024, don't hesitate to contact our friendly audio solutions team at audio@cmi.com.au or visit www.cmi.com.au.



UAD Apollo X16D



Innosonix LP2

Innosonix D2



Adamson CS Family

Pan Acoustics, Pan Beam Series



Blacktrax BT1



JBL SRX900 Series



Cmi Music & Audio

Epson will be showcasing the EB-PQ2220B projector at ENTECH Roadshow.

Building on the highly compact and efficient EB-PU Series platform, Epson has integrated its patented 4K Crystal Motion technology, panel thermo-control, and double micro-lens array to set a new standard in 4K image quality. The 20,000-lumen EB-PQ2220B offers a range of benefits, including a more compact design, easier installation and setup, simplified maintenance, and exceptional image performance.

To find out more, please visit www.epson.com.au/products/projector/EB-PQ2220B.asp



EVENTEC

EVENTEC @ ENTECH
DELUGE MOVERS

Two Eventec Deluge Movers are shown. The one on the left is a larger model with many red LEDs, and the one on the right is a smaller model with a mix of red and green LEDs.

IP65 Rated
 19 x 60W RGBW + 72 x 0.5W RGB LED
 Aura LED Effects

EVENTEC @ ENTECH
WOLFMIX

A black Wolfmix W1 MK2 lighting console with a large, colorful touch screen.

Quick Light Show Set Up
 Built in Effects Library
 4.3" Capacitive Touch Screen

EVENTEC @ ENTECH
FULLBOAR 4

A black Fullboard 4 lighting console with a large, colorful touch screen.

Limitless Lighting Control
 Up to 12 Universes of DMX Output
 2 x 15.6" 10-Point Touch Screens

EVENTEC @ ENTECH
WLA-210A

A stack of four black WLA-210A active line array modules.

Internal DSP with FIR Presets
 Connection via Network
 Sub and Top Active System

Eventec will be showcasing new and fan-favourite equipment from their range of brands. Showing off new moving heads from Event Lighting including the very popular DELUGEM7X60WFX and the new larger model DELUGEM19X60WFX alongside the HAVOC Series of movers.

For all shows on the Eastern Seaboard, you will be able to see our Event Lighting Series of Trailer Products, showcasing the Maximus Trailer Stage in Queensland and our Trailer LED Screen in New South Wales and Victoria.

Hot off of Integrate, we are excited to show you Wharfedale Pro's WLA-210A Active Line Array system for the PA shootout which we are sure will continue to turn heads and exceed expectations. We are also bringing a spectrum of products from Colorlight – from the VX10 Video Processor to the A200 Cloud Sender, we will have something for your next LED screen project!

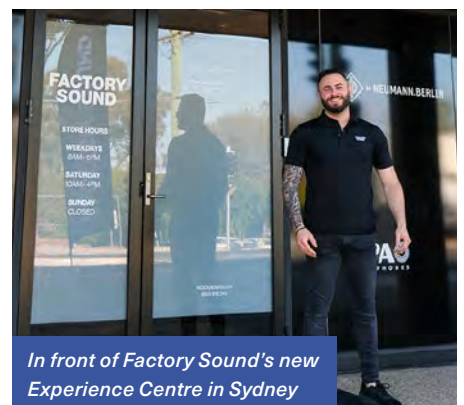
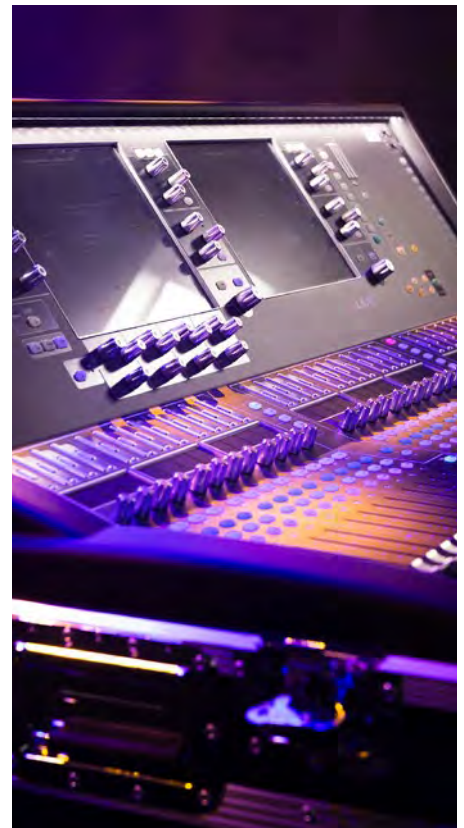
We will be showing off a range of ETC movers alongside the HOG Fullboard 4 Lighting Control System. For more intermediate users looking for a high functioning console that's easy to operate, there is the Nicolaudie Wolfmix W1 MK2.

Emerge through the haze and you'll also be able to catch industry leader Antari's new IP-1600 outdoor rated fog machine and updated fan-favourite F7X amongst other key products.





Inside Factory Sound Sydney



In front of Factory Sound's new Experience Centre in Sydney

FACTORY SOUND

Factory Sound is proud to mark two exciting milestones in 2024: our 30th anniversary in Melbourne and the opening of our brand-new Experience Centre in Sydney.

Since 1994, we've been dedicated to serving Australia's AV industry, providing industry-leading products and expert service. Our long-standing relationships with key suppliers and partners have cemented our position as the trusted choice for AV professionals nationwide.

At this year's ENTECH Road Show, we're thrilled to offer a preview of our latest offerings in the world's top AV brands, including AVID, DiGiCo, Sennheiser, Yamaha, RME, Roland, and Tenacious. It's a showcase of the most cutting-edge technology in the audio-visual industry, brought together to meet the evolving needs of our customers. We're offering a taste of what you can expect from our Experience Centres, where visitors will be able to interact with a curated selection of gear in a professional, hands-on environment.

Whether you're a seasoned AV expert or just starting your journey, stop by our stand at ENTECH for an exclusive look at the products and services that have made Factory Sound a leader for 30 years. This is just a snippet of what's to come as we continue to support and innovate in the AV industry.



JANDS

Since 1970, Jands has been at the forefront of distributing world-class audio, video, lighting, control, and broadcasting technologies across Australia and New Zealand, providing tailored solutions for any application.

At ENTECH 2024, you can experience the latest solutions and technologies from leading brands, including Shure, L-Acoustics, ROBE, Electro-Voice, ETC, Clear-Com, and Listen Technologies.

Shure

Experience live demonstrations of Shure's Axient Digital wireless microphone platform, trusted by professionals worldwide, and the newest addition to the Shure vocal microphone range, the Nexadyne.

ROBE

Explore the iBolt, iForte LTX, iSpider X, and T32 Cyc – advanced lighting fixtures designed for precision and versatility.

L-Acoustics

Discover the SYVA system and X Series loudspeakers, offering unmatched sound clarity and coverage for your performance or venue.

Electro-Voice

Check out the portable, battery-powered EVERSE Series loudspeakers and the versatile ZLX G2 Series powered portable loudspeakers.

JANDS

JANDS

Listen Technologies

Try AURI, the first assistive listening system with Auracast technology for seamless multi-channel audio.



ETC

See the Ion console and ColorSource fixture range, delivering vibrant colours and precision dimming for your theatre performances.



Clear-Com

Explore FreeSpeak, Arcadia and Gen-IC solutions for live events and broadcast.



LSC CONTROL SYSTEMS

The 2024 Entech Roadshow will be the biggest ever for LSC Control Systems. Due to the growth of the company, our stand has also grown and is now the largest possible (9x3m) size available.

This will be the official launch of the recently announced Avolites/LSC reunion, and we will have a dedicated section of the stand just for Avolites. Ron Carrington, Sales Director at Avolites, will be in attendance, with a D7 console he is bringing out as luggage (yes, a fully featured, dual screen console with UPS that is airline friendly). Other highlights will be the T3 wings, Q3 media server and the amazing super compact Quartz console.



Avolites D7

NEXEN Portable - New IP65 rated model



LSC 
CONTROL SYSTEMS

New LSC products will include the NEXEN family of nodes (including the new IP65 rated model), the ubiquitous UNITOUR and concept builds of the forthcoming APX and GNX products. Make sure you take a look at the GNX and APX and pass on your comments, to help us get the final design perfect.

ROXX will also be a major highlight at the show, with Michael Staffopoulos, Global Business Development Manager at ROXX, squeezing a couple of show dates into his busy schedule. The new Neo and Cluster S1 fixtures will be on display, ready to burn your retina and melt your brain.



Avolites Quartz

Avolites T3 Wings



ROXX NEO Barndoor and Filter

MEYER SOUND

Meyer Sound's presence on the 2024 ENTECH Road Show features demonstrations of a wide range of audio solutions, including the recently announced MILAN-certified ULTRA-X80 versatile point source loudspeaker.

From sports arenas and stadiums to houses of worship, theaters and live music venues, the versatile ULTRA-X80 delivers exceptional sonic experiences for all kinds of audiences, in all kinds of venues, for all kinds of sound. It's lightweight, compact, and network capable.

The system will also feature the other members of the ULTRA family, the ULTRA-X20 compact wide coverage loudspeaker and MILAN-certified ULTRA-X40 compact loudspeaker. Every loudspeaker in the ULTRA family works together or separately to deliver sound with fidelity and precision. Low end will be powered by the new 2100-LFC low-frequency control element. By pairing a single, all-new 21-inch driver with four voice coils to a potent Class D amplifier, the 2100-LFC produces a linear acoustic output suitable for the most powerful applications, yet it realizes this comparable performance in a loudspeaker that is much lighter and narrower.

The demonstration will feature audio designed with the Spacemap Go spatial sound design and mixing tool. Spacemap Go leverages the processing power of the Galileo GALAXY Network Platform in an intuitive iPad app that allows a focus on the art without the burden of complicated interfaces and confusing algorithms. Even first-time users can create sophisticated spatial sound designs in minutes, thanks to its simple iPad touchscreen interface. Other featured products include the USW-210P compact subwoofer, Nebra software platform, Compass control software, MPS-488X IntelligentDC power supply, and MM-4XP miniature self-powered loudspeaker.



RIEDEL



Come and see the Riedel Australia team at ENTECH Road Show, where the team will be showing the latest developments in all of Riedel's flagship product lines, including the Artist Intercom ecosystem, the Emmy award winning Bolero wireless intercom system plus our PunQtum IP Based Digital Partyline system.

We will also be showing SimplyLive, Riedel's Instant Replay and Live Video Production Tool product line plus our market leading video, audio, and data distribution platform, MediorNet. Still unique in the market to this day, MediorNet delivers decentralised routing, processing and transport functionality in Riedel's groundbreaking software defined hardware. We look forward to seeing you at the show!



Precision. Power. Purity.

NOW BUILT FOR A BIGGER STAGE.



