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DRONE SHOWS LOOK SIMPLE.
THEY ARE NOT.

TO COMPLY, YOU MUST BUY,
BUT NOT ANY MORE

MARTIN AUDIO IS ON
THE MONEY FOR 22LIVE
AND THE AUSTRALIAN
PINK FLOYD SHOW

AUSTRALIA'S EVENT
INDUSTRY HAS A HUGE
OPPORTUNITY

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COVERS NEW ZEALAND

ANDY STEWART'S
LISTEN HERE

JOHN O'BRIEN
IS BACKSTAGE

BRIAN COLEMAN
& THE GAFFA TAPES

Live

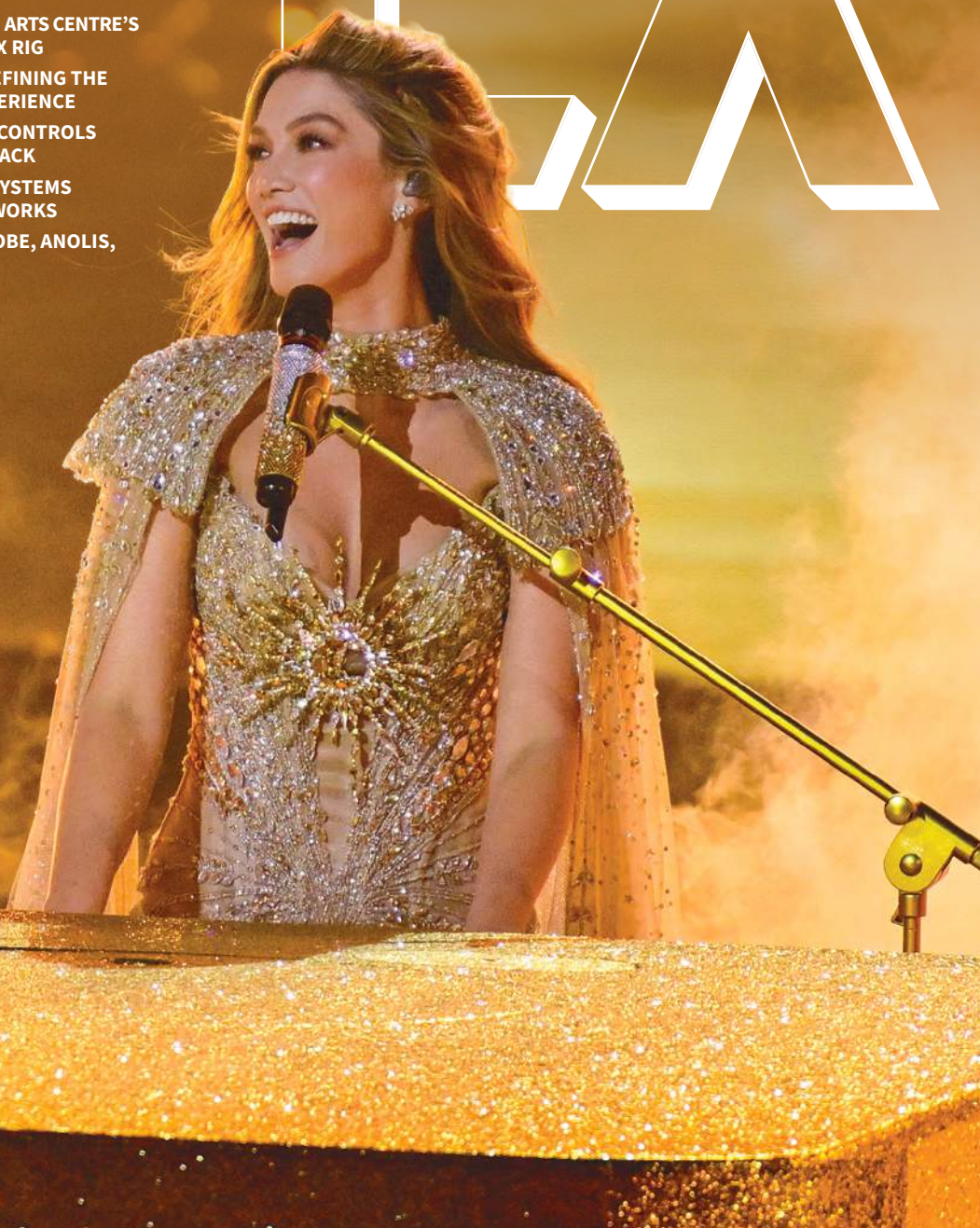
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FULL CIRCLE AT EUROVISION

PIXERA POWERS SOLD-OUT
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Cover Photo – It's full circle for Spectera at the Eurovision Song Contest 2026
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Contents Photo – Robe Helps Bring Las Vegas to London at BoTree's 77.
Photos by Tim 'Tiki' Shapcott

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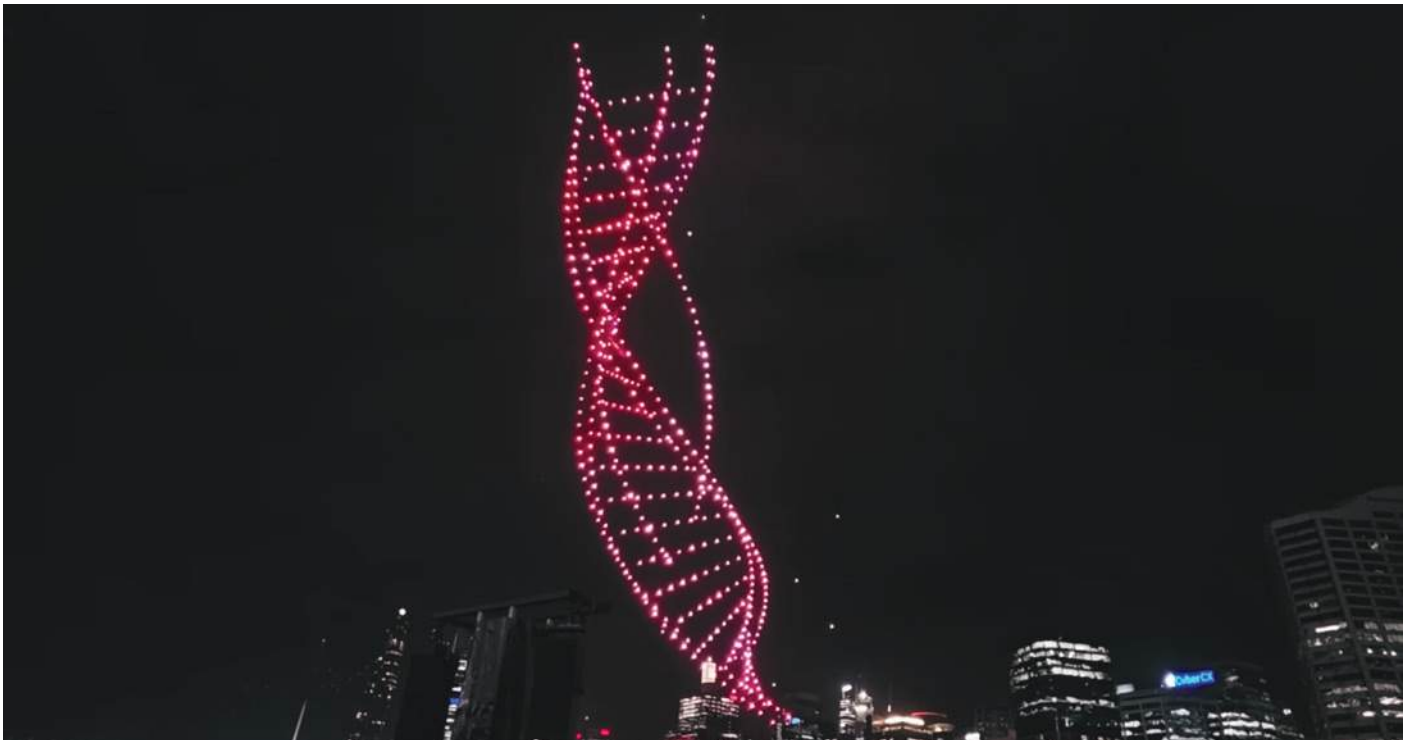
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Drone Shows Look Simple. They Are Not.

Vivid Sydney's drone show was supposed to be one of the centrepieces of this year's program. Instead, videos started appearing online on 25 May showing drones dropping into Darling Harbour while confused spectators tried to work out whether what they were seeing was actually part of the performance.

According to reports, 89 drones entered failsafe procedures during Monday 25's "Star-Bound" performance after what operators described as an "unforeseen change in the radio frequency environment". Witnesses described drones dropping into the water, striking marina infrastructure, and landing close to workers before subsequent shows were cancelled pending investigation.

I think one of the biggest issues here is that people often see drone shows as simple entertainment when in reality they are incredibly complicated operational systems sitting above crowded public spaces.

These are not just decorative lights floating around in the sky. They are hundreds of autonomous aircraft all trying to maintain positioning, communication, timing, separation distances, collision avoidance, and coordinated movement at the same time while operating in the middle of a live city environment full of competing signals and infrastructure. And that is where things can become complicated very quickly.

And another detail that has not received nearly as much attention publicly is that reports stated around 100 of the 1,000 drones involved in the

performance were also carrying pyrotechnic effects. This is not just about lighting effects anymore. You are talking about autonomous aircraft carrying pyrotechnic components while operating above a live public environment surrounded by watercraft, infrastructure, workers, and large crowds.

And I think this is the part many people outside the industry do not fully see. The public watches a 10 minute spectacle. Behind the scenes, operators are managing aviation systems, battery systems, communications systems, autonomous positioning, environmental conditions, exclusion zones, emergency procedures, crowd management, maritime environments, and pyrotechnic risks simultaneously.

A lot of people probably imagine there is somebody standing there manually flying the drones around like giant remote-control toys. That is not really how these shows operate. The drones are generally following pre-programmed flight paths while constantly communicating with wider control systems and with each other. They rely heavily on stable positioning data and stable communications to keep formation and operate safely.

If that communication becomes unreliable or the drones lose confidence in where they are meant to be, the systems are designed to react. Depending on how they are configured, drones may freeze, hover, flash warning sequences, return to base, or initiate emergency landing procedures.

That appears consistent with what some witnesses described during the Vivid incident itself.

One witness posted online:

"You can see them going into emergency loop mode (flashing green blue red white). They then froze like that for about five minutes before finally getting some resemblance of a connection then going back to base. I don't think most people realised until they went back to base (and they couldn't turn the lights off for ages even after they landed)."

What I actually found interesting in that description was that the drones apparently did not just instantly fall out of the sky. They reportedly froze, flashed emergency sequences, partially reconnected, then struggled through what sounded like attempts to regain control and return home. Because failures in systems like this are not always immediate crashes where everything suddenly stops working at once. Sometimes systems reconnect. Sometimes they partially recover. Sometimes operators are trying to work out in real time whether the problem is stabilising or getting worse. And that creates a very different operational situation compared to a straightforward equipment failure.

Another witness also claimed they had seen similar behaviour during rehearsals before Vivid officially opened:

"I saw this happen during their testing before Vivid started. At a nearby hotel and watched the rehearsal when suddenly a bunch of the drones broke away and dive bombed in the water. It coincided with the launch of the Mandalorian and we joked maybe they were some cinematic battle scene."

Now obviously, rehearsals are specifically designed to identify issues before public

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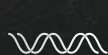
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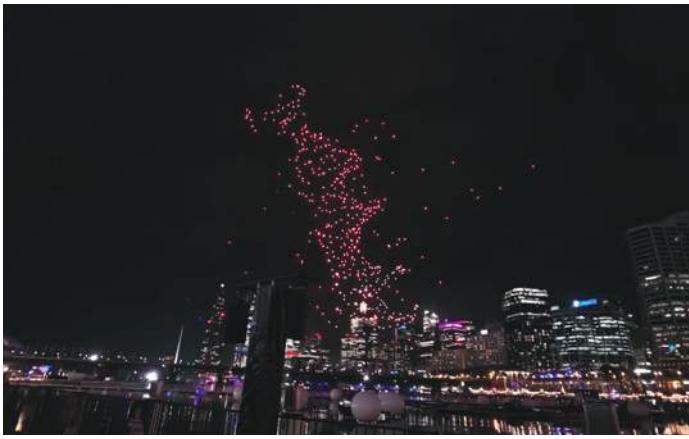
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operations proceed, and isolated observations do not automatically mean operators ignored known failures. But it does raise important questions about escalation thresholds and how organisations assess recurring technical anomalies during testing.

Because one of the hardest operational decisions in live events is determining when a problem remains manageable versus when it may point towards a larger systems issue that requires redesign, operational restrictions, or cancellation.

And with emerging technology, operators are often still learning how systems behave under real-world conditions at scale. That is particularly important with drone operations because the environment around them is constantly changing. Wind changes. Signal environments change. Crowd density changes. Maritime conditions change. The city itself changes minute by minute.

Which is why the reported “radio frequency environment” issue is interesting.

At major events, the signal environment is crowded before the first drone even leaves the ground. You have police radios, emergency services communications, Wi-Fi networks, mobile phone towers, Bluetooth devices, maritime systems, broadcast infrastructure, security systems, production equipment, nearby buildings, and tens of thousands of people all carrying connected devices.

Then add a harbour environment into the mix where reflections, interference, and surrounding infrastructure can affect signal behaviour again.

So when operators refer to a change in the radio frequency environment, it does not necessarily mean one dramatic thing suddenly happened. It can simply mean the environment shifted enough that communication reliability or positional confidence dropped outside safe tolerances. And

unlike a closed testing facility, operators do not fully control those surrounding environments.

This is also not the first time Australia has seen large-scale drone issues publicly.

Back in 2023, hundreds of drones fell into Melbourne’s Yarra River during a Women’s World Cup light show after technical problems occurred shortly after launch. Around 500 drones reportedly took off, with more than 400 ending up in the river below. Later investigations reportedly identified strong winds, autopilot issues, and problems relating to operator awareness of software alerts and system data.

And Vivid itself has already faced multiple drone show disruptions over recent years with the final Vivid drone show in 2024 cancelled because of forecast weather conditions and associated operational safety concerns. Then in 2025, organisers cancelled the drone program entirely amid crowd management and safety concerns linked to the scale of the event.

Now in 2026, there has been a major technical malfunction involving radio frequency disruption and autonomous failsafe responses that reportedly resulted in drones falling into the harbour.

Individually, these are different issues.

Weather.

Crowd management.

Technical systems.

Communications reliability.

But together they show just how many moving parts now sit underneath these productions. Because the drone show itself is no longer just the drone show. It depends on weather tolerances, communications systems, exclusion zones, aviation controls, software reliability, waterways management, emergency planning, crowd

behaviour, operational decision-making, and a whole range of technical systems all functioning properly at the same time.

“And I think that is the bit the public rarely sees. They see 10 minutes of lights in the sky. They do not see the operational balancing act underneath it all.”

None of this means drone shows are inherently unsafe or that they should stop. But I do think the industry needs to be careful about treating them as simple “safe alternatives” to fireworks without acknowledging they introduce completely different operational risks. Because replacing explosives with flying computers does not remove risk. It just changes the type of risk you are managing. And when those systems are operating above public spaces, waterways, workers, infrastructure, and crowds, the consequences of failure can escalate quickly.

From the information publicly available so far, the decision to cancel subsequent shows appears appropriate. That is what contingency planning is supposed to look like. The goal of safety systems is not proving nothing can ever fail. The goal is understanding what happens when something does.

This article reflects professional observations and commentary regarding publicly reported information available at the time of writing. It is intended to encourage discussion around event safety, operational planning, and risk management practices. It does not attribute fault or allege wrongdoing by any organisation or individual involved.

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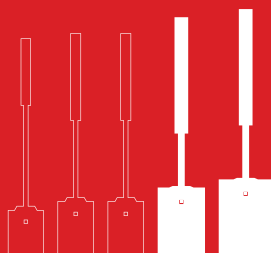
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TO COMPLY, YOU MUST BUY, BUT NOT ANY MORE

After years of people across the safety industry asking the same very reasonable question of “why are legally referenced safety documents sitting behind a paywall?”, we have a win!

In mid-May, the Australian Government announced funding in the 2026–27 Federal Budget to support free public read-only access to Australian Standards referenced in Commonwealth, state and territory legislation.

The announcement was welcomed by the Australian Institute of Health & Safety, which has been advocating on the issue since 2018. And honestly, for many people working in safety, construction, engineering, events, facilities, compliance, and operations, this is a very long overdue announcement.

Because the reality is that for years workplaces have constantly been told:

- you must comply with Australian Standards
- you must follow Australian Standards
- your systems should align with Australian Standards
- your venue should meet Australian Standards
- your equipment should comply with Australian Standards

But then someone actually tries to access one and discovers it can cost hundreds of dollars for a single document. And if you need multiple standards? Suddenly you are looking at a bill running into the thousands.

Large corporations can usually absorb that cost. Small businesses often cannot.

Community organisations struggle.

Volunteer groups struggle.

Small event organisers struggle.

Independent contractors struggle.

And then people end up relying on outdated copies, screenshots, summaries, or somebody else's interpretation because access itself becomes a barrier.

And that is where this whole conversation has always started feeling totally ridiculous. Because if something is important enough to be referenced in legislation, contracts, permits, audits, procurement requirements, venue rules, engineering sign-offs, or enforcement notices, then surely people should be able to actually read it.

A lot of people also do not realise that Australian Standards themselves are generally not legislation.

They are technical documents developed through committees coordinated by Standards

Australia. Those committees can include engineers, regulators, unions, manufacturers, technical experts, industry representatives, safety professionals, academics, and operational specialists.

The idea is to create agreed technical guidance and consistency across industries.

Some standards are voluntary.

Some become recognised as industry best practice.

Some are referenced through legislation or regulations.

Some are adopted into the National Construction Code.

Some become “deemed to satisfy” pathways.

Some are written directly into contracts and procurement requirements.

But operationally, many workplaces do not really care about the distinction between “mandatory” and “technically voluntary but practically expected.” Because if an inspector, auditor, venue, engineer, insurer, principal contractor, council, or client asks whether you complied with the relevant Australian Standard, most businesses are not going to argue semantics in the middle of a project or incident. They are simply going to try and comply.

