

AUDIO ISSUE

AEC THEATRE AND L-ACOUSTICS
SENNHEISER AT MEENYAN HALL
ORDIO'S DYNAUDIO AUDIO
THE REGENT THEATRE
REDEFINING RETAIL SOUND
MEET THE AUDIO TEAM AT NAS
VINYL REVIVAL

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TOP OF THE HOOD

CHAMELEON INVESTS
IN ROBE IFORTE LTXS

FX

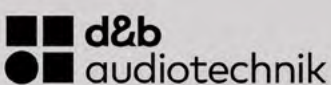


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JANDS, ELECTRO-VOICE, AND DYNACORD STRENGTHEN ANZ PARTNERSHIP

Jands has announced an enhanced partnership with Electro-Voice and Dynacord, marking the next phase of a long-standing and successful relationship across Australia and New Zealand.

Under the expanded agreement, Jands has been appointed as the exclusive distributor for Electro-Voice portable loudspeakers, Electro-Voice microphones, and Electro-Voice and Dynacord professional installed sound systems across Australia and New Zealand.

“Electro-Voice and Dynacord have been part of the Jands story for many years, and together we’ve built a strong and trusted position in the market,” said Phil Muffet, CEO and Managing Director of Jands. “This expanded appointment reflects both the strength of our history and our shared focus in the next phase of growth across Australia and New Zealand.”

The enhanced partnership brings increased alignment across sales, marketing, technical support, and partner engagement, ensuring customers continue to receive the performance, reliability, and application expertise the brands are known for.

“Jands has demonstrated long-term commitment and deep market capability across Australia and New Zealand,” said Mark Swindell, Business Manager – Oceania (Audio). “Strengthening this partnership allows us to better support customers and partners with a clear, aligned go-to-market approach for Electro-Voice and Dynacord’s professional and portable solutions.”

With strong mutual commitment and shared dedication, Jands and Electro-Voice look forward to delivering industry-leading performance where it matters, while continuing to support the strong and highly capable partner community across the region.

The P.A. People Appoint Kate Kelly as Business Development Manager



The P.A. People are pleased to welcome Kate Kelly in the role of Business Development Manager, based in Melbourne.

Kate brings more than 15 years’ of experience across theatre consulting, live performance and venue technology. An AVIXA CTS Certified professional, Kate joins the team following over a decade with Marshall Day Entertech and Studio Entertech.

Kate said she is excited to join The P.A. People, commenting; “The depth of knowledge within the company is remarkable, and I’m really looking forward to learning from and collaborating with the team. When a company has been successful for more than 50 years, you know they’re doing something right.”

Throughout her career, Kate has led the design of theatre and AV systems for projects ranging from major educational performing

arts centres to community venues and heritage theatre redevelopments. She continues to work as a theatre lighting designer, programmer and technician, staying closely connected to the evolving technical needs of live performance.

Kate is a passionate advocate for the theatre industry, promoting pathways for young people entering technical production careers and has served on the AVIXA Women’s Council (Oceania) for over five years.

The P.A. People Venue Engineering Manager Peter Grisard said “I am delighted to welcome Kate to the team. She brings strong industry knowledge and expertise, and we look forward to working with her.”



PAVT gets new generation AI remote control camera tech for Australia and NZ

PAVT has been appointed as the Everet Imaging distributor for Australia and New Zealand

Everet PTZ cameras are ready to go out of the box, with NDI bridge along with other native capabilities. This broad range of NDI solutions include premium NDI|HX3 and high bandwidth NDI PTZ cameras.

Everet offers a full range of high-performance, professional grade cameras suitable for broadcasting, houses of worship, government and corporate AV, with in-built advanced

AI auto-tracking and robust NDI streaming capabilities without requiring extra licensing.

Everet Imaging builds authentic high quality imaging products by using professional Sony or Panasonic CMOS sensors and American Ambarella ISP chipsets offering advanced features like real-time image stabilisation and high dynamic range video processing. You can clearly see the difference

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HARMAN Connect APAC 2026

DELIVERS IMMERSIVE EXPERIENCES AND REGIONAL CONNECTION

HARMAN Professional Solutions hosted the HARMAN Connect APAC Summit 2026, a multi-day regional gathering that brought together distributors, partners, customers, and HARMAN leadership from across Asia Pacific. Held at W Sentosa, Singapore, the summit showcased HARMAN's latest professional audio, lighting, video, and control innovations while reinforcing its commitment to collaboration, training, and immersive live experiences.

Taking place from Tuesday 10 March to Thursday 12 March 2026, the summit featured dedicated programs tailored for distribution partners, performance venues, live events engineers and system integrators. Attendees experienced hands-on demonstrations, product debuts, strategic business updates, and curated networking opportunities designed to support growth across the APAC region.

Aligning with Distribution Partners

The summit opened with the HARMAN Partner (Distributor) Summit on 10 March 2026, a dedicated session designed to recognise distribution partners and align on the business strategy ahead. Senior leadership, including

HARMAN Professional Solutions' President, Brian Divine, shared key updates, recognized sales achievements, and unveiled the product roadmap shaping HARMAN's direction for 2026 and beyond.

A Platform for Performance Audio, Lighting, and Immersive Experiences

The Performance Audio & Lighting Summit, held on 11 March 2026, delivered a full day of technical insight and live demonstrations by Global Product Line Managers focused on solutions for performance venues and live events. The program included lighting project highlights, live fixture demonstrations, including the APAC debut of the Martin MAC Encore Two and MAC One Beam, followed by audio showcases featuring the latest JBL Professional developments, including additions to the SRX900 Series.

The day culminated in a specially curated Flux Immersive Audio & Lighting showcase, before closing with JBL Live & Loud, an evening of entertainment, networking, and celebration of JBL's 80th Anniversary.



L-R: DARREN RUSSELL (DIRECTOR) ELITE EVENT TECHNOLOGY, DANIELLA PETERS (DIRECTOR TOUR SOUND) HARMAN, RODNEY HOUSTON (SENIOR DIRECTOR OF SALES, ENTERTAINMENT, APAC) HARMAN PROFESSIONAL SOLUTIONS, PETER KUBOW (TOUR SOUND SPECIALIST) MADISON AV



SHURE



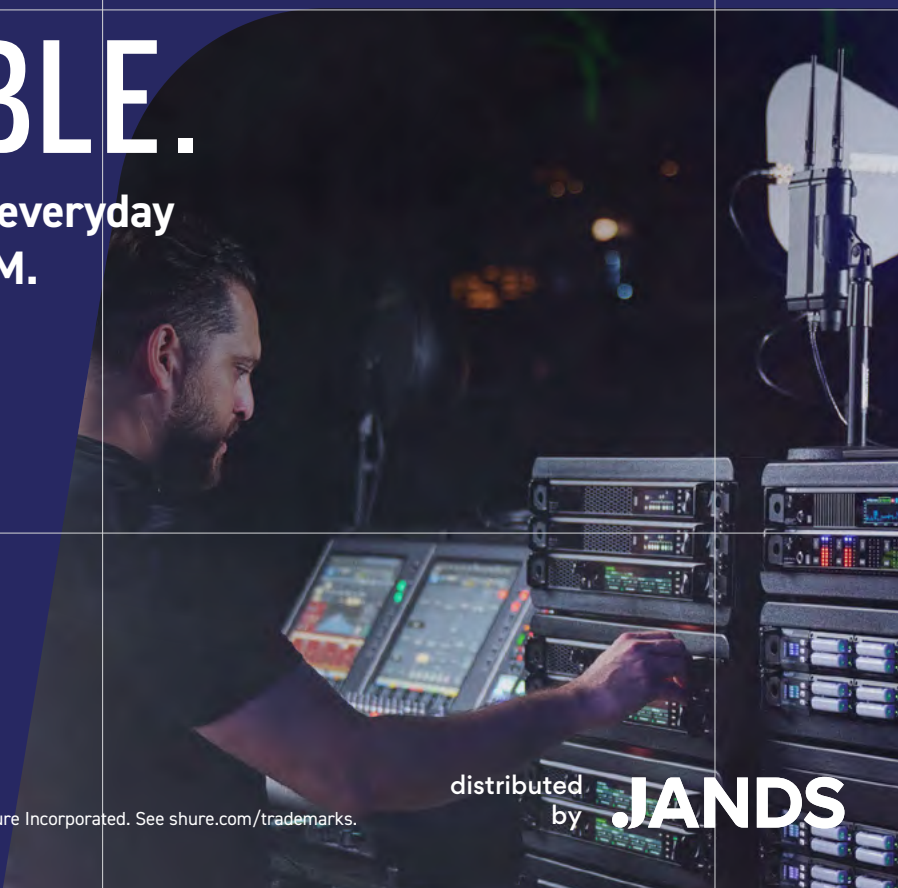
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Spotlight on Installed Solutions and Future Technologies

On 12 March 2026, the summit shifted focus to Audio, Video, and Lighting solutions for professional installations, highlighting how HARMAN Professional Solutions enables transformative experiences across diverse venues. Attendees explored updated JBL Professional loudspeaker ranges, including the first APAC demonstration of a Dante-enabled loudspeaker, alongside next-generation platforms such as BSS OMNI Open Architecture DSP, Crown ComTech D amplifiers, and AMX MUSE and SVSI solutions.



L-R: HANSLIE LIM (HEAD OF MARTIN PROFESSIONAL), DARREN RUSSELL (DIRECTOR) ELITE EVENT TECHNOLOGY, BRIAN DIVINE (PRESIDENT) HARMAN PROFESSIONAL SOLUTIONS, GEORGE GEORGALLIS (SENIOR DIRECTOR, PRODUCT MANAGEMENT) JBL TOUR & INSTALL, HENRIK KRISTENSEN (DIRECTOR PRODUCT MANAGEMENT) MARTIN PROFESSIONAL, RODNEY HOUSTON (SENIOR DIRECTOR OF SALES, ENTERTAINMENT, APAC) HARMAN PROFESSIONAL SOLUTIONS



L-R: HANSLIE LIM (HEAD OF MARTIN PROFESSIONAL), ROBERT LACKEY (GENERAL MANAGER, SALES) MADISONAV (ACCEPTING AWARD ON BEHALF OF ELEMENT ICT), BRIAN DIVINE (PRESIDENT) HARMAN PROFESSIONAL SOLUTIONS, GEORGE GEORGALLIS (SENIOR DIRECTOR, PRODUCT MANAGEMENT) JBL TOUR & INSTALL, HENRIK KRISTENSEN (DIRECTOR PRODUCT MANAGEMENT) MARTIN PROFESSIONAL, RODNEY HOUSTON (SENIOR DIRECTOR OF SALES, ENTERTAINMENT, APAC) HARMAN PROFESSIONAL SOLUTIONS





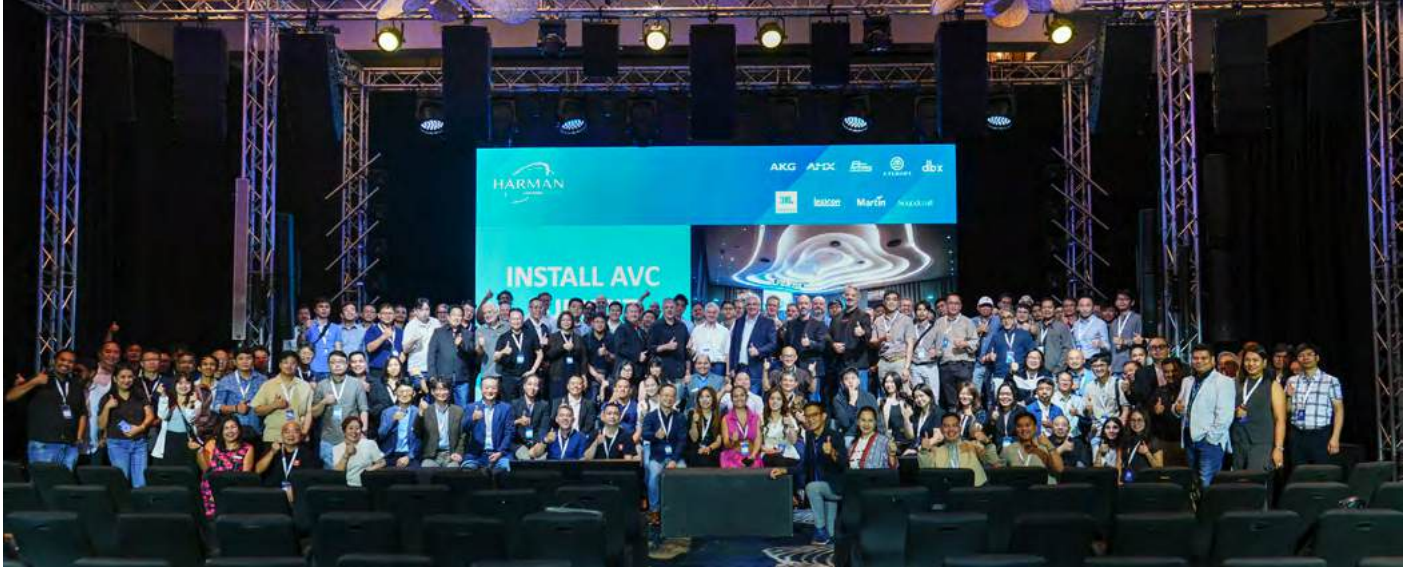
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L-R: CARLI CHURTON (NATIONAL MARKETING & COMMUNICATIONS MANAGER) MADISONAV, PETER KUBOW (TOUR SOUND SPECIALIST) MADISONAV, TIM ROBERTSON (TOUR SOUND SALES MANAGER) JPRO, JONI BENTON (DIRECTOR) JPRO, KEN KYLE (CEO) MADISONAV, PAUL EDLIN (SALES DIRECTOR) JPRO, STEPHEN PEERBOOM (MANAGER, TECHNICAL SALES SUPPORT TEAM) MADISONAV, PETER HAAK (PRODUCT LINE MANAGER) MADISONAV, ROBERT LACKEY (GENERAL MANAGER, SALES) MADISONAV

Strengthening Connections Across APAC

“HARMAN Connect APAC 2026 brought together over 200 partners and customers from across the region, reflecting the strength of our community and our shared commitment to innovation,” said Nick Screen, VP & GM, HARMAN Professional APAC. “The summit is more than a product showcase, it’s about building meaningful connections and sharing a clear vision for the future of professional audio, lighting, and integrated solutions in APAC.”

“Events like HARMAN Connect APAC are invaluable for strengthening relationships across the region and ensuring we’re aligned on the future direction of our industry,” said Australian HARMAN distributor MadisonAV’s CEO Ken Kyle. “For MadisonAV, it’s about translating these insights into real opportunities for growth within the Australian market and delivering greater value to our partners.”

SMPTTE Oceania Makes Its Debut at Integrate 2026

SMPTTE (Society of Motion Picture and Television Engineers) Oceania will hold its debut Industry Forum at Integrate 2026, joining Australia’s leading Pro AV trade show at ICC Sydney on 2–4 September. The forum will run on the afternoon of 3 September, bringing together the media technology community for an afternoon of insights, discussion, and knowledge sharing.

As the industry continues to navigate the shift to streaming, AI-driven innovation, and multiplatform delivery, the forum is designed as a platform for genuine industry dialogue. The forum will explore the issues that matter most to those shaping and working in the future of media technology in the region. As a community builder, the afternoon will be accessible for those right across the industry, from students and emerging professionals through to senior

leaders. Attendees will get a clear view of where the sector is heading and how they can play a part in guiding its direction.

Attendees will gain insight into the advocacy and education initiatives currently underway across the industry, while connecting with peers and contributing to conversations that go beyond individual businesses. It’s a space built for the people doing the work, and for those who want to help shape what comes next.

“The SMPTTE Forum at Integrate represents an important moment for the Oceania media technology community,” said Evdoxia Brownlow, SMPTTE Chair, Asia-Pacific. “By bringing the right people into the room and creating space for real conversation, we can address the issues that matter and build momentum as a community.”

SMPTTE Oceania is the regional home of the Society of Motion Picture and Television Engineers, connecting media technology professionals across Australia, New Zealand, and the wider Pacific. SMPTTE is a global society of more than 5,000 members, including creative professionals, media technologists, and engineers working across broadcast, streaming, cinema, live production, and IP infrastructure. Members transform the industry through Standards Technology Committees; advance their careers through SMPTTE’s extensive educational offerings; and connect with an invaluable network of mentors and colleagues through local and global industry events. Collaboration leads to innovation, and SMPTTE is proud to provide members a space to do both. Learn more at smpte.org/sections/oceania.

Integrate 2026 runs 2–4 September at ICC Sydney, co-located with the Security Exhibition + Conference. Registration opens 13 April 2026 at integrate-expo.com.



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AVOLITES D7 IS

Top of the Hood

PAUL 'PAULY' OWEN



Lighting designer Paul 'Pauly' Owen has been touring this year with an Avolites D7-215 lighting console, on which he's been running an eye-popping light show for Aussie rappers Hilltop Hoods on their world tour.

Hilltop Hoods – Adelaide's favourite hip hop heroes – have blazed a groundbreaking trail bringing their unique hooky soundtracks and intricate narratives into a live concert environment that has been accessible and hugely popular. The core lineup sees MCs Suffa (Matthew Lambert) and Pressure (Daniel Smith), joined by DJ Debris (Barry Francis) on decks and production. They formed the band in the early 1990s after meeting at high school.

Pauly has worked with 'the Hoods' for nearly 20 years, in that time forging his own very distinctive freestyle lighting techniques that are honed to their music and rhythm. He blends treatments and ideas from multiple different lighting disciplines – the finesse of theatre to the hi-impact rock 'n' roll – in the process creating new looks and lighting moments that work brilliantly in the attitudinal worlds of rap and hip hop.

This workflow has resulted in Pauly becoming universally known as 'The Hip Hop Lighting Guy'.

This latest Hilltop Hoods touring cycle started with the drop of their *Fall from the Light* album, kicking off with festivals in Australia and New Zealand, followed by Europe. It then stepped up to arenas around ANZ this spring.

Pauly started using the D7 in Australia, where the lighting equipment was supplied by rental company Harry the hirer, then continued with an Avolites T3 setup in Europe and went back to the D7 for the most recent Australian shows.

He has been using Avolites control since the start of his professional career in the early 1990s and he has stuck with the brand for numerous reasons, including its famous 'buskability' which is very much relevant to the way he operates lighting for the Hilltop Hoods.

His lighting MO with them involves plenty of improvisation and 'riding' the rhythm and the vibes of the band and the room, whilst – impressively – being as tightly cued and nanosecond-perfectly executed as a timecoded

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environment! This has become somewhat legendary in lighting design circles.

The Hilltop Hoods tour is Pauly's first on the D7, although he had been using an Avolites D9 for Jimmy Barnes' (of Cold Chisel fame) 'Red Hot Summer' tour in 2023. Barnes is another regular client.

A huge benefit he sees in the D7 setup is the portability, which is essential for a country like Australia where tours tend to involve a lot of flying to multiple destinations due to the geography and large distances between the major urban centres.

A D7 feature he utilises extensively in his workflow is the Key Frame Shapes generator for producing real-time effects.

Most of his Hilltop Hoods lighting designs involve a number of pixel-based fixtures, and consequently Pauly likes to map these – sometimes applying the effects across the entire rig – which looks simultaneously edgy and beautiful. "Using the D7 and a bit of lateral thinking, you can effectively animate a look without having to use a media server," he explained.

He finds the programming architecture of D7 straightforward but clever.

"You can get a rig working via the console in about 20 minutes which is pretty cool," he states, adding that he is a highly visual lighting designer rather than a technical one: "The console is the translator between what's in my head to how the lights will look onstage, and I have found out of all the options that Avolites generally is the best translator for me ... hands down!"

This is why he specifies the brand for all the larger bands he works with.