Introducing **ULTRA X80**

It's lightweight, compact and pound-for-pound our most powerful point source yet. No need for multiple systems and amps. Just one, easy-to-rig loudspeaker that's versatile enough for all kinds of venues. meyersound.com/ultra-x80

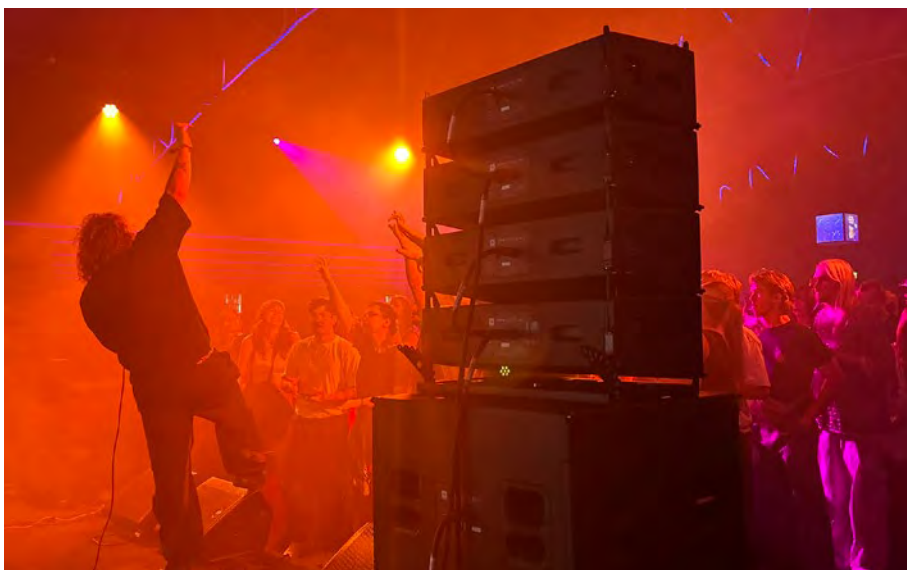




The team from MadisonAV will be showcasing the JBL VTX A-Series line array system, including the compact A8 system and the sub compact A6 system. We'll also feature a powered VRX 900 system and will be holding a listening session for the A8 system at each of the roadshows. Come and hear them for yourself, and see just how compact and easy-to-rig these systems are!

Fresh from local events including BIGSOUND, Tina Arena at HOTA and Enlighten Festival with Hoodoo Gurus, the VTX A-Series is JBL's next generation tour sound solution for mid-to-large size touring applications and high-end fixed installations. The series was designed from scratch to address not only audio performance, but the full scope of challenges faced by tour sound professionals, rental companies, FOH engineers and live production crews.

Meet our Head of Tour Sound, Peter Kubow, who will provide technical, configuration, rigging and transportation information. He'll be joined by the local MadisonAV account management team in each state.





PANASONIC CONNECT



Panasonic has been at the forefront of projection display technology for decades, delivering engaging experiences with bold, bright, vivid visuals. No matter the venue or size of your audience, from concert halls to large scale sporting events, our range of projectors will help your creative vision come to life.

Panasonic has also been delivering and pioneering innovative Broadcast and Professional Video products to the world for more than 60 years. This wealth of experience means our strength lies in our ability to provide reliable, high-quality solutions, playing a crucial role in some of the world's largest events. Whether you need arguably the best professional 4K PTZ cameras for live events or need 4K studio cameras or 4K camcorders, we have the products for you.

Panasonic is now revolutionising live vision mixing with KAIROS. A unique IT/IP video processing platform that provides unprecedented system configuration and operation flexibility while delivering improved video quality and productivity. At ENTECH we will be showcasing our flagship AW-UE160 4K PTZ camera, but will also have specialists on hand to talk about KAIROS, or any of our other products and how they could improve your productions.

Panasonic

NAS

NAS are excited to be back at ENTECH this year, showcasing the following brands and products.

Come and catch up with Dave, Anthony, Aaron, Brendon, Steve, Michael, Shane (and the rest of us) at your local ENTECH Road Show event – we can't wait to see you!



AtlasIED

Atmosphere Platform

Experience freedom of flexibility to create your Atmosphere. AtlasIED's Atmosphere platform sets a new standard for digital audio with multi-zone processors, amplifiers, and a variety of accessories. Touchless control, easy-to-program automation, and artificial intelligence offer integrators and users an effortless way to create the perfect Atmosphere for their business.



Pliant Technologies

CrewCom CB2

Affordable, powerful and professional wireless Intercom. The CrewCom CB2 wireless intercom system boasts the same proven CrewCom wireless technology while also providing ease-of-use and unparalleled performance without the high cost and complexity of many intercom systems. Right out of the box, CB2's smart system design makes it easy to connect to a hardwire system and uses a rugged, volunteer-friendly radio pack.

MicroCom XR

Wireless intercom for every budget. Simple to operate and budget-friendly, MicroCom XR is the ideal intercom solution for applications where quality wireless intercom wasn't previously a viable option. MicroCom XR's excellent range and rugged construction make it the perfect choice to deliver dependable performance for any application including theatre, concert, corporate events and just about anywhere groups need to communicate together. With MicroCom XR, there's finally an easy-to-use intercom solution that gives your production the right wireless intercom at the right price.



Jupiter (JP) Pro Series

Touring LED displays redefined. With expansive panels engineered for lightning-fast setup, the Jupiter Pro Series ensures performances aren't just seen – they're spectacularly experienced. At 50% transparency, the JP8 Pro elevates outdoor concert visuals. Feather-light yet resilient, it defies industry norms. Curved installations? No problem. Creativity unleashed? Absolutely.



Absen

Polaris (PL) Series

Cutting-edge LED displays. Featuring ultra-high resolution, HDR support, and a refresh rate of over 3840Hz, the Polaris Series displays deliver stunning visuals for any event. With lightweight, modular panels and creative curved installation options, the PL Series is perfect for dynamic and immersive setups.

dBTechnologies

VIO L1610

A three-way system with a symmetric design. Astonishing sound pressure in one of the most compact VIO cabinets. VIO L1610 brings the best technology of VIO Series and features a state-of-the-art symmetric acoustic design.

VIO X315

The evolution of the premium line VIO X. Powerful, tour-grade, three-way tri-amped point source speakers for public address in large venues. VIO X315 is a self-powered point source speaker capable of delivering outstanding sound pressure levels for its size, thanks to premium components, a three-way tri-amplified design and state of the art electronics.

OPERA REEVO 210 & 212

Two point source models raising the bar. OPERA REEVO Series deliver an astonishing sound pressure level with touring-grade sound definition and a remarkable low-end extension, in a compact and freshly designed enclosure accessible to anybody who wants great sound anywhere.



**dB
audiotechnik**

XSL-Series

A new benchmark in both mobile and installed audio. A compact powerhouse and master of efficiency, XSL and XSLi deliver SL quality, integrity and dynamics on the smallest scale possible. A complete package of accessories and software teams up with the d&b amplification and workflow platform for built in efficiency from start to finish.



QSC

Showcasing L Class active line array loudspeakers, the next-generation of advanced, intelligent, active loudspeakers for mobile and fixed entertainment applications.

Delivering extraordinary audio experiences and exceptional performance via system intelligence and premium components, both products were developed thoroughly and rigorously with sound quality, simplicity and expandability in mind. The remarkable result of a deep understanding of customer needs and application requirements, LA108 and LA112 loudspeakers are easy to configure and deploy for applications ranging from simple, portable, plug-and-play setups, to demanding, networked, high-tech AV productions and fixed installations.

Perfect for entertainers, installers and production companies - you won't want to miss this first look at all L Class has to offer.



QSC

PAVT

Tech demonstrations, new products, new market opportunities. 2024 - 2025 is a big COVID comeback for PAVT. With a combination of resurgent brands and market leaders, the new technology tipping point is here. Audio over IP and what it can do for you. Get the tech talk on the brands on the way up, with everything you need to be a leading-edge technology hub.



Powersoft

The world's leading amplifier brand for quality, reliability and network control.

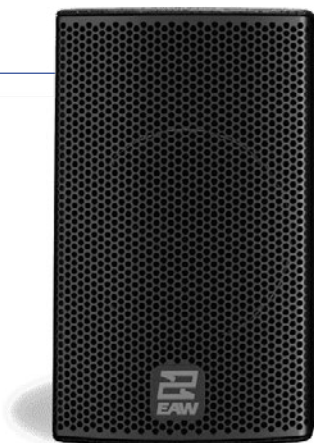
Find out how to monitor and control your amplifiers from anywhere, with the safe and easy Powersoft cloud control. See Mezzo audio networking capabilities with Dante/AES67 and an internal Gigabit Ethernet. New Powersoft Unica and the Verso gateway. Your gateway to high power and cloud control.



EAW

Big Sound - Small Boxes.

This is the big growth brand for 2024 -25. A host of newly developed technologies and new factory now produce a range of outstanding performance and value at the top end of the market. Both big boxes and small. Co-axial like you have never heard before. Recent release MKC coaxial point source loudspeakers. Mobile sound or fixed installations, EAW engineering makes all the difference. Hear the demo, you'll be impressed.



Luminex

Set up a converged pro AV network in no time. You don't need an advanced IT background. GigaCore switches come pre-configured for pro AV applications. ARANEO software makes connections and control easy. Find out why a Luminex network allows more stability and control, is easier to set up and what makes Luminex Network Intelligence, the market leader in data distribution equipment for professional lighting, audio and video applications.



Televic

The leader in conferencing and tour guide technology.

From a small regional council to the United Nations, no meeting too big, no meeting too unimportant. Scalable to meet your needs. Permanent installation, rental, wired or wireless.

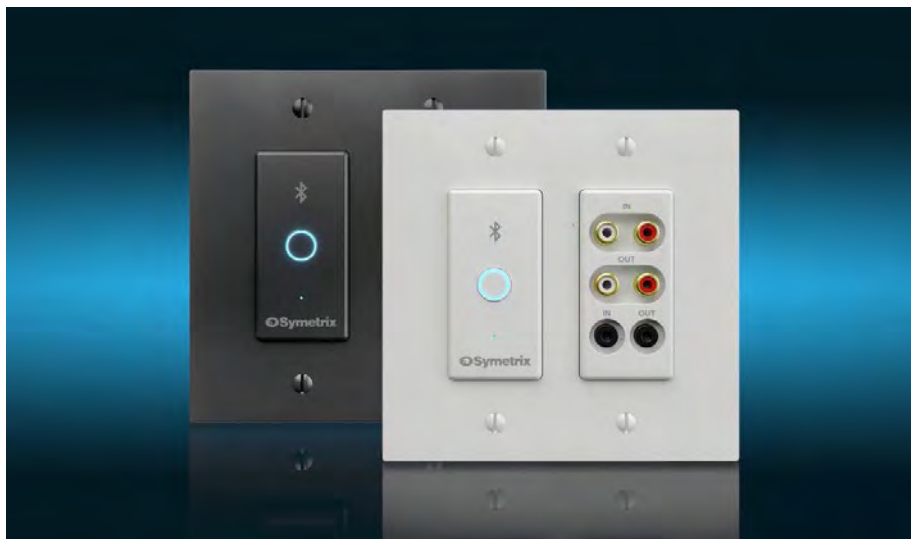
televic



Symetrix

Discover the xIO range of cross platform audio endpoints. now with plugins for most popular DSP platforms. Built with Symetrix superior build quality. Look and act the part with high resolution audio performance, ease of installation and long high-duty cycle life. Dante and AES67 compatible. Find out about the soon to arrive game-changing Server D100. Symetrix network for very large scale installations.