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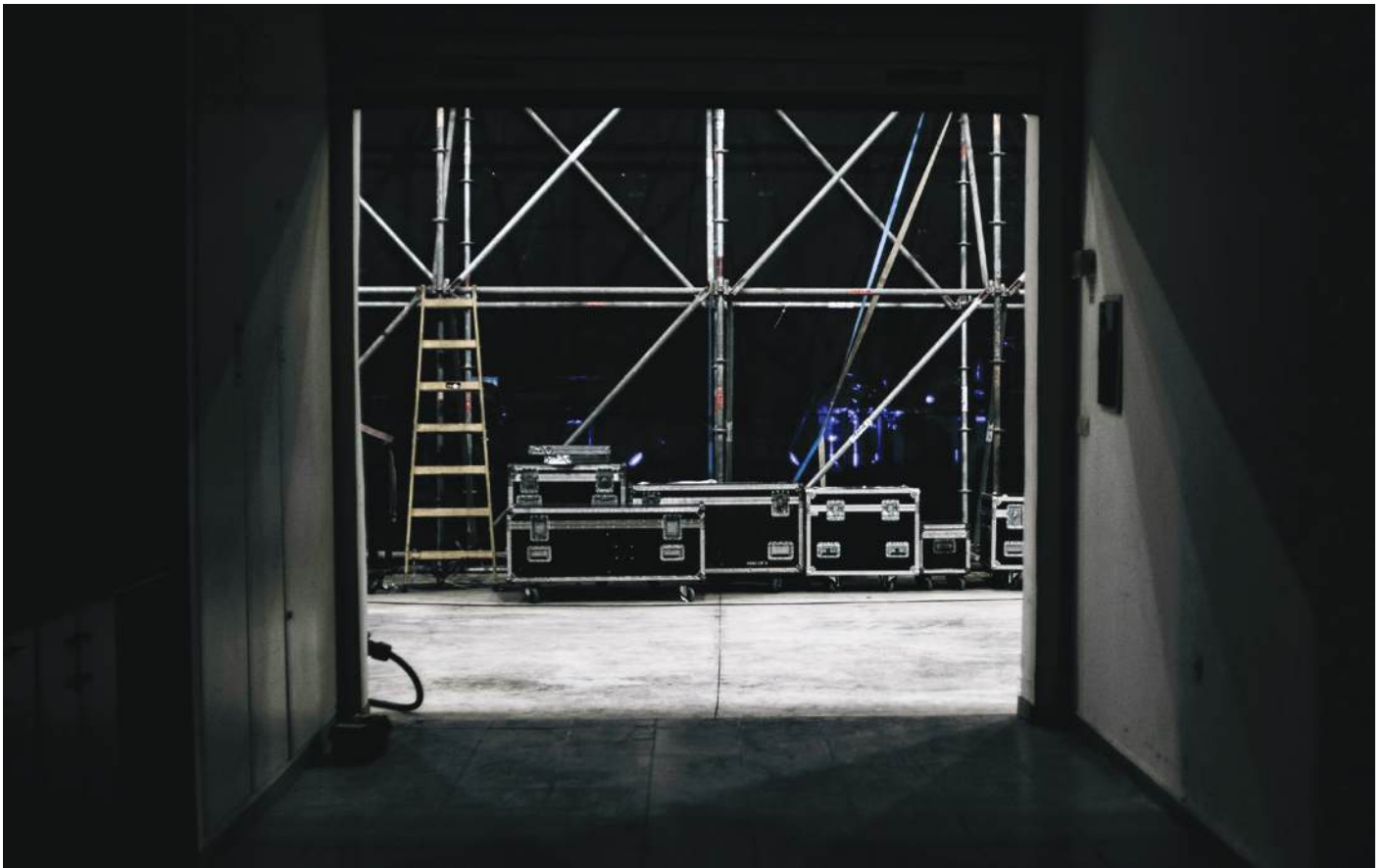
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And that is why the paywall issue has frustrated so many people for so long. Particularly in safety.

Because this is not niche information hidden away in a university archive somewhere. These standards influence real-world decisions involving:

- fire safety
- exits and egress
- temporary structures
- electrical safety
- fall prevention
- playgrounds
- crowd management
- accessibility
- emergency lighting
- hazardous substances
- lifting equipment
- public events
- gas systems
- amusement devices
- workplace design

and countless other areas that directly affect public and worker safety every single day.

Yet many people working in those environments have never actually been able to easily access the full documents themselves.

So instead, what often happens operationally is this:

- someone forwards an old .pdf
- somebody quotes one paragraph out of context
- people rely on toolbox talk versions of standards
- consultants paraphrase sections
- venues create their own interpretations
- or somebody says “I was told this is what the standard says”

And sometimes that information is accurate. Sometimes it is not. And that creates its own risk. Because there is a massive difference between genuinely understanding a requirement and simply relying on second-hand interpretations floating around the industry.

Now to be fair, developing standards properly is not cheap. It takes consultation, technical expertise, committee reviews, drafting, revisions, industry input, and ongoing updates. None of that magically appears for free and this article is not pretending otherwise. But there has always been a legitimate question sitting underneath all of this: Should safety-critical information that workplaces are expected to comply with be difficult or expensive to access?

A lot of people would argue ‘no’.

The line from the AIHS announcement probably says it best: “Standards that people are legally required to comply with should not sit behind a paywall.”

It is hard to argue with that logic.

And honestly, this will improve safety outcomes over time simply because more people will finally be able to directly access the source material themselves instead of relying on fragments, interpretations, or hearsay.

Will it solve every compliance problem in Australia? Of course not.

People will still misunderstand standards.

People will still misapply standards.

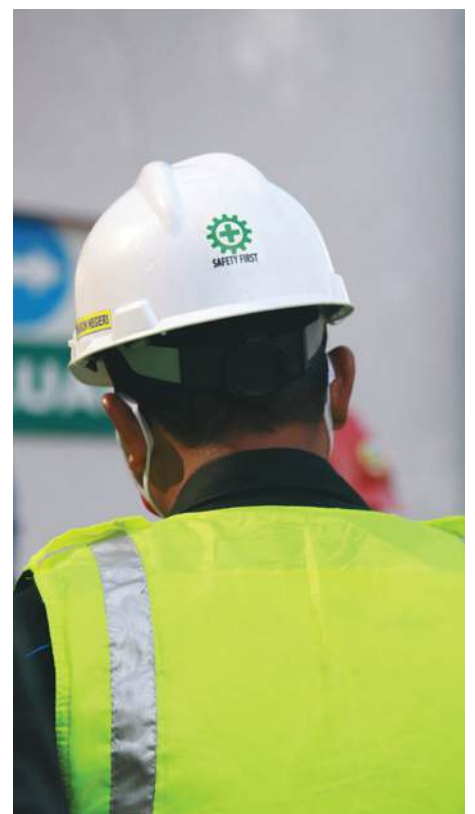
People will still ignore standards.

And there will still be debates about what is mandatory versus what is guidance.

But removing a major access barrier is still significant. Particularly for smaller operators who

are trying to do the right thing without massive compliance budgets sitting behind them.

For years, many industries have quietly accepted the strange contradiction that people could be legally expected to comply with documents they could not freely read. This announcement finally acknowledges how ridiculous that situation actually was. This feels like one of those rare moments where common sense may finally be catching up with compliance. Bring it on!





Martin Audio is on the Money For 22live and The Australian Pink Floyd Show

The Australian Pink Floyd Show has officially launched its 2026 global tour across Europe, the US, and the UK, backed by a comprehensive Martin Audio WPC system provided by technical partners 22live.

With over five million tickets sold worldwide, The Australian Pink Floyd Show is widely regarded as the premier tribute to the legendary rock band - a reputation so formidable that David Gilmour famously booked them for his own 50th birthday celebration.

To maintain this standard across a regular annual schedule that encompasses a spring European tour, summer US tour and Autumn/Winter UK tour, the production requires a sound system

that delivers sonic excellence, venue flexibility and operational efficiency.

The relationship between the tour and its technical providers is built on decades of trust. Paul Timmins, Hire Director at 22live, has worked with the band for over 15 years and has known Kevin Hopgood, one of the band's management team, for nearly 40.

"Kevin and I were both working in the industry with Malcolm Hill back during the Live Aid period," recalls Timmins. "In 2015, when they needed a new Front of House engineer, I suggested Trevor Gilligan, whom I'd worked with on Kasabian and Starsailor. He's been mixing the show for over a decade now and has a particular affinity for the Martin Audio sound."

When the band approached 22live in 2022 to overhaul their touring rig, the transition to Martin Audio's Wavefront Precision (WPC) system was the natural choice. For a production of this scale, balancing "big show" sonics with "smart business" logistics was essential.

"Space is always crucial," Timmins explains. "Because 22live started fresh, we developed our flight casing and cable systems without the burden of legacy gear. Our standard cases are two-thirds the size of traditional four-foot cases. When we ran the truck packs, we discovered

the Martin WPC system with 22live packaging actually saved three feet of truck space; a massive commercial advantage."

The touring system is robust and versatile, featuring 16-deep WPC main hangs complemented by 10-deep WPS out-hangs for larger venues. The low-end is handled by a combination of three SX218 2 x 18" and 16 cardioid SXCF118 1 x 18" subs, a setup Mark



Edwards, system engineer refined after A/B testing at Martin Audio's headquarters.

To ensure consistency in the wide range of touring venues, the team also carries the Martin Audio TORUS T820s as lip fills, TORUS T1215/30s for additional in-fills and a pair of FlexPoint FP12s as utility speakers.

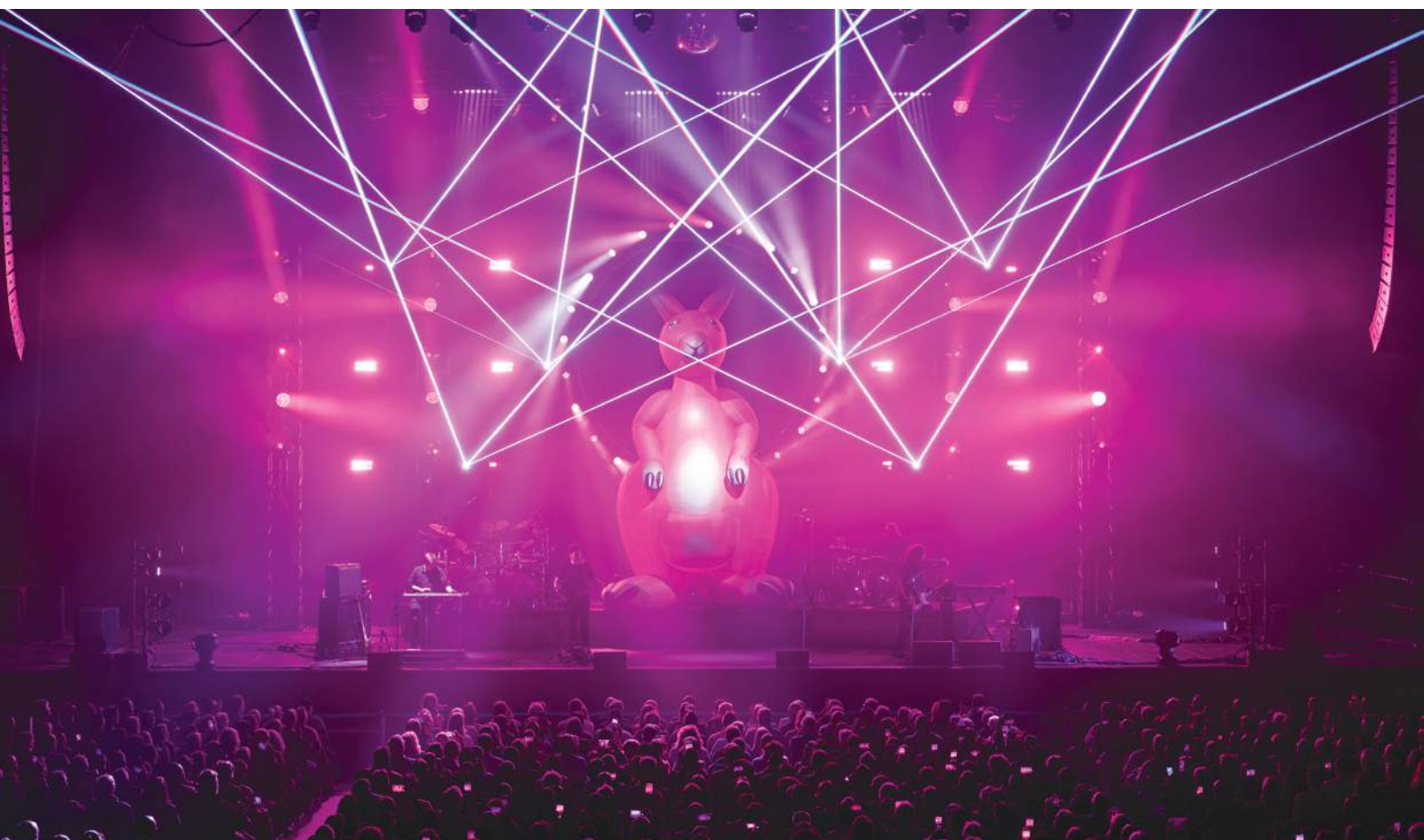
The entire system is powered by IKON iK42 amplifiers over a Dante network, driving the full system in two-box resolution. This allows Gilligan to use Martin Audio's Hard Avoid technology to keep sound off reflective surfaces and focused entirely on the audience.

"The warmth and vocal tonality of Martin Audio lends itself perfectly to the Pink Floyd catalogue," says Timmins. "I'm consistently impressed by how seamless the transition is between the WPC and WPS hangs. For a rental company, that consistency and the ability to deploy the most compact boxes is exactly what you want."

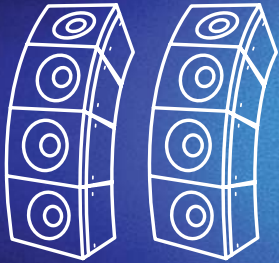
The results speak for themselves. Following a recent performance in Berlin, FOH engineer Gilligan reported, "Berlin last night was great! The system sounded like a hi-fi in the back row, and the venue measured SPL at the barrier 0.4dB louder than FOH, so a pretty good result!"

The partnership recently celebrated a major milestone, with 22live presenting the band with an award to mark the completion of 10 full tours and already over 365 shows together - all since 2022.

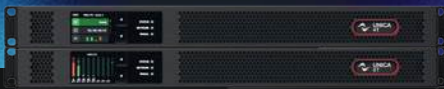
As the 2026 tour continues, the combination of 22live's expertise and Martin Audio's technology ensures that the "Pink Floyd experience" remains as immersive as ever.



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Australia's Event Industry has a huge opportunity. Are we going to run with it?

I've spent a significant amount of time recently analysing government policies relating to events and the Event Industry in every state and territory in Australia.

What I've found is striking. Across the country, governments are now placing events at the centre of state strategies, economic development plans, and long-term policy frameworks. And they're doing it at a level we haven't seen before.

This isn't just about governments spending more money on events. It's about a fundamental shift in how they understand what events do and the role they can play in their economies and communities.

A growing number of governments are recognising that events drive industry development, workforce capability, trade and investment, knowledge exchange, regional economic activity, community connection and place identity. They are starting to see events as economic and social infrastructure - central to how their states and territories grow, compete and connect.

This creates a huge opportunity for Australia's Event Industry. One that most people in our industry won't be fully aware of. It's worth understanding what's happening.

The Scale of Ambition

The ambition around events in Australian government policy is genuinely significant.

Queensland has the stated aim of becoming Australia's event capital. Events are a central pillar of its Destination 2045 strategy. The strategy calls for an integrated whole-of-government approach to major, regional and business events. Events as core state infrastructure.

New South Wales has positioned events as a key pillar of its Visitor Economy Strategy 2035 and has signaled its intent to further dominate business events nationally.

Western Australia is aiming to be the fastest-growing major events destination in the South East Asian region. That's a serious competitive positioning - placing WA in a regional context rather than just competing with other Australian states.

These are not small commitments - and just a few examples. They represent events being treated as strategic economic assets at a scale we haven't seen before.

Queensland - Events as Core State Infrastructure

Events are a central pillar of its Destination 2045 strategy, with a target of a \$4 billion events calendar by 2045 - including \$2 billion in regional events and \$2 billion in business

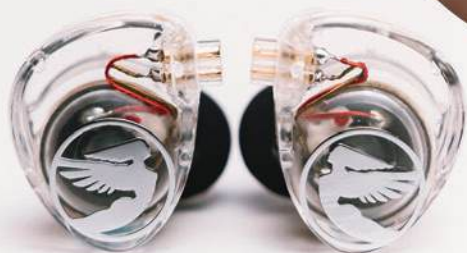
events. Along with its state aim of becoming Australia's event capital.

The strategy calls for an integrated whole-of-government approach to major, regional and business events. This is significant. It means events are being coordinated across government - not sitting in a single portfolio.

TEQ's Statement of Intent contains some of the clearest industry development language in any Australian government document. It refers to a comprehensive event industry development program designed to build skills, improve service delivery and support new technology adoption. It also explicitly links business events to government priorities in health, research, education and innovation - recognising that business events are platforms where industries advance, where knowledge is exchanged, and where innovation is adopted.

Queensland also has an Assistant Minister for Creative Industries alongside an Arts Minister. That structural separation matters. It recognises that the Arts and the broader creative industries - of which the Event Industry is one of the largest - are different things with different purposes and different economic models.

Brisbane 2032 represents the largest single event opportunity in Australian history. The Event Industry is central to how a major event of this scale is actually delivered - from opening



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and closing ceremonies to live sites, fan zones, corporate hospitality, brand activations, sports presentation, community events, and all of the production and technical infrastructure that brings it together.

Queensland's Time to Shine strategy commits to supporting sector readiness for government and corporate procurement - which is directly relevant to whether Australian event businesses and creative industries are in a position to win this work.

The opportunity to use the decade ahead of 2032 to build lasting event and creative industries capability is genuinely significant.

Western Australia

- A Broader View of What Events Do

Western Australia's approach to events is far more sophisticated than most - taking a broader view of what events do and the value they create in the state's economy.

The 2024 update to Diversify WA - the State's main economic development framework - separates creative industries as a distinct priority economic

sector. This positions creative work, including events, inside the State's core economic strategy alongside resources, energy, agriculture, defence and advanced manufacturing. That is a very different policy home from just sitting inside tourism.

Creative WA also contains one of the clearest statements in any Australian government document about the role of events in sustaining the workforce. It states that WA can establish events year-round across the State at sufficient scale to provide ongoing employment opportunities for the many specialised roles required. That recognises events as employment infrastructure - how the people who work in events and the creative industries find ongoing work.