"Avo consoles are designed from an LD's perspective," he observes. "The company are lighting people as well as developers, they know their industry and have a feel for the tasks and challenges for which the products are being used. That's resulted in a very efficient, logical and powerful workflow."

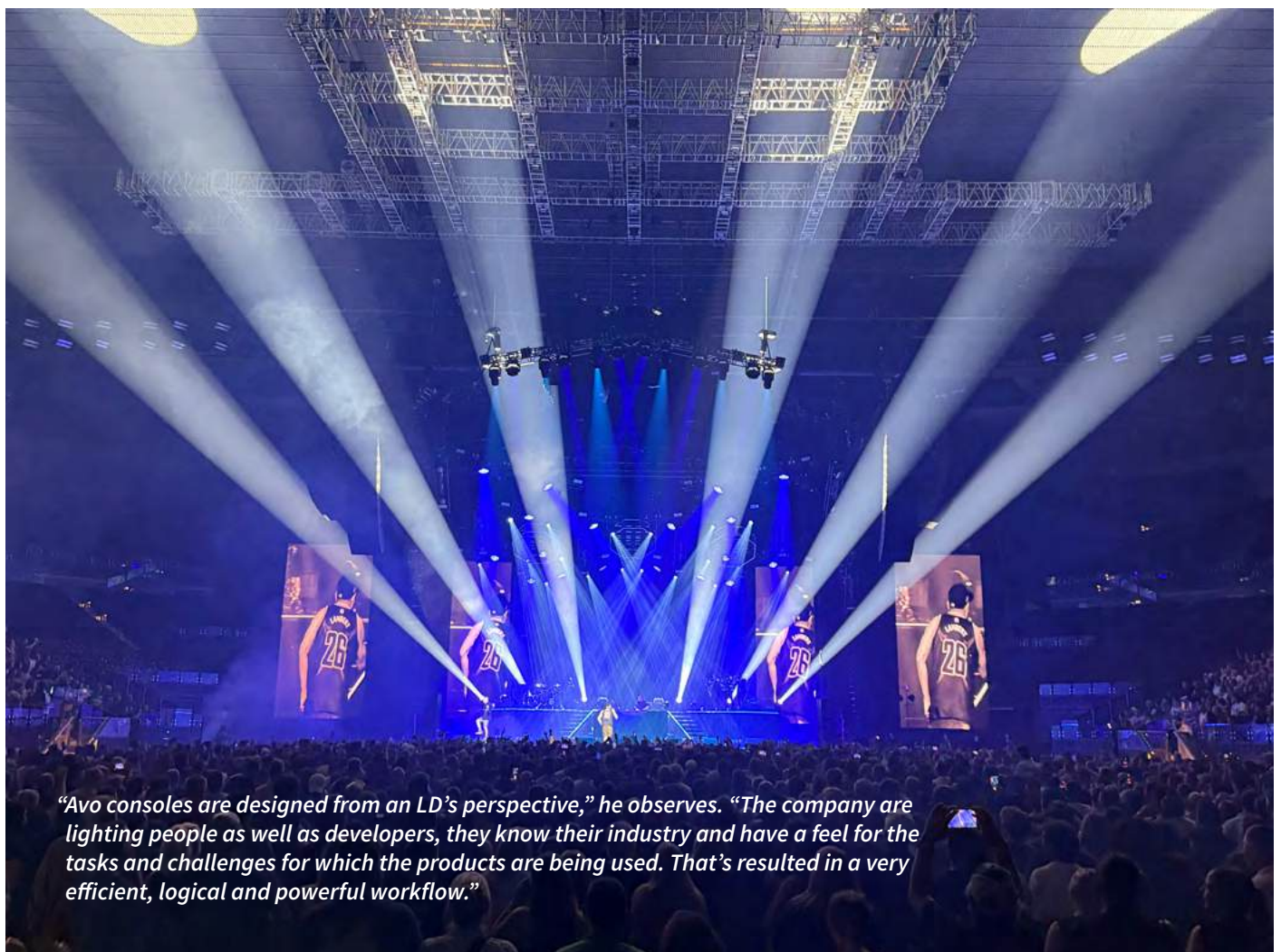
A typical Hilltop Hoods festival package will involve a front and back truss with about 60 fixtures – spots, washes, stripes and blinders, plus a floor package, which this year has comprised five floor dollies with – per cart – five Vanish LED panels, 20 MagicBlades and 50 LED Moles, plus

Cobras on top of the carts, 13 more Mole units around the stage, MAC Aura XBs for a low level side wash on stands and Klus LED strips for signage.

The upcoming arena leg of the 'Fall from the Light' tour will involve around 260 or 270 lights plus SFX and video and will also include Robe iFORTES.

Pauly's operating style is raw, rhythmic and flexible, bending with the roar of the music and crowds. He sometimes describes it as "a punch in the face," rude but in a respectful way, very full on and intense!

He typically programs a wide array of looks and then operates completely live, smashing through the faders and putting on his own individual show at FOH.



"Avo consoles are designed from an LD's perspective," he observes. "The company are lighting people as well as developers, they know their industry and have a feel for the tasks and challenges for which the products are being used. That's resulted in a very efficient, logical and powerful workflow."

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CHAMELEON TOURING SYSTEMS INVESTS IN ROBE IFORTE LTXS



Chameleon Touring Systems has invested in 15 new Robe iFORTE LTXs and iFORTE LTX FSs (Follow Spots with integrated camera), which have been delivered over the past six months.

Chameleon Touring Systems works across all entertainment and event production sectors, including concert and theatrical touring, festivals, musicals, corporates, broadcast, and television.

Chameleon was among the first to invest in RoboSpot after its launch and now has the largest stock of RoboSpot remote follow systems in the country, currently with 20 BaseStations.

These are used primarily with their stock of Robe iFORTE LTXs and iFORTE LTX FSs and also with Chameleon's BMFL Blades and BMFL Follow Spot LTs, sometimes using their LightMaster handle sets, which are still popular for certain shows and events.

The RoboSpot systems are out constantly on Chameleon's own shows, as well as in demand for a healthy cross-rental market.

The latest RoboSpot software update makes it possible to adjust fade times between presets and includes a colour picker that is set by numerical values; colour and position buttons to increase preset storage; a dedicated LT button; dynamic cross setup for iris, and many more cool features to make follow spotting even more flexible and dynamic.

The first RoboSpot systems joined Chameleon at the end of 2019, just before the pandemic. The remote follow spotting concept was becoming popular, and Tony wanted to stay ahead of the curve and offer his clients the most flexible and reliable remote follow and key lighting systems.

It turned out to be a canny investment! Immediately after the industry bounced back post-pandemic, demand for RoboSpots accelerated spectacularly.

All purchase decisions are based on multiple factors, including what Tony and the team think will be most useful for rentals and what is being requested on riders and technical specs, so the investment continued as Robe launched its iFORTE series.

Servicing numerous international artists visiting Australia, it is important to have the tech that they are demanding. Additionally, the LTXs can be used without the cameras as standard lighting fixtures, as was recently the case with Oasis' Sydney shows, where they were part of the floor package for Paul Normandale's design.

The iFORTE LTX Follow Spots have also been used recently on a RoboSpot system for Ricky Martin's Australian tour.

"iFORTE LTXs seem to be the follow spot of choice right now," stated Tony, "They are nice and bright, have a great CRI and all the LDs are happy to use them."

He thinks RoboSpot is a great piece of technology from multiple perspectives: "There's no climbing involved, and they are extremely quick and easy to set up, especially when the luminaires are stored and transported in pre-rigged truss sections."

He notes that on television shows, the floor electrician can also tech and operate a RoboSpot system, so having one person there on standby who can also run a follow spot makes it expedient in terms of people-power, which is a real benefit in the TV world.

Other creative advantages include the ability to light an artist from all angles with fixtures in different positions for greater three-dimensionality, more effective lighting and less shadowing; plus reducing unsightly light spill onstage by being able to hit the target from much more acute and convenient angles up on the rig.

The RoboSpot fixtures can also be utilised as part of a standard rig for certain parts of the show, if required.

Parameter control from the console can handle as much functionality as necessary, leaving operators free to focus on basics like iris and actually following the artist.



TONY DAVIES

Being active in every sector of Chameleon's business makes RoboSpot a hardworking and excellent value investment, notes Tony, "A bit like consoles in this respect; something of a 'must-have' for so many different productions."

"You can basically deliver a much slicker show using RoboSpot and it's been an important catalyst in moving the whole art of follow spotting into a new era," reckons Tony, who started Chameleon in 1986 and runs it in hands-on style, staying connected with all aspects of the operation.

Over that time, Chameleon has built a reputation for delivering quality and expertise, as well as taking a creative approach.

There has been a steady trend in the purchase of different Robe lighting products since 2017, starting with MegaPointes, Spiiders and BMFL Spots and Blades.

Recently – and since it became a Robe business – Chameleon has also invested in Avolites, with the purchase of two D7-215 consoles to service LDs who enjoy working with the legendary UK-manufactured brand, which has a strong history in Australia.

Tony observes a new energy in Avolites since the Robe acquisition and believes that the portability of Avo products like D7 and the just-launched D3 series will expand its scope, with other advantages like being able to easily fly consoles gig-to-gig with the backline or even as personal luggage.

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ELATION KL BATTEN

KL BATTEN uses a 100W RGBMA system to deliver natural light with high CRI (>94) for camera-ready colour. They are designed for clean, consistent blending across cycs, sets, walls, and scenic elements. Featuring green/magenta shift, a virtual gel library, and 2400K–8500K colour correction for precise white-light tuning. CMY emulation mode included. The KL BATTEN is available in 3 models: KL BATTEN 72 (6ft) @ 71,347 lumens, KL BATTEN 48 (4ft) @ 46,744 lumens, and KL BATTEN 12 (2ft) @ 10,981 lumens. Individual pixel control allows complex pixel-mapped effects. Connectivity includes DMX, Art-Net, sACN, and RDM, along with NFC configuration and Aria X2 wireless DMX. They are all wrapped in IP65-rated housings.

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MEYER SOUND NEBRA 2 SOFTWARE UPDATE

Nebra 2 is a major software upgrade that transforms Meyer Sound's platform into the central command centre for its integrated ecosystem. Nebra 2 introduces full processor control for Galileo GALAXY and GEN-1 technology for networked loudspeakers, giving users easy access to EQ, level, delay, and phase. These join connection and monitoring tools in one interface and unified workflow. Nebra 2 supports both small and large-scale systems, from compact touring setups to global stadium deployments. This upgrade for the Meyer Sound ecosystem supports management of multiple processors and loudspeakers and a variety of inputs and protocols, including analog audio, AES67, and Milan AVB. Show Mode lets users lock critical control points during performances, helping prevent accidental changes in live scenarios.

Australia and New Zealand: Meyer Sound meyersound.com +1 510 486 1166



JBL SOFTWARE UPDATES

JBL Professional have released three new software updates. Venue Synthesis 1.4 adds support for SRX900, SRX912M, SRX915M, SRX922, and the SRX922 Array Frame products. Performance and visualisation improvements enhance the modelling workflow for all users. A new View Menu in the 3D workspace shows and hides grid/axis guides, SPL flags, delay flags, and more. Tag-based plane colouring displays venue planes using their assigned tag colours for clearer visual organization. Performance 1.9 adds support for SRX900 Series point source speakers, along with new tools that streamline system control. Contribution Groups for gain and delay provide visibility into how DSP is applied across the system, letting users manage adjustments at any level of the group hierarchy before values are summed at the loudspeaker. A new Scaling Tool offers adjustment of spacing and arrangement of speakers within the workspace. ArrayLink 2.2.1 adds support for SRX912M, SRX915M, SRX922, and the SRX922 AF Array Frame.

Australia: MadisonAV
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MEYER SOUND 1800-LFC SUBWOOFERS

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sennheiser.com 02 9910 6700
New Zealand: Sennheiser
sennheiser.com 09 580 0489

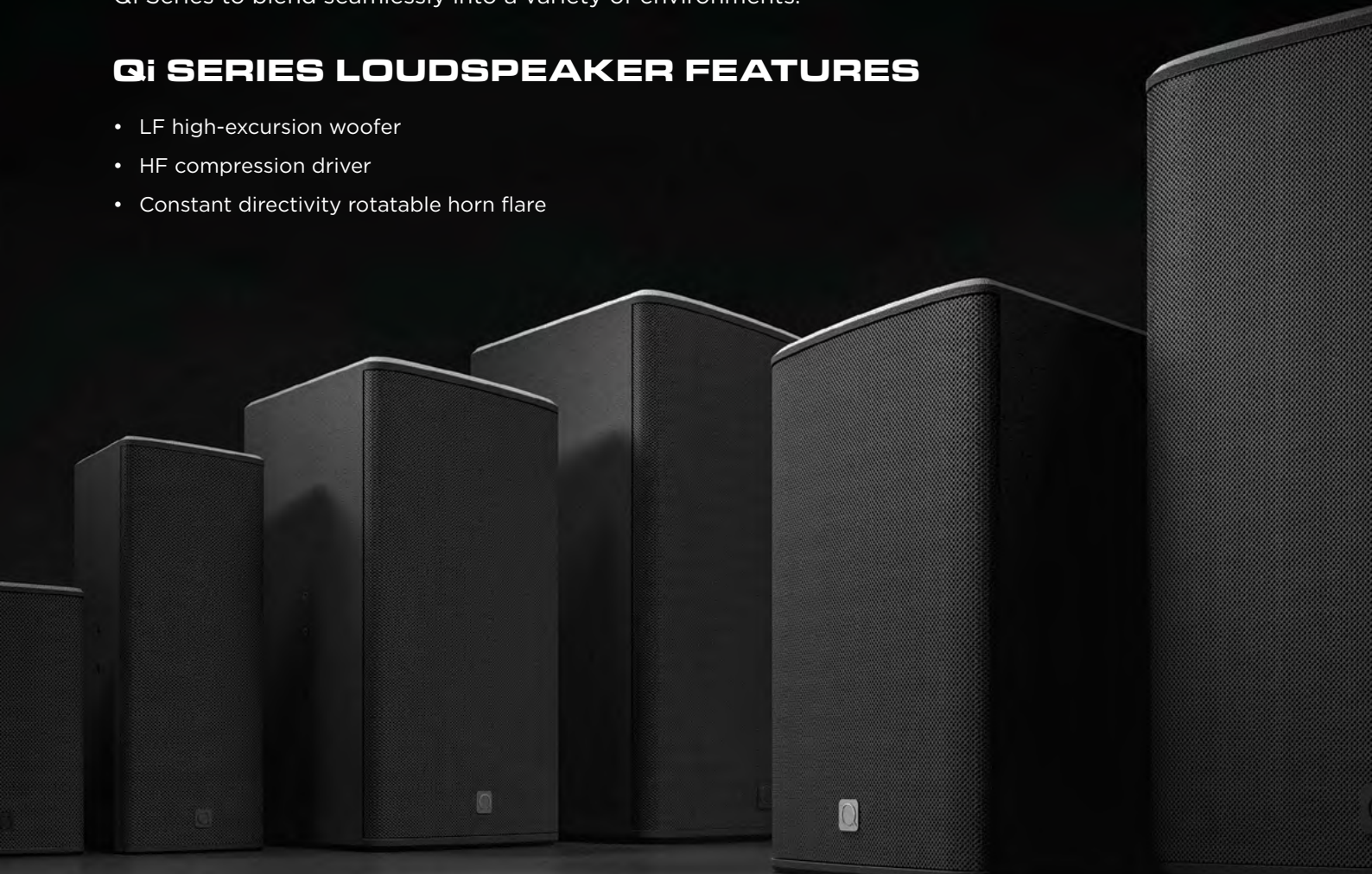


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FROM CRICKET GROUND TO

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HOW THE BAY OVAL IN MOUNT MAUNGANUI BECAME THE STAGE FOR A 25,000-CAPACITY FISHER SHOW

There are some venues that feel like an obvious fit for live music, and others that require a little imagination.

Bay Oval in Mount Maunganui sits firmly in the latter category. Best known as one of New Zealand's premier international cricket grounds, the venue had never hosted a major live music event. That changed this summer when Australian dance music superstar FISHER drew a crowd of around 25,000 people to the coastal venue for what became the Oval's first large-scale concert.

For the production team behind the show, it was less about dropping a touring rig into a ready-made venue and more about reimagining the entire site. From stage orientation and turf protection to laser safety coordination with a nearby airport, delivering a stadium-scale dance event inside a cricket ground required months of planning and a high degree of collaboration between promoters, council, venue management and production suppliers.

The result was not just a successful show, widely credited as lifting the mood of a community still reeling from the Mount Maunganui landslides, but a clear demonstration of the potential for regional sports venues to evolve into serious live music destinations.

For the local council, the packed venue and the surge of visitors into the Mount's main street afterwards reinforced the economic case for using the cricket ground to attract major touring acts to the region.

Why Bay Oval?

The idea of staging a major concert at Bay Oval had been quietly circulating for years. Trademark Live promoter Toby Burrows says the team had been in conversations with the venue for years before the opportunity finally aligned, "We'd been talking to Bay Oval for over five years about doing a show there. Working through the consents, the cricket schedules and how we would actually lay out the venue."

Timing proved to be the final piece of the puzzle. After a successful run of shows with FISHER in Auckland and Christchurch the previous year, the artist was keen to return to New Zealand but with something different, "He's at that stage in his career where he just wants to do really cool things, so we wanted to create something unique and iconic."

Mount Maunganui offered exactly that. The location, the beach town atmosphere and the natural amphitheatre of the ground itself all helped sell the idea, "Being our hometown was a big part of it. The venue's right in the Mount, it's got the embankment, the terraced pavilion, the harbour on one side and the ocean on the other. In the middle of summer, it's a real destination. Plus being a beach town, we thought that would appeal to FISHER, as a surfer."

But the biggest attraction was also the biggest risk: the fact that Bay Oval had never hosted a concert before, "Being the first time the venue had ever been used for something like this, we knew it would be a challenge as well as a talking point."

"Being our hometown was a big part of it. The venue's right in the Mount, it's got the embankment, the terraced pavilion, the harbour on one side and the ocean on the other. In the middle of summer, it's a real destination. Plus being a beach town, we thought that would appeal to FISHER, as a surfer."

From cricket ground to concert venue

Transforming a cricket venue into a large-scale music site presented several issues. Unlike purpose-built stadiums or event parks, the primary function of the ground remains sport, meaning every production decision must take the playing surface into account.

“The biggest impact on the grass is usually the stage build,” explains Burrows. “We managed to build the stage essentially into the embankment, so it wasn’t even on the playing surface.” The solution protected the pitch while still providing a suitable sightline for the audience. Additional turf protection was installed over the wicket block, using the same style of matting commonly seen at venues such as Eden Park.