Symetrix



PAVT

SHOW TECHNOLOGY

At Show Technology, our specialty is distributing professional equipment from renowned manufacturers in the lighting and control systems industry.

Ayrton

We are excited to showcase the Kyalami, the first phosphor laser source luminaire in the creative solution series from Ayrton. The performance capability of Kyalami is based on its unique design, extreme miniaturisation, and a minimalist cylindrical footprint that allows multiple luminaires to be installed only a few centimetres apart. A sphere of only 265 mm incorporates its 100W laser module with a cooling system and optics. Kyalami offers a next generation speckle-free laser source designed for rendering a D65 white point that allows perfect colour reproduction. It pushes all the limits when it comes to beam definition, with native contrast never before achieved by a digital light source, an incredible 1° beam angle, and an extreme range of focus that permits the beam shape to be adjusted according to the operating distance.



THE P.A. PEOPLE



TheatreQuip



MOVEKET

The P.A. People will feature a number of newly released products at Entech 2024

Moveket

Chain Hoists and Control

On display will be a new 250kg version of the Moveket ProStage+ D8+ range of chain hoists, complementing the existing 500kg and 1000kg models. We will also be showing integrated load monitoring capabilities and other unique features of these hoists.

The P.A. People will also be demonstrating the Moveket i-Motion variable speed BGV-C1 control system at ENTECH. Moveket also supplies BVG-C1 fixed speed and variable speed hoists and control systems suitable for flying loads over audiences. With speeds up to 40m/m and loads of up to 2000kg, Moveket has been at the forefront of dynamic flying systems for shows and events for many years.

TheatreQuip

Triple E Track Systems

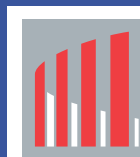
Also new for this year is the addition of the Triple E UniBeam and ChainBeam tracking systems. Capable of supporting scenery at up to 1 tonne per m, these systems feature manual, rope, or high-speed chain drive automation, and complement our own TheatreQuip Series 18 hand-drawn and motorised tracking systems and our new in-house Sewing Room capability.

Front Loaded Counterweight System

We will again have on display our novel approach to improving the safety and OHS aspects of working with Counterweight Flying systems in theatres.

ProBar & ArchBar Lighting Bars

The TheatreQuip range of lighting bars for production and installation has been very well received since its launch in 2022. New to the range this year is a vertically orientated ArchBar, ideal for perch locations in theatres and halls. Offered in both standard sizes and build to order versions, the ProBar and ArchBar offer a range of wiring and circuiting options along with support for Cat6 data and both 3 and 5 pin DMX outlets.



The
P.A.
People



Martin

The Martin MAC Viper XIP next-generation, Viper-class moving head combines legendary Viper performance, Martin XIP smart weatherproofing technology, and the most robust feature set Martin has ever developed. Drawing on best-in-class features that defined the iconic Viper lineup, including Viper Profile, Performance, Wash and Wash DX, MAC Viper XIP builds on its heritage, setting a new standard for all-in-one performance, innovation and reliability.

The combination of MAC Viper XIP's powerful lumen output and innovative patent-pending XIP water and dust ingress protection make it not only ideal for a wide range of temporary, year-round outdoor applications, but also ensures exceptionally low-noise levels for indoor use, similar to the whisper-silent Martin MAC Encore. Featuring Martin Professional's proprietary tailor-made light engine, the MAC Viper XIP unleashes an impressive 5° narrow, high-definition, and high-contrast beam, ensuring unprecedented lumen maintenance over the zoom range.

PROLIGHTS

Finally, from film sets to events, the PROLIGHTS ControlGo is the ultimate multifunctional lighting controller. This incredibly versatile, simple to use tool combines a fixture remote, RDM Tool, CRMX transmitter, DMX controller and DMX recorder into a single, portable and durable device.

Whether flashing out a film set, setting addresses on a tradeshow stand, or controlling battery uplighters, the ControlGO is THE device you need to get up and running quickly and easily.



SHOW
TECHNOLOGY



**YOUR VENUE
ENGINEERING
SPECIALISTS**

Event Communications

Venue Engineering

Installed Systems

Sales & Service

papeople.com.au



Chain Hoists and Control Systems



Staging Equipment for Venues



Actuators for Motorised Platforms

EXPERIENCE OUR TECHNOLOGY

entech ROADSHOW

OCTOBER
2024

BRIS
8

SYD
10

MELB
15

ADEL
17

PER
22



ULA GROUP

The ULA Group stand at ENTECH 2024 will feature the latest lighting, visual and stage technology from world-leading industry brands.

New technology to explore on our stand:

- The best-in-class intelligent lighting technology by Elation
- Astera's award-winning wireless technology for film and entertainment professionals
- The latest rental and touring LED displays from Vuepix Infiled
- Professional entertainment lighting range by ACME lighting
- Wireless lighting control solutions for professionals by LumenRadio
- Professional entertainment lighting control solutions by Obsidian and Netron
- The World's best atmospheric effects by MDG
- Leading edge lighting control solutions by ChamSys
- ChainMaster's world-class electric chain hoists and control systems

Come and explore our technology!
See you at the ULA Group stand.



VUEPIX
INFILED

ELATION

lumenradio

ACME

NOVA STAR

ChamSys

CHAINMASTER
THE WORLD OF MOTORS

ASTERA

BROMPTON
TECHNOLOGY

7M⁴
Miles. Works better.

pharos

DJIPower

arKaos

MDG

OBSIDIAN
CONTROL SYSTEMS



ULA
GROUP



entalks

Who's really in control?

Lighting ecosystems of the future.

Join us in the ENTECH Theatre for a presentation delivered by Koy Neminathan, Business Development Director of Obsidian Control Systems.

VUEPIX
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AR2 SERIES

Ultra thin & lightweight
Redefined curving system
Precise calibration
Quick & easy set up

Pixel Pitch: 2.9 - 10.4 mm
Brightness: 5,000+ nits
Various cabinet sizes
Wide range of accessories



DELIVERING OUTSTANDING PERFORMANCE

Crafted to cater for a wide range of indoor and outdoor applications.



Indoor



IP65
Outdoor



Light



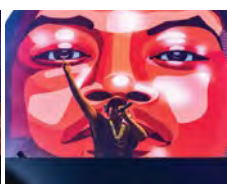
Thin



Curved



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entalks

Proudly presented by NW Group

Brisbane - Tuesday 8 October

Time	NW Group Theatre A	NW Group Theatre B	NW Group Theatre C
11:30	Who's Really in Control? - Lighting Ecosystems of the Future		
12:00		De-bunking Networking with NETGEAR AV	Rational Acoustics Relative Phase Seminar
13:00	KEYNOTE Employment Pathways, Rising Stars!		
13:30		The Seven Key Questions You Need To Ask Before You Buy A Chain Motor	Allen & Heath dLive - Monitor Mixing
14:30	Motley: Lighting Kiss!	Wireless Audio - What's Coming Next?	Allen & Heath dLive for Theatre Mix Master Class
15:30	Beam steering, wave shaping, and wave field synthesis	d&b audiotechnik Sound System Design	Allen & Heath dLive Mix Master Class

Sydney - Thursday 10 October

Time	NW Group Theatre A	NW Group Theatre B	NW Group Theatre C	NW Group Theatre D
11:30	Strategies to Stream Your Event Successfully			
12:00	Bonded Internet Connectivity using Pepwave and multiple 5G Connections		De-bunking Networking with NETGEAR AV	Rational Acoustics Relative Phase Seminar
12:30		Who's Really in Control? - Lighting Ecosystems of the Future		
13:00	KEYNOTE - Employment Pathways, Rising Stars!			
13:30			The Seven Key Questions You Need To Ask Before You Buy A Chain Motor	Allen & Heath dLive - Monitor Mixing
14:00	Why is Julius Still Doing This?	Beam steering, wave shaping, and wave field synthesis		
14:30	How to deal with a corporate client as an AV op		Wireless Audio - What's Coming Next?	Allen & Heath dLive for Theatre Mix Master Class
15:00	Transporting the Tekno Train			
15:30	Physical, Mental Health, and Fitness in Staging		d&b audiotechnik Sound System Design	Allen & Heath dLive Mix Master Class
16:00		"So, you want to upgrade your venue... what next?" Presented by Arup		

The 2024 enTALKS Programme

ENTECH's enTALKS seminar programme runs in every city on the tour, and for the first time, features additional local presenters in each city, creating a unique schedule for each stop. There's something for everyone; upskill your staff, learn about new technologies, and find out where the employment and business opportunities will be in 2025.

And what's more, it's all FREE for every ENTECH attendee!

Melbourne - Tuesday 15 October

Time	NW Group Theatre A	NW Group Theatre B	NW Group Theatre C
11:30	"So, you want to upgrade your venue... what next?" Presented by Arup		
12:00		De-bunking Networking with NETGEAR AV	Rational Acoustics Relative Phase Seminar
13:00	KEYNOTE Employment Pathways, Rising Stars!		
13:30		The Seven Key Questions You Need To Ask Before You Buy A Chain Motor	Allen & Heath dLive - Monitor Mixing
14:00	Matthew Peckham - Why I Still Do This		
14:30		Wireless Audio – What's Coming Next?	Allen & Heath dLive for Theatre Mix Master Class
15:00	The LD/Programmer Relationship		
15:30		d&b audiotechnik Sound System Design	Allen & Heath dLive Mix Master Class
16:00	Beam steering, wave shaping, and wave field synthesis		

Adelaide - Thursday 17 October

Time	NW Group Theatre A	NW Group Theatre B	NW Group Theatre C
12:00		De-bunking Networking with NETGEAR AV	Rational Acoustics Relative Phase Seminar
13:00	KEYNOTE Employment Pathways, Rising Stars!		
13:30		The Seven Key Questions You Need To Ask Before You Buy A Chain Motor	Allen & Heath dLive - Monitor Mixing
14:30	What is the Colour of Sound?	Wireless Audio – What's Coming Next?	Allen & Heath dLive for Theatre Mix Master Class
15:30		d&b audiotechnik Sound System Design	Allen & Heath dLive Mix Master Class

Perth - Tuesday 22 October

Time	NW Group Theatre A	NW Group Theatre B
11:30	Lights, Network, Action!	
12:00	de-Bunking Networking with NETGEAR AV	Rational Acoustics Relative Phase Seminar
13:00	KEYNOTE - Employment Pathways, Rising Stars!	
13:30	The Seven Key Questions You Need To Ask Before You Buy A Chain Motor	Allen & Heath dLive - Monitor Mixing
14:30	Wireless Audio – What's Coming Next?	Allen & Heath dLive for Theatre Mix Master Class
15:30	d&b audiotechnik Sound System Design	Allen & Heath dLive Mix Master Class

entalks

The NW Group enTALKS National Programme

KEYNOTE - Employment Pathways, Rising Stars!

The entertainment and installation tech biz is short of workers. Now is the best time to enter, but how? What are the jobs, what skillsets do you need? Where do you start? How do you start? Join CX and ENTECH founder Julius Grafton for a straight-shooting overview of a vibrant creative industry and leave equipped with a plan! Recommended for tertiary students, graduates, and career shifters. Not available for high school groups.