The Event Experience Strategy 2033 introduces the concept of "festivalisation" - recognising that the value of an event extends well beyond the ticketed core. The surrounding experience - fan zones, public programming, cultural programming, hospitality, street activation, local business participation - can carry as much or more value than the event itself.

This matters for the Event Industry because festivalisation doesn't happen by itself. It has to be designed, curated, produced and delivered. It requires event strategy, creative direction, precinct planning, technical production, stakeholder coordination, supplier management and audience experience design. All of which is the work of our industry.

WA is also aiming to be the fastest-growing major events destination in the South East Asian region. That's a serious competitive positioning - placing WA in a regional context rather than just competing with other Australian states.

Tasmania

- A Whole of Government Events Strategy

Tasmania has a standalone, dedicated government events strategy. This matters because it represents a deliberate attempt to articulate why government invests in events and how events contribute to the state.

The Tasmanian Government Events Strategy is built around three focus areas: economic, social and brand. It recognises that events create



employment, business opportunities, social connection, and contribute to a sense of place and pride. Economic activity, social outcomes, and what events do for how a place is understood and experienced - treated together, as part of the same picture.

This is a much more complete understanding of what events actually do. And it creates a framework that allows events to be supported and measured across their full range of contributions - not just one narrow part.

Tasmania's 2030 Visitor Economy Strategy commits to measuring positive impact across six areas: community, environment, destination, visitor, economy and industry. The explicit inclusion of industry as something to be measured - rather than just inferred from visitor activity - is significant.

Tasmania has also developed one of the more structured approaches to regional events through its Events Investment Strategy, which includes dedicated regional event support and capability development.

South Australia - Trade, Investment and Workforce

South Australia has one of Australia's strongest event identities, built over more than 65 years starting with the Adelaide Festival in 1960. This depth gives South Australia a credibility and capability that is hard to replicate.

What is particularly interesting in current South Australian policy is how events are being connected to trade and investment. The South Australia Trade and Investment Strategy explicitly uses major events such as LIV Golf Adelaide, AFL Gather Round and the Adelaide Festival as platforms for connecting investors and commercial partners with South Australian businesses.

That treats events as places where commercial relationships are formed, where markets are developed, and where investment decisions are influenced. Events as economic infrastructure.

SA is also doing important work on workforce. The CreateSA Delivery Plan includes a commitment for TAFE SA and Festival City Adelaide to investigate the establishment of a national institute dedicated to specialised festival and event industry training and workforce development. This recognises something fundamental - that event work is specialised and requires dedicated training infrastructure, not generic tourism or hospitality courses.

South Australia also has Festival City Adelaide - the only state-level peak body in Australia explicitly focused on supporting the conditions in which the festival and events sector can thrive. Having a peak body matters because it gives the sector a defined voice in policy conversations.

SA's commitment to recognising and measuring the broader social and community impacts of events - the "Force for Good" framework - is another meaningful step.

New South Wales - Scale and Ambition

New South Wales has long had one of the strongest events commitments in Australia. Events are a key pillar of the NSW Visitor Economy Strategy 2035, and the state has signalled clearly that it intends to further dominate business events nationally.

Destination NSW operates one of the most developed major events platforms in the country, actively acquiring, developing and supporting events across sport, entertainment, arts and business.

Vivid Sydney shows what can happen when a state develops and owns its own event IP over time. What started as a modest light festival has grown into one of Australia's largest events. The creative and technical capability required to produce it has

grown with it - and that capability lives in the local Event Industry.

NSW has also developed event support mechanisms including event starter and event growth funding, regional event programs, and the Regional Event Fund.

The ACT - An Integrated Approach

Events ACT is positioned as an events agency first - described as the lead agency for the development and delivery of events in Canberra, with a stated role in contributing to the development of the ACT's events sector. That language is stronger than most state level event agencies, which are typically described in visitor economy terms with events as one of their functions. Events ACT is framed around events as its core purpose.

The ACT Event Fund also recognises the broader ecosystem around events - organisers, performers, sponsors, volunteers, local businesses and suppliers - with eligible support areas including planning, management, audience development, program development and temporary infrastructure. Most event funding programs fund the event itself with limited attention to the supply chain around it. Explicitly naming suppliers and infrastructure as eligible support areas is closer to recognising what it actually takes to deliver events.

The ACT's Major Event Fund also includes event management capacity and capability as an explicit assessment criterion - recognising that delivery capability matters, not only outcomes.

What's Changing Across the Board

Looking across all of this, there are a number of themes emerging across multiple jurisdictions at the same time.

Whole-of-government Approaches are Developing

This may be the most important shift. Events touch many parts of government - economic development, trade, regional development, creative industries, community, sport, and infrastructure. For a long time, events sat in one portfolio and were viewed through one lens. This is starting to change.

Queensland calls for an integrated whole-of-government approach and has a cross-government Events Steering Committee. Tasmania says government invests in events across multiple agencies, not only through Events Tasmania. South Australia connects events to trade and investment strategy. Western Australia connects events to its core economic diversification framework. The thinking is catching up with the reality of what events do across economies and across communities.



Governments are Recognising the Real Role Events Play

Tasmania's events strategy frames events around economic, social and brand outcomes. South Australia commits to recognising and measuring broader social and community impacts. Western Australia's festivalisation concept recognises the full economic and experiential value of the event ecosystem. Queensland connects business events to government priorities in health, research, education and innovation. These are all steps towards recognising what events actually are - platforms for driving industry development, knowledge exchange, community connection and economic activity.

Events are Being Connected to Trade and Investment

South Australia's use of major events as platforms for investor engagement. Queensland's linking of business events to government priorities. These approaches treat events as places where economic development happens - where industries connect, relationships form and investment decisions are influenced.

Broader Measurement is Being Committed to

Tasmania's six-area positive impact framework. South Australia's "Force for Good" measurement commitment. The Australian Government's investment in business events measurement through Tourism Research Australia. None of these yet amounts to a full Event Industry measurement framework. But the principle that visitor spend alone is an inadequate measure of what events do has been established across multiple jurisdictions.

Workforce is Emerging as a Policy Concern

South Australia's national training institute proposal. Queensland's event industry

development program covering skills, service delivery and technology. Western Australia's recognition that events provide ongoing employment for specialised roles. These recognise that events depend on people and capability - not only on infrastructure and marketing. Once workforce becomes a legitimate policy concern, the path opens to broader questions about training pathways, supplier development, business support and industry sustainability.

The Real Challenges

Despite all of this government interest in events, the Event Industry itself - the people and businesses who actually create and deliver all of these events - doesn't get mentioned very much in all of these policies.

The Event Industry is not properly included in the national industry and occupation classification systems - ANZSIC and ANZSCO. This means we are difficult to measure, and difficult to include in industry development, workforce planning and skills policy. You can't develop what you can't see in the data.

While the Event Industry is often referred to as being part of the visitor economy, we actually aren't included in visitor economy statistics.

While we are one of the largest and leading creative industries, we are often not included in creative industries policies or statistics.

These are not minor technical issues. They create structural invisibility. We saw the consequences during the pandemic, when the Event Industry received little targeted support because it was largely invisible in government data, classifications and program design.

We need to change this.

Are We Going To Capitalise On This Opportunity?

Across the country, governments are making enormous commitments to events. They are treating events as core economic and social infrastructure. They are connecting events to trade and investment, to industry development, to regional growth, to creative industries, to community connection and place identity.

Government interest in events has never been higher. The sophistication of the policy thinking is increasing. The scale of the ambition is there. And the foundations for industry recognition are being laid across multiple jurisdictions.

This is the biggest opportunity the Event Industry has ever had. We should not be timid about the contribution we make. And we should not sit in the background while governments build their strategies around the work we do.

As an Event Industry we need to step out from under the shadows of other industries. We need to act as an industry in our own right. We need to proudly speak up about who we are, what we do and the real contributions we make. And, we need to be at the table with government.

Australia's Event Industry has a huge opportunity. Are we going to run with it?

You can download a copy of my submission to the Senate Select Committee on Productivity in Australia - The Australian Event Industry: Driving Creativity, Productivity and Social Connection - here: <https://www.event.com.au/s/The-Australian-Event-Industry-Driving-Creativity-Productivity-and-Social-Connection-V3b.pdf>



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Premium reverbs, vocal tuning and pitch processors, distortion, saturation, and more.

+ More Power per Channel

Supports the latest generation of DEEP processing add-ons.

+ Bigger, Bolder!

High contrast "Dark" GUI on 9" touchscreen for faster navigation and workflow.

The logo for SQL+ is displayed in white on a dark background. It features the letters 'SQL' in a bold, sans-serif font, followed by a plus sign '+'.

ALLEN & HEATH

POWERSOFT PRIMA SERIES AMPLIFIERS

Powersoft's PRIMA Series are two compact 4-channel professional amplifiers for installed audio systems. PRIMA 164 and PRIMA 324 are designed specifically for applications where signal processing is already handled elsewhere in the audio stream or where DSP is not a required part of the system architecture.

Both PRIMA models support Hi-Z and Lo-Z operation and come in a half-rack form factor. They can distribute power across channels and offer localized gain trimmers and status LEDs. Both share the same architecture, with 160W and 320W total output power respectively.

Australia: PAVT pavt.com.au 03 9264 8000

New Zealand: PAVT pavt.co.nz 09 272 8041



NEW GEAR

ETC HOG TOUR WING

ETC's newest member of the Hog family is the Tour Wing. This full-featured playback hardware adds additional faders for existing Hog users. 10 motorised, RGB-backlit playbacks and RGB-backlit keys complement a full dashboard display. The Tour Wing seamlessly integrates with all consoles in the Hog family, as well as the Hog PC, unlocking 12 universes of control directly.

The launch of the Hog Tour Wing coincides with the release of Hog OS v5.1, required for Tour Wing integration. Version 5.1 supports the Tour Wing on all new Hog consoles, the HPU and Hog PC, and brings multiple improvements to the Hog environment.

Australia: Jands jands.com.au 02 9582 0909

New Zealand: Jands jands.co.nz 09 941 9780



SENNHEISER HD480 PRO HEADPHONES

HD480 PRO are top-of-the-range closed-back headphones designed for studio and live environments.

Attention has been paid to a tight, accurate bass reproduction, with a frequency response of 3 to 28,700Hz (-10dB). Multiple stages of passive sound shielding help keep the audio pure.

User comfort is a priority with comfortable ear pads with soft grooves for the temples of glasses.

Further, the connection cable features a coiled part, effectively decoupling the HD 480 PRO from any structure-borne or handling noise, and the detachable cable can be worn on the left or right side.

Relevant specs include: Sensitivity: 107dB SPL (at 1kHz/1Vrms); 98dB (at 1kHz, 1mW); Max. SPL: 130dB (1kHz, 5% THD); and THD: <0.5% (at 1kHz, 100 dB SPL)

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ALLEN & HEATH

NEW GEAR



HIVE Q-SYS VERIFIED BEEBLADE PLUGIN

HIVE have released a Q-SYS Verified Plugin for HIVE Beeblade media players. The plugin enables HIVE media players to be fully controlled and monitored within Q-SYS Designer.

In practice, this means that a single command within Q-SYS could trigger multiple actions, such as powering displays, launching media playback and adjusting audio levels simultaneously.

The plugin supports the full range of HIVE Beeblade media players, making it compatible with deployments across HIVE's Beebox, Nucleus and Beehive enclosures.

Australia: ULA Group ulagroup.com 1300 852 476

New Zealand: ULA Group ulagroup.com 09 218 6532



ATLASIED ATMOSPHERE AZP AMPLIFIERS

AZP amplifiers feature onboard DSP with integrated speaker tunings, flexible matrix mixing, and loudspeaker management tools, including EQ, crossovers, and limiters. Power share technology allows total amplifier power to be allocated across channels in 5W increments. A built-in message player enables paging and announcement functions.

Dual network ports provide flexible deployment options for control, monitoring, and Dante audio.

The AZP series also includes full sound-masking capabilities, with onboard signal generation, scheduling, and commissioning tools, along with CAT-based speaker connectivity.

Housed in a 1RU form factor, 4- and 8-channel configurations are available in 150W or 300W (selectable LoZ or HiZ) per channel.

Australia: PAVT pavt.com.au 03 9264 8000

HIVE V1.3 SOFTWARE

HIVE v1.3 is a major software update that significantly expands the capabilities of the HIVE media server platform. This release lets users combine multiple layers and mixes simultaneously – with support for up to eight layers and four concurrent mixes. V1.3 adds MPCDI integration for compatibility with industry-standard projection mapping and auto-calibration tools.

The release also includes important security and deployment improvements, including the move to SSH key-based authentication. Additional updates include enhancements to pixel mapping, improved synchronisation and timing accuracy, expanded NDI workflows and support for high-bandwidth 10Gb ST 2110 environments.

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The entire FP range is available in black and white. New models are: FP-4T 4" Premium IsoFlare Pendant Loudspeakers; FP-6T 6" Premium IsoFlare Pendant Loudspeakers; FP-8T 8" Premium IsoFlare Pendant Loudspeakers; FP-8THC 8" Premium IsoFlare Pendant Loudspeakers for High Ceilings; and FP-8ST 8" Premium IsoFlare Pendant Subwoofers.

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NEW GEAR



L-ACOUSTICS L1 AND CS1 SOUND SYSTEMS

L-Acoustics has debuted the flagship piece of their L Series line array - the L1 large-format sound system. This comprises L1 and L1D, acoustically identical enclosures with differing cabinet shapes. L1 is designed for long-throw performance while L1D serves as the final element, extending the coverage to the near field.

Each enclosure integrates two 18" low-cardioid (LC) transducers side-mounted for frontal energy and rear rejection, four front-facing 15" low-frequency drivers, eight 8" mid-frequency drivers, and six coaxial 4"+2.5" HF compression drivers. The L1 achieves a maximum SPL of 160dB per enclosure, and full bandwidth of 35Hz to 20kHz.

The L1D element matches this transducer architecture with a progressive 60-degree vertical coverage pattern for nearfield zones, achieving 155dB SPL.

CS1 is the companion cardioid subwoofer to this system. It uses four 21" transducers in a cardioid topology, to deliver peak SPL of 150dB and bandwidth down to 25Hz.

All L series elements are optimised to minimise low-frequency spill, with up to 18dB of rear rejection between 20 and 250Hz, and more than 26dB of rejection below 80Hz.

Two Panflex modules per L1 enclosure offer 70- and 90-degree symmetrical patterns plus an 80-degree asymmetrical mode. L1D extends options to 110- or 70-degree symmetrical and 90-degree asymmetrical for nearfield coverage

With far fewer elements required to achieve similar output from earlier systems, rigging and deployment is fast and light. The auto-locking rigging system requires no external pins. Each L1 enclosure is driven by a dedicated LA7.16 amplified controller with 16 discrete channels of DSP and amplification. L-Acoustics Soundvision software uses a new-generation Autofilter algorithm to shape the system output in all three dimensions.

Australia and New Zealand: Group Technologies
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ALLEN & HEATH SQ+

Allen & Heath's SQ+ introduces RackUltra FX processing, expanded DEEP processing power, and a bigger, bolder interface across three new models: SQ5+, SQ6+, and SQ7+.

SQ+ offers four RackUltra FX engines, each with dedicated stereo sends and returns. DEEP Add-Ons include CompStortion, Source Expander, and Dual Threshold Expander. The user interface is built around a larger 9-inch touchscreen and a new dark GUI.

The range has three frame sizes: the SQ5+ with 17 motorised faders, 16 XLR mic/line inputs and 8 SoftKeys, and an optional 19-inch rack kit; the SQ6+ with 25 faders, 24 XLR inputs, 16 SoftKeys and 4 SoftRotaries; and the SQ7+ with 33 faders, 32 XLR inputs, 16 SoftKeys and 8 SoftRotaries.

Australia: Technical Audio Group tag.com.au 02 9009 4322

New Zealand: Jansen Pro Audio jansen.nz 09 377 3663



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BandBox is an AI powered smart practice amp and portable speaker range from JBL. Both the BandBox Solo and BandBox Trio feature AI-powered vocal and instrument separation, allowing musicians to play along with their favourite tracks by using Stem AI to isolate or remove vocals, guitar, or drums from any track in real time.

BandBox Solo includes one guitar/microphone input, and includes effects like phaser, chorus and reverb. A built-in looper, pitch shifter and tuner are standard.

BandBox Trio includes four instrument inputs, and a built-in four-channel mixer, plus all of the Solo features.

Australia: MadisonAV madisonav.com.au 1800 00 77 80

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Based on Elation's Dartz 360, the Dartz Beam features enhanced optics, an expanded FX toolkit, and full IP65 all-weather protection. With an ultra-narrow 1.5° beam, the Rebel Dartz delivers 125,475 lux at 5 meters. An 150W RBL LED engine produces rich, saturated colours and uses a dedicated True Green filter. Colour temperature is tunable from 3200K to 16000K.

FX tools include: dual gobo wheels (10 interchangeable rotating/indexing and 16 static stamped); stackable prisms (6-facet linear and 8-facet circular); heavy frost filter; 16-bit dimming curves; and variable strobe.

Connectivity is via DMX, Art-Net, sACN, and RDM, plus NFC configuration and Aria X2 wireless DMX.

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Icron Arbutus 63301 is a USB-C extender with DisplayPort Alt Mode. Using a single USB-C connection to the host, the Arbutus delivers 4K60 video via DisplayPort Alt Mode, USB 3.2 Gen 1 data at 5Gbps and up to 15W of power delivery, extended up to 100 metres over a single CAT 6a/7 cable.

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HOMEgrown, REPLANTED

KIWI FESTIVAL SHIFTS FROM WELLINGTON WATERFRONT TO THE MIGHTY WAIKATO

For 18 years, Jim Beam Homegrown was almost inseparable from Wellington's waterfront. It was the festival where Aotearoa's biggest local acts played within sight of the iconic harbour, where audiences moved between stages and city streets, and where the capital's bars and restaurants effectively became part of the event footprint.

Then, in 2026, Homegrown moved, not just a few streets over or to another park in the same city, but out of Te Whanganui-a-Tara and into Kirikiriroa Hamilton. For any established event, that kind of shift is high risk. A festival is never just its line-up or its site map; it's audience habit, supplier relationships, city texture, flow, memory, and a thousand small cues that tell people they're exactly where they want to be.

Festival director Andrew Tuck faced twin challenges: making Claudelands work operationally and retaining the essence of Homegrown in a completely different place. He's been in events for 28 years, and his approach is shaped as much by people as production. As he puts it: "Homegrown's more than just a festival. Homegrown's about the people. It's about the audience. It's about the artists. It's about the people working together." That philosophy mattered when the Wellington chapter reached its natural end.