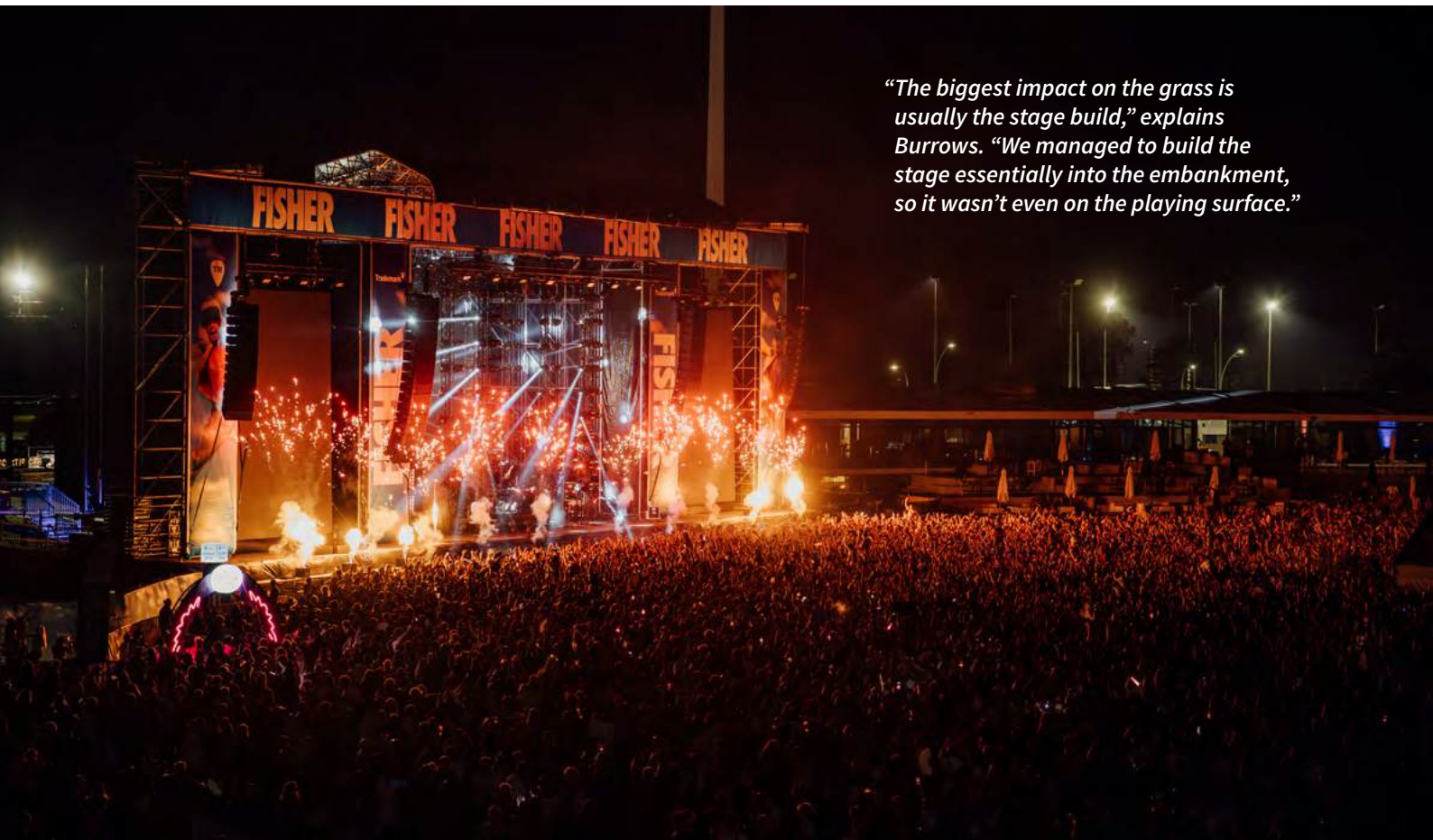
Noise management also formed a major part of the consenting process, “With residential areas nearby, noise was always the biggest potential issue. We had to go through detailed modelling to prove we could operate within the limits allowed under the consent.”

Fortunately, the venue’s natural geography worked in the production’s favour, “It provided the perfect orientation. With the stage backed up to the Mount and facing toward the harbour and industrial area, most of the sound travelled away from residential areas.”

Delivering a first-of-its-kind event at the venue also required close collaboration with Tauranga City Council. Alongside the consenting process, the council’s events team worked with the promoter and venue operator Bay Oval to navigate logistics around traffic and crowd management. The city also provided financial support to help secure the event, recognising the economic and cultural value of attracting a major international act to the region.



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Designing the show

Once the venue layout was resolved, attention turned to the production design. The visual concept for the show was created by Dave Eldridge of High Scream, with the New Zealand performance marking the first time the design had been deployed.

According to Chief Production Manager Johnny Gibbs, translating the touring concept into the realities of the New Zealand supply market required a considerable amount of engineering work, “The design was very challenging due to the large quantity of identical fixture types and the limited amount of any single fixture type available in New Zealand,” Gibbs explains. Marc Benedict from Forge Lighting assisted with sourcing fixtures from multiple suppliers to build the rig.

The vertical truss structures also required careful structural design. The vertical lighting trusses were carrying significant weight and were aligned beneath just two load-bearing roof beams, which were already supporting a substantial LED configuration. To distribute the load safely, the team combined flown elements with ground-supported truss structures. Gibbs recalls, “Rocket Scaffolding CEO Dan West, their engineer and I poured many hours and late nights into the stage design. We figured out how to construct the stage on an embankment, with extra support structures in place for the ground-supported LX trusses while also seeking to minimise any damage to even a single blade of grass on the cricket pitch, as a televised international match was scheduled soon afterward.”

Screens, lasers and control

The visual system centred around a substantial LED configuration. The upstage video wall consisted of a 7m by 9m centre screen flanked by two 4m by 9m side panels, built from Glosline Vanish P3.9 – 7.8mm LED to reduce overall weight. Additional 6m by 9m side-of-stage screens constructed from Roe CB5 panels provided IMAG coverage for the large audience.

Global Production Partners supplied the main LED system and eight 40 Watt lasers used throughout the show, while CT Group supplied the sidewalls.

Operating lasers in Mount Maunganui required an additional layer of coordination, as Tauranga Airport lies roughly one kilometre from the site, “We had to work closely with the airport because the lasers were firing directly over the runway, implementing procedures to ensure flight operations were unaffected.”

Visual playback ran on two GX3 media servers with Pixelhue P20 handling video switching, while lighting control was managed via grandMA3 consoles.

Audio and effects

Audio for the event was supplied by Western Audio Engineering using a d&b audiotechnik system configuration. The main hangs comprised GSL8 and GSL10 arrays, supported by KSL8 side arrays and additional KSL8 and KSL12 delay towers.

Front fill coverage was provided by V7P and V10P cabinets with SL-series subwoofers delivering the low-frequency energy required for a dance show of this scale, “Western Audio did fantastic work on the system design to achieve an SPL suitable for the show while still enabling compliance with our noise limits for the show.”

Audio control was handled via DiGiCo SD10 and SD11 consoles. Elsewhere in the rig, Tron Audio supplied the DJ riser and equipment package including Pioneer CDJ-3000 players and V10 and A9 mixers, and RMX1000 effects units.

LiveFX delivered flames and pyrotechnics, culminating in a 30-second finale fired from the roof of a building behind the stage.

A lighting trick with local infrastructure

One of the more inventive production elements came from the venue itself. The Bay Oval sports lighting system is DMX-capable, allowing individual control of the stadium lights. By linking the touring lighting system with the venue infrastructure, the team was able to integrate the floodlights directly into the show design, “This allowed the team to create special effects and powerful blinder-style moments during the show. To my knowledge this is the first time this has been done in New Zealand and it definitely had serious impact.”

The people behind the build

As with any outdoor event, the success of the show relied heavily on the production crew working behind the scenes. Gibbs makes special mention of the FISHER production team, “They were very easy to work with and remained consummate professionals and friendly humans.”

“The key stage crew were Ryan Stechman, whom I pulled out of retirement to stage manage the show immediately after he finished his wedding, and Jono Hayes who doubled as deputy stage manager and pack-down manager. Jono’s role was key in ensuring the turf wasn’t damaged while the packdown was in progress.”

“Overall, it was a huge effort under some real challenges, but the entire team worked wonders to make it happen. Another shoutout to the Rare Entertainment team of riggers and loaders who put in some long hours getting everything up and down, in and out.”

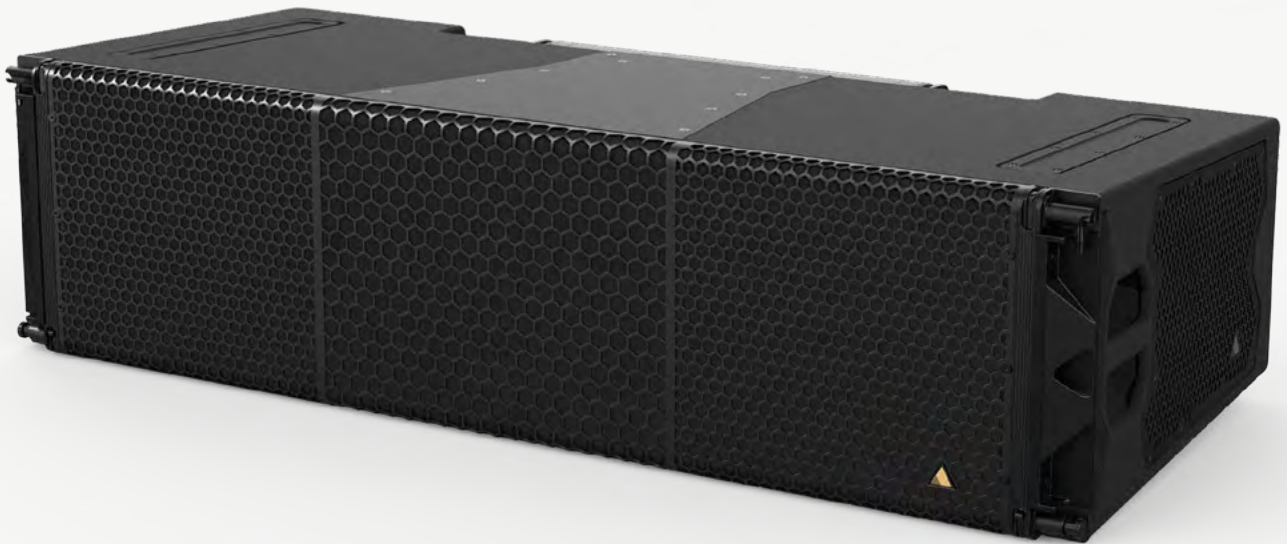
More than a one-off

For the organisers, the successful delivery of the event demonstrated something larger than a single headline show. Burrows says the moment that stayed with him most came during FISHER’s set itself. As the performance built, a series of vertical lighting trusses flanking the DJ booth fired to life for the first time, illuminating the stage alongside the massive LED backdrop, “It was everything I hoped it would be. We’d gone through a tough time in the Mount in the week prior with the landslides, so people needed something to gather everyone together and bring some happiness to the place. When those vertical lights lit up with FISHER playing, and you had the Mount in the background, it was just incredible.”

The concert proved that regional venues, even those not traditionally associated with live music, can support major productions with the right planning and partnerships. For Bay Oval, the event has opened the door to future possibilities. And for the production teams involved, it offered the rare opportunity to turn a cricket ground into a dance floor for 25,000 people on a summer night in Mount Maunganui.



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IMMERSED OR MISGUIDED?

If you can't hear the main vocal at a show you paid good money to see, does it really matter whether the mix is in mono, stereo or immersive?

The conversations I have around the installation of immersive audio systems at large live arena-type shows sometimes remind me of the chatter I hear around the colonisation of Mars. There are lots of opinions and regurgitated theories about how and when a Mars expedition might get underway, yet almost no-one does the maths to realise just how impractical – some would say utterly fanciful – the whole thing actually is. Meanwhile planet Earth is on the ropes.

The same sentiment applies to immersive audio systems at large live venues – do the physics and mathematics around these systems, or indeed the economics of installing these sorts of complex sound systems into large arenas (and then disassembling them and shipping them off to the next venue), really stack up when you take into account all the extra time and costs involved?

At least one person I know thinks it doesn't.

Backtracking Slightly

The other day, whilst glancing up at my laptop to check that the House music was still playing (muted too of course) during a live mix of an M. Ward show at Meeniyan Hall, I noticed an email in my inbox from none other than Howard Page, Sting's FOH engineer, and the Senior Director of Engineering at Clair Global.

I didn't open it at the time, for obvious reasons – I'm not one to check emails while mixing a live show, although I've seen others do it! Besides, I had assumed it was probably just another promotional email from an audio company

where Howard Page was, perhaps on this occasion, the subject of an article or mix tutorial.

But it wasn't.

As I discovered after the show, the email was from Howard himself, writing to me to discuss the impracticalities of immersive audio for large-scale touring acts.

To preface all this, I must point out that Howard and I aren't well acquainted, although I have sat with him once before at a Sting show at the Myer Music Bowl in Melbourne some years ago. But we haven't had contact since. So I was more than a little surprised to see the email in my inbox.

As it turns out, Howard has been holidaying in Australia, and whilst here he's been reading my articles in CX Magazine (amongst other things I hope), which was nice to hear! But his main reason for making contact was to press home a point about immersive audio systems in the live touring realm, one that he's adamant is being sidelined by the hype surrounding various immersive formats.

His assertion is that 'immersive audio' – generically speaking – has its place in theatres, fixed installs etc., but not in the real world of large-scale, high-intensity world touring. In addition, the fundamental properties of the speed of sound – he rightly argues – makes the practicalities of playing dynamic, rhythm-based music in a large space a time-alignment nightmare for most punters in a large live venue, with only a small group at the centre of the sonic focus able to enjoy time- and phase-coherent audio. Others on the periphery aren't so lucky.

Immersive On A Major Scale

The only way 'immersive audio' in a large venue can work – particularly on the scale of let's say, a soccer stadium – is when the music is fundamentally time incoherent in the first place, and by that I simply mean, the main musical elements have no strict timing cues, like a drum beat, for example. Instead, the music might be made up of slow, amorphous synth pads, vocals or sound effects. For music like this, where the timing is less critical, immersive audio on a large scale is entirely possible, even though everyone is actually hearing a slightly different version of the performance.

But I'm confident when I contend that this isn't what 50,000 people are likely to want to witness at a large gig! People go to big concerts like this to party, dance and sing along to songs they know well – not be put to sleep by ambient synth pads. But in a large space, when the core elements of an immersive system are comprised of a rock band, for example – and given that the speed of sound is something we can't change – when these elements arrive at the ear of 5,000 people on the periphery of an immersive system, the timing of the music for these customers, who've paid good money to be there, will be a shambolic mess.

The way around this fundamental problem is to pick a small section of the venue – presumably in the centre, in front of the stage – and make that sonically 'immersive', and then play either a stereo or even mono source into other parts of the arena. But this is surely, by definition, an admission of sorts that immersive systems in general, are compromised by the size of the venue.

But Howard Page's concerns around immersive audio systems on tour are more specific even than this, though he also shares these aforementioned concerns. His others stem from what he sees as the impracticalities of an international touring act installing immersive systems into venues that sometimes, for a multitude of differing reasons, often simply cannot accommodate the installation of such vastly more complex, expensive, and time-consuming systems. A venue might, for example, have extremely restricted rigging weight limits, sightline issues, or be simply constrained by time – these systems invariably take far longer to construct, tune and then deconstruct than your average left/right system with in-fills and delays.

Immersed In Plugins

I'm planning on meeting up with Howard to explore this topic in more detail in the next week or two, whereupon hopefully by next issue you'll be hearing from Howard either as part of a discussion, or even directly from the man himself, not sure at this stage. So stay tuned for that.

But while I still have space here, there's something else I'd like to weave into this article, if I may, that Howard mentioned in one of his emails the other day. It was a comment that really struck a chord with me that relates only indirectly to the immersive audio debate, but fundamentally to two things that are central to any conversation about live performance in general – the mixing, and the customer.

His comment was this: "Whenever I sit around watching other engineers mix at large-scale festivals, I am often stunned by the amount of extra plugins and processing they apply, in most cases to the absolute detriment of the end result. I often make the not-so-subtle joke to audio students – 'Do you think Mrs. Robinson in seat E15 knows or cares what plugins you have on the lead vocal if she cannot understand a word the singer is singing because the bass and kick drum's low-end are towering over the mix?'"

Of course not, she'd be deeply disappointed by that outcome.

To which I would add (in furious agreement with Howard): When Mrs. Robinson is there to see her favourite artist perform live – let's say she's a huge fan of Lady Gaga, and she's paid good money for that E15 seat – does she expect the 500,000W PA to be powerful enough to allow Lady Gaga to be clearly audible in the mix, or would she prefer NOT to hear the person she's come to see, but rather the kick drum and the guitars? Is that where her focus is; is that who's name is on the poster out front – "Kick Drum and the Guitars!?"

One thing's for sure, if Mrs. Robinson was going to a Sting concert she wouldn't suffer that fate. No one is more concerned with the audience's focus than Howard Page.

He is meticulous about creating a fantastic sounding, sonic focus around the person everyone is there to see – Sting. He's unapologetic about it too. In reality, he's far less concerned about what you or I might think of his mix than what his

customers experience – the audience that has paid to be there! To Howard, that's what matters most.

And he's right to think that way.

I would assert that when people complain about a live mix sounding 'bad', the overwhelming reason is because they couldn't hear the singer – the person they came to see, upon whom they were focussed all night.

If you get the vocal mix wrong at a live show – regardless of whether it's low or dull, too compressed or too wet – the rest of the sound counts for nothing. Yet time and time again this is precisely what happens at live shows – mix engineers bury the lead vocal in the mix to the point where punters can't hear the one thing they're almost exclusively focussed on – the singer.

As a mix engineer, if you can't get that right, your mix is a dud. It might not be seen that way by the engineering fraternity in the room, perhaps; they might have liked how the rest of the instruments were sitting, or the coverage of the subs in the venue, but punters couldn't care less about all that. They just leave wondering how, with all that equipment, they still couldn't hear the singer.

Regardless of whether a sound system on any given night is immersive, or indeed mono, the concerns of most paying customers remain the same. Their focus is on the star they've come to share a space with and more importantly, hear sing, not what the PA is, or how it's configured. Frankly, if you can't hear the singer, what does it matter anyway?

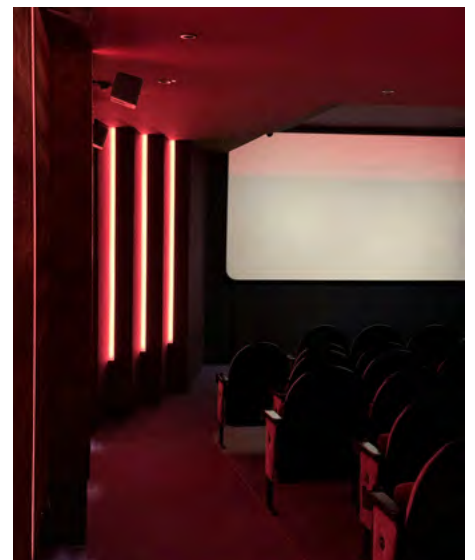
I remember mixing a gig at the Corner Hotel years ago; a record launch for an album that I'd also produced. The mix sounded great on the night – even though I was a relatively inexperienced live engineer at the time – mainly because the singer was (and remains) amazing, and I had her loud and glamorous in the mix.

After the show, about 20 people came up to me at Front of House to tell me how great they thought the mix sounded... praise I accepted graciously. One individual, meanwhile, made the negative comment: "I thought the vocal was a bit loud..."

He was an audio engineer.

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

'Immersive audio' – generically speaking – has its place in theatres, fixed installs etc., but not in the real world of large-scale, high-intensity world touring.





LIVE

SYDNEY'S NORTH WEST GOES LARGE

Strategically located on the outskirts of Sydney within its rapidly growing north west region, Bella Live sets a new benchmark for live performance venues in the city, and is one of Australia's largest new multi-purpose entertainment venues.

Momento Hospitality, a key player in Australia's pub and hotel industry, expanded its flagship Bella Vista hotel to utilise its nearby 1400sqm storage warehouse with 8m ceilings in creating Bella Live.

Momento anticipated strong local interest, following a 'build it, and they will come' approach, and, with a capacity of 2,000, it sits alongside any superclub in Australia in hosting various events in a region rarely visited by international acts and alternative promoters.

Designed by Archebiosis Architects, Bella Live blends sleek, modern style with an industrial warehouse vibe. The space features a 17.5m bar and a prominent 10m by 8m stage, flanked by VIP booths for an exclusive viewing experience.