De-bunking Networking with NETGEAR AV

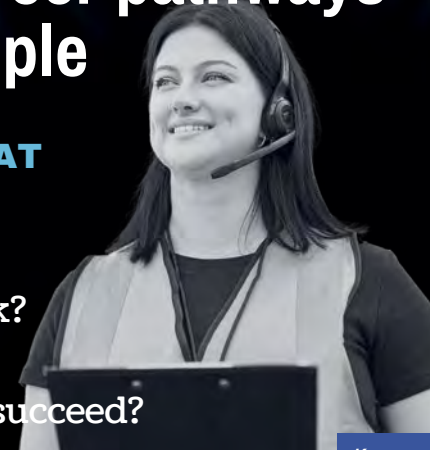
You need to be a card-carrying IT professional to even think about configuring an Ethernet switch for AV, right? Nope. Audio Brands Australia de-bunks this and a host of other myths that have likely been holding you back from truly enjoying the cost and complexity savings of modern AVoIP systems.

The Seven Key Questions You Need To Ask Before You Buy A Chain Motor

Join the discussion about why all Chain Motors are NOT created equal, and some key features that you need to look for in particular applications. There will be a short presentation, after which you will have the opportunity to control a multi axis synchronous chain motor system. If you are using chain motors or are looking to use some in your next event or venue, this is a not to be missed presentation from two of the experts in the industry.

Presenters

Peter Grisard – Manager, Venue Engineering. A long-term industry professional, Peter leads a team of skilled practitioners to deliver engineered solutions for a diverse range of clients.



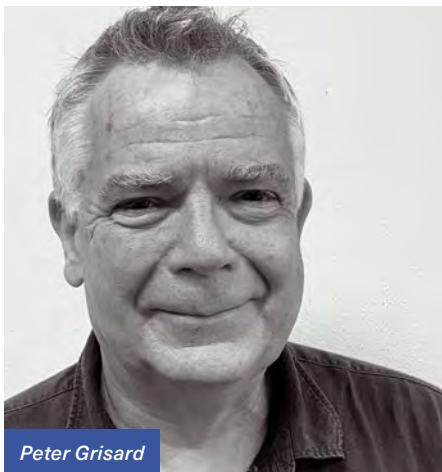
RISING STARS

Promoting career pathways for young people

KEYNOTE SESSION AT 1PM ALL CITIES

How do you find work?
What are the jobs?
What do you need to succeed?

Keynote



Peter Grisard

Chris Dodds - Managing Director. Chris has led the development of The P.A. People for more than 25 years of its 50+ years of continuous trading. Now under one roof, The P.A. People



Chris Dodds

has the proven capability to design, engineer, manufacture, integrate and service - theatre machinery, performance audio, lighting, and AV systems.



Peter Twartz

Wireless Audio – What's Coming Next?

PRM's Peter Twartz has been a radio frequency manager for many of the largest special events over the last 25 years.

Wireless Audio – it's generational change time, what's coming? We started with VHF then UHF, we went from Analog to Digital, we've got spread spectrum devices. We've heard about WMAS; it's coming, but what is it? There are other really clever formats already here and we've got more coming, but will they work together? Does frequency coordination get any easier? Or does it get harder?

d&b audiotechnik Sound System Design

Hosted by Grammy Award winning Dave Jacques, or Anthony Murdoch, both of NAS.



Ben Clarke

NAS's Sound System Design Seminar is an introduction to sound system design using d&b ArrayCalc, covering the basics of venue design, loudspeaker selection, d&b's ArrayProcessing software, and designing subwoofer arrays.

Rational Acoustics Relative Phase Seminar

Studio? Live? Theatre? Cinema? What is the phase response telling you in your measurement and why is it important? Our job every single day is combining sources of sound – and if they do not match in phase response they can never combine effectively for their entire operating range.

We are going to demonstrate through DSP emulation (and with live SMAART measurements let you see and hear the result in a distributed IEM System) of what happens

when sources of sound combine with differing phase response, just like in the real world. This could be two microphones, two loudspeakers, two coverage zones etc... Let us help explain some of the chaos in our daily lives and like all good measurements, provide a way of making better phase response decisions. Presented by Ben Clarke, Rational Acoustics SMAART Instructor.

Allen & Heath dLive – Monitor Mixing

With a focus on the monitoring demands of a modern church worship band, Andrew Crawford teaches you how to juggle the multiple mixes, outputs, listening styles, and personalities on-stage while keeping your cool and everyone happy!

Allen & Heath dLive for Theatre Mix Master Class

Andrew 'MixWizard' Crawford will unpack how he mixes a theatre show from beginning to end on dLive. Explore the new scene management features in dLive V2 that are designed with theatre engineers specifically in mind.

Allen & Heath dLive Mix Master Class

Join the MixWizard himself, Andrew Crawford, and special guests, for a deep dive into dLive. Andrew and FoH rock stars guide you through their, tips, tricks, and special mix sauces.

TUESDAY 8 OCTOBER

BRISBANE

Who's Really in Control? – Lighting Ecosystems of the Future

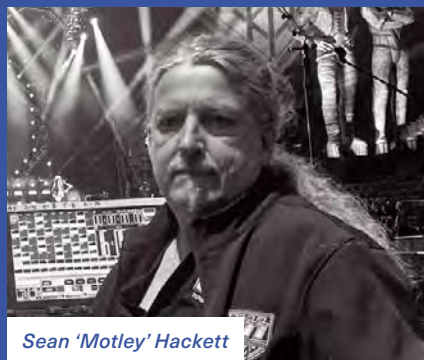
How have lighting controllers developed over the years? Does David have any chance of beating Goliath? Do the 'smaller footprint' controllers have the ability to compete against the bigger rivals? How does one navigate and stay competitive in the lighting control world? Presented by Koy Neminathan, Business Development Director, Obsidian.



Koy Neminathan

Sean 'Motley' Hackett – Lighting KISS!

Motley has spent 40 years lighting Rock 'n Roll bands, and 16 years as LD for the legendary KISS. In addition to KISS, Motley was LD for INXS, Savage Garden, and Noiseworks. We can't even cover all the tours he worked as crew for Jands (1986-1999) and Bytecraft PRG (1999-2017). Motley will talk about how he lights KISS's massive shows, and the journey from being a fan in the 1970s to their Lighting Director.



Sean 'Motley' Hackett

The differences between beam steering, wave shaping, and wave field synthesis

Three different approaches to shaping and directing sound, three different technologies. Presented by David Curtin Smith, founder and director of EDC Acoustics. David has designed audio systems and conducted acoustic designs for over 1,000 venues around the world, ranging from small churches to large stadiums.



David Curtin Smith

THURSDAY 10 OCTOBER
SYDNEY

Strategies to Stream
Your Event Successfully

Simon Byrne is the owner and operator of Streamout, a full-service webcast provider in Canberra. With over 15 years of experience in live event streaming, Simon specialises in delivering reliable, high-quality streaming solutions using advanced technologies such as bonded internet, remote production using SRT as well as fundamental techniques. Discover the secrets to flawless live event streaming with expert insights on planning, production, and execution. In this session, you'll learn practical strategies to ensure your stream runs smoothly, from choosing the right equipment to optimizing your network.

Bonded Internet Connectivity
using Pepwave and multiple 5G
Connections

Presented by Streamout's Simon Byrne, this session will explore how combining multiple networks creates a seamless, high-bandwidth connection, perfect for live streaming in challenging environments.

Who's Really in Control?
- Lighting Ecosystems of the
Future

How have lighting controllers developed over the years? Does David have any chance of beating Goliath? Do the 'smaller footprint' controllers have the ability to compete against the bigger rivals? How does one navigate and stay competitive in the lighting control world? Presented by Koy Neminathan, Business Development Director, Obsidian

Why is Julius Still Doing This?

In a no-holds and gloves-off interview Mark Taylor asks CX Magazine founder and ENTECH Road Show organiser Julius Grafton the big question: "Why is Julius still doing this?"

How to deal with a corporate
client as an AV op

Mark Taylor delves into the machinations of dealing with corporate clients in the AV domain, with his eager assistant Marcus role-playing the typical corporate client.

Transporting the Tekno Train

Vivid 2024 featured the very first Tekno Train for Sydney Trains, an immersive dynamic experience that was sold out in days! But with a moving performance stage, no cabling between carriages, and some complex safety requirements, we had to build something fun and unique. This seminar takes a look behind the curtain at how we made the magic happen. Presented by Andrew Yager of Real World Technology Solutions.

Physical, Mental Health, and
Fitness in Staging

Join industry all-rounder Emma Sputnik in a discussion about how to protect the most valuable tools in the work kit - yourself and others. With long days, late nights, planes, trains, and automobiles all in the average week of staging, learn some tactics on how to give your mind and body the best rest available. The presentation covers endurance tactics, how to recognise the signs of burnout, and recovery techniques that will keep you in top shape and show-ready for the rest of your life.

Arup - "So, you want to upgrade
your venue... what next?"

Upgrading a piece of equipment is easy, but upgrading a whole venue is hard. Constructing, renovating and upgrading performance venues presents unique sets of challenges to owners, operators and designers alike. The Arup Venues consulting team will run you through some perils and pitfalls of upgrading (or creating) such spaces, from putting together a project team, regulatory pitfalls, estimating budgets, and more.

Presented by Tom Brickhill, a Senior Consultant in Arup's Sydney office with a background in live theatre, TV and event production. With over 10 years of professional experience in the theatre and events industries, he has worked



Tom Brickhill



Mark Taylor



Andrew Yager

with numerous prestigious companies and producers throughout Australia and globally.

The differences between beam
steering, wave shaping, and
wave field synthesis

Three different approaches to shaping and directing sound, three different technologies. Presented by David Curtin Smith, founder and director of EDC Acoustics. David has designed audio systems and conducted acoustic designs for over 1,000 venues around the world, ranging from small churches to large stadiums.

THURSDAY 17 OCTOBER
ADELAIDE

The Colour of Sound Theory

Cais Nitschke is an audiovisual technician with a focus on lighting and vision systems. Their background initially was in music, and they transitioned fully into the AV field in mid-2023. They have completed their Cert IV in Live Production at AC Arts and also have experience both on and off the stage, exploring the sensory and immersive theatre side of the entertainment industry. The Colour of Sound Theory looks at a correlation between colour and sound, and how the two match up. Through this, could we create a version of sound that can be seen?



Cais Nitschke



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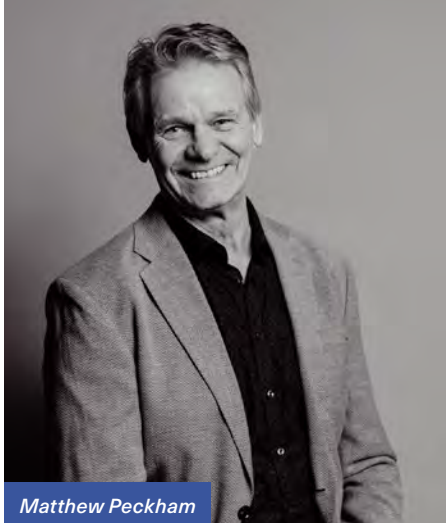
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TUESDAY 15 OCTOBER

MELBOURNE



Matthew Peckham

Arup - "So, you want to upgrade your venue... what next?"