When the waterfront ran out of room

Homegrown's story began in 2008, when the first festival was held on Wellington's waterfront and featured 35 New Zealand acts. By 2010 it had become Jim Beam Homegrown, and over the years it grew into one of the country's defining all-Kiwi music festivals, spanning rock, pop, roots, electronic, hip hop, and more.

Wellington's strength had always been its openness. It wasn't a contained greenfield site but stitched into the harbour edge and public realm. "It was the only festival in the country that you could come and go from," Andrew explains. "At three in the afternoon you could decide, I feel like a steak and a glass of red wine, and you could pop into a restaurant."

That permeability was part of the charm and eventually part of the problem. The site had no spare capacity. "We literally had scaffolding going up over gardens. Once you get to a point where



you can't change a festival anymore or make it any better, you're going to become stagnant. People skip a year because they think they won't miss anything. Then they stay home the next year, lose their connection, and your festival starts to die."

Although the team looked for a way to stay in the city, the constraints were fundamental. "After a couple of years' investigation, Wellington City Council realised there was nowhere that would work. By 2024, based on the way the event flowed that year, we knew it was time to find a new home."

Building a new Homegrown from the ground up

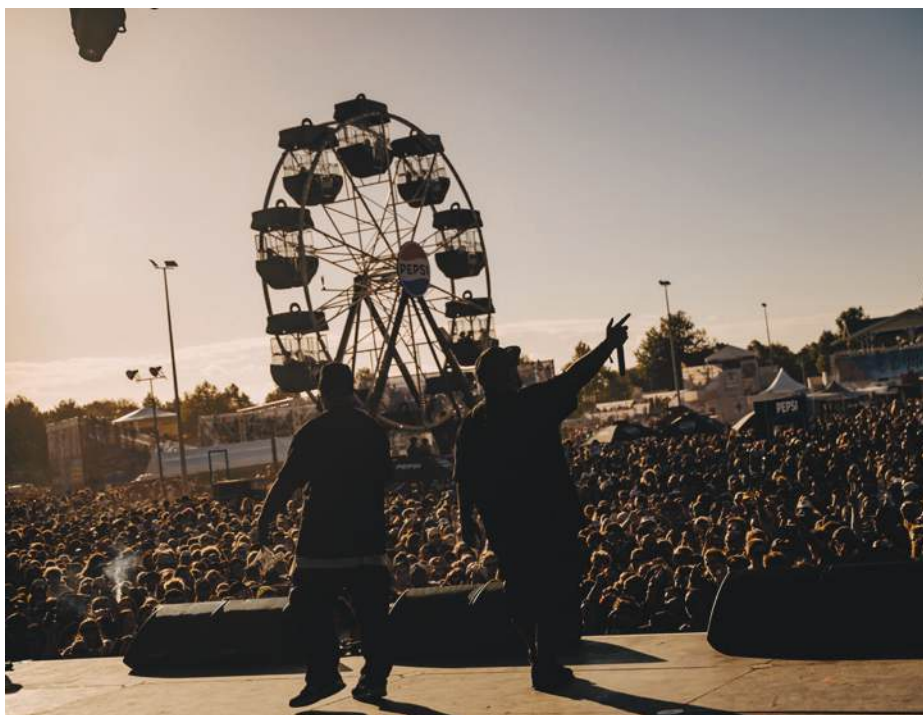
The search for a new home went to tender. Around nine cities explored the opportunity, with Hamilton and Dunedin emerging as the final two. Dunedin appealed partly because it didn't already have another major event of this kind; Hamilton, likewise, had space in its calendar for something of Homegrown's scale. Both offered viable





options, but Claudelands won because it ticked the practical boxes: traffic flow, walking distance to town, nearby hospitality, and crucially the ability to manage a large-scale event without fighting the site.

The physical contrast could hardly have been sharper. Wellington sprawled along the waterfront; Claudelands was contained. Wellington allowed the city to bleed into the festival. Claudelands required the festival to create its own world. The site-planning process was iterative and exacting. Andrew walked the grounds, identifying natural stage positions and flow paths, but the map kept evolving. “We moved our entrance three times from the first



time we drew it. I think by the time we got to the end of the event this year, we were up to version 98 of the site map.”

Sound was one of the biggest technical questions. Seven stages on a contained site had obvious potential for bleed. Andrew brought in a trusted sound technician to map the grounds, then adjusted stage positions accordingly. “We tweaked some stages, moved them three degrees this way, stepped this one slightly back, or angled that one. Then we got a whole noise-management plan done based around trajectory and mapping.”

On site, the theory held. The team used soundcheck to test the modelling in real

conditions. “You walk from one stage; you could hear it to this point and then it disappeared. Everything was there for a particular reason. It wasn’t just thrown up. You can’t beat maths!”

Audience flow received the same treatment. In October, the team marked out the site and walked it as punters and VIPs, testing sightlines, travel distances, bar access, and potential pinch points. At one stage, they flipped a stage 180 degrees. “You’d think the sound’s great, but the traffic flow’s terrible. They’ll get jammed up. If I’m going to a bar, I’m going to get caught on this corner. It’s not wide enough.”



That kind of decision-making is invisible when it works, but it determines whether a festival feels easy or exhausting. "A lot of time was spent making sure the audience experience was the best one."

Space to move

If the audience experience was the first test, the build was the second. It was substantial: around six days of marking out; three weeks on the ground; 21 B-trains of scaffolding in the first week alone; and approximately 146 tonnes of scaffolding installed.

For crews used to squeezing a major festival into Wellington's waterfront, easier logistics was the biggest win. "In Wellington, you could pretty much back one truck in and another was out on the road waiting." Hamilton was a different proposition. "At one stage we had 22 truck-and-trailer units, plus a couple of 80-cube box trucks, all loading in at the same time. I think it was 350-odd trucks that came in for the build, and at no time was there any congestion. We'd get to the end of each day and almost marvel that there had been no traffic jams."

The move also prompted a fresh look at suppliers. Wherever local capability could meet the brief, the team used it, but Andrew was careful not to lose hard-won knowledge. "Obviously there are savings on transport, and it's nice to put money back into a city, but relationships matter. My toilet lady has been with me for 16 years. She's been through three different companies, but she knows what I need: 40 cleaners cleaning toilets every ten minutes!"

That mix of local capability and trusted continuity was one of the less visible ways the relocated festival kept its character. Homegrown is local music on stage, but it also relies on event labour from across the country, suppliers, cleaners, scaffolders, security teams, sound crews, and production managers working to a shared standard.

Same festival, different ground

There were lessons. Unlike in Wellington, Claudelands remained an operating venue during the build, with conferences and other events using internal spaces and car parks. Early security arrangements were tweaked to pull trucks off the road, and future refinements are planned around contractor flow, inductions, high-vis, radios, and getting people onto site efficiently.

There are opportunities, too. "This year was our baseline. We've come out of it with very positive comments from the audience, contractors, police, and council. Everyone's really, really happy so now we can grow." The extra space creates programming and production flexibility. "The cool thing is we can add what's hot in New Zealand. If there's a genre that suddenly starts to blow up, like country or K-pop, we can jump on board with that now. Whereas in Wellington, we would have had to drop a stage to pick up a stage. We can also move an existing stage and give returning audiences a different experience: trees, buildings, bouncing lighting off architecture, and so on."

As to whether Homegrown retained what makes it Homegrown, Andrew says the heart of the move comes back to culture. "Our motto is that we treat everyone as you want to be treated yourself. Sure, you're only as good as your last event, but you're also only good if the people on the ground enjoy being there, want to come back, and do their best work."

He saw that during the Claudelands build. "Scaffolding was going in, people were doing their mahi, but they were singing and laughing even though they were working hard. You've got to have people enjoying themselves, because that's when the magic happens."

That extended to artists too. A joined-up green room created space for bands to hang out, reconnect, and collaborate. Andrew saw musicians jumping up to play with each other across the day, the kind of informal cross-pollination that only happens when the environment invites it. "That, to me, is what Homegrown's about and will always be the essence of Homegrown, as long as my business partner and I are at the helm."

There will be tweaks. There always are. Contractor flow will be sharpened, stage positions reconsidered, supplier feedback folded in, and the site map will no doubt move through another long series of versions before gates open again. But the first Claudelands edition gave Andrew and his team what they needed: a working baseline, room to move, and confidence that the festival's character survived the shift.

**Homegrown can live in Hamilton.
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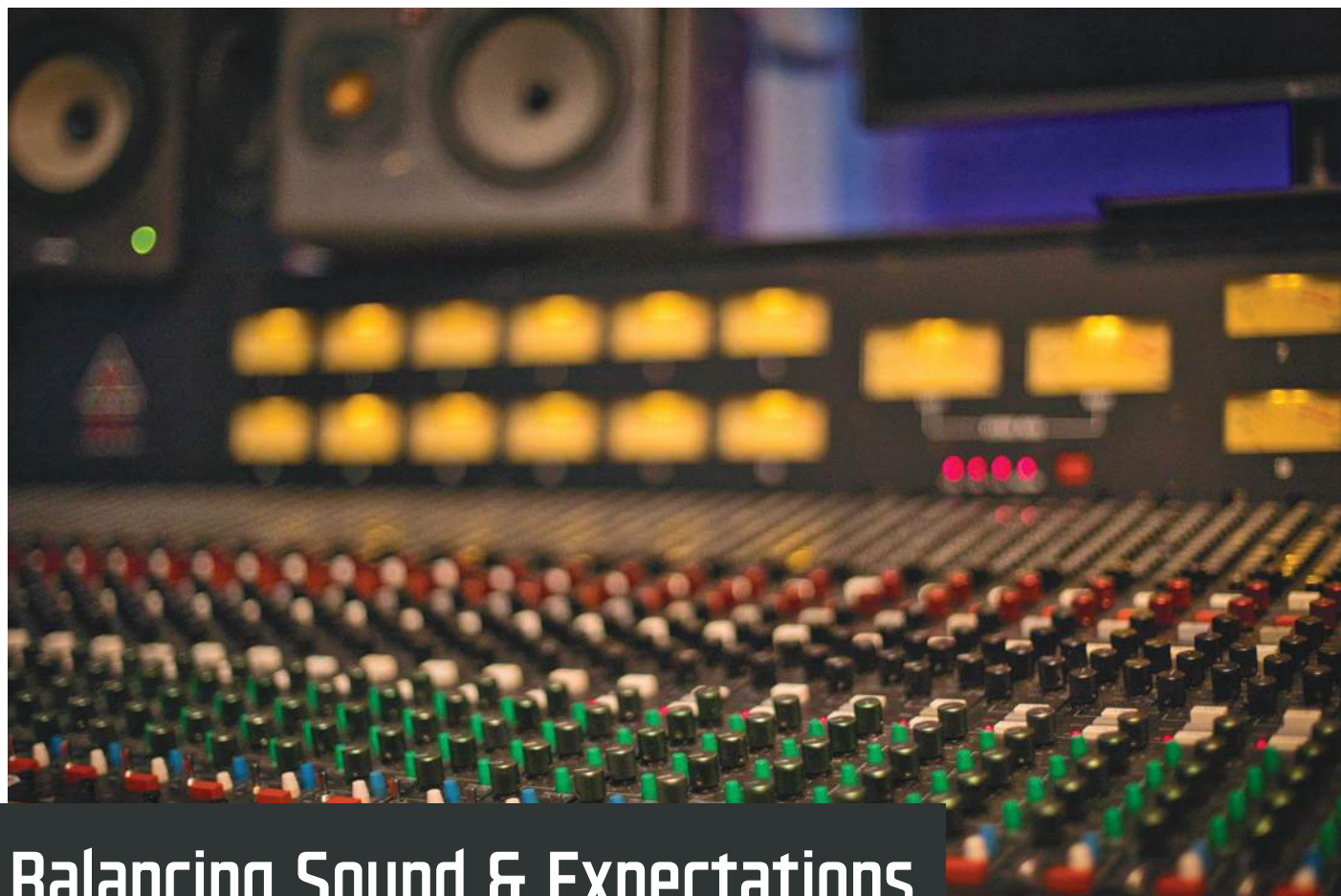
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NEW ZEALAND / 31



Balancing Sound & Expectations Life as a Mix Engineer in 2026

Where does music production stand in 2026? Is it heading the way of the Dodo, or are we navigating our way successfully through the onslaught of new technology?

There's a persistent myth embedded in the minds of musicians and engineers, that the best records are born from impossibly complicated productions – enormous track counts, exotic microphones, cutting-edge plugins, endless overdubs and technological wizardry beyond the reach of ordinary humans. But that mythology is old hat now, its dominance finally waning.

What's replacing it, however, is a similarly inaccurate portrayal of the way music is produced in 2026.

Popular opinion these days asserts that music can be manufactured by literally anybody without the need for skilled musicianship, experienced recording engineers, or even songwriters. Indeed, there's an overwhelming belief nowadays that anyone can make great records with essentially no background in any of these skill sets, provided they have the latest technology on their laptop.

And of course, it's true in one form or another, that a smattering of audio gear and a computer can produce an audible outcome. But whether the results are great, artistic, or inventive are questions that, in many respects, seem entirely irrelevant in this context anyway.

What's frustrating about today's accepted mythology is that our current technology invariably makes things better: empowering

even the most inept musical dropkick, providing sophistication where it's entirely lacking, adding technical skills where none exist, and artistry and taste for those who neither pursued, recognised, nor ever appreciated it.

But this is simply untrue. Technology is hopeless at offering artistic guidance. It's bereft of taste, and the worst minimalist since God invented grains of sand. It's like saying that scrolling endlessly through the patches of an '80s synth made you a brilliant keyboard player back in the day. It certainly didn't do that – but it did frustrate and bore a person witless.

Being able to make a sound is one thing; making great music is something else entirely.

But technologists never want this theory to see the light of day.

The companies who survive only by convincing you that their latest plugin emulation is 'the real deal', who ceaselessly push the latest gear into the bedrooms of millions of audio enthusiasts worldwide, do nothing but offer us yet more options and methods, sounds and controls, than most of us can ever hope to accommodate or apply.

We live in a decade where literally every sonic ingredient, every musical flavour is available to

us at the click of a mouse. Our metaphorical spice drawers and musical larders are filled to bursting with options... and every audio developer tries to convince us that, by adding a bit (or a lot) of their latest spice, our sonic problems will be solved.

Meanwhile, no-one is being shown how to cook. Worse, people are growing convinced that learning the craft of mixing, producing, engineering or performing is itself 'old school' thinking. To be proficient in one, or several, artistic roles is somehow a worthless pursuit, or at least a dated skill set.

But this is total BS. Companies want you to think that way – it helps them sell their latest plugins, loops and sample libraries. They want to convince you that anyone can make a hit song without talent, taste, musicianship, skills or experience in the arts. Theoretically this is true, of course, but when was the last time someone who knew nothing about music – couldn't sing, couldn't play, couldn't face an audience – hit the big-time? It basically never happens. Even the ones who appear to come screaming out of nowhere are often incredibly talented musicians, and almost always have a team around them with extensive backgrounds in their fields of expertise.

Mix Files or Which Files?

Sessions regularly arrive here at The Mill containing endless alternate takes, sprawling vocal productions, dozens of software instruments and enough plug-ins to keep someone tweaking sounds until the end of civilisation. This is how most people make music these days – for at least two reasons.

The first is because, in the absence of quality musicianship of the type where a performance shines so bright it needs no embellishment and very little accompaniment, let alone layering and production support, a recording artist will instead add quantity.

This fails to achieve the desired musical outcome in almost every instance, simply because one is generally no match for the other. There are musical exceptions of course – there always are. But this too is a trap of logic. Just because there is an exception to a rule, doesn't mean you should always rely on it being true in your case. Quality focusses your attention, makes you gasp in the face of a performance, creates space and easily commands a mix. Meanwhile endless mediocre layers blur and smear the focus, tend to shun the limelight, making them hard to mix, and require far more time and effort to compile. They are also inherently riskier because while they always take longer, they also often fall short of expectations.

Ironically, technology itself isn't the problem here. In many ways, modern tools are astonishing. The ability to recall entire sessions instantly, repair damaged audio, tune vocals transparently, remove noise, rebalance stems and automate almost every conceivable process is extraordinary. There are moments where modern software genuinely feels like science fiction.

But capability and judgement are not the same thing. That's the distinction our industry still struggles with.

These days I sometimes joke that I'm no longer a mix engineer at all. I'm a Fix Engineer. The mixing is often the easy part. The fixing is what consumes the hours.

There's rarely a session that arrives in my studio without some form of surgery required. Sometimes it's technical – clicks, pops, hums, distorted waveforms, bad edits, phase disasters, corrupted files or vocal recordings captured beside what sounds like a running dishwasher. Other times it's musical – timing inconsistencies, tuning issues, collapsing arrangements, missing hooks, choruses with no energy and bridges that span, well... sometimes nothing at all.

And increasingly, entire productions arrive built around the assumption that all of this can simply be solved later – by someone like me.

That's the dangerous mindset modern recording technology has encouraged: the belief that performance standards no longer matter because software exists to rescue everything.

It doesn't.

Or more accurately, it can – but at a cost, and never with quite the outcome you might expect. And as for the human experience – when the production of music is based on endless layering of sound, often alone with no-one else to spark the music into life with a second or third opinion, it barely resembles past generations of music

production where people lit up a room together and made something far more than the sum of its parts. Some called it magic back then... and there is evidence of it on countless albums. No plugin can replicate the magic of human interaction. Consequently, far too many albums now lack this spark, this 'magic'.

Meanwhile, you can absolutely tune every vocal note into submission. You can grid-align drums until they resemble machine code. You can edit bass performances note by note for three consecutive days if you really want to. But eventually you sand away whatever humanity might have made the music interesting in the first place. And technology won't stop you – it can't tap you on the shoulder and gently question whether what you're doing is a good idea. It has no idea.

A lot of younger artists have grown up inside a production culture where imperfection itself feels unacceptable. Every waveform is visible, every transient editable, and every vocal line can be infinitely manipulated. The result is that some musicians no longer distinguish between performing well and editing well.

They are not the same skill.

The irony is that truly great performances still make mixing vastly easier than any technology ever invented, and yet almost no-one ever attempts it.

A brilliant vocal recorded through an average microphone will nearly always outperform a mediocre vocal recorded through \$20,000 worth of equipment. A tight rhythm section still beats endless editing hands down. Conviction still matters. Emotion still matters. Human feel still matters.