Design details include concrete-rendered finishes, glossy red accents, marble terrazzo benchtops, and glowing linear pendants.





Engineered for scale and flexibility, Bella Live is designed to meet the technical demands of major national and international tours, while also providing space for emerging and local talent to flourish.

The venue has been designed to be versatile enough to host a headline DJ set, a stand-up comedy night, a major sporting event, or a significant corporate event, and includes a 100sqm fully accessible stage.

From techno nights to soulful Sunday sessions, Bella Live can easily flex from daytime keynotes to late-night celebrations, while sports fans can enjoy UFC, F1, and Premier League action on giant screens in a lively atmosphere.

“Bella Live can instantly become whatever it needs to be,” confirmed General Manager Richard Saliba.

Momento’s long-standing partnership with AV integrator Vestec Electro Pty Ltd involved installing the AV infrastructure and equipment across the site, under the project management of Mark Vesic and Nev Hanna, while distributors Technical Audio Group (TAG) played a significant role in the audio design with their system solutions and engineering (SSE) team contributing with Martin Audio’s Display software and EASE Modelling.

TAG Technical Director, Anthony Russo was charged with leading the team, and he acknowledged that work needed to be done on the room acoustics before any audio spec could be drawn up.

“No system of any size, brand, or power could have worked in this space until the room acoustics had been addressed,” said Russo. “We needed to engage the best acousticians to tame the space of horrendous low-frequency problems and reduce the reverberation time to a level that strikes the aural balance for patrons and artists.”

Enter well-known acoustician David Gilfillan from Gilfillan Soundwork, whose team conducted on-site measurements and computer modelling using the latest room simulation software from Treble Tech.

They demonstrated to the client the before-and-after effects of the room treatments using headphones, and the owners were left with no doubt that the investment, while significant, was entirely worthwhile.

“In my extensive experience with audio, this was a monumental challenge for a venue of this kind, and demanding a no-holds-barred approach,” said Russo.

To reduce the long, low-frequency reverberation time, 31 Helmholtz bass absorber resonators were constructed. Each resonator was over 3m tall and 1.5m wide and had a depth of 500mm, with varying angles and calculated timber perforations.

They were carefully positioned along the walls, with 100mm thick acoustic panels installed between them.

In addition, the ceiling was treated with acoustic Enviro-spray, and the area above the stage was fitted with 24 suspended 1m by 1m panels, and 100mm thick acoustic panels, to reduce vertical reflections.

“From the concrete bunker we once knew to the acoustics of a proper theatre auditorium, the difference was spectacular, and worlds apart,” confirmed Russo, who then set to work on the sound system design for the room.



“Bella Live can instantly become whatever it needs to be,” confirmed General Manager Richard Saliba.



With the promoters seeking to attract top international acts and meet all rider requirements, as well as deliver a concert experience for 2,000 people, TAG's design team developed a solution based on 12 Martin Audio WPC Wavefront Precision line arrays combined with eight Martin Audio SX 218 dual 18-inch sub bass units, all powered by factory-supplied iKon iK42 20,000W amplifiers.

The WPC, featuring its dual 10-inch three-way design, provided sufficient SPL and headroom to handle full-house nights. Simultaneously, Martin Audio's electronic steering capability enhanced pattern control in a reverberant environment.

Extensive CAD modelling made bass control crucial. Traditional left and right stacked setups caused the usual power-alley issue, with the final solution being a horizontal arrangement of the subs in a continuous line beneath the stage.

This enabled the individual steering of each cabinet if needed, leading to better low-frequency summation and overall performance.

To minimise energy emission from the subs at the rear, top, and sides, 100 sandbags weighing 30kg each were placed on top of the cabinets and around the back and sides.

"If you have to have subs under stage, you have to make sure you control the energy reaching the stage floors and direct it toward more useful areas," said Russo.

To support the main system and VIP booth areas, a delay system consisting of 10 Martin X15s and six SX 212 subs was installed.

To meet the rider requirements, a foldback system comprising seven Martin Audio LE 200 high-powered concert 15-inch two-way wedges and an SX118 subwoofer was supplied with two iKon 42s, enabling an eight-send monitor system for the main stage.



Technical Information

Audio

- 12 x Martin Audio Wavefront Precision WPC
- 8 x Martin Audio SX218
- 7 x Martin Audio iKon iK42
- 7 x Martin Audio LE 200
- 1 x Martin Audio SX118
- 1 x 48-way ACC Limited multipin splitter system

Control

- 2 x Q-SYS Core 100f Digital Processing
- 2 x Netgear AV line 4250 network switches

Lighting

- 15 x Prolights Ruby FCX
- 6 x Pluto 600
- 10 x Neptune 400 Wash 8 FX
- 3 x ShowPRO Collider FC
- 2 x Look Solutions Unique 2.1
- 4 x Unity Laser Elite Pro FD4
- 1 x MA Lighting GrandMA3

Video

- 2 x Leaton Vision 2.5 LED wall
- 2 x Sony VPL-PZH61
- 2 x Novastar VX 400

Consistent with top performance spaces, Vestec installed a comprehensive house and stage data and analog patching system, including a 48-channel concert splitter and multiple tie lines.

This setup enables the space to manage live events and any broadcast or recording needs.

Total system processing and routing are managed through two Q-SYS Core 110f units running in backup mode, capable of handling Dante and analog streams, while a cloud-based Q-SYS Reflect system allows for remote monitoring, software updates, and email fault notifications.

When Bella Live planned its lighting system, the goal was clear; to construct a lighting rig that would meet the demands of international touring artists while also delivering an exceptional light show to captivate the audience.

Gareth Mealing from Show Technology worked closely with the owners to carefully select equipment capable of supporting a wide range of events, with the guiding principle behind the design of 'quantity is king'.

This approach resulted in a robust setup featuring 15 Prolights Ruby FCX profiles, which are packed with gobos, a linear prism, frost, and infinite pan and tilt rotation, and six Pluto 600 high-powered LED moving head profiles featuring an advanced motorised zoom system.

The team selected 10 Neptune 400 Wash FX units for its vivid colour displays, precise pixel control and LED ring effect, while three ShowPRO Collider FC strobes offer more creativity with a wide range of pre-programmed macros, special effects and flash. A pair of Look Solutions Unique 2.1 hazers provide steady haze for optimal atmosphere and enhanced lighting effects.

Together, these fixtures provided the room with remarkable depth, vibrant colour, and dynamic movement, allowing for a variety of visual effects, and no nightclub is truly complete without some powerful lasers, and so the team incorporated four Unity Laser's Elite Pro FD4, adding a next-level visual impact.

With the design finalised, Mark and Nev from Vestec Electro took charge of the installation, delivering a tidy, professional fit-out that looks impressive and performs flawlessly. Recognising that the backbone of any serious lighting rig must be world-class, the team opted for an MA Lighting grandMA3 onPC rack system paired with ArtNode 8, ensuring reliable control and flexibility.

The system is meticulously programmed so that the entire rig can be operated with just a touch, keeping Bella Live fully prepared for any event, from headline acts to massive weekend parties.

With such an enormous venue, no performance space could be without a video system, and so Vestec engineered and installed two Leaton Vision 2.5mm pixel pitch 6m by 3m video walls, and the venue's inventory includes additional panels to enable custom designs for various performances, including DJ decks, dance podiums, and corporate events.

Additional room and bar projection are managed by two Sony VPL-PZH61 projectors, delivering 7000 lumens and a 21.9 aspect ratio.

Control is handled by a Novastar system with Q-SYS managing additional venue management control.

With care and attention paid to its top-to-bottom AV build out, Bella Live offers a space that has long been lacking in suburban Australia – a venue able to host everything from top-tier acts to corporate events.

Such has been the success of Bella Live that it has already hosted some of the biggest international acts, including Snoop Dogg, Will Sparks, NE-YO, Lil Jon, Wiz Khalifa, and more. A testament to the success of a cutting-edge design, experience, and installation.

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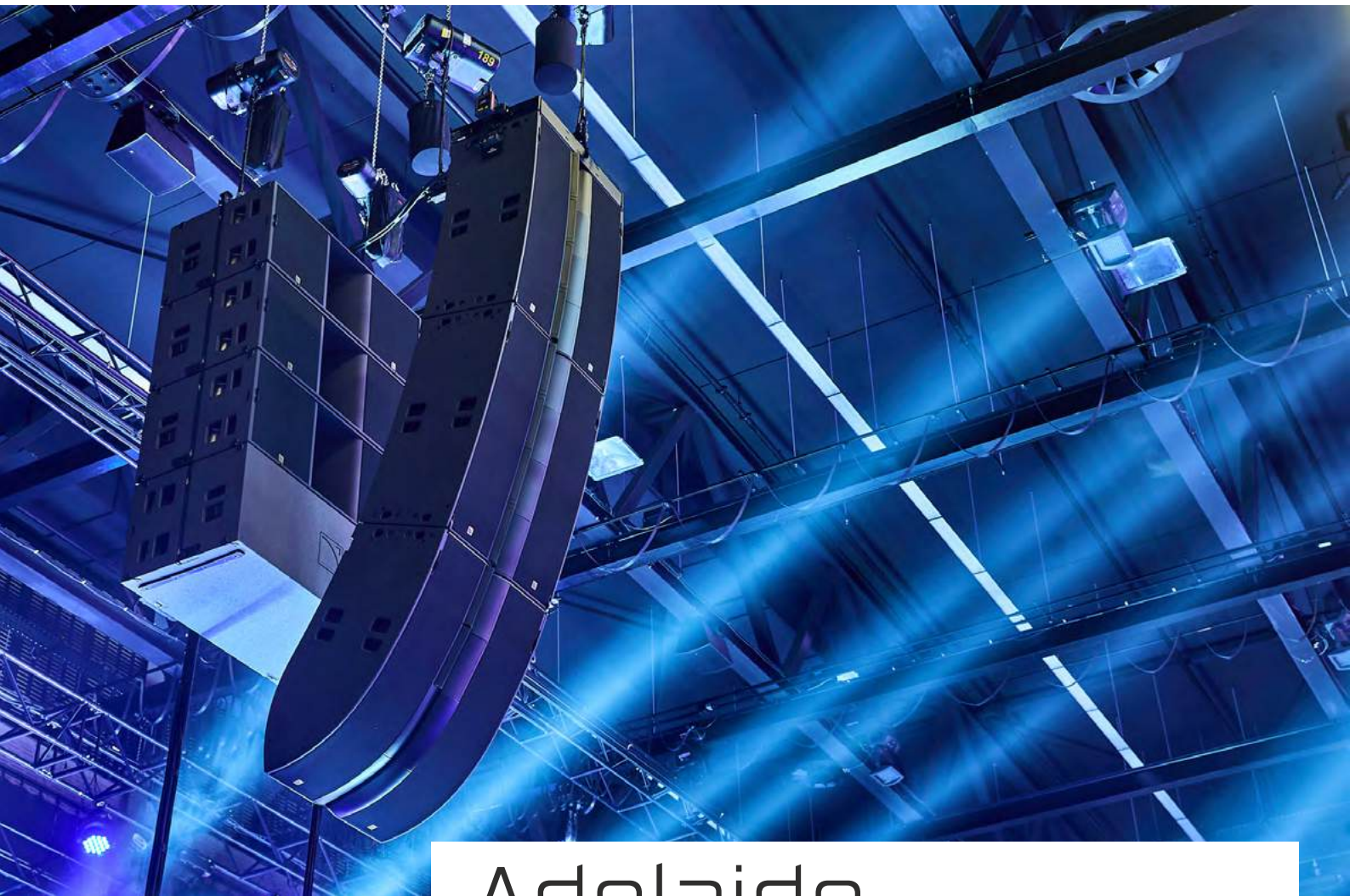
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Adelaide Entertainment Centre Theatre GOES BIG with L-Acoustics L2

The Adelaide Entertainment Centre (AEC) has been welcoming punters since 1991, and back in 2010, finished a \$52 million renovation that added the AEC Theatre above the main arena. The Theatre can seat 1,900 in traditional theatre mode, can host 1,000 for cocktails, or 700 for a banquet. It can also be split in two. The original L-Acoustics V-DOSC PA was built on an ingenious system that could physically move the PA up and down the venue according to format, and make the space more intimate with less seating rolled out.

The V-DOSC system provided great ROI, having lasted for 15 years of solid gigging, but as it does for all PAs, the time had come to replace it. Adelaide's own Novatech pitched their design for a replacement and won the contract due to a few points of difference. At the heart of their design was L-Acoustics relatively new L2 "Progressive Ultra-Dense Line Source" line array.

L2 differs from most other line arrays in that it's not built out of many elements rigged together; it's two models (L2 and L2D), and the maximum you can rig together is two L2s and one L2D. The L2 is what in a traditional line array would be the top, or flattest part of a J-curve, and the L2D has wider coverage and the bottom part of the curve; effectively down fill.



L2 SPEAKER INSTALLATION



L2 SPEAKER INSTALLATION

Each L2 and L2D element has eight 3" compression drivers on DOSC waveguides, eight 10" drivers, and four 12" drivers mounted on the sides. Running on an L-Acoustics LA7.16 amplified controller with 16 channels of independent DSP, users can sculpt the wavefront with what is essentially beam steering. All this means that an L2 PA goes up in the air with just two or three connections, no pins, and no angles, making deployment a breeze. System steering and optimisation all happens over the network via L-Acoustics' LA Network Manager software.

"We designed the L2 system ourselves and bounced ideas back and forth with L-Acoustics," explains Novatech's Managing Director, Leko Novakovic. "One of the key differentiators in our design is flown as well as ground-stacked subwoofers. It's a room that does everything from heavy EDM through to a stand-up comedian. For all the shows that don't need the floor subs, when you roll the L2 forward, the four-a-side flown L-Acoustics KS28 subs roll with it, and with L-Acoustics Network Manager you can easily adjust the coverage to suit, not like a traditional array where you'd have to fly it in and re-pin it."

In the design phase, modelling in L-Acoustics' SoundVision software by both Novatech and L-Acoustics suggested that the venue could be adequately covered by just one L2 and L2D per side. "The science is that one L2 is the equivalent to four L-Acoustics K2 line array elements," explains Leko. "We had used a K2 system in the Theatre, with eight elements in total, and already knew that performed well. The venue really wanted the extra power and the aesthetics of having a longer, more powerful looking array to overcome any visiting engineer's apprehensions. They stretched the capex, because you can never have too much PA!"

Declan Smith, Venue Project Manager for Novatech, talks us through the full system; "The design brief was simple," he says. "The system needed to perform across every room configuration without altering array geometry between formats. All up, it comprises two L2 and one L2D per side, with six KS28 subwoofers flown behind each array in a cardioid configuration. Six L-Acoustics X8 provide front-fill coverage in a

compact and unobtrusive form factor. For very high SPL shows, an additional twelve floor-deployed KS28 can be rolled in, with L-Acoustics Kara II front-fills pre-attached, providing additional low-frequency extension and output when required."

As part of the project, Novatech designed a custom drive rack centred around the L-Acoustics P1 system processor. The system runs on fibre-based AVB, with Cat5 AVB and analogue redundancy paths. The rack also incorporates an XTA MX36 console switcher, SSL interface, and a Stream Deck Studio with custom-programmed controls.

"We tuned the system using the M1 measurement and optimisation workflow built into the P1 processor," continues Declan. "This methodology provides spatially aware feedback across the room, allowing confident decisions around timing, phase alignment, and EQ."

With the simplicity of L2s installation, Novatech's crew had a lot of time to optimise the system. "We were careful to tune it in all of its different modes and positions, pushing it up and down the room," adds Leko. "We made absolutely sure it's fit for purpose. The feedback from our crew as we put it in was, 'How good's this?! Can't wait to get it into our hire stock!' So, now we have our own L2 system on the way. Going in and out of a gig easily is what L2 is actually designed for; efficient truck space and ease of use. You get four L2 wide in a truck. That's equivalent to 16 K2 elements, making it one of the most powerful PAs for its truck pack size. And you only clip two or three connections together, not 16."

"The L-Acoustics L2 system was a real pleasure to install and commission for the AEC Theatre," agrees Declan. "The unique challenge of this venue is its flexible configuration; the stage position, and therefore the PA coverage requirements, change depending on the size and type of show. The motorised bleacher seating can be deployed for seated events or retracted entirely for standing shows. L2 provided an effective solution due to its high degree of control across the array, with full DSP control of each element. This allowed us to maintain consistent coverage and tonal balance across multiple room layouts."



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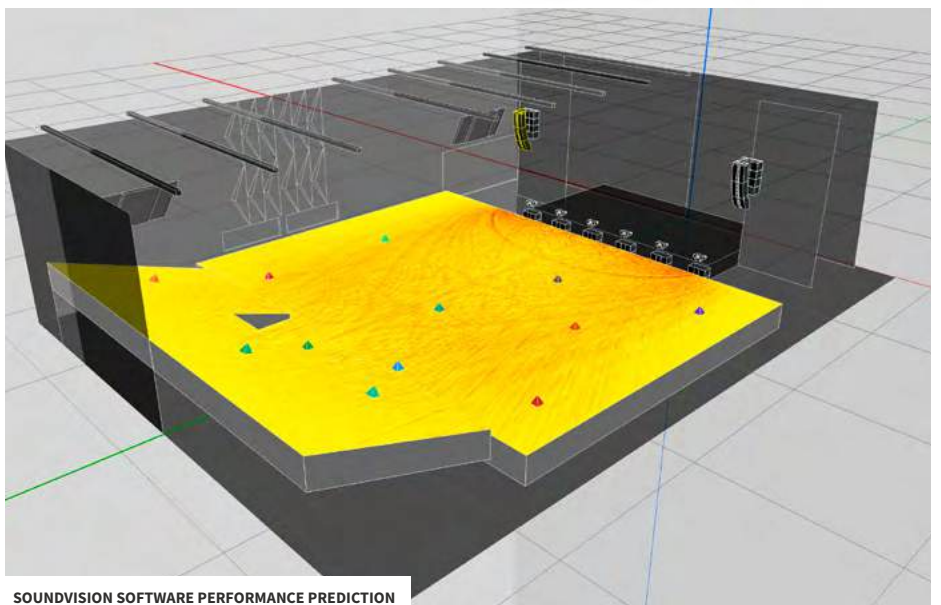
L2 DEBUT AT SCIENCE EXCELLENCE AWARDS 2025

With quite a few shows already under its belt, the response from users and customers alike has been excellent. “The new system is getting rave reviews from punters, which is an excellent thing to hear,” relates Leko. “We’ve had nothing but praise from visiting touring engineers as well. I think that sonically, it has an edge over other systems. Its performance is on par with other L-Acoustics arrays, but because of the advanced DSP and control, you notice more detail. The impact of the cardioid control is huge, both in the subwoofers and the performance of the L2s.”

“The L2 system delivers substantial headroom across all genres, with particularly strong high-frequency clarity and coherence compared to other current line array systems,” concludes Declan. “Shows have been met with consistently positive feedback, and we look forward to continuing to put the system through its paces across a wide range of productions.”



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SENNHEISER EW-D SKM

AT MEENIYAN HALL

MEENIYAN HALL GOES WIRELESS FOR ANNIE AND THE CALDWELLS

Digital wireless systems are a dime a dozen on live stages, but the name Sennheiser still adds a layer of surety and confidence to the equation, not to mention sound quality.

Last month I was lucky enough to work on a run of live shows at Meeniyon Hall in regional Victoria, with a dozen or so bands, many of whom were also in Australia to perform at WOMAD or the Port Fairy Folk Festival. Lyrebird Arts Council, who organise these special gigs at Meeniyon Hall, have a long tradition of attracting international acts to this quaint country hall, where artists are treated to a friendly, welcoming atmosphere, a magnificent home-cooked meal, and a backstage area that looks like a scene out of Hogwarts.