Upgrading a piece of equipment is easy, but upgrading a whole venue is hard. Constructing, renovating and upgrading performance venues presents unique sets of challenges to owners, operators and designers alike. The Arup Venues consulting team will run you through some perils and pitfalls of upgrading (or creating) such spaces, from putting together a project team, regulatory pitfalls, estimating budgets, and more.

Presented by Nick Liley, a Senior Consultant in Arup's Melbourne office with a background in Technical Production, focused mainly on Theatre.

Matthew Peckham - Why I Still Do This

Matthew Peckham is a freelance consultant providing expert advice on everything related to operating, building, maintaining, or renovating theatres and other places of entertainment.

Over the past forty-something years, he has worked on countless productions in many capacities, in theatres too numerous to name, gaining experience he is always willing to share. This talk is a mixture of advice and reminiscences covering the highs and lows of that theatrical rarity – a long career.

Gavan Swift and Robert Cudden - The Lighting Designer/ Programmer Relationship

An open and frank discussion about how a Lighting Designer works with a Programmer, and how a Programmer puts up with a Lighting Designer!

Gavan Swift is a multi award-winning lighting designer. His musical lighting designs include Mamma Mia!, Heathers the Musical, Mack & Mabel, The Mikado, The Pirates Of Penzance, Hot Shoe Shuffle, Little Shop of Horrors, Sweet Charity, Fiddler on the Roof, Jolson, Buddy, Oh What A Night, Footloose, Hair, Xanadu, Chess, Carousel and Saturday Night Fever both in Australia and on London's West End. Gavan was the lighting designer for Moby Dick at the San Francisco Opera, Washington National Opera, LA Opera, Dallas Opera and will remount this design at the Metropolitan Opera in New York next year.

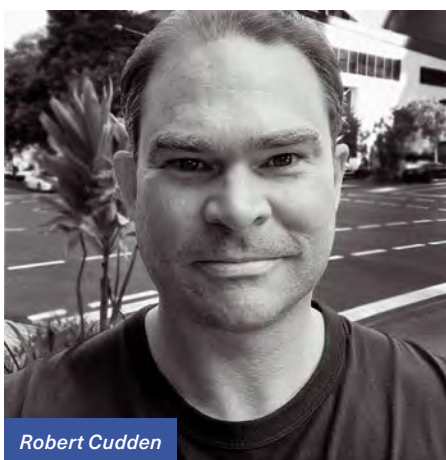
Robert stands as a prominent Theatre practitioner, specialising in large-scale commercial productions, within the Asia Pacific region. He has garnered significant recognition for his expertise in lighting and projection. Throughout his career, Robert has been extensively involved in a wide array of distinguished projects, including major musicals, concerts, television shows, events, and other prominent productions, collaborating with some of the most esteemed designers and renowned companies worldwide.

The differences between beam steering, wave shaping, and wave field synthesis

Three different approaches to shaping and directing sound, three different technologies. Presented by David Curtin Smith, founder and director of EDC Acoustics. David has designed audio systems and conducted acoustic designs for over 1,000 venues around the world, ranging from small churches to large stadiums.



Gavan Swift



Robert Cudden

TUESDAY 22 OCTOBER

PERTH

Lights, Network, Action: Shining A Light on Network Control Innovations

Join Perth native and Hollywood Lighting Programmer Chris 'Chalky' Chalk for a discussion about new lighting control network techniques and solutions. Chris will focus on his recent use of Netron data distribution products and their CLU Management software to create integrated lighting control networks. The discussion will include system design, workflow and troubleshooting techniques Chris has used in Hollywood and in a Galaxy Far, Far Away.



Chris 'Chalky' Chalk

Seven key questions you should ask



before you buy a chain hoist

So, you've just bought a shiny new PA system or a LED screen and truss, and now you need some chain hoists to suspend it.

All chain hoists are created equal - Right? Well not really.

Here are seven key questions you should ask before you buy a chain hoist:

1. Load Requirement

Let's start with the basics...

Hoists come in load ratings from 125kg through to 2500kg and higher. Typical Single Fall rigging hoists in Australia are rated at 250kg, 500kg and 1000kg. For simple deterministic loads, the load can generally be shared between the hoists, however for more complex loads this becomes a non-trivial discussion (see the side bar for a discussion of what this means).

Chain hoists generally come in Single Fall (strand of chain) or Double Fall (two strands of chain with a pulley in the hook body). Single Fall is a safer and preferred option. The chain in a Double Fall hoist can twist on itself which can cause catastrophic chain failure. Double Fall hoists need considerably more care and attention than the Single Fall variety and should only be used when there is no alternative available.

2. Speed

So now we have looked at the weight, how fast do we need to move the load?

Typical rigging hoists travel at a fixed speed of 4m per minute (most common speed available) or 8m/min (not always available).

Fixed speed hoists are not generally available at speeds greater than 8m/min.

Variable speed hoists can travel up to 30m/min for specialist applications.

Another characteristic worth mentioning here is the Duty Cycle of a hoist - no chain hoist is designed for continuous operation - periodic operation is the norm, so long drifts and frequent use may need special consideration.

While a faster hoist may seem desirable, it will require a larger motor for a given load and will therefore cost more. While slow and steady is generally a good adage, just remember that at 4m/min, you will be holding the button for 9 minutes to get the full travel for a 36m hoist.

3. Configuration

So now we know the load and the hoist speed, there are a number of other physical features that we should look at. Some of the many items in this category that you might want to think about include:

- Remote Control/Direct Control (the norm in Australia and New Zealand is remote control with the connection to the hoist via a six-pin square connector)

- Motor up/Motor down (motor fixed to the top rigging point or motor traveling up and down the chain)

- Attachment method (Hook to Eye, Hook to Hook etc)

- Height of Lift

- Handles to assist with handling

- IP rating

- Packaging

Selecting the optimal physical configuration of the hoist is essential to maximise its usefulness and ease of use – you don't want a hoist that is too short for that other venue, or in some applications one that can't be easily converted from motor up to motor down.

4. Monitoring

That covers the basics for typical rigging hoists. But if you need a hoist to support a truss with more than two hoists, or grid with more than three points, then perhaps you should be looking for a more sophisticated hoisting solution. Hoists are available with additional features and monitoring functions that may be useful for positioning or required for safety. These might include:

- Load Monitoring - Load Cells report the actual weight of a load and can report both underweight and overload conditions
- Run/Direction/Position Monitoring – Encoders report that the hoist is actually moving, its direction and relative position

- Hour Meter – can assist with maintenance and service intervals and provides valuable data for determining the remaining lifespan of the hoist

In conjunction with an appropriate control system, these features can greatly enhance the safety and operation of a hoist system, particularly when an Indeterministic load is involved (see Side Bar). Generally, a solution will not only require the appropriate features to be fitted to the hoists but also a specialist control system to provide monitoring, user feedback and support.

5. Operation and Control Requirements

There are a number of operational requirements that may influence the configuration of the hoist and/or control system that may be required

- Do you require Group moves
- Is Asynchronous or Synchronous operation required
- Do you need control dependant on load and/or position
- What are the Control Pendant/Desk/Rack options

Like the monitoring features discussed above, the operational requirements mentioned in this section are often associated with more complex systems used to support mother grids and other multi-point loads.

These control features are also commonly found within C1 Fixed Speed and Variable Speed hoisting systems used for personnel flying such as the MoveKet KES system.

6: Compliance

The Australian crane code AS1418 has a part dedicated to chain hoists, however this standard only describes basic industrial hoists (equivalent to a D8 hoist – see below).

It is reasonable to say that there is no Australian Standard that describes chain hoists that support higher levels of safety for use in the entertainment industry (supporting loads without using secondary tethers).

The Australian Safe Work Regulations requires a PCBU (Person Controlling a Business or Undertaking) to only use hoists designed for “the purpose” when moving or suspending loads over persons.

While there is no directly applicable Australian Standard covering entertainment applications, the German code of practice ‘igvw – SQP2’ describes the design and use of chain hoists for use in the event technology industry and is widely recognised as international best practice.

If you select hoists according to this code of practice and follow its requirements for use of the hoist, then it is the generally held opinion that you will have fulfilled your Safe Work Regulation obligations.

The three main classifications of hoists in the code of practice are D8, D8 Plus, and C1. The following is an excerpt from the igvw-SQP2 code:

D8: Electric chain hoists that must not be used to hold or move loads over people without additional safety devices. Generally, a secondary safety device (tether) shall always be installed for each D8 electric chain hoist.

D8 Plus: Electric chain hoist is constructed, dimensioned and equipped in such a way that it is qualified for holding of overhead loads over people without a secondary safety device.

C1: Electric chain hoists are generally suitable for holding and moving overhead loads over people.

Generally, if you are looking to use hoists where you are suspending loads over people you should be looking for a D8 Plus hoist as a minimum standard. The use of multiple or more highly load rated D8 hoists without tethers is not a substitute for the increased level of safety offered by a D8 Plus hoist and should not be considered unless you have a robust and independently audited Risk Mitigation strategy. Remember, as a PCBU, you need to be able to demonstrate how you have fulfilled your Safe Work Regulation obligations.

7. Life Cycle

There is a common misconception that chain hoists have a mandatory limited life – this is simply untrue.

- There is no Australian WHS legislation that mandates retirement or overhaul (like there is for access equipment)
- Users and PCBU's need to follow the hoist manufacturers guidelines for maintenance and servicing
- A minimum of annual inspection and load test is required plus inspection by an ‘expert’ every three years

As you can see, there is more to selecting the correct hoist for a particular application than might be anticipated. While picking a load up with two hoists is relatively straight forward, the introduction of a third hoist to a truss system changes the game completely. The issue of deterministic and indeterministic loads (see the side bar) can introduce complexities that can only be realistically resolved through the use of hoists and control systems with added safety and monitoring systems such as load cells, position encoders and/or interlock systems to ensure safe operation.

As a PCBU you have a legislative Duty of Care to understand the complexities and applications of these systems. If you are unsure, then please consider seeking advice from an entertainment rigging professional before this becomes an issue for your business.

Please drop in and have a chat to the folks on The P.A. People stand at ENTECH around Australia or come to the Seven Things

You Need To Ask Before You Buy A Chain Motor presentation at 1:30 pm in each city. Alternatively, feel free to get in touch at venueengineering@papeople.com.au

When you may need some extra advice...

As mentioned in our introduction, all loads that are to be suspended can be categorised as either statically deterministic or statically indeterministic.

If the load you are suspending is statically indeterministic you might be well advised to seek the advice of a qualified professionals

Deterministic or Indeterministic?

Statically determinate load system

In a statically determinate load system, all loads and reactions (loads applied on individual electric chain hoists and anchor points) can be analysed using basic mathematical methods (three equations of equilibrium).

Examples of a statically determinate load system could be:

- Loads on single electric chain hoists (point load)
- Loads on two electric chain hoists (single span truss or a two point pickup)
- Area loads on three electric chain hoists (a triangular truss)

Statically indeterminate load system

In a statically indeterminate load system, the reactions (loads applied on individual electric chain hoists and anchor points) can only be analysed using complex mathematical methods (more than three equations of equilibrium).