The audience may not understand why something sounds good, but they absolutely feel it when it does.

Ironically, one of the fastest and most effective production approaches still remains the oldest one of all: simply recording a band playing a song well.

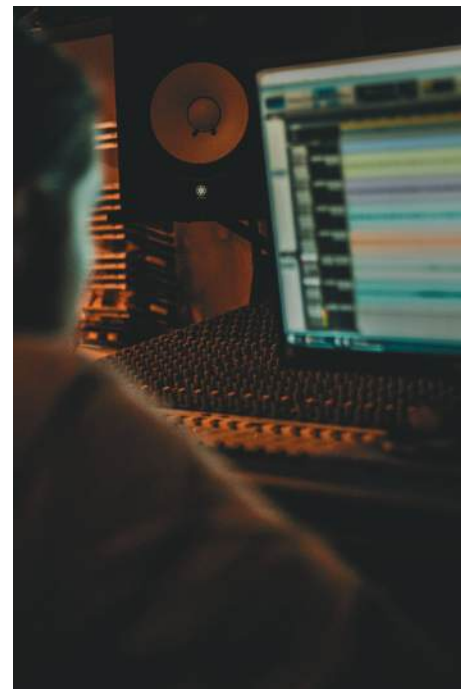
In 2026 that almost feels rebellious.

Live tracking has become strangely uncommon compared to hyper-edited construction-style production workflows. But when good musicians walk into a room and genuinely perform together, something happens that technology still struggles to replicate convincingly. Timing fluctuations interact naturally. Dynamics breathe. Human momentum develops. Music appears spontaneously – 'out of nothing' as Brian Eno would say.

And from a mixing perspective, that cohesion matters enormously. But until someone can find a way to quantify it – though they never will – people will be free to relegate live performance to the dustbin, or deride it as old school thinking – that there was never any such thing as magic between musicians.

And then there's the biggest productivity illusion of all: staying up all night.

I learned years ago that exhaustion destroys judgement faster than almost anything else. Around 9.30pm there's often this deceptive second wind where you suddenly feel energised again. That's the trap. Push through it and suddenly it's



2 am, your ears are cooked, you're EQing cymbals like a lunatic and tomorrow's session is already compromised before it begins.

Sleep is part of mixing.

So is perspective.

So is walking outside occasionally and remembering that the world contains things other than snare drums.

The truth about life as a mix engineer in 2026 is that it exists somewhere between artistry, psychology, technical problem-solving and endurance sport. You're constantly balancing competing priorities: precision versus emotion, polish versus humanity, loudness versus dynamics, complexity versus clarity.

And despite all the technology surrounding modern production, the central challenge remains remarkably unchanged from decades ago:

Serve the song.

Not the plugins. Not the revision cycle. Not the trend. Not the technology.

The song.

Because listeners don't fall in love with productions based on the number of tracks involved or the sophistication of the signal flow. They connect to emotional impact. To honesty. To feel.

That has never changed.

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



It's full circle for Spectera at the Eurovision Song Contest 2026

TECHNICAL PRODUCTION BY AGORÀ DELIVERS A NEW BENCHMARK FOR ARENA SOUND AT THE WORLD'S BIGGEST LIVE MUSIC BROADCAST

As the official audio supplier to the host broadcaster ORF for the Eurovision Song Contest (ESC) 2026, Sennheiser deployed its biggest Spectera set-up to date at Vienna's Stadthalle, including manufacturing samples of the yet to be launched Spectera handheld transmitter. A total of four active Base Stations handled about 150 live streams for wireless mics, in-ear monitoring and control data in what is widely judged to have been the best live sound for the ESC ever, created by technical production company Agorà. Sennheiser's technical application engineering (TAE) team, headed by Jonas Næsby and Volker Schmitt, were on site to provide support with the wideband system and the new workflows it permits.

ORF had turned the Vienna Stadthalle, and in fact the whole city, into a truly spectacular venue for the ESC and its huge fan community. The excitement in the area was tangible, as it was with the technical suppliers. As Volker Schmitt noted, "The anticipation was constantly rising, especially as the 70th Eurovision Song Contest promised to be one of the most technically ambitious productions. In addition to the live television magic and creativity the ESC radiates, its scale and complexity have always been an invitation to the industry to bring – and often unveil – their latest and greatest technology. That does not just refer to us bringing Spectera to Vienna, but also to video, lighting, the laser crew, you name it."

Valerio Motta, ESC project lead at Agorà, said: "Eurovision is a fast-paced, dynamic, and highly demanding production. Everything feels calm as long as everything works, and having Sennheiser involved in such a delicate project made the entire audio team feel supported and confident. We all knew that even if any issues had come up, which they didn't, the manufacturer's support would

have been there to help resolve them in the best possible way.”

For the ESC, ORF with Head of Sound Gerhard Jansa and Agorà with project lead Valerio Motta turned the Vienna Stadthalle into a full-energy spectacle of lights, laser beams and sound.

“I believe there was a unique combination of factors that contributed to the result: excellent sound coming from the PA system, great signal flow management, and outstanding audio quality in the artists’ ears,” continued Motta. “Not receiving a single complaint from any artist is a strong validation of the listening experience they had throughout the event. Using Spectera during such a demanding production environment and integrating it into a workflow of this scale was interesting not only from a technical perspective but also in terms of operational flexibility and signal management. In a production where reliability and speed are essential, having tools that simplify complexity can make a real difference.”

In the Sound Room

Behind the scenes, technical crews, artists, and broadcasters had been working tirelessly for weeks to fine-tune every detail of the spectacular shows. The Stadthalle’s sound room, led by Head of Sound Gerhard Jansa, handled mic audio, IEM audio, artist audio preparation, and audio distribution to the OB vans. Failsafe operation was key for the entire event; for example, the sound room accommodated two independent mixing desks with an operator each.

The same idea of failsafe reliability was behind the six Spectera Base Stations that were used – while four were active for audio and control data, working on one RF channel each, another one was exclusively dedicated to scanning the spectrum 24/7, but could also run as a spare as it was already linked with all antennas. A sixth Base Station was a true spare unit.

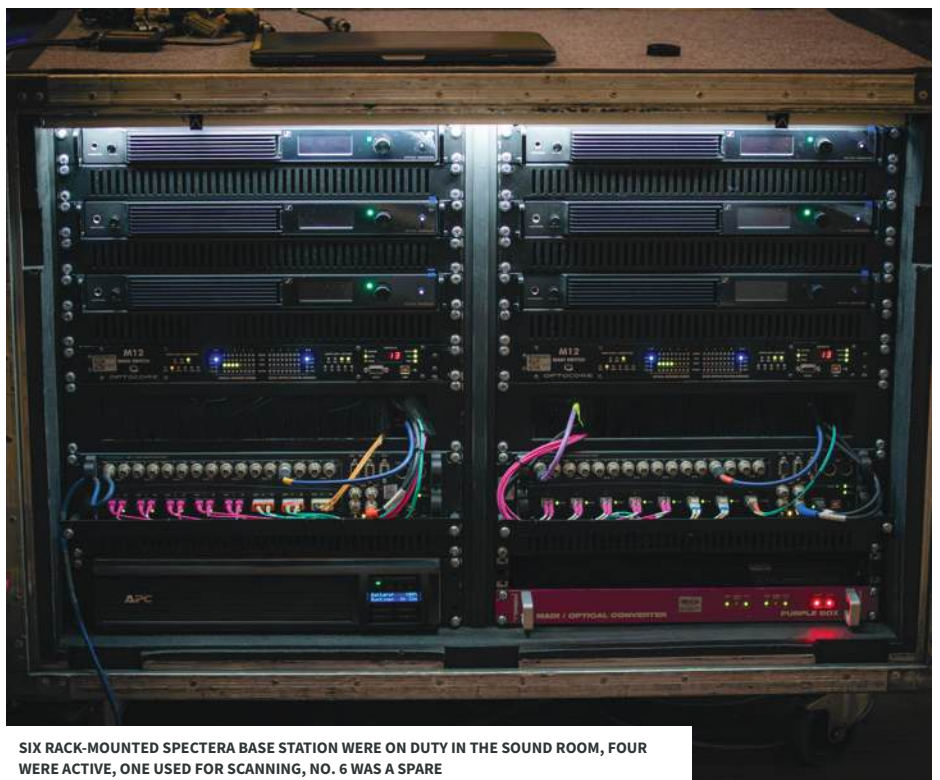
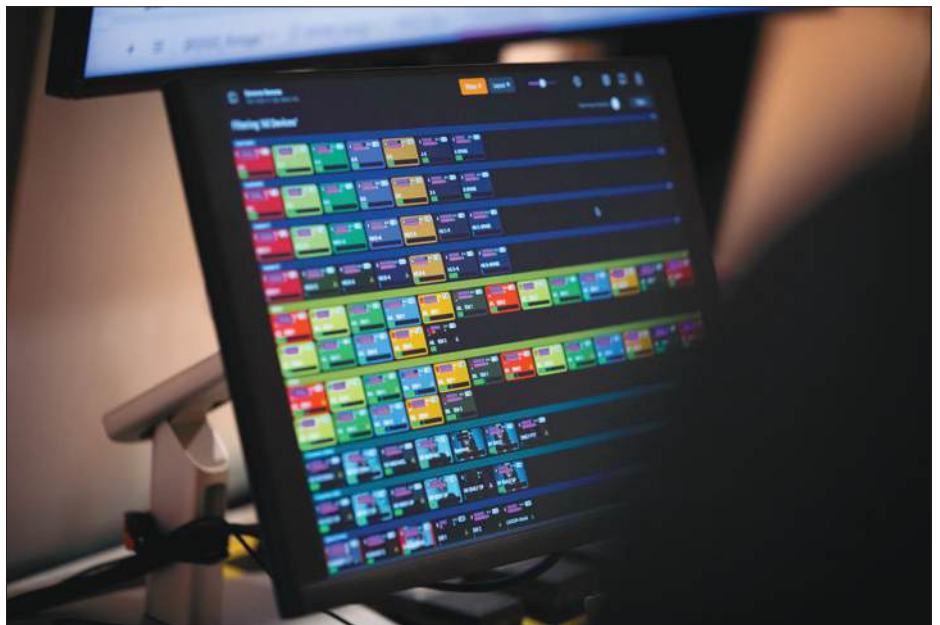
“The requirement of ORF was nicely simple and short: ‘We need coverage in the entire venue,’ recalled Schmitt. “We started out with two Spectera DAD antennas at stage right and green room left for each Base Station, and that gave us full transmit and receive power for the hall. For extra reliability, we then added another two antennas per Base Station. Also, a firmware variant especially for the event had given us a preview of upcoming functionalities that were needed on site, such as a level recorder.” An RF control centre in the sound room continuously provided a full overview of the current status of the Spectera wireless microphones and in-ears using Spectera WebUI and the Sonoros app.

Jonas Næsby pointed out the simplicity that Spectera provided for cabling the arena: “We used a fibre run from the sound room to FOH, converting back to copper using standard IT media converters. This meant that we got the full performance of the remote antennas, and not the usual compromise presented by RF-over-fibre systems used with conventional wireless.”

Spectera DAD antennas were also mounted behind the stage to ensure perfect coverage when the artists would enter the stage from behind the video wall.

Rotation makes the wireless world go round

The songs presented at ESC are three minutes long, and just as the many stagehands who were



SIX RACK-MOUNTED SPECTERA BASE STATION WERE ON DUTY IN THE SOUND ROOM, FOUR WERE ACTIVE, ONE USED FOR SCANNING, NO. 6 WAS A SPARE



THE RF CONTROL CENTER IN THE SOUND ROOM: SPECTERA WEBUI ON THE MIDDLE SCREEN, THE SONOROS APP ON THE RIGHT-HAND SCREEN, LOGGING THE DATA AND RECORDING AUDIO FOR EVERY DEVICE



CREW WITH A HEART: THE ENTIRE SOUND TEAM DONATED FOR VIENNA'S ST. ANNA CHILDREN'S HOSPITAL

working so swiftly outside the camera angles, the audio team only had 42 seconds to change over to the next act. With six people maximum on stage per act, the team provided a mic rotation of six Spectera handhelds, an in-ear rotation of six Spectera SEK bodypacks working as in-ears only, and an 'all-in' rotation of six Spectera bodypacks with headsets mics and in-ear monitors.

Næsby noted, "For the artists who opted for a hands-free solution, we used the bidirectional Spectera bodypack with a cardioid Headmic 4. This mic contributed prominently to the overall sound quality, performing extremely well in front of the PA and wind machines. For those who preferred a Spectera handheld mic, we had brought the soon to be released Neumann KK 105 A capsules. This is a super-cardioid model to get less pick-up from adjacent sound sources and the room."

Highlighting the dimensions of the show, Næsby pointed out that "No other TV production builds in more redundancy than the Eurovision Song Contest. Almost the entire set-up has a full backup system ready to take over. Really, the only two things, where a dual set-up doesn't work, are the artist, and the microphone in their hand, making it the single most important piece of equipment in the signal chain. The Spectera handheld SKM quickly proved to be the perfect solution. The unmatched RF stability of wideband transmission, combined with multi-antenna capabilities instantly provided confidence to the production that ORF had made the right choice of bringing these pre-production samples to a show of this calibre."

Amidst their work at the Stadthalle, the crews in the sound room still found the time to give something back: From load-in to the grand finale, donations were collected for St. Anna Children's Hospital in Vienna, with Sennheiser matching the contributions. ORF and the EBU also invited 16 young patients and their parents to a special backstage visit with tour guide Victoria, where they met Austrian performer Cosmo and Cyprus entrant Antigoni, while collecting autographs and selfies from other artists along the way.

Wideband advantages

"Spectera made life easier for everybody," continued Schmitt. "For the talent, who were impressed by its fantastically clear, spatial in-ear sound and who had just one bodypack to hide in their costumes when using a headset mic. For the dressing/undressing team, who were happy that there was just one bodypack to fit into the costume, and last but not least for us, as Spectera is providing us with essential health data."

"During rehearsals, we had a small incident where the talent on stage said 'I can't hear myself,'" explained Schmitt. "In the past, that would have meant that we had to dash out of the sound room and up onto the stage to check what was wrong with the device. Now, we could see the issue in the Spectera software, connect with the liaison manager, ask her to plug in the earphones of the talent, and all was set. Nobody was in panic mode, everything was calm, which gave us a very, very good feeling for this production."

Schmitt goes on to cite a more complex example with an act that changed the stage costume three times – in an environment where inconsistency can introduce errors. "In the past, we didn't have any feedback from the device about how it fared with the newly chosen costume, which in this case was studded with metal elements, making us wireless experts extra nervous. With Spectera, we could immediately see when RF health deteriorated and take counter-action, before the artists even noticed that something was not OK."

"Overall, Spectera earned praise from engineers, production teams and delegations alike for its crystal-clear audio, flawless wireless performance and exceptional RF stability in what is one of the most demanding and most celebrated live music broadcasts in the world," Schmitt concluded.

Spectera goes full circle

Sennheiser WMAS developers Jan Watermann and Sebastian Georgi were excited to see Spectera come to the ESC. "A truly unique event, and we were so pleased to see the system being employed on it for the first time," said Georgi.



"It was actually at the ESC in Copenhagen in 2014 when fading problems required me to develop some software fixes for Digital 9000," recalled Watermann. "A former shipyard had been chosen as the ESC venue, measuring 160 metres by 160 metres, everything made of metal. No RF would work in that environment. No comms radio, no police radio, no radio networks of any public authorities. We got Digital 9000 to work by employing special filters and optimising antenna positions."

"You can actually say that the ESC was the birth of Spectera, because it was there and then that we decided to address the fading issues from a totally new angle. With standard wireless, you can set up more antennas, but that does not solve the underlying problem: the fading notches and cancellations. We wanted to eliminate those at the root."

Georgi added: "And so we started out with the development of wideband technology for professional audio. Working with a broadband

channel of 8MHz, which is not prone to those fading notches, was the beginning. As bandwidth must not be wasted, this required multiplexing microphones differently, which again led us to the idea of time slots, and so the ball got rolling.”

Watermann and Georgi actually returned to that same Copenhagen venue with their WMAS demonstrator in January 2016. “We set up a single antenna, and had coverage within the entire hall! That was the first time I saw Jonas Næsby on the verge of tears,” smiles Georgi. “This shipyard is like a Faraday cage, and we had perfect coverage just like that.”

Spectera puts an end to fading – and phasing

Watermann pointed out another important aspect that often gets overlooked: “The second issue we resolved are the phase issues and clock synchronisation of digital systems, the fact that phases can cancel each other out when multiple signals converge,” said Watermann. “Standard digital microphones have an internal clock, which simply starts transmitting. Even though the sample rate of the mics is the same, they aren’t perfectly in sync. To be able to output them together, I would have to convert them all individually, because I can’t tell the microphone to go slightly faster or a little bit slower; it just transmits, and you have to process the signals as they arrive.”

“A classic example of phasing issues is a broadcast host who uses a headset microphone and at the same time a handheld mic for interviewing a guest. During the interview, the host tends to forget that he or she is miked up already, and speaks into the handheld, too. The sound engineer gets the host audio over the headset mic and the handheld, so two signals, and on the mixing desk this results in cancellations within the frequency curve. The audio suddenly sounds weirdly phase-shifted, out of tune, if you will. Then the audio engineer usually reacts very quickly and pulls the fader down on one of the mics, but for a few seconds, you can hear this phasing effect.”

Georgi added: “For Spectera, we needed to be synchronised anyway for the TDMA technique we’re using, so we can now sync the internal clock of the mics, too. Now the sound engineer no longer has any issues with phasing and can

simply mix all mics. This isn’t just theory; we built the demonstrator and actually had five open microphones, and several people listened in and noticed, ‘Wow, there’s no more phasing here.’”

“This is where Spectera comes full circle,” the developers concluded. “Development started as a solution to the fading challenges that the ESC posed, and in its 2026 edition Spectera has arrived at the ESC, solving these issues, streamlining workflows and delivering exceptional audio for artists and audiences alike.”

Næsby also was proud to once again have new Sennheiser technology on Eurovision: “Sennheiser made this show wireless back in the 80’s, digitised it in 2013 with the introduction of Digital 9000 and now uses the cutting-edge Sennheiser WMAS with Spectera.”