At one of these shows – Annie and the Caldwelles from Tupelo, Mississippi – we had the pleasure of using Sennheiser's EW-D wireless microphone system, with SKM handheld transmitters in the hands of all four female vocalists. I'd not used these mics before at a live show, so this was my first interaction with them on stage in front of a live audience.

For the backing vocal trio of Anjessica Caldwell, Deborah Caldwell Moore, and Toni Rivers we used screw-on e835 cardioid dynamic capsules, while on the main vocalist, Annie Caldwell sang through Sennheiser's MM 435 dynamic cardioid capsule, with its detailed, lightning-fast aluminium copper voice-coil.

Cutting straight to the chase here, the MM 435 dynamic capsule is quite superb sounding: clear and balanced, full-toned and crisp. The microphone transmitter and capsule combination are a total pleasure to sing into. I gave the mic a good run before soundcheck while I was setting

up the stage and was stunned by what came back through the Nexo foldback.

Easy to hold, with minimal handling noise, and a flat-topped grille (which I like) the SKM MM 435 combination is a reliable, superbly built wireless system. The only contentious component on the SKM bodies are the mute switches, which some engineers love and others don't, although this can be disabled via the mic's internal menu options if you don't like the idea of artists finding a way to switch the mic off accidentally.

Before the show, we were forced to put tape on all four handhelds so that the women didn't mix the mics up backstage, hence the tape clearly visible in the photos. Annie and the Caldwelles typically start their shows instrumentally, with the guitar, bass, and drums of Willie Joe Caldwell, Sr. (guitar), Willie Caldwell Jr. (bass), and Abel Caldwell (drums) kicking things off, the ladies then singing while they're still backstage – hence the need for the mics to be labelled.

This process quickly tested out the wireless system's capacity, which worked flawlessly on the night. The Caldwell singers also like to wander out into the audience during their shows – which they certainly did on this occasion – and here too the mics were stable and clear: no feedback or reception issues whatsoever. Lachlan Wooden, who was travelling with the band, tested the mics on the floor pre-show to make sure there were no nasty surprises later.

This was my main concern at the show actually – that the singers weren't going to cause problems by wandering too far from the antennas and receivers on stage or wave their mics at the PA and cause feedback. True to form, they did wander – but the mics were stable throughout, with not a hint of feedback or reception issues.

One thing about these mics – particularly the MM 435 capsule – is that they are detailed and clear. The 435 is lighting fast, which has obvious benefits as well as potential downsides, depending on the singer.

With Annie Caldwell, who has a voice like a freight train, there were times when she probably needed more radical multi-band compression at around 5k than we could provide on the night, but she sounded amazing nonetheless. But on a separate occasion, at a second gig where I used the mic on a male crooner performing solo with an electric guitar, the EW-D SKM handheld with the MM 435 capsule sounded stunning, with no sense whatsoever that the upper mids needed controlling.

It was a perfect insight into the 'sound' of a mic. On these two separate occasions, the same mic sounded quite different. What might have felt like a potential shortcoming of the MM 435 capsule at one gig, proved a strength at the other. The 'sound' of the mic was totally dependent on the singer and the circumstance.

It proved yet again – if proof still needs tabling – that mics don't make a sound, they capture sound. It's often a misstatement of fact to say that a mic 'sounds' like this or that, when in fact it's the singer and their interaction with a mic's mechanics and electronics that has the single biggest influence over the outcome – it seems like an obvious thing to say here, but it's an often forgotten fact, especially in general conversation.

I've had lots of mics on stands over the years, and not one has made a sound until something has interacted with it. Actually, come to think of it, my old Neumann U67 used to make some weird noises on its own occasionally, but a new valve fixed that problem... but I digress.

What I would contend with Sennheiser's MM 435 capsule in particular (which seems to receive the same old negative criticisms by those who want the capsule to sound 'punchier for rock gigs' – why, I have no idea), is that it sounds like a condenser without the negative consequences of the mic hovering up sound from all corners of the stage.

I love this combination. You get the fidelity without the sensitivity to feedback some condensers are prone to, or the lead vocal mic acting on occasion like an unwanted room mic for the drum kit.

There are thousands of mics in the world these days claiming to be the best for live performance. In the world of wireless, Sennheiser are at the technological forefront: of performance, build quality, reliability and sound.

I had no issues with the EW-D system on the nights we used it, and felt strongly that the MM 435 capsule on top of its SKM handheld transmitter produced some of the best live vocal outcomes – wireless or otherwise – I've ever had the pleasure to hear or mix.



Ordio's Dynaudio Audio



Sydney's Ordio Productions are not doing things by halves. A specialist provider of professional audio and acoustic solutions for studio and broadcast environments with deep experience in custom cabling and acoustic treatment, their purpose-built Taren Point studios allow professionals to hear complete solutions in real working spaces before making purchasing decisions. They recently refitted three of their studios with Dynaudio monitoring, creating a showcase for the Danish brand, and there's a new Dolby Atmos space still to come...

Their Studio 1 is running Dynaudio M-Series M2 MkII passive three-way monitors run on a Dynaudio Delta 40 digital power amp with DSP, augmented by a Dynaudio 15" passive sub powered by Dynaudio Delta 20 digital non-DSP power amp. There's also a pair of powered Dynaudio Core 7s and a Dynaudio Core Sub.

Studio 2 has a massive pair of Dynaudio M-Series C3 MkII passive three-way monitors powered by a Dynaudio Delta 80 digital power amp with DSP.

Studio 3 boasts Dynaudio M-Series M1 MkII passive two-way monitors powered by a Dynaudio Class A/B power amp. They are joined by powered Dynaudio Core 5s and a Dynaudio Core Sub.

In the very near future, Ordio will open their Dolby Atmos room, all powered by Dynaudio, and will include the formidable Dynaudio M3 MkII as left, centre, and right, flanked by passive models in the surrounds, and an 18" Dynaudio sub.

We sat down with owner Ben Wever to talk about the move to Dynaudio, the philosophy behind the working studios as showrooms, and the partnership he's developed with Australian Dynaudio distributor Amber Technology.

"We wanted to do something unique and boutique, putting the integrity back into our brands, and building a space where people can truly appreciate them," declares Ben. "It gives us the opportunity to pitch a brand in its native environment; I'd rather see a giraffe in Africa than in Taronga Zoo!"

With industry-standard outboard, high-end mixers, top quality microphones and excellent acoustic treatments, all of Ordio's functioning recording and mixing spaces now benefit from Dynaudio monitoring.

"It's not just the M Series MkII, we also have the BM series, LYD series, and Core series across the rooms for comparison," explains Ben. "In Studio 1, for example, we have the M2 MkII flagship monitors. They're small enough for a monitor bridge but powerful enough to fill a seven-by-five-metre room. We've paired them with a 15-inch sub, along with Core 7s and a Core sub to create a night-and-day comparison. We can show you the Core 7, an active DSP box that punches above its weight, and if you're happy with that, great. But once you step into M2 MkII, something special happens; when it comes to stereo imaging, finesse, fidelity, accuracy, and technical brilliance, these monitors deliver."

"Out of the box, the M Series M2 MkIIs are accurate, flat, and responsive," continues Ben. "We were concerned initially about using passive boxes in 2026, but it makes sense. There's more room in the cabinet without internal amplification and heat. The porting is right, the depth is substantial, and nothing feels stressed."

The smaller M1 MkIIs are in Studio 3. "They're a two-way design with no DSP control; the crossovers are in the box," outlines Ben. "Studio 3 is our podcast, vocal chain, and entry-level room. It's designed for editing, light post, and testing gear like channel strips, microphones, and headphone amps. It's aimed at the prosumer market. In that room, we've also got the Core 5 and Core Sub to provide a clear comparison between prosumer and M Series. The M1s immediately show their pedigree, especially in the tweeters. There's zero fatigue, and the new driver design is incredibly strong. They're ideal for broadcast and smaller post environments, especially speech-focused work. In smaller suites, like those in Surry Hills or St Leonards, they're easy to install on a monitor bridge or fly-mount.

They go low, but not in an exaggerated way. They're about accuracy, not hyped low-end. At lower volumes, they still produce a strong soundstage. They're versatile and serve a clear purpose within the M MkII Series lineup."

Running the passive M Series monitors are amplifiers from Dynaudio's Delta range. "The Delta amplifiers are large, digital, and don't overheat," states Ben. "The DSP is incredible, and we're still learning how to fine-tune the system. Every day we discover something new about how accurate they are. We like to understand the limits of how far you can push a system. With 1000 Watts driving them, these speakers can run all night, but you'd tap out before they do."

With such a massive investment and huge opportunity to get working engineers in front of Dynaudio, distributor Amber Technology are providing Ordio with their full support. "Working with Amber has been a 20-year journey for me, and I can't speak highly enough of them lately," professes Ben. "Over the last five years especially, their team has brought in sharp people who are genuinely passionate about the industry. I've met too many sales reps who show up with a station wagon and a price list, then disappear, offering no support. Amber is focused on pro audio, and is doing what others aren't, which is taking care of their customers properly."

With a strong background in room acoustics, Ordio can ensure your new monitors are going into a space that is perfectly treated for them. "Ordio has been appointed the Australian and New Zealand distributor of a German-made range of acoustic products called bluefiber," reports Ben. "We're now going across the country looking for solid, qualified installers and solutions providers to grow our sales network. We're building the bluefiber acoustic showroom,

which will also be the new Dolby Atmos space, filled with Dynaudio. It'll be a place to learn, educate, play, demo, and quote from."

With Dolby Atmos now a must for both Apple Music and Netflix, it's inevitable that all studio and post professionals need to upgrade, if they haven't already. Ordio will soon have the space for them to start their journey. "We're going to need serious renovations," admits Ben. "We've appointed the same builder who constructed the other rooms. He's a fantastic local carpenter and designer. We've finalised quotes for air conditioning,

electrical, three-phase distribution, and all materials required for Dolby Atmos certification, including zero-vibration building standards. We are ready to go!"

The Atmos room will also carry equipment from other Amber brands, aligning with Dynaudio. "When the Atmos room goes live, it will become a major selling point," notes Ben. "We'll be able to run training nights, seminars, and professional mixing sessions. We can offer hands-on training, full support, and direct sales or remote support as

needed. The Atmos room will be a feature in itself, but it will also bring people into the other spaces."

Ultimately, Ben sees the Dynaudio range as supporting the Ordio business model. "Rolling out the M MkII Series across the rooms allows each space to showcase something unique," concludes Ben. "On a commercial level, it's an opportunity. On a personal level, I know who I'll be working with in 10 years, not just 10 months. Amber Technology has backed these spaces just as much as we have."



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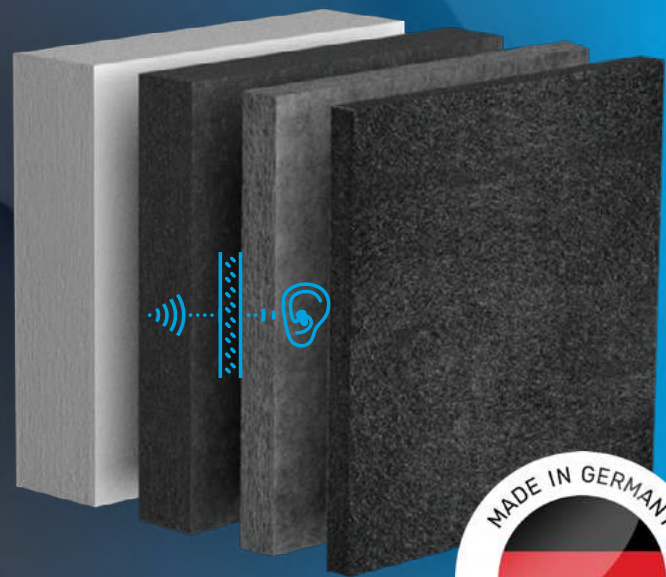
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THE REGENT THEATRE

RICHMOND, NSW

From Art Deco Cinema to Intimate Live Destination

The Regent Theatre in Richmond is a stone's throw from the mighty Hawkesbury River, and has been entertaining the community since 1935. It's one of those exuberant Art Deco cinemas of the 1930s movie boom that exist all over Australia; its sister theatre, the heritage listed Roxy in Parramatta, was designed and built by the same team of architects Moore & Dyer and builders Herbert & Wilson.

The Regent has been through several incarnations and fitouts. While primarily a cinema, it always had a stage that hosted vaudeville acts. Beneath the current stage, there's evidence that there used to be a proper theatre organ that rose up on a lift. In the 1970s, it was divided into two separate cinemas, and was bought and renovated by TV personality Mike Walsh in 1976. After changing hands again, it was under the same ownership until as recently as five years ago, when the owner retired and two locals decided to revive their beloved childhood cinema.

The new owners experimented with screening movies and mixing it up with a few comedy gigs, including Peter Hellier, Lano and Woodley, and Arj Barker, plus small solo music gigs from the likes of The Whitlams frontman Tim Freedman. On the back of the success of these live shows, they decided to investigate what it would take to turn The Regent into a proper live venue to attract bigger acts.

As luck would have it, one of The Regent's assistant managers had been on the tech crew at his high school years earlier when Voyager Productions' Jim Morely updated their lighting rig to LED and installed a new lighting desk. Having been taught how to run the new console by Jim, he remembered him well, and recommended management get in touch.

Jim runs Voyager Productions out of Dundas Valley, and the company dates back to 1999 and its initial contracts with the Sydney Olympics. It's grown steadily since then, and regularly provides live production to councils, cultural events, corporate clients, schools and small pub and club tours. Over the years, Voyager have also branched in to installs, which now makes up about 20% of the business.

"The install business grew organically," says Jim Morely. "You know how it is; you do a job somewhere and someone says, 'That sounded great! Can you look at our PA?' Next thing you know, you're installing a new system. Same with lighting."



Jim assessed the state of the venue to determine what they needed. "The only PA system in there was a homemade left-centre-right-surround movie system," recalls Jim. "It had those huge old subwoofers with the dust caps missing off the cones, probably from the 1960s. We started talking about a bit of extra lighting and a pair of decent PA speakers. Then the project just grew."

What was originally a small renovation over two months to 'just tidy it up a bit' turned into two years. Everything was replaced; new roof, new air conditioning, new plumbing, new bathrooms. "They spent huge amounts of money," admits Jim. "But this was the cinema they used to go to when they were kids, so it was very much a passion project."

The PA Jim chose to bring The Regent into the live music game proper is based around a Nexo line array. "It's six Nexo GEO M10 per side," outlines Jim. "Under the stage we've got six Nexo L18 subs. Beside the stage we've got a rack with two Nexo NXAMP 4x4 amps. In that rack we also have an Allen & Heath DX168 stage box, two Eventec four-way DMX splits, and one Sennheiser radio mic receiver with a handheld transmitter as the house mic for MCs and announcements. At the operating position we have an Allen & Heath SQ-6 audio desk and a ChamSys QuickQ 20 lighting console."

The main left-right is supplemented by a Nexo P10+ as centre fill and Nexo ID24 dual 4" as delay speakers for the last few rows of the balcony. This project was carried out before the recent changes to Nexo distribution in Australia, while the brand was still distributed by Group Technologies. "They were fantastic," enthuses Jim. "Group Tech's Dan



JIM MORELY

Grist provided excellent prediction modelling using Nexo's NS-1 software. The predictions were surprisingly accurate. Dan's support was really appreciated."

For the lighting rig, Voyager installed an aluminium pipe grid, nine metres by six metres, with a pipe every metre in both directions. "The grid sits five meters over the stage, as high as we could get it," relates Jim. "There's just a roof directly overhead. On the grid, we've got six LED PAR cans that are non-zoom, plus two that are zoomable. It's a basic lighting rig, but we can add to it later."

Working in a heritage building to retrofit 21st century technology can be immensely difficult, but Jim and his team were in good hands. "We had a really good builder, Gary Borg, who worked closely with me and the engineer on where things could go," conveys Jim. "I'd literally put a marker on the floor and say, 'This is our PA hang point' and he'd say, 'Okay, how much weight do we need to carry?' Then he'd work it out with the engineer and install the beams accordingly. I'd come back and my hang point would be there. It was fantastic."

"He was also helpful with the subs," continues Jim. "Under the front of the stage there's a void, probably where the theatre organ used to be. The stage had been extended about 50 years ago. The subs fit there perfectly, but they needed to be raised about a foot and a half so they lined up with the floor level. Gary built platforms for them and did lots of small timber framing jobs around the venue. He also built the bio box and put a nice desk in there. At every stage he'd ask; 'Where do you want power points for this? Where do you want switches?' He's actually an electrician by

trade and also has builder's license. He installed power for the stage rack and added a spare three-phase socket next to the amp rack for visiting acts. We didn't have a formal project manager, but he basically filled that role."

With The Regent a fair way out from what could be considered suburban Sydney, it was considered prudent to have a backup power source. "The Regent put in a backup generator for any electrical outages that might happen," explains Jim. "It's big enough to run all the AC, PA system, and all other venue power requirements. This is a huge benefit for ticketed shows. We used it on a local community gig in November on a super hot day when there was a power cut; it really did save the day."

After two years of solid work, The Regent now has a vibrant calendar of both live music and comedy, with upcoming shows including comedian Ross Noble and music from Aussie rock royalty Ian Moss.

Jim is more than happy with the result; "It's a great little space," he enthuses. "It has all the classic elements of a theatre, but it's quite small. The capacity is 608 seated, and there isn't a bad seat in the house. It's like a pocket-sized Enmore Theatre; not as grand, but the same kind of feel. Even the person in the very back row is only about 22 metres from the stage. It feels like you could almost lean out of your chair and shake hands with the person on stage. It's fantastic, and I just love it"



AMP RACK





REDEFINING

*large scale retail sound
with Void Acoustics*

Nextopia is a next generation experiential destination located on Floors 5 and 5A of Siam Paragon, Bangkok, owned and operated by Siam Piwat Group. Designed to go beyond conventional retail, the space blends shopping, culture, live events, and immersive experiences across more than 22,000 square metres, with audio positioned as a defining feature of the visitor journey.

From the outset, Siam Piwat Group's brief was ambitious: to create the best sound system ever experienced in a retail environment, not just in Thailand, but globally. The system needed to support everything from daily ambient sound to DJ performances, live events, and concert style activations, while maintaining consistency, clarity, and control across a complex, multi-level space.

"We wanted more than just sound that can be heard," says Ms. Chadatip Chuttrakul, Group CEO of Siam Piwat. "We wanted sound that is high quality and fundamentally different from conventional retail environments. When I walked through the space after the installation was completed, I was truly impressed."

A complex acoustic challenge

The primary challenge was delivering high quality, even sound coverage across multiple floors with varying ceiling heights and architectural layouts.

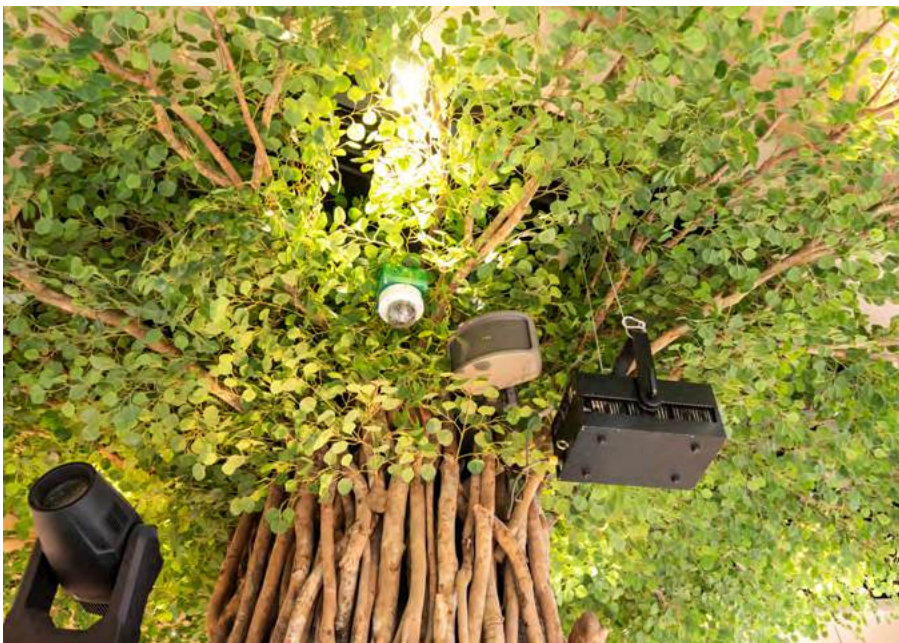
Traditional retail audio solutions could not support Nextopia's immersive, event driven vision. The system also required precise zoning, allowing individual loudspeakers to be adjusted by time and level, while remaining visually integrated and compliant with strict construction standards.