Examples of a statically indeterminate load systems could include:

- Linear loads on more than two electric chain hoists (multi-span truss)
- Area loads on more than three electric chain hoists
- Guided loads

A common example of an indeterminate load might be a LED screen suspended on a truss with three or more motors. It would be very easy for one hoist to be either overloaded or underloaded without the operator's knowledge. In this case you could use load cells to better understand how each hoist in the system is loaded or ensure that every hoist in the system can safely support the load of the entire truss and LED screen. Food for thought.



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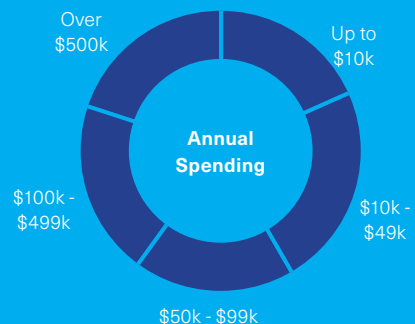
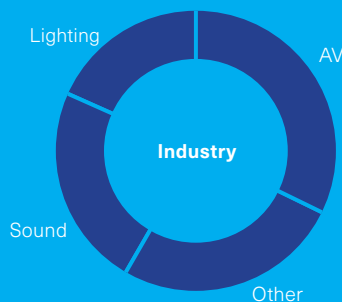
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Case Study:

LED screen Gondola for an indoor sporting venue

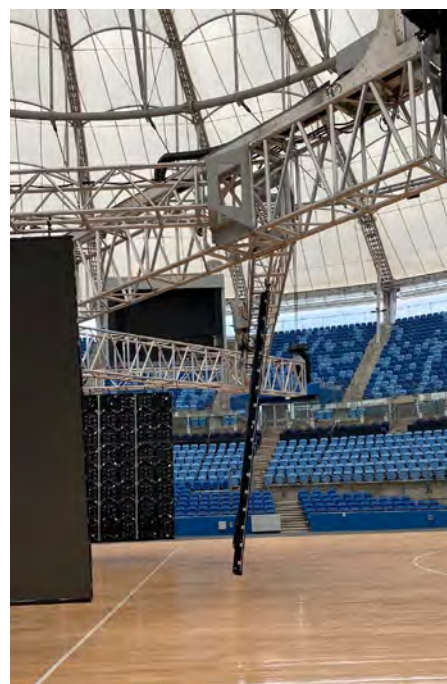
The P.A. People were recently tasked with the design and implementation of a 10 tonne Gondola structure to support four LED screens at an indoor sporting venue. The only suspension points available were at the perimeter of the structure. Given the design requirement, a four-point hoisting system was required. In order to maintain the integrity of the system the design team chose four Moveket 2,500kg D8 Plus hoists, given that the gondola was suspended over the playing surface.

Because the hoist layout was inherently 'indeterministic' (i.e. more than three hoists supporting an area) each hoist was fitted with an integral load cell and an incremental encoder. Coupled with a MoveKet MPC-4ID8 chain hoist control system, the system monitors both underload and overload conditions for each hoist. Should any hoist see less than the self-weight of the system, or encounter an overload condition, the system will not operate. In addition, the provision of

the incremental encoders means that system self-monitors the direction and operation of each hoist and has a number of preset heights available for different event types.

Without the use of load cells and encoders, an installed system of this size and scale would simply be unsafe.

As you can see, not all chain hoists are created equal



IT'S PHILL WEBB

Welded to Electro-Voice

I vaguely knew Phill at CS Trilogy, an upcoming pro audio rental and retail shop at Enfield in the early 1980s. It became The P.A. People, and look at it now! Phill went on to work for the E.V. distributor and thus started a brand obsession that has led to an unlikely addition to the Webb family home at Menai in Sydney's 'southern shire'. 500+ EV microphones spanning the length and breadth of the storied maker's catalogue.

Why, I ask? I gird myself for a lengthy but informative answer. You see, Phill has an earnest manner that is quite endearing, and a work ethic that makes me dizzy. Weekends mixing all kinds of club acts. Hanging with musicians. Being the straight guy.

I normally like to do these interviews at lunch, fuelled by demon drink, but Phill isn't a lunch kind of guy. So we chatted on the sidelines of ENTECH NZ where he was supporting the local distributor. These days Phill is the brand specialist for Bosch, the German conglomerate that owns EV and Dynacord. They make damn fine dishwashers too. And security electronics – they were foundation supporters of the roadshow I created for the security industry some years back, called SECTECH. Which I no longer run, because that's a story!

Back in 1973, young Phill aspired to be a guitar legend. He was quickly ordered off stage and delegated or demoted to the mixing console. Eventually in the CS Trilogy hire dept he discovered the firm favoured AKG microphones were inferior to the 'rubbish' EV mics. He saw the light and went to see the legendary Ian Johnstone at EV (Sydney) and got the Concert Sound portfolio: Midas, Klark Teknik and EV.

In 2005 the local boss Col Formston (RIP) of what then was Mark IV Audio (the importer) purchased the business. Eventually in 2007 Bosch bought it.



"Bosch is now in the process of selling us, but it's a big transaction so it'll take time."

"I mix gigs on weekends to supplement my income. Illawarra Catholic Club since 1998, I must be doing something OK. Also, Revesby Workers since 2011."

The microphones range from 1929. I ask whether this is a fetish or a hobby? "No, it's a passion."

"Many years ago, I went to the head office in Burnsville, Minnesota, was there four days and every morning the boss walked past me and on the final day he asked me why I was in THIS office? It was the microphone office. I said selling speakers is a job, selling microphones is a passion."

Is there any other microphone in the world?

"I do own some other microphones, but EV have been doing it so long, I stick."

I'm trying to get some emotion, so I ask Phill if, when he passes (he is currently 68 years old), he would like some microphones inserted in the casket with him. This produces a pause as he considers. Which would he choose?

Decision. "I wouldn't like to see them incinerated!"

So hypothetically, I ask, what if you were offered the huge job but with an audio brand

you didn't like?

"Ah, well, fortunately I never had to make that decision!"

Would that be an existential decision that would change the fibre of your being, I ask?

"Possibly. Yes."

Wife Shirley is a music teacher. Their 27-year-old daughter has a PhD in psychology, "the art of being able to better manipulate your parents. Doctor Webb to be exact."

Phill, have you ever done anything BAD in your life? "I would need to think a long time about that."

Hangover? "When I was a teenager! Avoid magnums."

On the question of sound engineers; "With older engineers, it's all about drums and vocals, younger; it's all about the guitars and the bottom end."

That seems to be a wrap. I'd like to get him drunk someday. Or even just see him wearing something other than his black Bosch uniform. I don't think that's ever likely. He is a good guy, and seemed OK with my line of questioning. He jumps up and heads back to the Music Works stand in Christchurch, to talk at length with a guy. About microphones.



Peavey Aureus 28

Keep it Simple

I first ran across the Peavey Aureus at ENTECH Road Show just after NAS had taken on the brand. It caught my eye as a product that was simple, reliable and practical. My immediate thought was – “what a great console for schools.” This is a really good learning console for people coming into the industry, like a kid that never mixed before, and they can play around and see stuff without getting overwhelmed by it. Everything is well laid out and simple, even one layer deep, and it is very intuitive in how it works.

Starting back in the analog world, we had to hear what we were doing, rather than watching a screen. This desk keeps it simple enough to see that but with enough depth to dig deeper when needed. Adding a gate, compressor or effect to any channel is easy but you can then expand each filter easily to refine its settings and see them on either the inbuilt screen or docked iPad. Assigning anything to a channel is very intuitive and it's just as easy to tweak it.

Buss assignment is also simple, and their adjustments can be assigned to the physical rotary encoders to the left of the unit or faders below.

The most impressive thing about this desk is the physical feel. When you press a button, you get a solid ‘click’ and know that you have pressed that button. It's not a vague soft press like some units. That feedback gives confidence that you are in control of the beast. Retro but reassuring.

Wireless

The Bluetooth shares the channel with an input, and you tell it whether it's that input or coming off Bluetooth. It was simple and easy to setup. For a live gig, I connected to the iPad on Wi-Fi and used it mainly for metering. If I saw anything that needed adjusting, I could see it from there without affecting what I was doing on the rest of the board. The Wi-Fi connection stayed strong, without any dropouts or glitches. This thing is rock solid.

While it would be technically possible to leave the iPad with a monitor engineer while I mixed FoH, I'm not sure I'd recommend that as a workflow.

Library

One of the coolest things about this console is the included libraries of presets. They've created a library that allows predetermined basic compression, gates or EQ settings for

common uses, like bass guitar or snare. They are preloaded with some pretty good settings. I loaded up a vocal compressor and it gave me a couple of dB off zero for the threshold, a nice four-to-one ratio and a really good starting point that a beginner could easily run with.

Support

Peavey and NAS have both been around for a long time. Knowing that gives me a safety net - if something goes wrong with this console, I will be well supported, both from a manufacturer and distributor perspective.

Cons

Peavey has used an external power supply for this unit. Unfortunately, it uses a proprietary four-pole connector that could be hard to repair or replace in the field. Maybe an IEC or similar standard connector might be more appropriate.



The Specs

Channels: 28 inputs x 14 outputs

Inputs: 16 XLR-1/4" combo

Phantom power: 16 channels +48V

Additional inputs: Bluetooth, USB A & B

Outputs: 10 XLR, 2 RCA, 6 digital

AUX Sends: 8 AUX

Busses/Groups: 8 BUS, 2 MAIN, 4 DCA

DATA I/O: WiFi onboard,
Ethernet remote

Computer connectivity: Ethernet,
WiFi, USB

Headphones: 1 x 1/4"

Faders: 9 x 100mm motorised

EQ: 5-band fully parametric

Effects: 23 effects in two engines

Rack Mountable: yes, with
optional rackmount kit

Mute Groups: 3 programmable

Mute Functions: 6 dedicated controls

Bluetooth: stereo, long range

Solo function: with dedicated controls

Tablet holder: yes

Product Info:

peavey.com/product/aureus-28-digital-mixer

Distributor Australia: nas.solutions

Distributor New Zealand: nz.nas.solutions

Verdict

The Aureus is a fun console to mix on. It sounds good, it does what it has to do, and feels good. When you look up from the console and you look at the band, look at the punter, and you see that everyone's having a great time, you know that's the indicator that everything is going well. For a console at this price point, it is a mighty simple and robust but still very powerful mixer.

It's very much a digital console with quite a bit of flair to it, but still feels quite analog – a real plus for old schoolers like me or users new to mixing. I wish I had this kind of console in front of me when I was learning. It's not overwhelming, but at the same time, you can expand it into full-blown mode pretty quickly, making it a perfect board for a beginner.

Writer's Bio

Andrew is a tech first, client second, industry shenanigans last type of guy. Audio, lighting, vision – it's all the same to him. As long as it fits the client's requirements, it's good. It doesn't matter what brand label it carries.

He wears multiple business hats: Technical Director at Gigawatt Sound and Lighting (PA/LX hire and install), Technical Support for KV2 Audio, and Technical Services for Creative Lighting Control Freak. In all these roles, he likes to be a translator between the technical and the practical.