Sennheiser equipment in use during ESC 2026

4 x active Spectera Base Stations, using one RF channel each

1 x Spectera Base Station for scanning

46 x Spectera SKM handheld microphones with Neumann KK 105 A super-cardioid capsules

101 x Spectera SEK bidirectional bodypacks

Headmics 4 (cardioid)

IE 100 PRO in-ears and EK 2000 IEM bodypacks for the orchestra and dancers (openings and intervals)



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AV Stumpfl PIXERA powers sold-out Hilltop Hoods Australian arena tour

Melbourne-based Diverse Audio Visual Events deployed the rental staging standard PIXERA two RS Gen.2 media server to drive a unified 4K canvas on the Never Coming Home Tour 2026.

Melbourne-based production company Diverse Audio Visual Events (DAVE) recently deployed AV Stumpfl's PIXERA two RS Gen.2 media server as the backbone of the complete video system for Hilltop Hoods' Never Coming Home Tour 2026, a national run of arena shows that sold out across Australia.

Hilltop Hoods, one of Australia's most successful recording acts, took the Never Coming Home Tour to Qudos Bank Arena in Sydney, Rod Laver Arena in Melbourne and RAC Arena in Perth, and more, with sold-out dates placing Diverse AV at the heart of one of the country's biggest hip-hop tours of the year.

Brad Hurlle, founder and managing director of Diverse Audio Visual Events, was responsible for designing and delivering the tour's full video production. Hurlle selected the PIXERA two RS Gen.2 following consultation with Branden Butler of Show Technology Australia.

The compact, yet powerful 2U media server offered the performance and flexibility the project required. "Going with the PIXERA two RS Gen.2 ensured we delivered both performance and flexibility without compromise," says Hurlle.

The visual design was built around a unified 4K canvas across all LED surfaces, utilising INFILED Black Widow mesh LED systems at an 8.3mm

pixel pitch to create a seamless large-format stage picture. The show ran on timecode for precise and repeatable execution night after night, while the system also had to handle extensive live camera feeds and rapid camera cuts throughout. "The main goal was to build a turnkey video system that could scale easily from arenas through to festivals, while still keeping latency low so the crowd felt totally connected to what was happening on stage," says Hurlle.

Given the tight production timeline, the team used PIXERA zero for pre-programming, building and refining the show ahead of deployment. On show, the PIXERA two RS Gen.2 handled all playback, with control routed through a ChamSys MagicQ PC Wing for real-time layer manipulation and opacity control.

"One of the standout features for me is the timeline workflow. The ability to make live edits and adjustments on the fly has been a gamechanger," says Hurlle. "When I was sitting



down with the Hilltop Hoods team and the LD, Paul 'Pauly' Owen, it allowed us to be incredibly reactive to any and all ideas and requests in real time. We could quickly shape how the overall visual looked, and, more importantly, how everything tied in with the lighting design and how the act felt onstage."

The project also marked Hurle's first go using Notch, working alongside Adelaide-based content designer and programmer Brenton 'Marchie' March (aka CtrlldChaos). March found PIXERA straightforward to navigate, particularly when it came to exporting control modules and getting Notch blocks running smoothly. "Once we had that dialled in, it really opened things up creatively, while still keeping the system running clean and stable," says Hurle.

The Never Coming Home Tour was the first time Hurle had deployed the PIXERA platform. In the lead-up to the tour, he received support from Paul Collison of elevendesign, one of Australia's most experienced lighting designers and a longtime PIXERA user. "I've been keeping an eye on PIXERA for a few years, but I haven't had the right project to fully leverage its capabilities. The Hilltop Hoods tour was the perfect opportunity," says Hurle. "Transitioning from another platform was very straightforward. What sold me was the balance of affordability, flexibility and scalability."

"I can't say enough good things about the direction and capability of the PIXERA platform," says Hurle. "Diverse AV is stoked to be a rental house of LED screens and now to have the ability to control and manage those screens via PIXERA too."





Ayrton Diablo shines in Masquerade

A NEW IMMERSIVE PRODUCTION OF ANDREW LLOYD WEBBER'S PHANTOM OF THE OPERA

Five-time Tony Award-nominated lighting designer Ben Stanton chose Ayrton Diablo S fixtures for the latest interpretation of Andrew Lloyd Webber's iconic "Phantom of the Opera": an immersive production called Masquerade, being staged on West 57th Street in Manhattan.

Masquerade began previews July 31, 2025 and has been a hot ticket ever since. The show takes guests, clad in formal evening wear, through the Paris Opera House where they move through the music, mystery and seduction of the 'Music of the Night.' They journey across multiple floors in an expansive former retail space Lee's Art Shop and experience what the press has called the complex and intimate staging and lush visuals of the famed narrative.

Stanton had used various Ayrton lighting instruments for concert tours before he first implemented Diablo S fixtures for Broadway's Maybe Happy Ending. He has reprised them for Masquerade with PRG furnishing the large complement of fixtures.

"Andrew Lloyd Webber is excited about supporting new interpretations of his classic works," notes Stanton. Masquerade is a chance for Phantom fans and people who have not been exposed to the previous shows to experience the production in a more intimate way. The show covers four floors

and the rooftop of the former Lee's Art Shop and was a huge undertaking to light: It was like doing many plays at once. We lit at least 30 spaces, some with a very high level of theatricality, some very experimental and some in-between."

It was Stanton's goal that each space "feel authentic and not overloaded with theatrical equipment. We tried to hide as much as possible

and use smaller scale fixtures, but we were still lighting a musical and needed to do justice to the singers and these amazing songs."

Using Diablo S fixtures again was "a no-brainer," the lighting designer recalls. "Size and weight were crucial factors, and the Diablo has a high output for their size and are really beautiful lights. They are concentrated in certain spaces, some mounted





in the plaster ceilings, some on unistrut and other unconventional rigging solutions.”

“The show is intricately timed and staged with six audience groups moving through in 15-minute intervals,” Stanton explains. “Some spaces are used in multiple ways: You can revisit them and they look entirely different. You can attend the show more than once and have different experiences. The Diablo helped with that dramatic transformation.”

He says the Diablo fixtures are “beautiful for creating heightened theatricality and intense focus on moments featuring iconic songs. They are also integrated inside the famed chandelier to create special effects.”

Stanton and his team of Associate Lighting Designers David Shocket and Vittoria Orlando, Programmer Alex Fogel and Production Electrician Briana Messina worked the entirety of last summer to put together the lighting for “Masquerade.” “It’s like nothing I’ve ever done before; I’m very proud of it,” Stanton says. “The Diablo fixtures were a great choice and such reliable fixtures. They’ve performed perfectly with no issues.”



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PARAGON Precision Powers the Visual Spectacle of The Thorn

The Thorn continues to captivate audiences across the U.S. on its 2026 spring tour with a sweeping blend of theatrical storytelling and modern production technology. Touring the South and Southeast through early May, the large-scale production combines drama, dance, music, martial arts, and aerial acrobatics, brought vividly to life through a striking lighting design by Cory Fournier.

This year's production features a full lighting refresh that includes Elation's PARAGON M LED profile moving head, supplied by 4Wall Entertainment. The fixtures play a central role in shaping the show's visual language from subtle emotion to high-impact concert-style moments.

Visual Storytelling

The modern-day passion play delivers an immersive retelling of the life and death of Jesus. Working alongside Creator and Founder John Bolin and Director Andrew Harmon, Fournier helped shape the look of a show that leans heavily on visual storytelling.

"Lighting plays a gigantic role in guiding the audience's experience," explains Harmon, who

has been directing the show for the past 15 years. "Lighting tells the audience where to look and, in many ways, it becomes part of the dialogue. It says 'this moment is important' or 'wow' or 'this is a sad moment.'"

Precision

An Emmy Award nominee for his work on Fox's *The Masked Singer*, Fournier brings a wealth of experience across broadcast, film, and live events. His connection to *The Thorn* dates back to 2010, having first joined as a lighting tech under early collaborator Robby Kurtz of 4Wall. Departing in 2012 to pursue his own career before returning to this year's production, Fournier collaborated closely with Harmon and Bolin on the production.

Each year, The Thorn adopts a guiding principle to focus on, with 'precision' chosen for 2026. "Even before the tour started, we focused on precision with the crew," Fournier explains. "When we brought in the PARAGON fixtures, they immediately meshed with that concept."

Fournier, who serves as production manager, lighting designer, and lighting director on the tour, embraced that philosophy while refining a design he inherited from previous Thorn collaborators. Given creative freedom, he introduced new programming elements, sharpened the visual look, and added his own 'tips and tricks.'

"It's been a lot of fun," he shares. "We kept the core of what makes The Thorn special but upgraded the rig to deliver sharper, more precise lighting throughout the show."

A Versatile Rig for a Dynamic Show

Recommended by 4Wall's VP of Business Development, Robby Kurtz, PARAGON has proved to be a versatile and reliable solution on the tour. "I've been thoroughly impressed," says Fournier. "The framing shutters are incredibly accurate, the colours are rich, and the increased lumen level across the stage really shows. The precision on those fixtures has been great." He adds that they haven't had to touch the spares or even reset a fixture.

The lighting system includes 36 PARAGON M fixtures deployed across the rig. 10 are positioned on the front-of-house truss for key lighting, while the remainder are distributed across side-stage toms and overhead trusses. The majority, 32 units, are integrated with a real-time performer tracking system. To cover the variation in the story, Fournier says he leans into the fixture's full feature set.

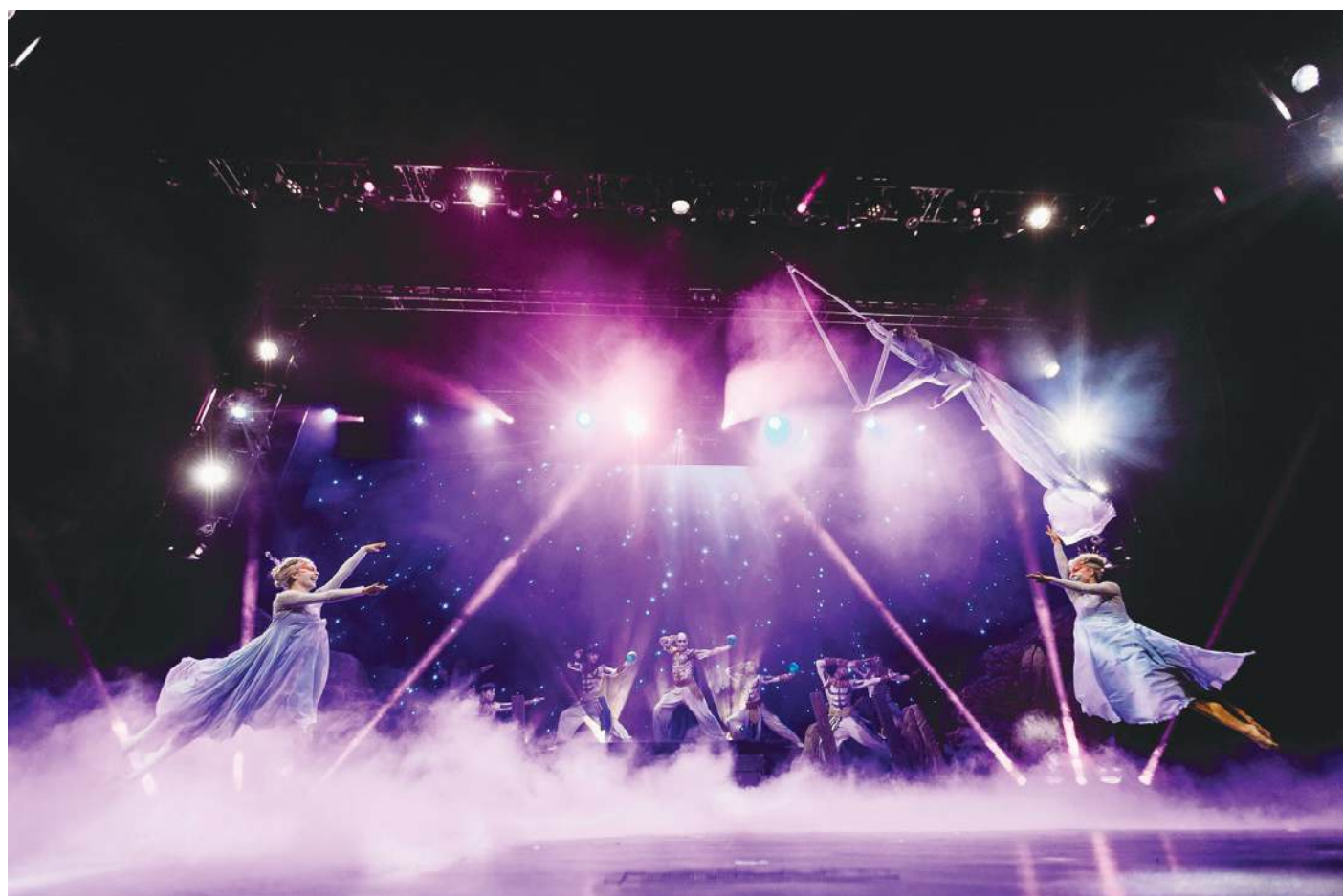


"We're using virtually everything the fixture offers for high-energy, concert-style looks, to very quiet, emotional moments," he explains. "One of the biggest comments we get when people first see the show is that they didn't expect how varied and impactful it would be, and it's what makes the experience so powerful. One minute it's deeply theatrical, set-piece driven and dramatic, and the next it feels like a full-on rock 'n' roll show. It's a full experience."

Creating Emotional Impact

The ability to support storytelling through light is central to the production and PARAGON effects capabilities, from color floods to break-up textures to mid-air beams, all play a key role in maintaining visual interest throughout. Among the many visually striking scenes, one moment stands out for the designer and, undoubtedly, for many who see the show.

"It's the starry night scene when Jesus is born," Fournier says. "Dot gobos from the PARAGONs cut through the haze, and it feels like you're really inside that moment. Using gobos and the animation wheel while tracking creates these





beautiful, evolving shadows and textures as the focus moves around to the different zones. The beam spread across the room, and the clarity of the fixture really carries the emotion and underscores the importance of that moment.”

While *The Thorn* assumes that many audience members are familiar with its story, the production aims to create a deeper connection. “We assume that most people know the story of Jesus, but they might not have experienced it or felt it,” Harmon says. “We hope people leave the show with a different understanding of the story of Jesus and that they feel it more emotionally.”

Powered by Partnership

4Wall provided the AV package for the tour, including the new lighting kit. Fournier credits the company for helping shape the system, and for its excellent on-the-road support. “4Wall has been incredible to work with,” he said. “The gear looks brand new out of the box, and Robby Kurtz and Gabe Thruston are great to work with. It’s a great team and makes a big difference when you have that level of partnership on a tour like this.”

LIGHTING CREW:

Production Manager and Lighting Designer:
Cory Fournier (www.CoryFournier.com)

Lighting Programmer and Lead Rigger:
Levi Foster

Lighting Crew Chief: Alex Martinez

Lighting and Video Tech: Zach Moore

Lighting and zacktrack Tech: Teddy Mendoza

4WALL ENTERTAINMENT:

Robby Kurtz: VP of Business Development

Gabe Thruston: Director of Live Events



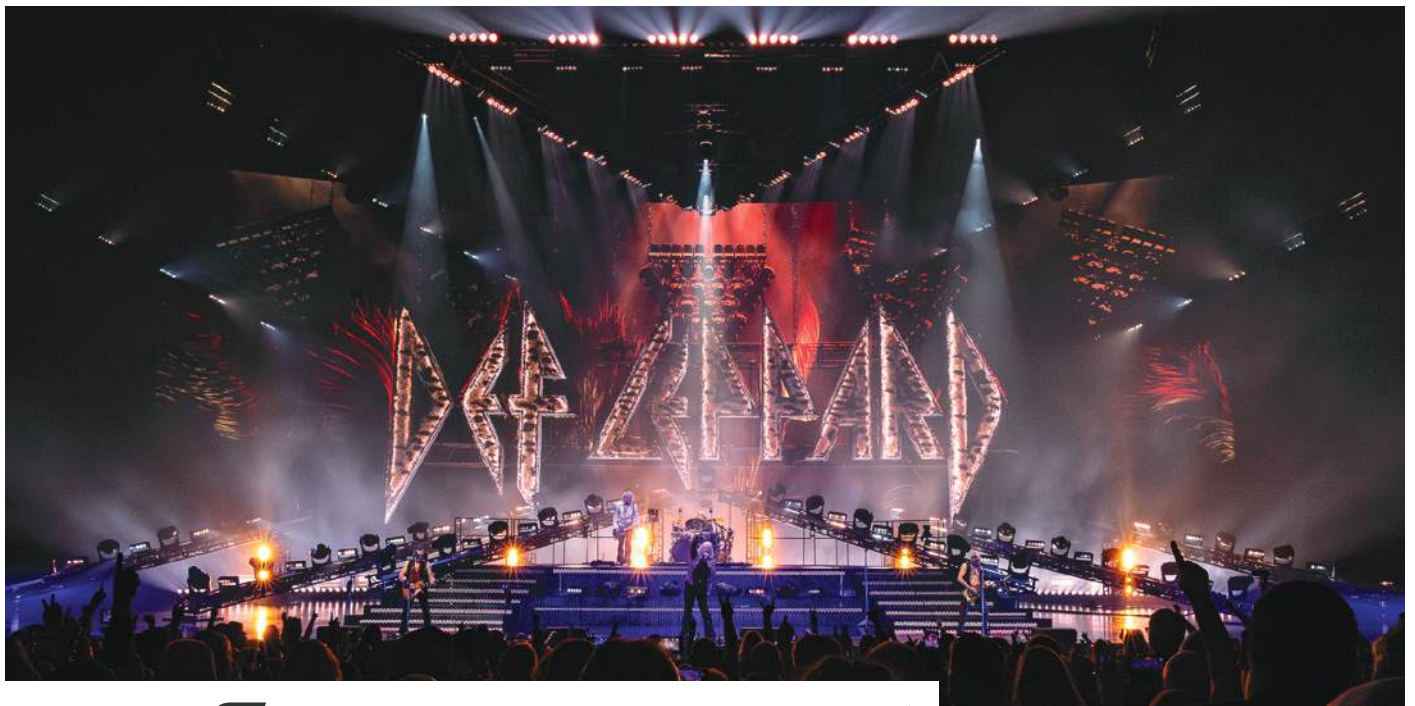
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Def Leppard Hysteria in Las Vegas

Legendary Rock ‘n’ Roll Hall of Famers Def Leppard – one of the biggest-selling rock artists of all time – played 12 incendiary sold-out shows at the Colosseum at Caesars Palace, Las Vegas, complete with a spectacular new visual and lighting design created by Montreal-based Luz Studio.