Void Acoustics at scale

Void Acoustics was specified following a previous installation at Raynue, Bangkok. The brand was chosen for its exceptional sonic performance, iconic design language, and flexibility in custom finishes.

The system was designed and integrated by Aura Visual System, Thailand's exclusive Void Acoustics distributor. Working with Void's technical team, Aura Visual System delivered a coherent, hall like listening experience across Floors 4, 5, and 5A, with precise delay alignment, tonal consistency, and controlled dispersion.





The system includes:

Floor 4

- 57 × Cirrus 6.1

Floor 5

- 15 × Cyclone 55
- 2 × Cyclone 10
- 5 × Venu 112 V2
- 6 × Cirrus 6.1

Floor 5A

- 2 × Air Motion V2
- 2 × Venu 218 V2
- 11 × Cyclone 10
- 8 × Venu 112 V2

Amplification

- 3 × Bias D1+
- 11 × Bias Q1.5+
- 1 × Bias Q2+
- 1 × Bias Q3



“This is the largest project we have ever undertaken,” says Gle, Project Manager at Aura Visual System. “It was extremely demanding, but at the same time incredibly exciting. We worked closely on fine tuning each individual loudspeaker to ensure the most realistic and immersive sound coverage possible.”

Immersive results

The completed system delivers powerful, evenly distributed sound that transforms Nextopia into a destination closer to an entertainment venue than a traditional retail space. Its flexibility allows the atmosphere to shift seamlessly between the subtle ambience and high energy activations. With its scale, flexibility, and immersive impact, Nextopia sets a new benchmark for large format retail sound design.

MEET THE AUDIO

TEAM AT

NAS

NAS are a distributor active in both Australia and New Zealand, handling a huge range of audio products and solutions. Their portfolio ranges from d&b audiotechnik to dBTechnologies, to DSP and public address masters AtlasIED, through to famed commercial audio brands Peavey and Crest Audio. If it makes noise and it goes in installs or on live shows, NAS have a product for it.

Together, the NAS team brings decades of hands-on experience across live production, broadcast, touring, system design, distribution and technical engineering, underpinned by a shared passion for audio and the wider AV industry. With backgrounds spanning everything from FOH and systems engineering to sales, account management and state leadership, the team combines deep technical expertise with strong industry relationships and a practical, customer-focused approach. Many team members have worked across multiple facets of the production and distribution landscape, allowing them to understand real-world challenges and deliver reliable, well-designed solutions. Driven by ongoing education, collaboration and a genuine love for what they do, the team is committed to helping clients and partners achieve outstanding results across Australia.



Corey Sleeman, State Manager, VIC/TAS/SA

Corey attended SAE in the early 90s and spent much of that decade playing in – and engineering for – bands across the Melbourne music scene. Over time his focus shifted toward sales, and for the past 20-odd years he’s worked with many of Australia’s key distributors. This has given him the opportunity to work side-by-side with industry legends and build strong relationships and long-standing friendships with clients all over the country. This is an industry Corey genuinely loves – one he’s deeply passionate about – and he feels fortunate to have built a career in a field that continues to inspire him every day.

Email: corey.sleeman@nas.solutions



Dan Parsons, Account Manager, VIC/TAS

Dan has 20 years of live broadcast, production and OB experience specialising in sports broadcasting on live radio, live TV and corporate events. He has worked on a number of productions in a variety of roles including live mixing of AFL/NRL games for Triple M, as well as the V8 Supercars for Telstra. Using a customer focused approach, Dan loves assisting clients in finding high-end solutions for their projects.

Email: dan.parsons@nas.solutions

Sometimes it all gets too much...



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



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





James Pavey, Account Manager, VIC/TAS

James has built his career across every corner of the production industry – starting as a PA rigger and growing into roles across LED sales and procurement, rigging, AV, lighting, and pro audio. Over the years he’s developed a strong, trusted industry network and is passionate about helping partners and clients deliver their best work.

Email: james.pavey@nas.solutions



Anthony Murdoch, Technical Sales

Anthony figured out in primary school that he liked being behind the scenes, not on stage, and grew his passion for audio working on the tech crew throughout his time at school. Before finishing school, he hassled his local rental company owner, Mario at Monaco Sound, until Mario gave him a job, where he spent more than 10 years developing his skills in production and installation, before heading over to Austage at Shed 14 (before the pier sunk!) Anthony started in distribution in 2017, and over the last nine years he’s worked on some amazing projects, and has been lucky enough to have some Australian industry legends as mentors, who’ve helped him refine his skills in sales, system design and optimisation, and RF management. Anthony is always happy to share the knowledge he’s learnt with anyone in the industry, actively taking part in education sessions at any opportunity.

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Brendon McDonald, State Manager, QLD

Like so many, Brendon also spent many years in wanna-be-rockstar land and has always had a passion for music and sound. He worked 11 years in MI wholesale in Sydney prior to joining NAS in Queensland, where he has been since 2011. His focus is to do the job right the first time – with the right gear and within budget.

Email: brendon.mcdonald@nas.solutions



Aaron Lee, State Manager, NSW/ACT

Aaron joined the NAS team as Integrated Systems Account Manager for NSW/ACT in 2019, working alongside the existing NSW/ACT team to focus on building and growing key relationships with both new and existing NAS customers throughout NSW and ACT. More recently he took on the role of NSW/ACT State Manager, allowing NAS to streamline communications, team management, sales and budget requirements and associated conversations, with a future-focused vision for NAS in these important territories. Aaron has a long-standing passion for all aspects of the audio visual industry, with his involvement in the field now exceeding 20 years.

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Max Hedrich, Technical Engineering

Like many in the industry, Max's interest in audio began with music. Growing up, he tried, and failed, at playing several different instruments in different bands, and instead went down the technical path, studying audio engineering at JMC Academy. After a stint in live production recording, Max joined NAS and hasn't looked back. Nearly 14 years later, he's had the opportunity to work across several different roles within the company, learning from many talented people and working on many interesting projects along the way. Today, in his role as a Technical Engineer, he gets to happily indulge his inner nerd, as well as satisfy his passion for sound, while working on the technical side of system design and helping bring carefully engineered audio systems to life.

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Dave Jacques, Technical Engineering Manager

Starting in live production in Australia in the early 1990s, Dave has worked as a production manager, and FOH/System engineer locally, and on the international touring circuit. Returning to Australia and joining NAS in 2009, he is responsible for system design and training with brands such as d&b audiotechnik and dBTechnologies. He's still active as a FOH engineer outside of NAS, and his daily work draws on these skills engaging his passion for clever and detailed design. Training with some of the great minds behind our brands has built on the skills that real world touring experience has provided him. Dave's focus now is on increasing knowledge for both himself and others, and helping to create great solutions for customers. Ongoing education and an attitude of remaining teachable allows us to continue to raise the standard of the experiences we create out there in the real world.

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Doug Pringle, Technical Engineering

Equipment Relocation Engineer specialising in FOH systems.

Email: doug.pringle@nas.solutions



Travis du Preez, Account Manager, NSW/ACT

Travis started out in the live production industry in New Zealand, working across roles including FOH, monitors, systems, and production management. Like many people in the industry, that meant getting involved in a bit of everything across audio, lighting and vision. During this time, he also started his own recording studio and worked on a range of projects that helped further develop his technical skills. After moving to Australia and stepping into the distribution side of the industry, Travis now supports production companies and integrators across NSW and ACT. His background working in production continues to influence how he approaches the role, with a focus on practical solutions and systems that work reliably in the field. He is always keen to jump in, get his hands dirty, and push for the best outcome all round.

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VINYL



REVIVAL

THE PHYSICAL MEDIA RENAISSANCE AND THE PROBLEMS WITH STREAMING

Six months ago, after about a year of feeling increasingly uncomfortable about the ethics of continuing to use Spotify, I pulled the plug. I'd been told for years by musicians and music fans how terrible the platform is for musicians and music culture. I had three albums of my own music on the platform and had always been pretty underwhelmed by the limitations of presenting it. However, inertia and a family account kept me putting off doing anything about it.

Liz Pelly's March 2025 book 'Mood Machine: The Rise of Spotify and the Costs of the Perfect Playlist' (which I still haven't read) laid bare the grim economics and inhuman mechanics of Spotify and was quoted by outraged musicians all over the internet. Then in June, Spotify's founder Daniel Ek invested 600 million Euro in Helsing, a European company developing AI software for warfare, and adding it to its autonomous drones – literally killer robots. That's when Australian alternative legends King Gizzard & the Lizard Wizard, along with scores of others, pulled their music of the service.

I knew I had to get off it, both for daily listening and hosting my music (not that the tiny amount of streams I generated would bother the company in

any way). I removed my music from the platform then, but I'm mildly ashamed to admit I didn't shut off the subscription immediately because my teenage son's a huge music nerd too and was spending every available moment listening to indie bands like Car Seat Headrest (check them out – they're fantastic).

I was a big streamer, and I used the platform in the way a lot of people do – having it on constantly in the background while I'm working, generally running whatever it suggested based on what I already like. Admittedly, it did a really good job of that. The one day, a track that really grated on my ears and immediately raised my hackles came on.

I picked it immediately, and a quick search proved it – it was AI generated music.

That's when I snapped. My son was home from school, so I went to talk to him, explained about the terrible impact on music culture, the slave labour pay for musicians, and the killer robots. He was aghast, and after being assured he'd still have access to music, immediately said, "Dad, shut it down." So I finally did.

I bought an external optical drive for my computer, dug out our family CD collection, and bought some old-school CD display and storage units for my office and our lounge room. Going through all our albums, there was so many things I had forgotten that I love, a few questionable purchases, and



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some great stuff that I don't even remember buying. I was struck by how our collection just 'stopped' after a certain year, around about 2012, which was when Spotify launched in Australia. I've certainly discovered and listened to a lot of artists since then, but I own nothing tangible from them. I felt this a loss, and it still makes me sad.

I have friends who are avid vinyl collectors, but I can't bring myself to buy it, largely for technical and physical reasons; I'm happy to buy hi res digital audio files, and physical CDs. I do however understand why people buy vinyl – it's beautiful to look at, looks great as a collection, and the act of putting on an album is intentional and meditative, as is the listening experience.

I have since attended two record fairs that were mainly vinyl-focused, but some vendors sell CDs. At the second one, I came home with about 20 CDs, only two of which turned out to be a dud punt on an unknown artist; one because I liked the cover, another because I respect the label. What I loved about them was the joy of digging through the racks and finding something you didn't expect, or something you don't know that gets your attention. It's probably largely nostalgia; I used to dig through record store CD racks all the time as a student (when I couldn't afford them, but bought them anyway), then as a young sound tech, (when I shouldn't have bought so many, but did), then when I was in a corporate job, slinking off to Melbourne's lost and lamented Polyester Records CBD outlet in my lunch hour. Digging through the crates, I felt like myself again.

The other thing I love is the experience of listening to uncompressed digital music. Apart from the CDs, I've been buying high resolution downloads from Bandcamp. Often they're higher than CD quality, and I have quite a few that are 48kHz and 24-bit. I know it's a sound nerd thing, and I have a really nice pair of studio monitors to listen on, but I really appreciate being able to hear all of the music again. It just lives and breathes so much more than a compressed stream.



AUDIO-TECHNICA HI-FI GALLERY LAUNCH PARTY



THE HOTARU FLOATING TURNTABLE



WESLEY VON GRABILL AT VINYL REVIVAL



THE HOTARU FLOATING TURNTABLE



TAG'S NICOLE KLAER AND WESLEY VON GRABILL IN FRONT OF THE AUDIO-TECHNICA DISPLAY



WESLEY ABOUT TO CUT THE RIBBON



TYPICAL REACTION TO THE HOTARU TURNTABLE

It was against this background as a newly minted streaming objector that I got invited to the launch of Melbourne's first Audio-Technica Hi-Fi Gallery at Melbourne's Vinyl Revival, an old-school Hi-Fi shop selling turntables, amps, speakers, and everything else a vinyl aficionado would need for happiness.

The concept is that the Audio-Technica Hi-Fi Gallery exhibits the best of the brand's premium headphones, turntables, and cartridges. There was even one of Audio-Technica's unique levitating Hotaru turntables, which sell for a sweet \$15,999, if you're in the market.

I'm happy to say that Vinyl Revival isn't one of those ridiculous audiophile joints where everything is \$25,000 and up; there are sensible and affordable products and some great starter packages for those just getting into vinyl. Yeah, they do have some expensive premium products, but they're not 'these speaker cables are made of dark matter and cost \$10,000 each' weird about it.

Wesley Von Grabill, General Manager for Audio-Technica at distributor Technical Audio Group, was there to launch the Audio-Technica Hi-Fi Gallery, and we had a great chat about physical media, intentional listening, and our mutual enemy; streaming services.

"Audio-Technica started making cartridges for turntables in 1962," explains Wesley. "They now also make turntables, which they only started doing in 2012. They started with one model and now they have around 20. Same with headphones and loudspeakers. With all these new products across the market, the time was right to relaunch the brand as a premium Hi-Fi solution in Australia."

And they've done it in style; Wesley himself designed a beautiful Audio-Technica display cabinet that would look at home in a premium Tokyo Hi-Fi bar. It showcases their products, including headphones, turntables, and styli, along with iconic Japanese sake and whisky, and even has a bonsai tree on a shelf. Another Gallery with its own cabinet opened in Sydney at Audio Connection, back in January.

I asked him about the Hotaru – not that I had the budget to buy one; "There are only five in the country, and there's two left for sale if you want one!" Creating limited edition premium products is a very Audio-Technica way of marketing. "They're always trying to create products that have never been done, or something different," agrees Wesley. "The last time they did something like this was the ART1000, a high-end cartridge with a lab-grown diamond stylus that is grown directly onto the base. That went for \$6,999."

Wesley pointed out Audio-Technica's SP3X powered bookshelf speakers, which I wasn't familiar with; "We launched those last year. They've got a 3" woofer, 1.1" tweeter and come in black and white. Audio-Technica actually started making speakers in the '70s, then moved away from it. It makes sense to add them back to complement the turntables."

I asked Wesley what his thoughts were on what's driving the vinyl revival. "The White Stripes' Jack White really kicked it off with his own record press in 2009," posits Wesley. "But that also coincided with the rise of our arch-enemy Spotify and other streaming services. We've gotten to a point where there is no ownership of music anymore. If you really love The Beatles or Taylor Swift, you want to be fanatical about it; you want to buy something. CDs had already disappeared, so people went back to vinyl. People like vinyl because it looks cool in the living room, and some people collect it just for that. It's created a whole different generation of market. It used to be old men in a dusty record store, and now it's mass retail - it's changed everything."

"You're a human being," concludes Wesley. "You're analog, not a digital creature. Well, not yet anyway. That's what vinyl and turntables are. There's a needle touching a groove. That connection is always going to be deeper than any digital connection. Even if you don't have the most expensive setup, that human experience is much more enjoyable than a wireless streaming experience."



MARRINER'S

Mark Allan

MARK ALLAN AND THE APPARATUS

MARCHES FORTH

Melbourne's Marriner Group are the custodians of some of the most significant venues in Australia, including the Princess Theatre, Regent Theatre, Comedy Theatre, and Forum Melbourne. Without them, Melbourne wouldn't punch so far above its weight in attracting major international theatrical events and touring musicians.

And CX readers know, it's an army of workers backstage that keep the Marriner empire running. And, for 32 years until March 4 2026, that army has been headed up by Technical Manager Mark Allan. With his penchant for wordplay and Dad jokes, Mark chose March 4 to 'march forth into retirement' and March 2 to host his retirement party, as it kicked off the 'march to march forth.'

The party was held in Melbourne's freshly redeveloped LB's Record Bar, mere metres from The Princess Theatre, where Mark started his career when it became the first Marriner venue. "I first rocked up to The Princess for a job interview 32 years ago on the first of July," says Mark. "My son Harrison was born that day and his rushed delivery made the newspaper. The management were all there at the big board table. I showed them the article and said, 'This is why I look like

this.' They gave me the job anyway, and I've loved every minute of it."

"My brother asked me what do I think my legacy at Marriner will be," continues Mark. "I think it started 31-and-a-bit years ago, when Head Mech Graham George 'Cookie' Cook and I had just taken over from Cameron Mackintosh after Phantom of the Opera left The Princess, and Marriner started to run the theatres. We watched producers bringing in staff. They'd use some local crew, but by the next show they'd be gone, replaced by a new lot. We said, 'this is no good. They need to use Marriner crew.' So we made that rule."

"That's the best thing we've ever done. Now we have 200 casual crew backstage, with around 80 working at any one time, or around 120 during a bump-in week. They have constant work. I walk around and see faces every day who have been with us for years. Theatre is such a people-heavy

business, and you can't replace it with machines. That's the best part about it."

Speaking of machines, there was an absolutely show-stopping contraption at the head of the room that was Mark's retirement present, a device that its creator, soon to be new Marriner Technical Manager Robert Daniel Harrison, was referring to as The Apparatus.

"This gift is comprised of different components from every venue that Marriner Group operates," illustrates Robert. "We've got an old flood light from the chandelier of the Regent Theatre, a new Regent Theatre house light, an old knife switch from The Comedy, a patchbay from The Princess, a motor controller from The Forum, eye lights from the original Princess, and some chasing festoon on the outside, just to top it off. It was about 30 hours of design, fabrication and programming."



KAYELY MARRINER, ANDRE BRANDA-PAWLACZYK, DAVE BELJAN



MARK ALLAN, DEBBIE BROWN



HARRY ALLAN

"It's worth acknowledging that Mark Allan has been able to hand over the reins to Robert," observes Marriner Group CEO Jason Marriner. "Robert was first with us for 12 years and completed his apprenticeship as an electrician under Mark. That has made for a seamless handover, and we're very much comforted in Mark's departure knowing we have a very capable and respected person in Robert Harrison to take over the reins."

"I've personally very much enjoyed Mark's companionship, as we all have," continues Jason. "The banter, discussing our different projects over an egg and bacon brioche roll, but most of all, his friendship and genuine enthusiasm for the people he works with, and for the business. His contribution will stay with us for a long time to come. His DNA is imprinted on everything that we do. It's imprinted within the people and colleagues in our business. We're in the theatre business, and it's all about the people you work with, Mark is testament to the quality of people in our organisation. Mark has been an incredible stalwart of the company. He's left an indelible mark in the 32-and-a-half years that he's been with us. When we started back in the business in the early 80s with little knowledge of the theatre, having somebody like Mark on board from really the get-go has been instrumental in our success."

Mark has seen a lot of changes in what we refer to as The Uptown Theatres in Melbourne over the years. "I remember walking down to The Regent when it was a glass arcade with escalators going down to the plaza," Mark recalls. "Then we renovated it, and renovated again. When we decided to bring the balcony forward at The Regent, I thought, 'Are we crazy? But the result was extraordinary.'"