Heraclitus of Ephesus (l. c. 500 BCE) famously claimed that "life is flux." Image: a line engraving of the 5th century BCE Greek philosopher Heraclitus of Ephesus. (From the Wellcome Library of Portraits)

CHANGE IS THE ONLY CONSTANT

Search for the new and groovy

We humans are evolutionary beasts, evolving over our lifetimes and between generations. We are constantly changing. As a species, we are also part of a commercial cycle that relies upon constantly shipping new product, at increasingly short intervals.

Although your grandfather's axe has seen four handles and three heads, the original copy was undoubtedly constructed from better quality steel and more robust timber than the current version. It was built by a human, not a robot. Inbuilt obsolescence and intensive marketing of modern consumer society have shortened this cycle and worsened the outcome for everyone but the seller and their distribution network.

We accept change for change's sake. Particularly within the AV industry that relies so much on the churn to ship more units. Being tech based, there is always a trend towards the new and improved. R&D has always been alive and well when there are gadgets involved.

We accept this change because each new feature, each new unit is good for sales. Each sale equals another AV job. This applies to virtual products too. A major new software release brings an upgrade fee, and a support or administration job to go with it.

Yet, while we are happy upgrading vehicles, clothes, and gizmos at a rate that keeps us in, or on the edge of, debt, so many people get stuck in an intellectual rut. The pressures of life as it is being lived can give little opportunity for expanding your horizons, questioning your values (assumptions), investigating the possible or just plain contemplation. It is easy to stick with the 'known knowns' without the challenge of upending all of that. Too many take the easy option and vote like their parents, drive the same brand of car for a lifetime and swear undying fealty to a sporting team, regardless of how they perform on the field.

Personally, I like to tip over my conceptual appcart as often as possible. It keeps me fresh, and I feel relevant. Because of that, I have friendships in many diverse areas, across a wide variety of age groups and demographics. This approach also results in constantly learning new things and interacting with new people on a regular basis. It also keeps ideas fresh, and shibboleths challenged.

The most obvious example of this cultural ennui are music tastes. I am frustrated by the number of times I have heard the statement "there is no good music anymore." It comes from folks of all age groups and was most recently uttered by my 30-year-old niece. Maddy is a self-employed artist who is making a tidy living as a sculptor. As a relative, I have inherent bias but, objectively, her work is really strong, and she deserves success in this endeavour, where she continues to grow and challenge herself. But I railed hard against

her regarding music. Where once we bonded over metalcore, we now stand apart as she closes her mind's ear to new possibilities. And she is far from alone. Depending on who you talk to, good music stopped in 1800, 1900, 1950, 1960, 1970 ... indeed all the way up to last week! In reality, good (or new) music stops when listeners stop the adventures of youth and 'settle down as an adult'. The tunes and acts that inspire them during their purple patch become the last great bastion before 'the day that the music died.'

There is serious science behind this proposition. I recently found research that had looked into this exact phenomena: <https://theconversation.com/why-do-we-stop-exploring-new-music-as-we-get-older-200080> As pointed out there, researchers often attribute this to psychosocial maturation but I think a general attitude shift is more to blame. Many folks continue to update clothing or cars while sticking with a musical artist for life. Singers are not like footy teams. Indeed, the best ones grow and mature over time, most unlike sporting clubs.

I've been spending a lot of time on Substack, reading other authors, and interacting with them both professionally and personally. On the whole, I find this platform like social media for writers, with just enough technical and technique discussion to justify it as worktime. Its subscription-based model appeals as a customer, but I fear that the numbers don't add up to it being sustainable over the long term without adding in advertising or sponsorship.

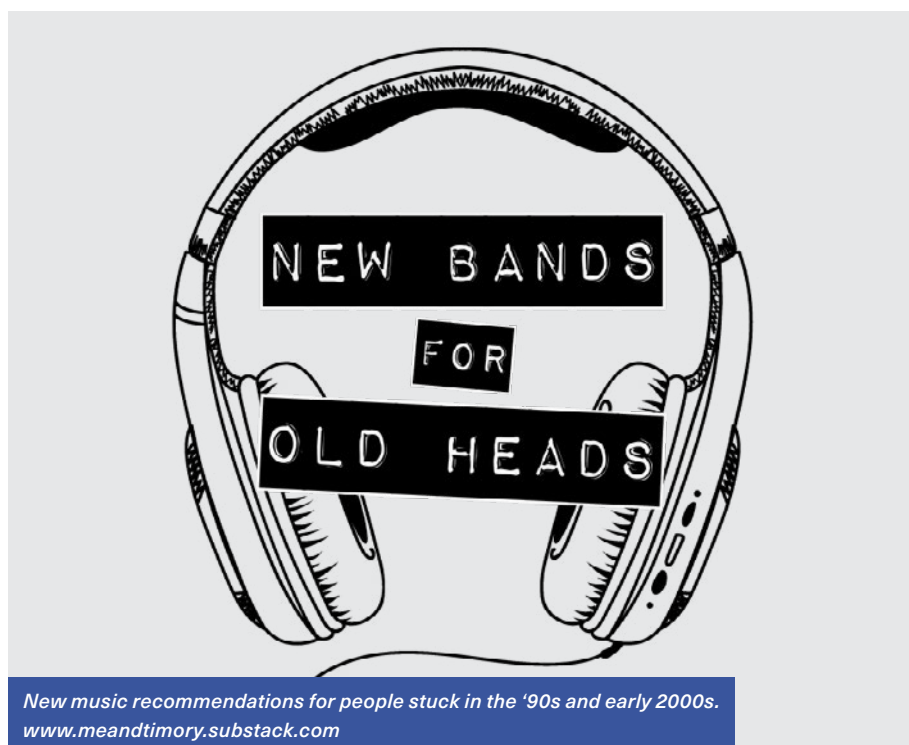
Time will tell, but my fingers remain crossed and hope reigns eternal.

One of my favourite authors there is New Bands for Old Heads by Gabbie (meandtimory.substack.com/). Her goal here aligns with mine - getting people to find and enjoy new music. Gabbie recently made a recommendation to check out the playlist of artists that you already like or follow. This is premium advice. Doing so will give you an insight into where that act got their inspiration, what gets them excited and will inevitably expand your own horizons. Then rinse and repeat on those finds.

We are not alone. There are other people fighting the good fight in keeping our ears refreshed: Jared Smith (@jaredthecurator), Black Noise by Saint Virgil ([check out blacknoisewav.substack.com](http://checkoutblacknoisewav.substack.com)), and more. YouTube is another great source for aural exploration. Benn Jordan (@BennJordan) is one channel that crosses between technical and artistic. Plus, his direct personality appeals to me. SynthHacker Tom (@SynthHackerTV), Coolea (@coolea) and Trash Theory (@TrashTheory) have some quirky takes on music trends.

In our industry of music performance, it is surprising to me how many colleagues over the years have stuck with their formative tastes. "This new music is crap. They aren't the same as Creedence, Cold Chisel, Chocolate Starfish, White Stripes..." or whatever legacy act you got stuck on. Well, no - the newer acts are new by definition and every week, every year, and every decade there will be even more new artists and styles evolving and hitting the market. Hint: you will probably be working for them before long, so stay hip to the trends.

Danish musician Maggie Bjorklund (@maggiebjorklund8246) puts it well: "You can't roll the times back, and we had better embrace the new world with file sharing and YouTube." More poignantly: "Music is a forum



where we share a little bit of ourselves, both as the musician and the listener. Both need to be in it and present in order for magic to happen."

Going on a journey of discovery is not all about the new and recent either. Following these tune-trails into aural rabbit holes can open your mind to much historical artistic output that was hitherto unknown to you. I recently dug through notes on Youssou N'Dour and found the most excellent Star Band de Dakar, where he was once a singer. My favourite offshoot is Orchestra Baobab. Until that moment, I had no idea they even existed as an act, and I have several friends heavily into Senegalese music. Though the band is now a shallow shell of its peak in mid-late last century, I'm definitely a fan. Through processes like these, I'm regularly discovering old music that is still new or fresh to me.

In amongst so many failing or faltering festivals, I see two sectors that are doing well: nostalgia (for a particular era or style) and cover bands, which have long held their niche. Both of these feel like endless regurgitations of artists long past their use-by date but they do consistently draw in the punters. This means jobs for our techs and sales for our distributors.

Is this reductive race to the safe and familiar a feature or a flaw of our music culture? Recycling might be efficient resource allocation for physical products, but I find it quite limiting for artistic output. Play it safe in the past, or risk the new and adventurous? Commercial or creative? Grow or stagnate? Ultimately, it's your call...

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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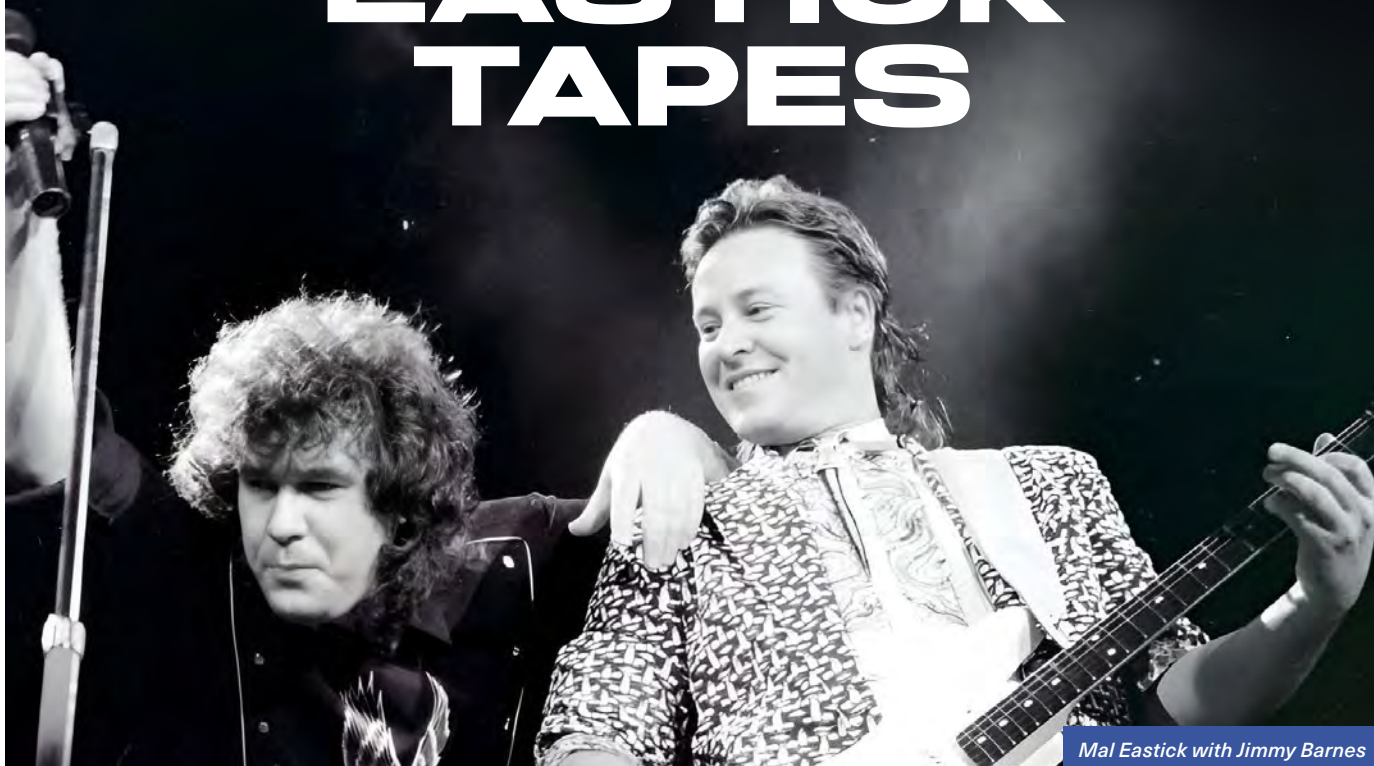
¹Passion, Pride, Pitfalls Dec 2014

www.entertainmentassist.org.au

Supporting the mental health of Australian entertainment industry workers

Saved by the Blues

THE MAL EASTICK TAPES



Mal Eastick with Jimmy Barnes

Snippets from the archives of a bygone era

In 1986, posters advertising the Mal Eastick Band began appearing taped to telegraph poles and plastered on walls around major venues. This signalled that the standout guitarist and songwriter, who was a founding member of country rock band Stars and a sought-after guitarist for touring and recording acts such as Max Merritt, Renée Geyer, Glenn Shorrock, and Jimmy Barnes, was now a headlining act.