On Luz’s lighting rig were some core Robe products, including WTF! IP rated LED strobe-wash-blinder fixtures, Tarrantula wash beams and four RoboSpot systems running with 18 BMFL FollowSpots, all supplied by Christie Lites, co-ordinated via their UK office.

Luz Studio was brought on board to produce a completely fresh live performance environment for the band, which involved delivering a full visual package, including a stage set and some very striking video content. Embracing all the visual elements collectively ensured great optical harmony and balance, a creative treatment noticed and very much appreciated by fans.

A starting point for the stage aesthetic was a massive 110ft wide by 40ft high upstage LED screen, with a triangular-shaped double-layered set of risers in front, flanked by two diagonal staircases and two ground-level raked diagonal trusses per side.

The band made their entrance via the venue’s large stage lift, and the show started with them

ascending to stage level and initially being framed by an automated ‘hero’ triangular-shaped truss that flew out during the first number, completing the last segment of a Union Jack-shaped truss facing the audience. This was a nod to their British roots, hailing from Sheffield in the late 1970s.

As the design started to evolve, creative director Matt Larivee knew early on that they wanted to use WTF!s and RoboSpots.

He had seen the WTF!s during a visit to the Robe factory in the Czech Republic at the end of 2025. “They looked fantastic, so I thought they would be ideal for this residency, especially to cut through the massive video wall. I really needed fixtures with plenty of power and options.”

The four floor-level angled trusses traversed the stage set at around 8ft high, two each side, and the 18 WTF!s were deployed on these trusses.

The set was a combination of Def Leppard classic anthems, moments and greatest hits from their nearly five decades of popularity and success, together with edgy new material, so Matt needed plenty of latitude and dynamics in the lighting to cover all eras of the music.

He loves the WTF!’s zoom feature, as well as the pan and strobing options, but it was actually the warm white LED zone of the fixture that was a dealmaker for him.

This was because he knew he could get that classic retro blinder look that would help define a range of classic ‘big rock’ looks – which,





together with the associated video content, were juxtaposed so elegantly.

The 24 Tarrantula wash beams were split into two batches of 12. One set was positioned on the downstage truss, used for general band and mid-stage wash, and picked for its intensity and relatively directional beam, so he could contain the field-of-light without it spilling onto the diagonal-shaped set piece upstage of the band.

The other 12 were on the floor, either side of stage, washing across the band from a lower level, again using the contained beam path to avoid messy encroachment onto the side walls.

A total of 18 BMFL FollowSpots were utilised, running on four RoboSpot systems, each following the four mobile band members with three BMFLs from the front, plus either one of two from the back. The operators were all positioned offstage. Matt would have ideally liked to use FORTES on the system, but he was happy to go with BMFLs. They are reliable and a known fixture that have graced many of his previous designs.

Apart from the enormous flexibility that RoboSpot brings to any performance area, Matt specifically likes this remote follow system because of its straightforward application and abundance of good operators.

The fluidity and consistency unlocked by being able to imagine lighting and video worlds together with the 3D set parameters simultaneously for a high-profile show like this was visibly present, and, as with any Vegas residency, production values were high and there were many expectations.

“We – us, the band, management – all wanted the show to have an arc, so songs and timings were carefully selected where we could build those moments, and create big, bold, memorable looks that were not overcomplicated, so they really spoke out to the audience,” noted Matt.

These reinforced the songs and narrative while providing an additional tempo, framework and drama for the show with lighting and video combined. Notables included a giant leopard, which looked about to pounce off the screen and onto the stage at any moment, but these kept rolling through the nearly two hours of rock-tastic energy.

Many of the video environments also included virtual lighting, diligently calculated to riff and contrast with the real lighting onstage, evoking an eye-catching synergy of optical trickery that also helped move everything along.

The Luz Studio team worked closely with Def Leppard’s longtime lighting director, Cole



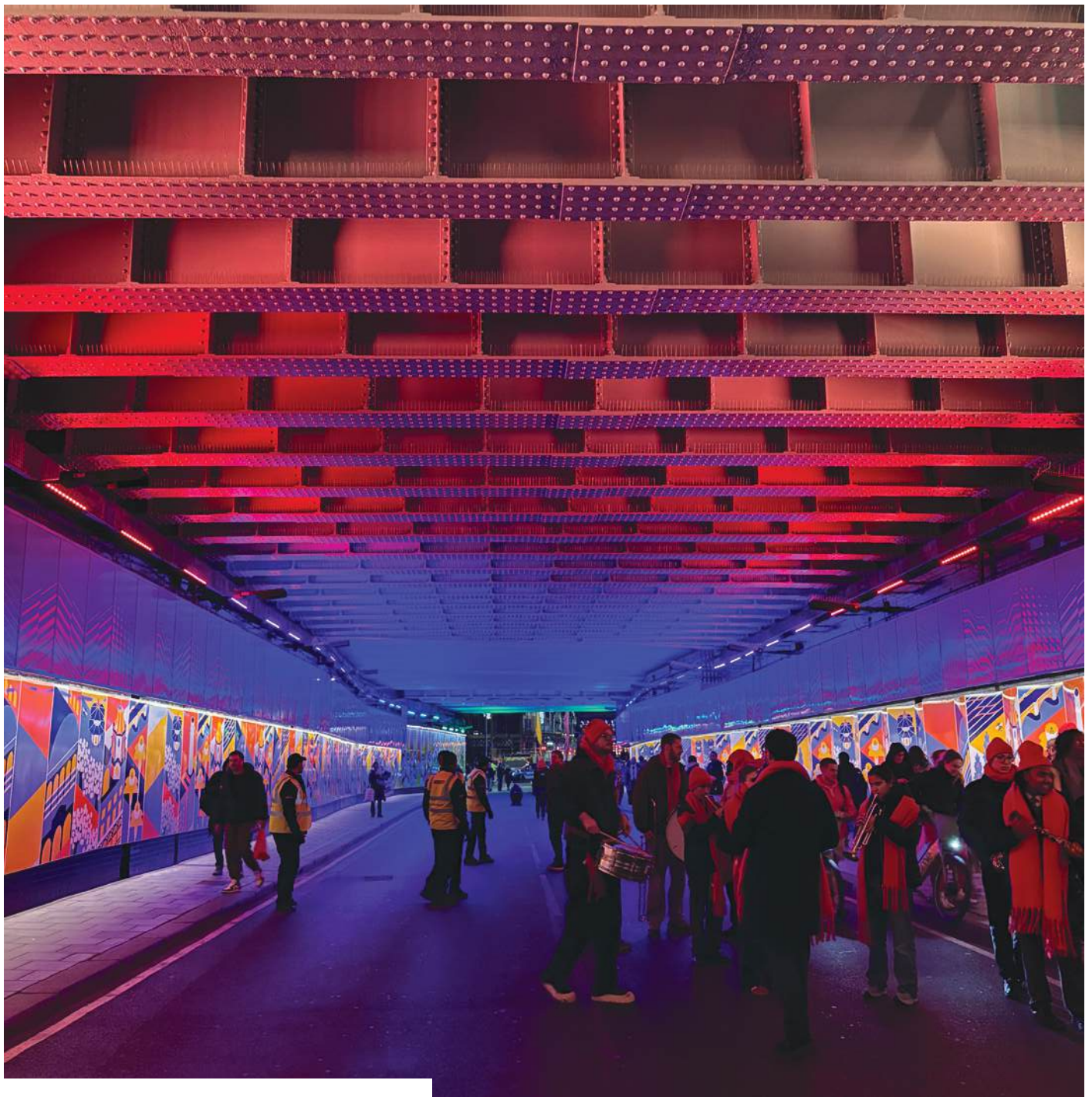
MacDonald, who flew out to Montreal and pre-vizzed with them, as well as being on-site at the Colosseum and running lighting for the shows.

Luz Studio’s Pierre-Luc Bedard led the lighting programming with Philippe Marquis and Cole MacDonald.

The new-look stage presentation was a huge hit with everyone, especially the fans.

Def Leppard is a band with almost a cult following and many fans from different generations catching multiple concerts during a touring or performance cycle. Impressions from numerous comments suggest that for them, this – the band’s third Vegas residency – was a next-level, “best ever” live show phenomenon!





ANOLIS GOES BEYOND THE BRIDGE

“Beyond The Bridge” is a cool and creative community driven intervention that has transformed the Falcon Road Rail Bridge underpass in Clapham, South London, from a dingy, uninviting urban walkway to a safer, more pleasant and visually stimulating environment with the application of art, lighting and logistics.

Now featuring 70 Anolis Eminere 4 luminaires plus other new lighting fixtures, the project was commissioned by the London Borough of Wandsworth in a bid to transform the 100-metre-long major rail and road intersection in a practical way that addressed community concerns and became a local talking point.

A competition for architects, designers and artists to present ideas was launched in 2024, resulting in a winning entry picked for its innovation and vibrance.

“Beyond The Bridge” was a bold, collaborative vision, collectively imagined by GPAD architects, community engagement specialist POoR, MRG Studio, Sutton Vane Associates (SVA), Cundall and MDA Consulting, with SVA responsible for the lighting design.

SVA in turn specified the 70 Anolis Eminere 4 low-profile, high-output, IP67 rated LED strip luminaires to be a major part of the new lighting

scheme, with 35 fixtures installed near the top of both sides of the underpass walls on special mounting brackets.

Mark Sutton Vane, who heads up the Hammersmith-based architectural lighting design practice, explained that POor (Power Out of Restriction) had engaged in hugely valuable ground research with the community to get feedback and inspiration for the artwork that now stretches along the full length of the passage, which then needed appropriate lighting.

There were three elements to the lighting design of “Beyond the Bridge”: The first was to provide comfortable and legally compliant street lighting for all using the busy road that was brighter at night and dimmed down to 20% during the day; the second was to provide balanced lighting for the art panels and the third element was adding illuminative fun into the equation, which is where the Anolis fixtures came in.

“We wanted to be able to colour the whole scenic area along the bridge,” stated Mark, “this included the walls and the overhead steel support beams, so we needed powerful high-quality luminaires with very good colour mixing, and that’s when Anolis came to our attention.”

The Council chose a signature blue colour from the Anolis fixtures which lights the whole roof elegantly and provides a nice iridescent glow. This runs for 10 minutes, then morphs into a very subtle and slow rainbow chase activated over a 5-minute period, carefully calculated to not be distracting for passing vehicles, before reverting to the solid blue.

The Emineres are programmed and run via a Pharos controller.

The fixtures also needed to be robust. Being waterproof was a given, as was extended longevity, and they also have to withstand the bridge’s constant vibrations from Network Rail rolling stock traversing multiple tracks above, going in and out of Clapham Junction station – one of the busiest rail intersections in the UK – that operates round the clock.

The lights also had to be resistant to other common urban hazards like pigeons, although reducing their presence was also part of the overall project.

It was the first time that SVA has specified Anolis products. A major challenge for Mark and his team was to find fixtures that were tough and well-engineered AND that met all the technical specifications, which included DMX control, brightness and high-quality output and colour rendering. Eminere 4 was chosen after extensive testing.

The Eminere 4s are also a highly sustainable solution, with power consumption that is straightforward to calculate for UMSUG (Unmetered Supplies User Group) evaluation, which measures the energy consumption of non-individually metered electrical equipment connected to a distribution network for accurate billing.

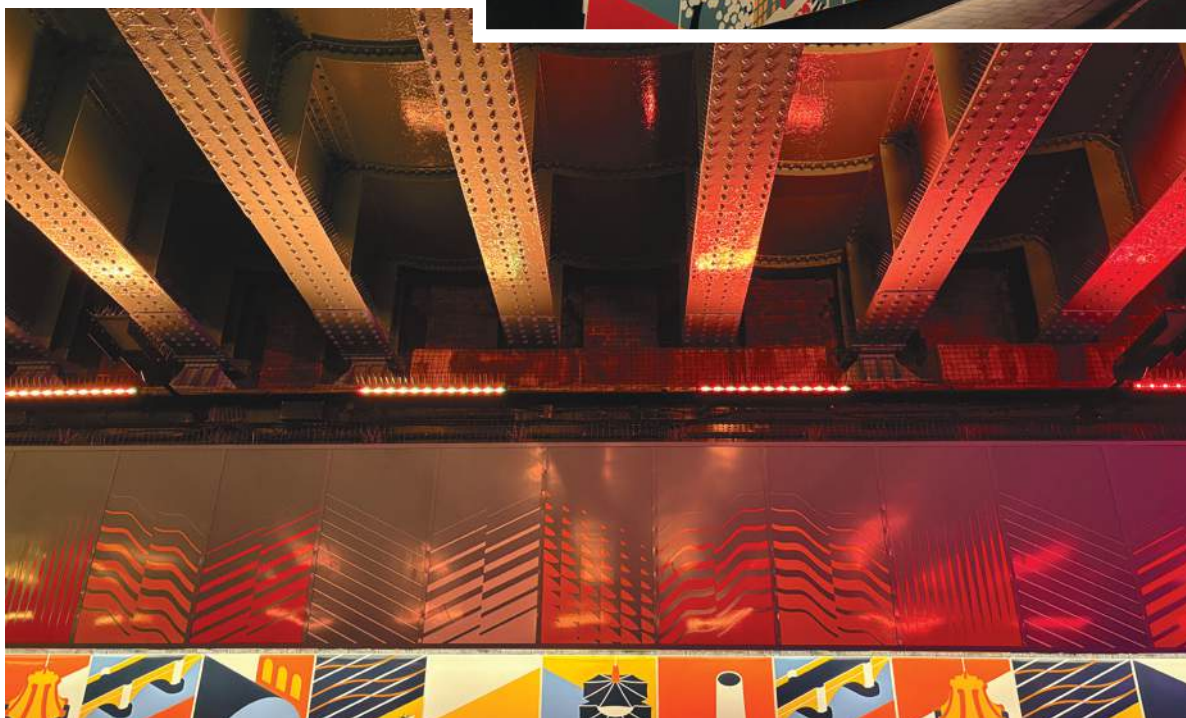
Anolis designed and built the special Eminere 4 mounting brackets which utilised as many existing holes as possible in the original Victorian brick

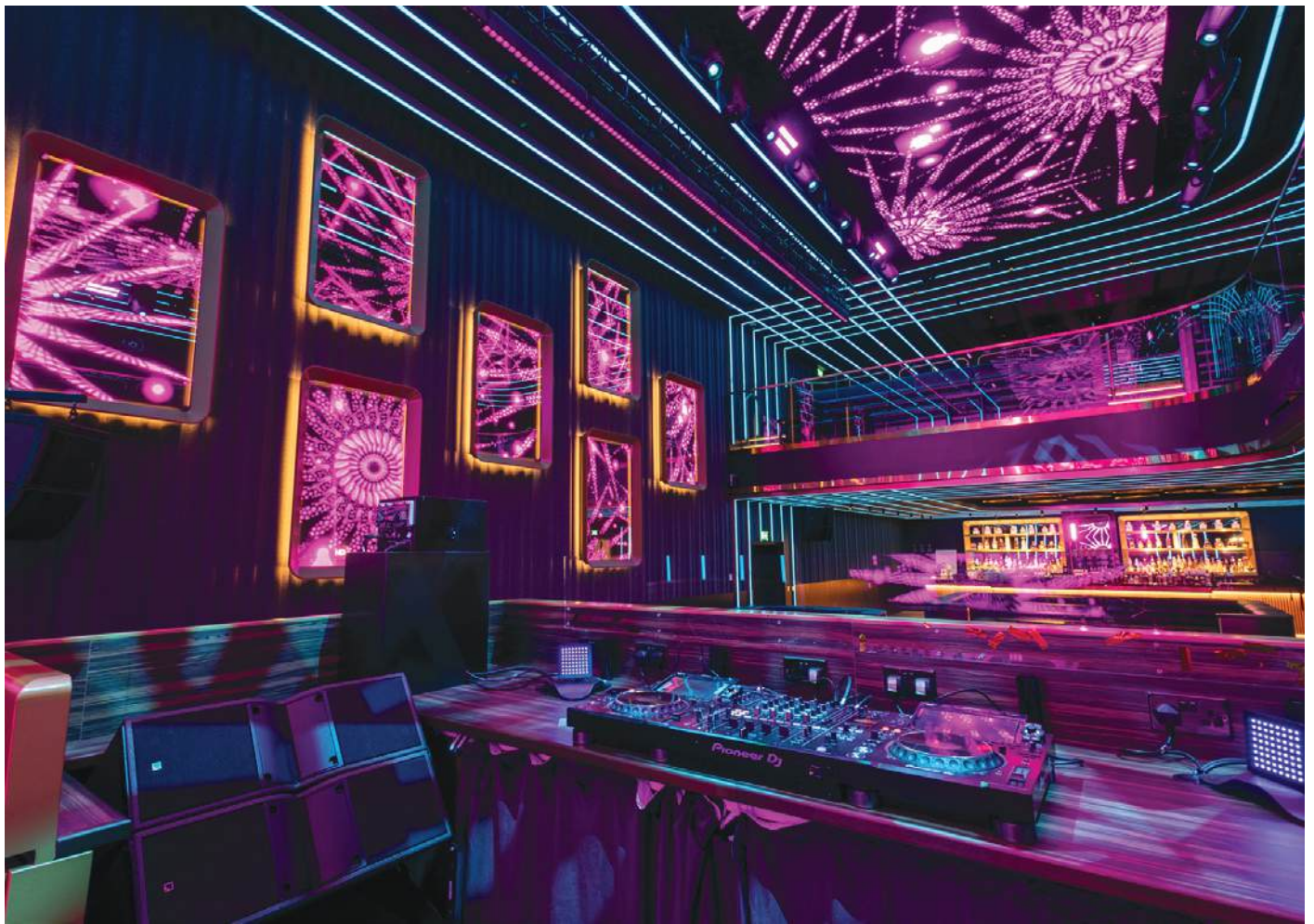
walls from the previous lighting installation. The brackets had many variants as the runs of lights are not exactly straight, and had to navigate drains, pipes and other obstructions.

Mark was impressed that none of this was an issue for Anolis. He liaised with Ashley Popple from the Anolis UK office and also appreciated the speed of manufacture and delivery as the project realisation lead time was swift once the design received the full go ahead.

The lighting installation was completed on site by electrical contractor Armadillo Lighting using bespoke cable layout designed by Sutton Vane Associates to ensure all necessary wiring stayed neat and well protected.