"I still walk in to The Forum Theatre and think 'I love this venue.' We did everything to it we wanted to. It's now a spectacular multi-purpose venue. We talked about the renovation and adding a goods lift for six months, and the Mariners did it. It was a big team, and the end result is spectacular. I still get blown away by it."

Mark is a true theatre professional; "We keep to rule number one: the show must go on, and we don't fail. Well, maybe a couple of times," he jokes. And he couldn't resist going out on one last one; "I was speaking to my brother again on the weekend, and he said that 95% of bald men still own a comb. They just can't part with it."



MARK ALLAN



ROBERT DANIEL HARRISON



KAREN SIMPSON, EMILY WRIGHT



JASON MARRINER, MARK ALLAN



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Vale James "Michael" White

Michael was born James MacGregor White on September 5 1943 in Edmonton, Enfield, England. Most in the industry knew him as Michael White. The unflappable owner of Sound On Stage Sydney. The king of audio deals and solutions.

From early on, he understood what it meant to be tested. Those familiar with his childhood will recall it was not always an easy time, being away at boarding school from the age of seven, having to find his own way, and doing a lot of growing up very early.

Even then, one thread ran constant through his life: music.

As a boy, he loved sound, instruments, and understanding how things worked.

That passion for music and sound eventually drew him into working on pipe organs - those huge, complex instruments that need patience, precision, and respect. He spent time around them, learning how they were built, how they breathed, and how they filled a space with sound. That early immersion in music and machinery shaped his entire career.

In his twenties, he moved to Australia, following his mum who had come here with his brother Andrew, making a big, brave decision: to leave England and head to Australia, backing himself to build a new life on the other side of the world.

When he arrived in Australia, he immediately began working on the beautiful pipe organs of Saint Mary's Church. But very quickly, he did something that would define him for decades

to come; he started his own audio-visual business, Sound on Stage, later evolving into SOS Business Communications. That decision says a lot about Michael. He was determined, independent and backed himself.

Over the years, his work took him to theatres, boardrooms, conference centres, churches, schools, Sydney Airport, and State Rail; anywhere that needed sound, light, and a touch of magic behind the scenes. This was particularly evident with world-class bands like The Eagles, who trusted Michael to bring their show to life, not just for the live performance but also for the recording of the concert to be distributed worldwide.

SOS was one of the first to bring the giant Aida musical to life in production in Australia.

Michael employed and mentored many well-known industry experts, such as Leon Hart, Rosco, Malcom Savage, Frank Mazdin, Wyn Morrow, and Mark Taylor, to name a few.

With Michael leading SOS, no tender or production was an obstacle to his pitch and unique salesmanship.

Many people here will remember him not at the front of the stage, but at the back of the room: quietly ensuring everything worked, the sound was right, and the show could go on.

It was not an easy journey. There were significant setbacks along the way, times when he had to rebuild after major losses and start nearly from scratch, especially after the big fire at the warehouse in Glebe. But he didn't give up. If there's one theme that runs through Michael's story, it's that he just kept going.

He worked, he rebuilt, he adjusted, he found another way.

That tenacity gave him financial success, but more importantly, it gave him a sense of purpose. Providing, building, solving problems, that was how he moved through the world.

Those who knew him well will recall that beneath his serious, determined exterior, there was a gentle and often quite humorous man, with a very distinct style.

He also had a mischievous, playful streak that carried with him right into later life.

A man with a stubborn streak, a dry sense of humour, and a gentle heart.

A man who enjoyed a beer with his mates, a cigarette in the sun, a good car story, and the satisfaction of a job well done.

Michael was an industry icon who inspired and touched many, and he will be sorely missed.



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WHEN MUSICIANS BECOME *Lighting Designers*

HOW PIXEL MAPPING IS BRINGING STAGE VISUALS INTO THE HANDS OF ARTISTS

For decades, lighting design has been a specialised craft sitting just outside the musician's world. Artists wrote the music. Lighting designers interpreted it. But something interesting has been happening over the last few years: the line between those two roles is beginning to blur.

Affordable LED technology, powerful laptops, and increasingly intuitive software have made it possible for musicians to take control of their own visual shows. The same way artists now produce their own recordings in home studios, many are beginning to design the lighting that accompanies their music. And for performers who thrive on creative control, that shift opens up an entirely new instrument.

Turning sound into light

One of the tools driving this change is ENTTEC's EMU, a sound-to-light control platform designed specifically for musicians, DJs and live performers.

Unlike traditional lighting consoles which often require deep knowledge of DMX addressing, fixture

profiles and programming logic, EMU was built around a familiar workflow for audio creators.

If you can automate a parameter in your DAW, trigger a MIDI controller, or adjust EQ on a mixer, then you can also control lighting.

The software allows performers to pre-program lighting cues, trigger them live via MIDI or footswitch, or synchronise lighting directly with their DAW through a VST plugin. That means lighting can evolve alongside a performance rather than running as a separate, fixed system.

For artists who perform solo or in smaller touring setups, that level of integration can be transformative. Instead of relying on a dedicated

lighting operator, the performer becomes the visual director of their own show.

The rise of pixel-based stages

While traditional stage lighting often focused on fixtures such as PAR cans, strobes and moving heads, modern performances are increasingly built around LED pixels.

LED strips, panels and custom fixtures now appear everywhere: behind DJ booths, wrapped around instruments, embedded in stage sets, or even worn by performers themselves. These installations can contain hundreds, or even thousands of individual LEDs.

The concept of LED pixel mapping will be familiar to many lighting designers and programmers. For years, it has been used in large-scale stage productions, architectural media façades and touring shows to create video-style effects across arrays of LEDs.

But for many musicians stepping into lighting control for the first time, pixel mapping can feel like an entirely new world. Programming individual pixels through conventional DMX workflows can be incredibly time-consuming. Designing a two-minute lighting sequence might require hours of detailed programming and a solid understanding of addressing, universes and fixture profiles.

That's where newer tools are lowering the barrier to entry.

Painting light instead of programming it

The latest update to EMU introduces a feature that many musicians have been asking for: visual LED mapping. Instead of thinking about DMX channels or fixture addresses, users simply drag their lights onto a virtual canvas that mirrors their real-world stage setup. Once mapped, the lights behave like pixels on a screen. Effects can be drawn across the canvas, animated, and synced to the music in real time.

A ripple effect might sweep across LED strips behind the drummer. A wave of colour could travel across a wall of pixels as a bass drop hits. Video-style shaders can generate complex motion patterns that react to tempo, MIDI signals or live audio. In other words, the lighting becomes another layer of the performance.

From programming to creativity

This shift from technical programming to visual design is arguably the biggest breakthrough. Musicians don't want to spend weeks learning lighting protocols. They want to experiment creatively, and the LED mapping workflow reflects that mindset. Set up your fixtures, drag them into position, choose a scene or effect, and hit play.

Under the hood, EMU handles the DMX translation, addressing, and output across multiple universes of control data. But to the user, the process feels more like working in graphic design or video software. In fact, many musicians describe it as "painting with light".

Designed for the modern performance workflow

The software also integrates seamlessly with the tools musicians already use. Lighting parameters can be automated directly from a DAW timeline, meaning lighting cues can evolve alongside the arrangement of a track. MIDI controllers can manipulate colours, movement or scene parameters live on stage.

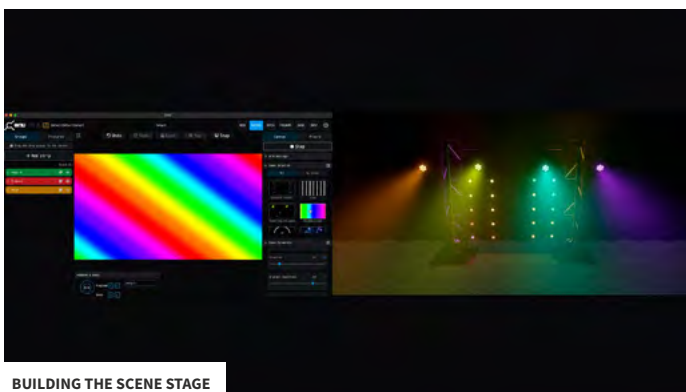
For performers who prefer audio-reactive visuals, EMU's sound-tracking engine can analyse incoming audio and drive lighting effects based on frequency bands, intensity or rhythm. The result is a system where lighting behaves like part of the music rather than a separate technical layer.

Scaling from club stages to festivals

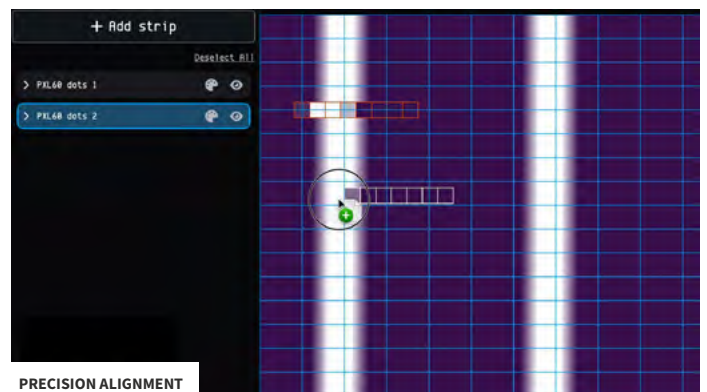
Despite its musician-friendly interface, EMU still offers serious power under the hood.

The platform supports multiple universes of DMX output, allowing artists to control thousands of channels of lighting data when needed. That means a system originally built for club performers or touring bands can also scale to larger installations or festival stages.

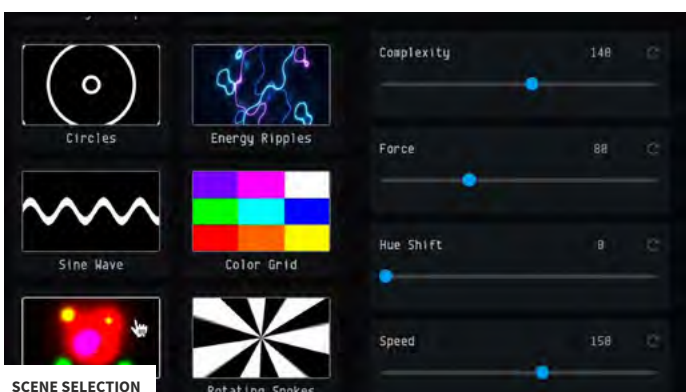
And because the lighting show travels with the artist, simply stored inside the project file, the same visual identity can be recreated anywhere, from rehearsal studio to arena stage.



BUILDING THE SCENE STAGE



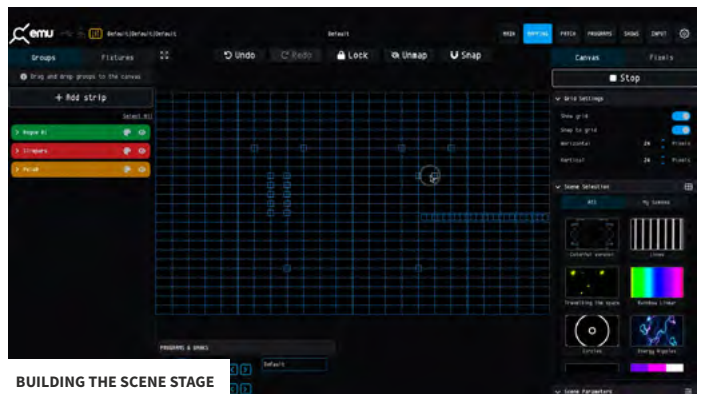
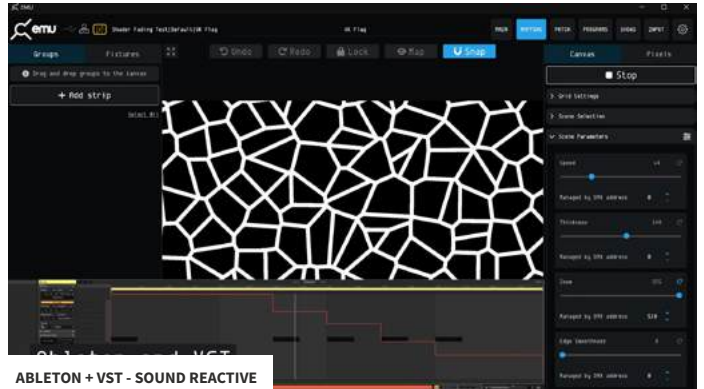
PRECISION ALIGNMENT



SCENE SELECTION



EMU SCREEN WITH DAW



The future: visuals as part of the music

The most interesting aspect of this technology isn't the software itself; it's the cultural shift happening around it.

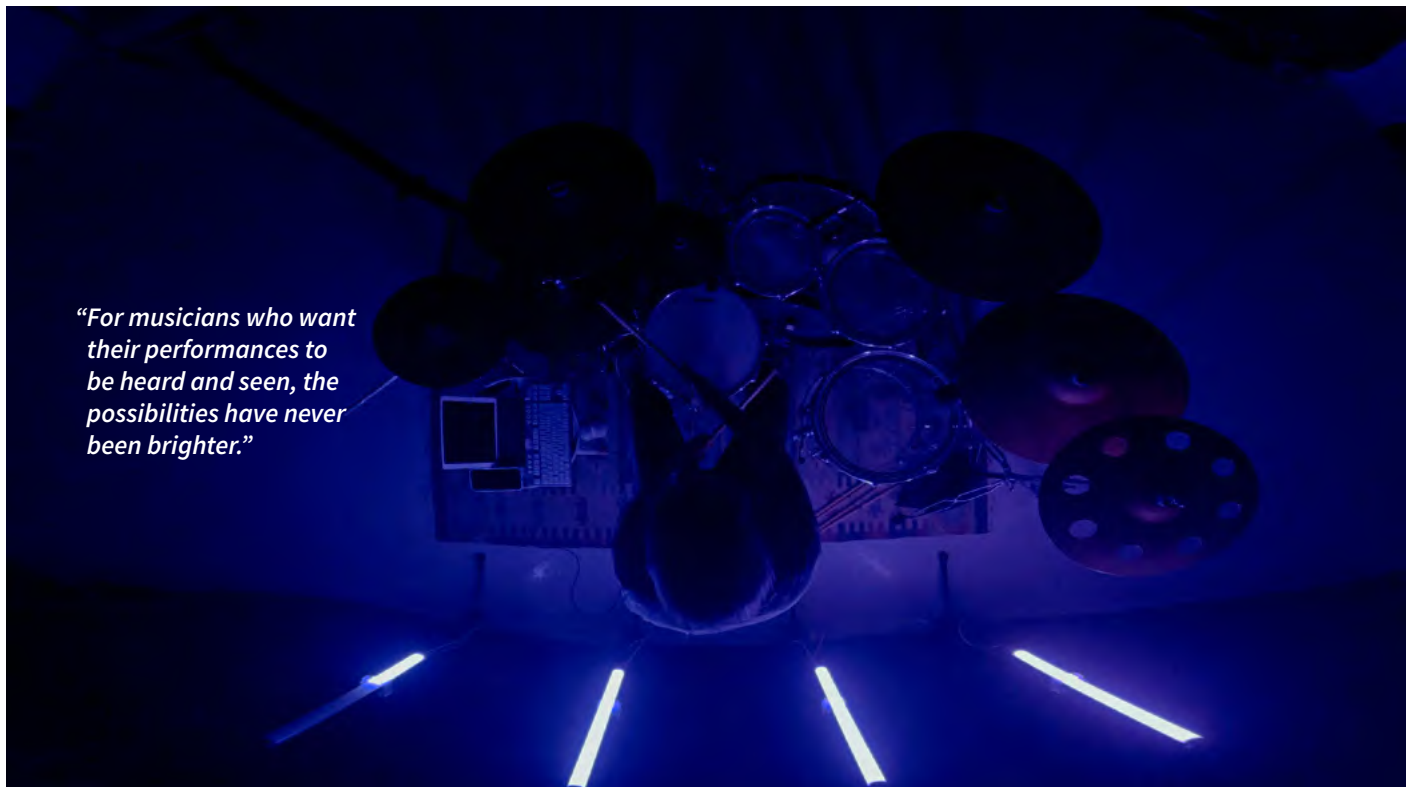
For a new generation of performers, lighting is no longer something added after the music is written. It's becoming a part of the creative process. Artists now design visuals while composing tracks. Producers build lighting cues alongside arrangements. DJs integrate lighting control into their MIDI setups. In other words, the stage show is becoming another instrument.

With tools like LED mapping making complex lighting systems accessible to non-specialists, this trend is only going to accelerate.

One musician currently exploring that territory is YouTube drummer Cobus Potgieter, whose high-energy drum cover videos have amassed more than 300 million views online. Potgieter has recently begun experimenting with synchronising lighting directly with his performances using EMU, triggering lighting effects live from his drum playing via MIDI and DAW automation.

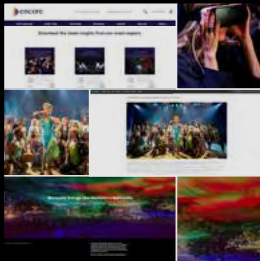
Demonstrations of these experiments are expected to begin appearing on Cobus's social channels over the coming months, offering a glimpse of how musicians themselves might increasingly become the lighting programmers behind their own shows – so keep your eyes and ears peeled!

For musicians who want their performances to be heard and seen, the possibilities have never been brighter.



“For musicians who want their performances to be heard and seen, the possibilities have never been brighter.”

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ETC



Gio @5

The ETC Gio @5 lighting console is part of the ETC Eos console family, which includes the full size Apex range, followed by the Gio, the Ion, the Element, and PC based options. They are a staple in theatre, along with ETC's iconic Source Four series of fixtures.

Construction and Aesthetics

The Gio @5 has a relatively compact footprint compared to other consoles with similar processing power. It is about the '1 person/half a table' size: 36cm (H) x 64cm (W) x 67cm (L) and weighs 24kg. It features one 18.5-inch multi-touch LCD monitor. You can feasibly run it using one screen, but more would be easier.

It works well in smaller control booths or temporary FOH positions. It is not a hard console to unplug, move, and plug back in for a rehearsal/tech/focus. The Gio @5 is large enough to be used as a proper show console yet small enough to move around if need be or to be used in a smaller space. ETC have hit the nail on the head with the size.

Admittedly, it's not the most exciting console to look at; it is a conservative, clean and professional looking console.

In the back it has four DMX ports, two display monitor ports so you can attach external monitors, and two Cat5 ports.

Applications and Features

There are two model options available with the Gio @5; the 4K model and the 24K model. I was using the 4K version but the difference between the two is a software upgrade as opposed to a hardware version. The 4K supports up to eight universes, the 24K supports up to 48 universes. You pick what you need based on your application. I will say it is quite impressive for a console this size to be able to support and control 48 universes without the need for external processing.

The ETC family of consoles are well-known for building great cue stacks. This would explain why they are much more popular in theatres than in nightclubs or concert type settings. The Gio @5 is no different.

A strength of the Gio @5 is that it runs the full Eos software. This means you get the same feature set found on ETC's larger desks. It is basically a scaled down version of the full size Apex.

Magic Sheets is a cool feature which allows you to import images and drawings, create programmable buttons, faders and controls on your displays, and build custom user interfaces for your show. I feel like most lighting operators are visual people, so this is a really useful tool.

The five physical faders seem a bit limiting at first, but it really depends on how you use the desk and what you use it for. For cue-based programming they are usually sufficient, while buskers or people operating on the fly may need to add fader

wings or create buttons or faders on the touch screen. I think most operators would much prefer physical buttons and faders to a touch screen. Then again, this console isn't really designed to be a busking console.

Control and Programming

From a usability standpoint, the Gio @5 feels very 'operator focussed'. There is a subtle difference in a lot of lighting consoles in that each one tends to lean slightly towards a function. Some consoles tend to be more suited to operators, some to designers, and other to programmers. A lot of experienced lighting operators, designers, and programmers understand this, and it does tend to influence their choice of console.