It was Kevin Borich who tipped me off about Mal Eastick's remarkable career, and after contacting Eastick for an interview, the Adelaide-born guitarist gave me some insights into his labyrinthine musical journey.

"As a kid, I was immediately drawn to music without knowing why because no one else in my family was musical; they didn't even play records. I started playing guitar at 16, and I was trying to find some other guys in the neighbourhood who played," says Eastick.

Eastick explains how, while waiting for a doctor's appointment in 1973, a chance meeting of future band members of Stars unfolded after he heard the sound of musicians rehearsing some distance away. "I walked towards where the music was coming from until I was outside a shed. I opened the door, and that's how I met Andy Durant (guitarist) and Glyn Dowding (drummer). We formed the band Astrakhan, which was totally covers and our very first band," says Eastick.

"After the band (Astrakhan) separated, I met Mick Pealing (vocalist), and we formed a band called Flash, which was only together for six months. Andy Durant was exploring some other musical styles at the time, and he left to play in a band doing a kind of King Crimson jazz rock thing," says Eastick.

Stars

Mick Pealing, Glyn Dowding, and Mal Eastick formed the band Stars in 1975 with Graham Thompson on bass. Stars caught the attention of Little River Band's Beeb Birtles during a performance at the Mediterranean Hotel, Adelaide, and they were subsequently signed to Mushroom Records and relocated to Melbourne, where they were joined by Andy Durant, who then became the major songwriter of the band. The line-up became Mal Eastick (guitar), Glyn Dowding (drums), Mick Pealing (vocals), Graham Thompson (bass), and Andy Durant (guitar, vocals).

During those early years, Stars supported acts including Joe Cocker (1977), The Beach Boys, and Linda Ronstadt (1978–1979). Stars first album, *Paradise*, was released in 1978, followed by *Land of Fortune* in 1979. Stars also performed at the November 1999 Concert of the Decade on the steps of the Sydney Opera House to an audience estimated at over 100,000. Then tragedy struck with Andy Durant being diagnosed with a melanoma that sadly took his life at the age of 25 in May of 1980.

Devastated by the loss of his best friend and fellow band member, Eastick began to plan a memorial concert. "I conceived it on the way home from his (Andy Durant's) funeral. I then went to Gudinski (Michael Gudinski), Michael Judd, and Frank Stivala, the leading booker in Melbourne. They had all managed and booked Stars. I told them what I wanted to do because I was shattered. I organised the whole thing, even the players and what songs they played. It wasn't done for money; it



Lonnie Mack with Stevie Ray Vaughan

was done for my friend; it was done for cancer research (Andrew Durant Cancer Research Foundation)," said Eastick.

The memorial was staged at the Palais Theatre in August 1980. The concert featured Stars band members along with artists including, Jimmy Barnes and Ian Moss (Cold Chisel), Renée Geyer, Broderick Smith (ex Dingoes), and a line-up of other accomplished musicians. The concert was multi-track recorded for television, and highlights of the concert were remixed for a double album that was released the following year under the title, the Andrew Durant Memorial Concert.

Broderick Smith

Eastick later joined forces with Broderick Smith in a band that was initially called Broderick Smith's Hired Hands, which then became Broderick Smith's Big Combo. Eastick was a member for three years. "With Broderick, we really just cut our own pace, our own path, and we were one of the hottest bands in Melbourne," says Eastick.

The Jimmy Barnes Band

After iconic Australian band Cold Chisel disbanded in 1983, Jimmy Barnes put together the Jimmy Barnes Band, which toured from 1984 for the best part of two years. Barnes chose Mal Eastick as his lead guitarist. It would have been no easy feat following Chisel's former guitar maestro, Ian Moss, but Eastick generated his own signature backing and blues lead breaks, along with some very silky licks, which were seamlessly meshed in between Barnes' vocal phrasing. In fact, Barnes could often be seen glancing over his shoulder, relishing the cohesion. Eastick went on to play guitar on Barnes' first two solo albums, *Bodyswerve*, and *For the Working Class Man*. "A lot of blues purists criticise me because I played with the likes of Jimmy Barnes, but the truth is that Jimmy Barnes hired me because he wanted the blues influence in his band," says Eastick. And when Eric Burdon (The Animals) toured Australia in 1989, Eastick was chosen as his backing guitarist.



Johnny Winter

Lonnie Mack

Lonnie Mack was an American singer and guitarist who pioneered blues rock guitar. "It was the first show under my own name, the Mal Eastick Band, and we opened for Lonnie Mack at the Basement in Sydney. It was only supposed to be one night, but we ended up selling out eight nights. When Lonnie Mack did his encore for the last set of those eight nights, he called for me to come up and join him. So that was my first time playing with an international. I was pretty nervous, but what an honour that was," said Eastick.

Johnny Winter

"In August of 1986, I was asked to open for Johnny Winter for four shows in and around the Sydney area; the first one was at Dapto Leagues Club south of Wollongong. I got to meet Johnny backstage that night, and that is an extremely rare thing because of his inhibitions. To meet with him in the back room was an honour, and he said to me, 'Hey, you've got that Lonnie Mack tone.' It's because I've got the effects to sort of create that Lonnie Mack vibrato thing, and I did two Lonnie Mack songs."

Eastick explains how he caught a glimpse of Johnny Winter, who was behind the stage curtains watching him play. "Imagine what it

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was like when I turned around in the middle of the song, looked over at my bass player, and saw him through an opening in the curtains; there he was with this white hair and the most incredible Texan hat with feathers on it," said Eastick.

Buddy Guy

When American blues guitarist Buddy Guy, the muse for guitarists such as Eric Clapton, Jimi Hendrix, Jimmy Page, Jeff Beck, and Stevie Ray Vaughan, toured Australia in the 90s, Matt Taylor's Chain with Mal Eastick on guitar were the supporting band. Buddy Guy had been a very close friend of Stevie Ray Vaughan, who had died in a helicopter crash in August of 1990, and it was forbidden to speak about him on the tour. However, on the final night of the support, Eastick asked and was granted permission to play 'Lenny', a Stevie Ray Vaughan instrumental dedicated to his wife Lenora 'Lenny' Bailey.

"After Buddy Guy's last show finished, Buddy's tour manager came up to me and said, 'Buddy would like to have lunch with you tomorrow,' which obviously meant that he approved of how well I played the song and how respectful I was," said Eastick.

Surgery and Recovery

In 1993, Eastick was diagnosed with a rare condition, which he describes in layman's terms as tangled blood vessels in the brain. At the time, the condition was considered inoperable. "While I was finishing my Spirit album in 2000, I could feel that I was going down. I went to see a surgeon who'd replaced

the surgeon I saw in 1993, and he was the new protégé, who had developed a lifesaving skill for this condition. My wife was pregnant at the time, and I named our second son (Morgan) after that surgeon (Professor Michael Morgan). I named that album Spirit not long before I went for my big surgery in case I didn't come back out," says Eastick.

Musicians on the Spirit album, who perform as Mal Eastick and the Spirit Band, are John Makey (vocals), Rudy Miranda (drums), and Ian Lees (bass). "When I got the word that I was going to have this surgery, I had to pluck up the courage to tell my band and ask them for the biggest favour of all, and that was, if I was able to play after recovery, that they'd still be there for me. And they all were," says Eastick, who since has also had 10 operations on his hands so he can continue playing guitar.

Kevin Borich

It was Eastick's long-time friend, Kevin Borich, who invited him to return to the stage at the Longview Farm Party, NSW, in 2004. Borich's long association with Joe Walsh was also responsible for the Eagles' superstar being a guest performer at the event. "That was my first gig since March 2001. I only played three songs, and that was a huge challenge at that time during my recovery. But I met Joe Walsh, who gave me a wonderful compliment about my playing, which meant the world to me at that time. Kevin was the last act on, and then Joe Walsh joined him for the culmination at the end of the day. Kevin said to me, 'Why don't you come up and jam with me and Joe?' Wow, imagine what a turning point that was for me!" said Eastick.



Mal Eastick in Stars

Under The Stars

In 2017, Stars regrouped: "We put a line-up back together, and I played lead guitar on two albums. The first was called Boundary Rider, which is a song that Andy and I co-wrote, and I finished 10 or 15 years after he passed. The next Stars album was One More Circle Around the Sun, which was released in 2020," says Eastick, who laments that the Covid lockdowns, lockouts, and closed borders contributed largely to ending his association with Stars and his ability to tour and perform. Although Eastick performed under the Stars name, he never felt the same experiences that he felt when Andy Durant was in the band. "That was only because I knew nobody who could replace Andy Durant and play in the style that he did," says Eastick.

Blues has been Eastick's inner inspiration for a long time. "I didn't realise it at the time, but the first three songs that I wrote and recorded with Stars were blues shuffles," he says. His albums The Southern Line and Spirit were recorded on his own label, Bluefish Records. He is currently booked for a return performance at the Longview Farm Party, NSW, which runs from Friday October 4th to Monday October 7th, 2024. Eastick is also active in other elements of the industry, including online guitar tutoring via Zoom, and he also partners with Andrew Hegedus in an acoustic blues duo. In 2015, Mal Eastick, Andy Durant, and Mick Peeling were inducted into the South Australian Music Hall of Fame.

Both Mal Eastick and Kevin Borich have undergone lifesaving surgeries, and while attributing their recoveries to gifted surgeons, friends, and family support, they both share a spiritual connection with the blues that incites them to keep on playing. Kevin Borich has a song entitled Saved by the Blues, and this theme has been touted as a documentary about Borich and Eastick.

For online guitar lessons from one of the masters, you can contact Mal Eastick via email, admin@mal-eastick.com



Andy Durant 1954-1980



Buddy Guy with Mal Eastick



Kevin Borich (L) and Mal Eastick

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