The familiar Eos syntax makes it easy for an experienced ETC operator to jump in straight away. For those not familiar there is a bit of a learning curve. The syntax and terminology are slightly different to other consoles.

The ETC lighting consoles all have knowledge that is transferable between their desks. This is comforting, as it makes taking the time to learn the ins and outs of the desk a worthwhile investment.

It has a solid and robust effects engine which allows you to zoom to get as detailed and specific as you want with your effects, as well as quickly apply broad and basic effects.

The ETC Gio @5 features its own onboard Virtual Media Server for Pixel Map content mapped



to DMX-capable fixtures. While not the most advanced media server, it will do what you need it to do. If you were doing advanced mapping or media server work you would probably bring this as an external piece anyway.

It has its own 3D visualisation tool called Augment3d. 3D visualisation is great; it was already a big part of pre-programming and figures to play a much bigger role moving forward into the age of AI.

The console integrates well into networked lighting systems via protocols like sACN and Art-Net. The Gio @5 can accept triggers from MIDI show control (MSC), MIDI notes, Open Sound Control (OSC), or analogue contacts.

The ETC Gio @5 would be best suited for venues such as theatres, performing arts centres, broadcast studios, schools or universities, as well as a small to mid-size touring shows. The console is designed where cue lists, palettes, and timing precision matter more than busking layouts. It is definitely more of a theatre console than a rock and roll desk.

Help and Support

Help and support for the ETC Gio @5 is great. There are many different options depending on how you like to learn. As a visual person myself, I really liked the YouTube video tutorials ETC have online. I was able to walk myself through the desk at my own pace and learn a whole bunch.

Training days are run for the consoles in most major cities a few times a year. You do find training days popping up on Eventbrite.

They also have a reasonably active forum on their website that is well moderated by the ETC team. ETC's support is known for being available for a long time after a console's release, including continued software updates and fixture library maintenance.

This long-tail support does pay dividends and is more useful than many may think. Newer, younger operators may not necessarily have access to the latest and greatest equipment and will learn on what they can, even if it is an obsolete desk. They get experience on an old ETC desk with support and, when they move into professional shows, they gravitate towards the newer ETC consoles.

Verdict

The ETC Gio @5 is a great console that fits seamlessly into the Eos ecosystem. Although geared towards theatre users, you really could make it work in just about any setting.

It is well supported by the development team, and offers all the features you would need for a professional mid-size show. The ETC Gio @5 is a really solid offering that can handle much more than you would initially expect.

Product Info: www.etconnect.com
Distributor Australia: www.jands.com.au
Distributor New Zealand: www.jands.co.nz



The Specs

- 4,096 or 24,576 outputs
- 32,768 control channels (mapped to any number from 1 to 99,999)
- 100,000 Cues
- 999 Cue Lists
- 999 Submasters
- 100 Fader pages
- 4 x 10,000 Palettes (Intensity, Focus, Colour, Beam)
- 10,000 Presets (all palette)
- 10,000 Groups
- 10,000 Effects (relative, absolute or step)
- 99,999 Macros
- 10,000 Snapshots
- 10,000 Curves
- 10,000 Colour paths
- 99 discrete users
- Partitioned control
- Show import from Obsession, Express, Expression, Emphasis, Congo, Cobalt, grandMA1, grand MA2, Safari and Strand 500/300 Series
- Augment3d 3D programming and visualization environment
- Magic Sheets suite for customized user programming and displays
- Virtual Media Server function for pixel-mapping effects, images, and animations
- One 18.5-inch multi-touch LCD touchscreen for display, direct selection and context-sensitive control
- Supports two external display port monitors (1920x1080 minimum, 3840x2160 maximum), with optional single-touch or multi-touch screen control and DDC/IC support
- Five 60mm motorized faders, 100 10-fader pages for configurable faders, for channel, submaster and palette/preset, timing and effect rate/speed playback control
- Main Playback with two 60mm motorized faders
- Four force-feedback encoders for non-intensity parameter control

WHAT

WAS

THAT?



I CAN'T HEAR YOU

Ahh, the sweet sound of silence. A joy I'll never experience again. In fact, I haven't heard true silence for over 35 years. That was when the tinnitus kicked in full time, 24-7. Subsequent hearing tests confirmed 20-30 percent loss and in went the ear plugs.

After several years as a mad keen punter, out 4-5 nights a week, often drunk, and always up the front, I started working R'n'R already regularly exposed to seriously dangerous noise levels. I'd also done a lot of heavy construction work, often using loud tools without aural protection.

Inevitably, something had to give. After a year or two mixing, it was my hearing. Audio engineers have a lot of tricks, but a crucial component is being able to hear! Fortunately, I enjoyed lighting even more and walked that path instead.

The damage had been done though. Foam plugs and earmuffs saved me from much more degradation, but permanent ringing has been an unavoidable fact of life for the decades since. Many people lose their mind over this, but I accepted early on that I should learn to live with it. In the constant background hum of city life, it blended

into the auditory blur of daily existence. Moving to the country brought the ringing back into focus. Here, when the winds don't blow, the ears scream.

Nowadays, the white noise of a hard surfaced cafe can be deafening, to the point of being quite painful. One of the most agonising noises are cicadas. Thankfully, this is only for a few weeks each year but, being surrounded by gum trees, we are also surrounded by these cacophonous tymbal smashing louts.

The noise that these little beasties make enmasse is excruciating. I clocked them at 105dB-A this summer, but the worst of it only lasted a day. Some years, I've had to don ear protection for several days during the din. I didn't measure those, but they sounded well north of 110dB. Reportedly, the species *Cyclochila Australasiae* (Greengrocer) can reach 120dB. Ouch.

The other unavoidable noise pollution out here comes from the Sulphur Crested Cockatoos. We have them in huge flocks, often numbering a hundred or more. Given that each one can screech at 110dB, the cacophony when they are all going off together is overwhelming torture. Thank goodness for double glazing and thick sound absorbent walls.

Fortunately, the cockies are only at their worst twice a day. At dawn, they stretch the vocal cords, but not much more loudly than the kookaburras or currawongs. Dusk can be another thing altogether. Not only does the volume level increase seemingly exponentially, they go slightly mad in their flying antics, darting at impossible angles even drones would struggle with. The vocal theatrics that accompany the aerial circus are equally random and unhinged. Suitably ear-goggled, it is often a hilariously entertaining spectacle.

Not so jolly are the constant rumbles from Puckapunyal, about 60km from here. With world events as they are, it is perhaps appropriate that our soldiers are practicing a bit of bomb chucking.

Tinnitus and harmonic sound waves

A constant 4kHz ringing is a fact of life for me. I tried masking and that didn't work well enough to bother continuing. For context, I was simultaneously working loud live gigs, drinking caffeine and alcohol daily, consuming nicotine and other stimulants - these are all known to increase tinnitus. So, 'suck it up and get on with things' became the default approach. If I cannot change it, I have to live with it. Not a bad way to approach most problems, but particularly with permanent or chronic ailments like these.

The other intriguing aural anomaly is a recurrent night-time hum. It kicks in around 10 pm and can continue either constantly or sporadically until

after 2 am. The sound seems to start at about 100Hz as a continuous tone. This sometimes goes for up to an hour before changing pitch slightly to about 130Hz, then cycling between the two. It is also quite intermittent - I can go weeks without hearing it, and then it recurs. Sometimes, a once-off, sometimes for a month straight.

Where does this noise come from? I suspect some sort of machinery that is also a fair distance away. A pump or a compressor is the most likely suspect. Without the high background noise floor of the city, and with the long waveform of lower frequencies travelling great distances, it's little surprise that I can hear it. That others cannot doesn't exclude it from my lived reality.

Whether I'm hearing the exact frequency that is being generated, or a higher harmonic, is irrelevant. Unless it is some kind of psychological artifact, or a physiological symptom, I still 'hear' it. Mercifully, this doesn't bother me, and I often even use it to construct doof loops in my head as the hum oscillates. Small things amusing small minds etc...

Sandy and the mysterious AC compressor

There is precedence for this kind of oddity within the family. Not blood related, but my father's second partner (of 35 years) complained of regular hums so loud and consistent that she was becoming quite disturbed and cranky. Given that acerbic and sarcastic were default modes for my stepmother, adding the other traits was less than desirable.

Dad and Sandy went through innumerable doctors, audiologists and other related specialists. All to no avail. Insultingly, a fair few told her she was 'making it up'. Any women ever heard this contemptuous rubbish from the medical fraternity before?

They were both tenacious buggers though. The old man started taking environmental audio recordings and trying to analyse what was going on. Early efforts revealed little of use. We talked at length about what might be occurring and what the options were to prove it. He ended up trialling increasingly specialist (and expensive) microphones, testing at multiple locations. First, around the house, but later in other nearby sites.

Eventually, he started to find some low frequencies regularly showing up. I don't recall exactly which ones. Using the locational data, he triangulated the source to a multi-story medical complex approximately 10km away and approached them formally to see if they knew of the source. And, if not, whether he could access the site to run further tests.

Management denied everything at first and refused any site inspections. They forgot about the insane focus of an autistic engineer in retirement. Doubling down with multiple recordings spread over time and distance, a ridiculous array of spreadsheets plotting every mouse fart within 30km, and a fortunate conversation with the site maintenance officer, eventually got him access to test all over the building. And there he found the hum - emanating from a rooftop mounted AC compressor whose runtime corresponded exactly with Sandy's noise complaints. Some acoustic experts finally got involved and designed a baffle that stopped the offending frequencies getting more than a few metres. Problem solved.

The reason that no-one else could hear this noise was its subsonic nature. Infrasound is outside of the human hearing range. Scientifically, Sandy couldn't hear the noise directly but was either picking up on either a harmonic of its frequency or could feel the fundamental in her body. No-one else they polled in the area felt it enough to notice, even when it was proven demonstrably to exist.

Infrasound has always been part of the natural world. But human endeavours are adding to the subsonic noise. Machinery causes hums, industrial scale machinery amplifies these. Wind turbines have been the target of ongoing debate on what, how much, and how harmful is the infrasound produced. A recent brace of unsettling subsonic noises are being attributed to data centres in the US. The answers to these quandaries are well beyond my rudimentary understanding.

All the above should be couched in the fact that, as an audio operator, I make a great LD. Humility aside, I understand enough of how audio basics work to pull an adequate mix on analog gear. But I know that many of you will have far deeper knowledge on these topics and would welcome (verbal!) feedback on any points I have raised.

I can hear clearly now (that the noise has gone)...

As part of annual eye checks, I get a free hearing test. Recently, I was pleasantly surprised that my ears tested 'perfect for my age'. Further, my peripheral and locational perception recorded above average. So, to the constant ringing, weird night-time hums, functional deafness in loud environments, and audible pain from surrounding critters: youse can all get stuffed. According to Specsavers, I hear perfectly.

If my vision were sharper, I'd be able to see where I put the noise cancelling headphones.





SOME COLD FACTS ABOUT

Audio Warmth

SNIPPETS FROM THE ARCHIVES OF A BYGONE ERA

The internet has become a minefield of tutorials featuring virtual time-travelling crusaders promoting various outboard audio devices in an effort to drag their surmised versions of warm analogue audio back to the future. But there's a simple method that fledgling audio producers can employ to get great analogue vocals and other sounds today without embarking on a labyrinthine and unnecessarily expensive journey. Just plug a good microphone into a mixer that has good microphone preamps.

Derived from the word 'analogous', meaning 'the same', an analogue signal is an electrical copy of a sound wave that remains virtually identical in shape from the moment it is captured to the moment it is converted back to a sound wave by a speaker. Analogue audio doesn't have to synthesise subtle distortion to create the warmth that is often touted by reviewers to be the consummate analogue signal, and there are many audio and recording engineers who meticulously try to avoid the noise and distortion associated with some early analogue equipment.

One such recording engineer is George Massenburg, the inventor of the parametric equaliser, who is noted for his meticulous approach to transparent audio. Unlike those who chase the coloured or warm sound of vintage tubes, Massenburg aims for chemically sharpened accuracy; his goal is to capture a performance without adding artificial harmonic distortion. He has engineered award-winning albums including, Linda Ronstadt's 'Cry Like a Rainstorm, Howl Like the Wind', James Taylor's 1997 'Hourglass', Billy Joel's 'The Bridge', and Alicia Keys 'Alicia' album.

Massenburg has consistently stated that a microphone preamplifier should be used primarily to add the necessary gain needed to boost a microphone to line level; this is a term used in the industry called 'wire with gain'. He argues that if you want to colour or warm the sound, you should do that later in the mix, where you have more control. He has stated that even musical harmonic distortion is essentially loss of information, and while you can often 'fix it in post' if there's a problem, you can never truly reconstruct the exact, untouched waveform once it has been processed at the input stage.

Those of us who mixed live sound in the 70s and 80s often wrestled with mixing consoles that had inferior microphone preamps. While there were concerns about the purity of microphone preamps, most conversations revolved around 'headroom'. The gain structure knob at the very top of a mixing console, which is often misunderstood, regulates how much the preamp multiplies the tiny voltage coming from the microphone. If it's too low, you drag up noise in the preamp boost; if it's too high, you introduce clipping. On the old analogue mixers you'd sound-check different microphones,

"On the old analogue mixers you'd sound-check different microphones, even shouting into them with the fader down until they peaked, and then you'd back off the gain until you got into what was called the 'Goldilocks Zone', where you had enough headroom without clipping during the show."



even shouting into them with the fader down until they peaked, and then you'd back off the gain until you got into what was called the 'Goldilocks Zone', where you had enough headroom without clipping during the show. The gain structure knob was logarithmic, and all the steps weren't exactly the same in terms of dB, and there were variances in dB steps between different mixer brands. On a digital mixer you would have to back off the gain about three to four segments to get to the sweet spot, which is -18dBFS (decibels relative to 'full scale' in digital systems).

Early console pre-amplifiers often suffered from an inadequate gain range; even with the gain pot at its minimum setting, high-transient

sources like kick drums or powerful vocals would exceed the input headroom, triggering the peak LEDs and causing clipping. That clipping didn't produce a warm harmonic distortion for vocals. In fact, clipping a vocal on a 1980s-era console with ICs (integrated circuit) preamps wasn't musical; it caused a harsh, aggressive shift in the frequency response largely and painfully heard in the high mids.

The clipping in those early mixers was a result of mixing consoles moving away from big, expensive transformers to ICs and op-amps. Sound engineers doing the Aussie pub-rock circuits in the 70s and 80s couldn't afford upwards of \$75,000 for a Midas Pro40 with quality transformer preamps on

every input or \$40,000 for a Yamaha PM2000 with quality Tamura input transformers. It was rarely an argument for or against a true analogue sound; more so, it was about quality preamplifiers with lots of headroom that didn't sound thin and harsh.

To accommodate the pub-rock market of the 70s and 80s, Jands released the JM5, which had ICs and was more of a bulletproof workhorse than a mixer with expensive transformer preamps, but it lacked adequate headroom. The flagship of Jands' final mixing console for touring was the JM8 (8-bus console), which featured discrete transistor front-end preamplifiers that could compete with high-end British consoles, including Soundcraft. Ultimately, in 1987 Jands became the distributor

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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Supporting the mental health of Australian entertainment industry workers

of Soundcraft when Australian tariffs were significantly lowered.

Way back in 1970, when Rupert Neve released the Neve 1073 Channel Amplifier, it was marketed as the 'modern, high-tech' replacement for vacuum tubes. He wasn't trying to distort the sound; instead, he was trying to create massive headroom. The low-end power and mid-range thickness were actually by-products of Neve's quest for a signal that wouldn't sound thin under pressure. By the time Neve founded Focusrite in 1985, his philosophy had evolved, and he began to move away from the heavy saturation of the 1073 era towards ultra-wide bandwidth and transparency. The Focusrite sound has been described as 'silky' and 'artistic', rather than the previous thick-body sound of the 1073. Neve didn't use words like 'analogue' or 'warmth' to describe his devices; he was always looking for purity, musicality, and human perception. He actually used the word 'glow', describing '2nd-order harmonics' that didn't sound distorted.

Behringer's 1273, which they say 'pays homage' to Neve's 1073, uses Midas-designed custom transformers built for mass production to mimic the Neve curve, but they generally offer a cleaner, less harmonically dense saturation. It's Behringer's 'tone' button on the 1273, which some aficionados claim captures a warm analogue sound, but the tone button simply switches the input transformer from the normal setting of 1200 ohms to 300 ohms, which loads the microphone's output stage more heavily, typically resulting in a 6dB gain and a subtle shift in the high-frequency resonance.

Microphone preamplifiers have improved significantly since their early days of 'hot and heavy' at the top end and cheap electronics at the lower end. Some of today's microphone preamplifiers have lower noise and distortion than those featured in the \$5000 consoles of the 1970s. In the early 90s, Mackie revolutionised the industry with their VLZ architecture as featured in the CR-1604 console. By the early 2000s, they again excelled with their Onyx pre-amplifiers that offered quality headroom and a low noise floor at a price that rivalled some of the giants in the industry. I've still got my Mackie 402-VLZ3, which I bought for my home studio in 2008, although it's now mothballed.

In the mid-90s, I purchased a Rode NT2, which, after testing, I thought was adding a nice harmonic distortion to colour my voice. However, I later discovered that Peter Freedman focused more on frequency voicing and capsule design to emulate legendary microphones such as the Neumann U87, rather than intentionally introducing harmonic distortion. While many 60s microphones used transformers, which contribute to harmonic distortion, the NT2 utilised a transformerless FET circuit, and Freedman and his engineers used special tuning of the backplate and tensioning of the diaphragm to achieve the NT2's vintage sound.

When my Rode NT2 met with a non-repairable fate some 25 years later, I dug out my old dynamic AKG D330 BT microphone, which AKG has long discontinued. Some would argue that going from a condenser to a dynamic microphone for recording was a significant step down, but even Rode has aggressively expanded into dynamic microphones, establishing a dominant foothold in the home studio, podcasting, and broadcast sectors. When my son was setting up his home studio, we settled on the AKG D5. I had a couple of old SM58s that



PETER FREEDMAN, CEO, RODE



AKG D5

we sound-checked against the D5, and we were both blown away by the AKG D5's performance. Admittedly, the SM58s were over 30 years old, and to be fair, they were designed for live sound reinforcement use.

My Mackie 402-VLZ3 was a great workhorse, but it had analogue outputs, and I needed a little mixer with a digital output. I decided on the Yamaha AG06, which has a USB output. This little gem is often overlooked because it doesn't feature EQ knobs; however, you're not mixing a live gig, so you can do your EQ later in your DAW. The AG06 has the high-quality D-PRE preamps that are found in Yamaha's high-end consoles. I've just purchased the newer AG06 MK2 for my son, and I'm insanely jealous because the new version has channel mute buttons, and they've redesigned the preamps to even accommodate the popular SM7B podcasting microphone because of its low signal level.

Most aficionados on the internet use 'sample packs' in demonstrating audio equipment they claim adds analogue warmth, and a lot of those samples just feature instruments. The bottom line is, if you aren't actually recording the audio, especially vocals, you are likely just utilising an expensive device to add an unnecessary layer of noise to a sampled sound. There is a current elite class of engineers who have divorced themselves from the outboard obsession, arguing that if you capture a sound correctly at the source using a great microphone and a high-headroom console preamp, the warmth is already there, and further analogue processing is just adding clutter. These engineers include Serban Ghenea (Taylor Swift, The Weeknd, and Bruno Mars); Andrew Scheps (Adele and Red Hot Chili Peppers); and Billy Decker, whose work is associated with over 50 million albums and who has mixed 16 Billboard #1 singles.



MY 402-VLZ3 MACKIE AND MY RODE NT2



AG06MK2

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