Everyone involved is immensely proud of this project, noted Mark, which also coincided with Wandsworth Council’s year as London Borough of Culture in 2025. Mark enjoyed the experience and camaraderie of being part of a “highly skilled and talented” team delivering a public art initiative that will be a permanent legacy on the Clapham Junction landscape.





Robe Helps Bring Las Vegas to London at BoTree's 77



The BoTree London is a cool new-build hotel property and part of Hilton's Curio Collection, located right in the heart of Marylebone, central London, combining all the individuality and style of boutique accommodation with the vibrance, colour and atmosphere of the bustling metropolis. It offers a welcoming, stimulating environment, perfect for those travelling for work, pleasure and adventure.

77 is a cosy and exclusive club and event space that is part of the hotel, described as "an intimate space where warmth, technology, and world-class music intertwine". It's slick and imaginative production design – encompassing lighting, audio, video, DJ setup, rigging and automation – was created and curated by Audiotek, with the lighting rig featuring Robe PAINTE Profiles and Tetra2 moving lights.

Headed by Frank Murray, Audiotek is acclaimed for its work in some of the most prestigious clubs worldwide over the last two decades, including Omnia and Hakkasan in Las Vegas – both of which also contain some Robe fixtures among other lights – and this is why they were approached to design an eye-catching and fabulous sounding technical set up for 77, allowing it to be anything from a discrete club experience to a dynamic multipurpose event venue.

Audiotek UK's director Chris Kmiec explained that the client left the overall system design elements for the 700-capacity venue to them, but their brief was to evoke a truly international top-end club look and feel, something that combined the best aesthetics from contemporary Las Vegas, Miami and New

York clubland, but that also offered something truly London in the mix.

The slightly asymmetric shape of the space was an anomaly they embraced, and one which helped inform the technology and the design. "It made things slightly more complicated, but it also added character," explained Chris.

Having used different Robe fixtures on numerous previous designs, the Audiotek team were looking for LED lighting fixtures that were physically compact but as bright as possible, so they could be densely packed in the roof. Knowing that the room would also be used for fashion shows, product launches and general private events and parties, they also looked for flexibility.

Quality was also important, and they wanted "reliable and contemporary products that would not look dated after a couple of years," leading them to PAINTEs and Tetra2s, which "ticked all our boxes and more," noted Chris.

He highlighted that a brand with strong local support was another must, and having dealt with Robe UK on multiple other occasions, they were happy to do so again.

The lights are rigged in the roof on custom frames, which are chemically fixed into the venue's concrete ceiling, and these were fabricated as part of the package, together with video elements.

Serious discussions evolved around positioning of the DJ booth due to the asymmetrical shape on two axes, with a decision to put it at the shorter end of the room, so the technical

design also had to accommodate the balcony void, but without compromising the overall look and height of the space.

It was the first time that Audiotek has used PAINTE Profiles or Tetra2s in one of their venue installations. Choosing PAINTEs as a fixture that produces equally effective spot and wash beams and looks, it thereby reduces the amount of hardware needed for double the effect.

They were impressed by the PAINTE's intensity and sharpness, and the number of features it offered, including static and rotating gobo wheels, full curtain framing shutters, prism and a very handy 8° - 48° zoom.

The Tetra2s were picked for their classy linear look and their versatility, and their ability to produce sheets and lines of light/pixel effects, twinkling and other eye candy. Their linearity perfectly fitted the architecture of 77, and some of them are rigged on motorised bars, which allows a more symmetrical lighting look to be produced if desired.

Frank and Chris completed all the conceptual technical design elements, Chris project managed the installation, James Benthams was their LD and the technical and systems designer was Ash Attwood.

Visual Zuu is the technical service provider running the venue's production elements day-to-day, also supplying cool video content and lighting operators.



This has been a really long tour.
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Frankston Arts Centre's Updated LX Rig

Melbourne's Frankston Arts Centre hosts close to 270 performances each year. Until recently, it was seeing to this feat with a rig that consisted of conventional Selecon Rama Fresnels and some generic LED Pars. "We had the ability to do multiple colours, but it was a very old design from the nineties," says Supervising Technician Glenn Parry.

While they certainly won't be retiring their trusted conventional fixtures anytime soon, the lighting rig has received a major upgrade with the addition of 12 Ayrton Diablo Profiles and 12 Ayrton Levante wash fixtures.

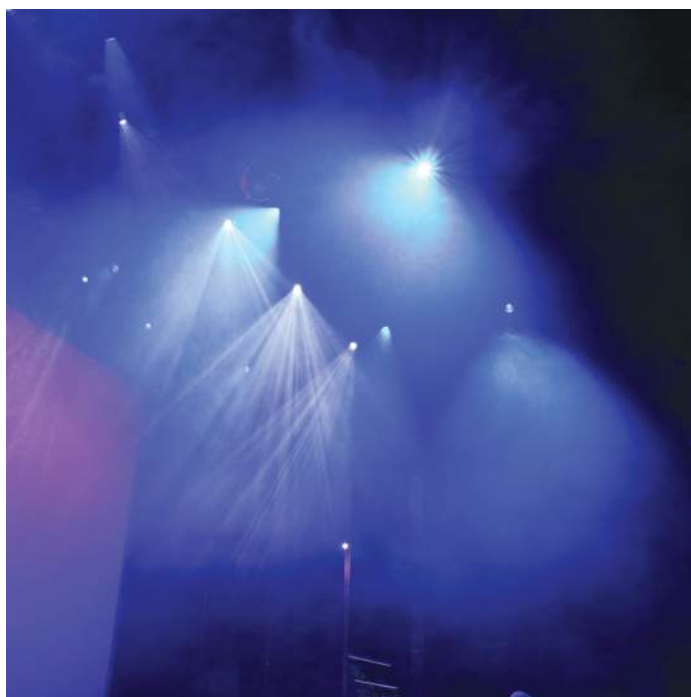
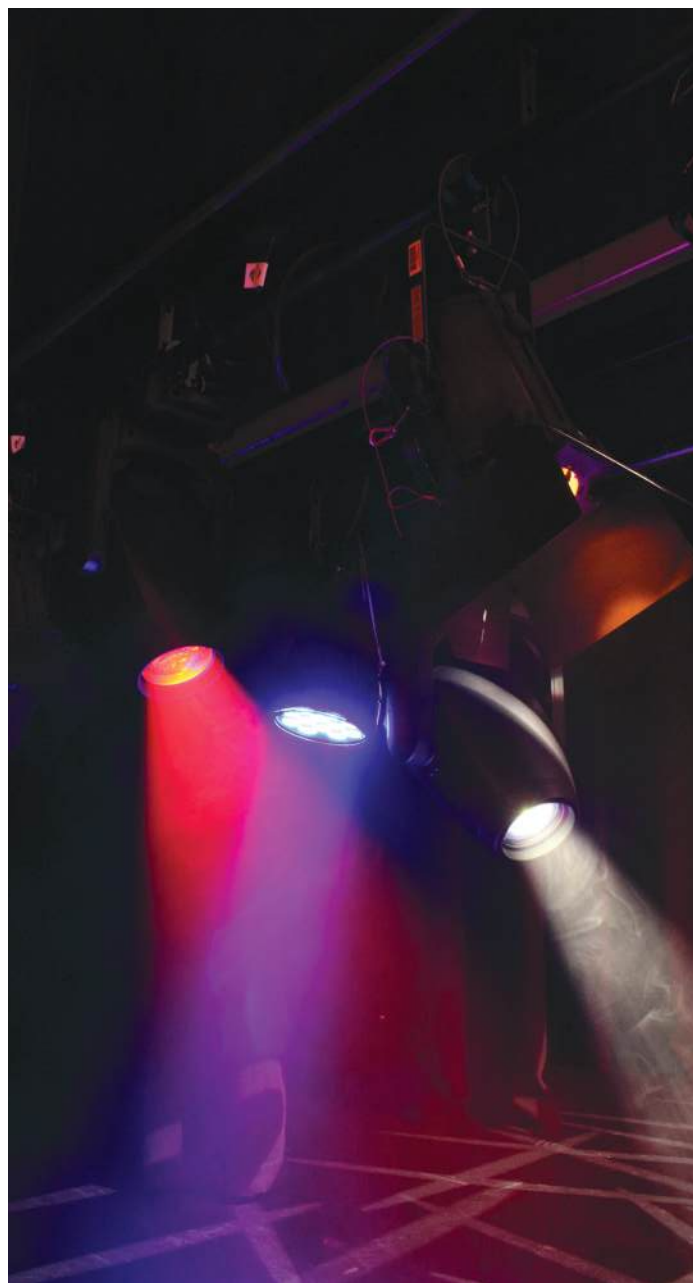
The choice of fixture was made collaboratively by Glenn, fellow Supervising Technician Samantha Crawford, and Team Leader of Production & Technical Operations Damian Clarkson. Input was also sought from other departments, such as the sound technicians – particularly those working from within the auditorium – because while they may not specialise in lighting, anybody with a pair of eyes has a valid opinion.

The benefit of being a touring house when shopping for new gear is that the team were able to road test the different fixtures that came through with various hirers and make an informed choice. "We settled on the Diablos for their output, their weight and their features," says Glenn. The investment was a long time coming, but Glenn is thankful for this. While the team were getting their ducks in a row there were advancements in what was on the market. "The LED stuff these days is so much better and a lot lighter than the arc lamp fixtures," he says.

The initial purchase was of six Ayrton Diablos back in 2024. "The range of Ayrton lights is phenomenal for what they do, and they seem to be quite

reliable,” says Glenn. So when they received funds to expand, they added another six Diablos and the Levantes.

The team chose the Levantes over an array-style fixture, as the need to light very close to the cyclorama requires the use of shutters or barn doors. For the same reason, the profiles also needed zoom capabilities to achieve tight specials on performers. Glenn is particularly pleased with the level of control and the fixture’s ability to create intimate, more ‘moody’ lighting looks. “I tend to light people as opposed to lighting the space,” he says.



The range of hirers Frankston services is broad – from mainstage companies, like the Melbourne Symphony Orchestra, the Australian Ballet School or MICF Roadshow, to live music, amateur theatre companies and school shows. The rig's functions now match that versatility. The team can light a 16-piece band or 300 school kids using the same set-up. "We have seasoned shows that come in and they want the same look everywhere they go. As a semi-regional venue, we are now very well equipped."

In addition to new and improved lighting looks, the team are working more efficiently thanks to the ability to have pre-saved palettes and looks that can be recalled quickly. Returning to a standard rig no longer requires manual focussing. "It's been an amazing change," Glenn says. "We've had some really good compliments." When Mike Oldfield's Tubular Bells performed at the venue, they told Glenn of the 64 venues they'd previously toured, Frankston had supplied the best lighting.

Alongside the 800-seat main stage is Cube 37 – a black box space with a retractable seating bank – and The Function Centre. These venues also received a glow-up with twelve ShowPro R3 wash fixtures. Each venue got six fixtures that are run through an MA dot2.

The wide zoom range on the R3s – from a wash to a pin spot – has allowed the ability to produce a discreetly lit show. "When we have only two performers we can create an intimate feel, as opposed to Pars that just wash the whole space with light," says Glenn. The spot is also perfect for focussing a lectern special. Glenn is happy with the speed at which the moving head's functions – zoom, pan, tilt – are executed and the warm white he is able to mix. He favours their additive RGBW colour mixing. The alternative subtractive CMY mixing, more commonly used on discharge lamps, can lose a lot of output when using dark colours. Glenn finds the R3s retain their brightness even in dark blue.

Invigorated by their new toys the team are now setting their sights on more upgrades, with the hope of adding a floor package and hopefully one day an MA3 console. Glenn may favour moody looks, but Frankston Art Centre's future is shining bright.





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Beyond The Game: *Lighting The Modern Arena Experience with Elation*

From historic arenas to next generation builds, lighting in North American sports venues is undergoing a quiet but significant shift. Recent upgrades at some of the country's most prestigious arenas - Intuit Dome, Crypto.com Arena, American Airlines Center, and United Center - highlight a broader trend: venues are rethinking not just how they illuminate the game, but how lighting shapes the entire live experience.

Increasingly at the centre of these modernisation efforts is Elation, a lighting manufacturer that has steadily built momentum in the arena sector by aligning its technology with the evolving demands of live sports presentation and broadcast, while maintaining the flexibility to support a wide range of arena events. While each installation is unique, a clear pattern has emerged: venues are not simply upgrading in-game and house lighting, they are investing in flexible, future-ready systems that entertain and elevate fan engagement, redefining what fans expect from the live sports experience.

Experience-Driven Design

For some time now, the role of lighting in arenas has grown beyond simple illumination. Today, it

is evolving further into a core storytelling tool, integrating with video, audio, and architectural elements to create a cohesive, immersive, and engaging environment.

This is particularly evident at Intuit Dome, one of the most technologically advanced arenas in the world, where the lighting system, provided by sales and integration firm JRLX, Inc, was conceived as part of a wider technological ecosystem to work in harmony with video, audio, and interactive elements. Rather than relying on traditional 'lights out' moments, the design supports a continuous visual narrative, integrating with the venue's circular Halo LED scoreboard and seat-based fan-engagement features for a more captivating, theatrical experience.

When the Los Angeles Clippers took the court after the upgrade, fans were treated to more than just basketball. A new Elation lighting system, featuring beam, colour, and texture effects from Proteus, Pulse and Fuze fixtures, transformed the arena into a fully immersive, multi-sensory environment, driven by the vision of Clippers lighting designer Robert Sanders.

"We've built a system that can deliver energy and emotion every night," Sanders said. "We take you on a journey and give you an immersive light show experience, so fans don't just watch a Clippers game; they're part of the experience."

The effect is less about isolated cues and more about sustained atmosphere that keeps fans engaged from the moment they enter the arena until they exit.

Team Branding

A similar philosophy underpins upgrades at Crypto.com Arena, home to the LA Kings, Los Angeles Lakers, and LA Sparks, where lighting plays a key role in reinforcing team identity and energising the building during pivotal moments.

For LA Kings games, high-intensity Proteus Radius beam fixtures, mounted in a circle around the rink, create a striking cage-like effect around the ice during player intros, goal celebrations, and key game moments. This signature look, unique to the Kings, along with the broader lighting design, has become an essential element in reinforcing the team's brand identity throughout a game.

Performance That Cuts Through

One of the biggest challenges in arena lighting is scale. Fixtures must deliver enough intensity to register clearly in a bright sports lighting environment while still delivering saturated colour and crisp effects that look good both in-house and on camera.

Lighting systems installed at the United Center and American Airlines Center, for example,

prioritize brightness, as well as consistency, ensuring even coverage across large playing surfaces and eliminating the hotspots or falloff associated with older technologies. This ability to “cut through” at long throws is critical in today’s arena environment, where lighting must function alongside LED scoreboards, ribbon displays, and high-definition broadcast workflows.

American Airlines Center, home to the NHL’s Dallas Stars and NBA’s Dallas Mavericks, replaced its aging discharge lights with Elation Paragon LED profile moving heads. “The new Paragons deliver a more even output from centre to edge and are thousands of lumens brighter than most competitors in this class,” stated Robin Crouch of integration company Gemini Light, Sound & Video. “Not only are we saving them money by switching to LED, but we’re also giving them higher-quality light and more intensity; a win, win, win.”

At the United Center, home to the NBA’s Chicago Bulls and NHL’s Chicago Blackhawks, high-power Proteus Brutus LED Wash FX fixtures, part of a lighting system also provided by JRLX, deliver the ability to texture the ice or basketball court with widespread gobo coverage while maintaining strong output, even in colour, for special effects. “At the almost 300ft throw distances, the units can punch through the sports lighting for broadcast,” Jason Reberski of integration firm JRLX confirms.

Robert Sanders, who worked closely with JRLX on the Intuit Dome project, conducted shootouts with the court lights on so he could see what looks good with deep colours, textures, and patterns. “Seeing those saturated beams carry across the arena and register on camera was incredible,” he said.

Equally important is control. The ability to shape light precisely, whether to frame a basketball court, isolate a player introduction, or avoid spill into spectator areas, has become a standard expectation. This reflects a broader move toward lighting rigs that behave more like theatrical systems, even within the scale of an arena.

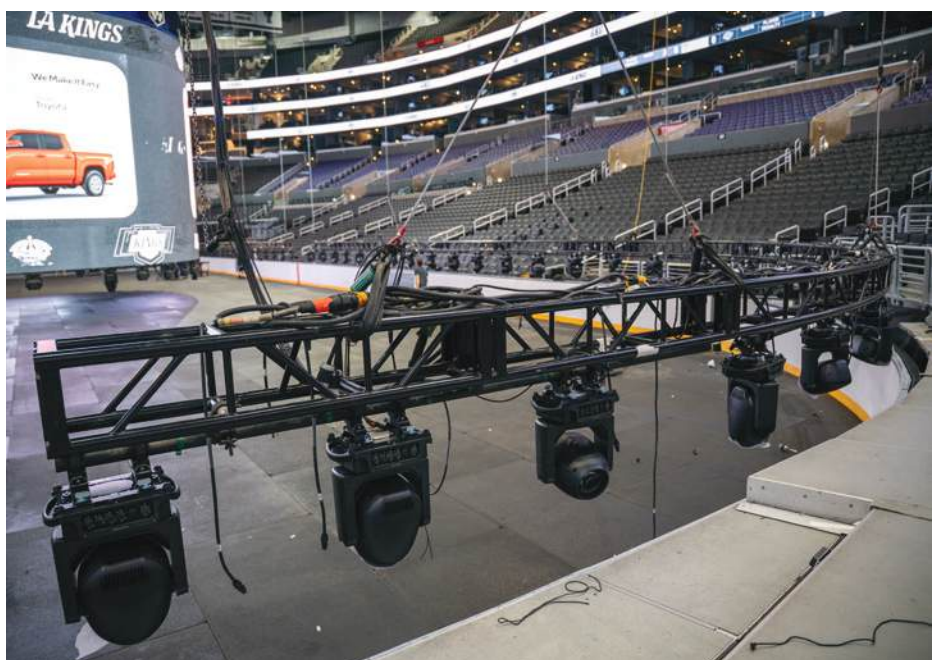
Broadcast-Ready by Design

With the continued growth of live sports broadcasting and streaming, lighting systems must meet stringent camera requirements. High output alone is not sufficient; accurate colour rendering, consistency, and flicker-free performance are all essential for delivering a polished on-screen product.

Across the recent sports venue installs, broadcast quality was a key consideration. Whether illuminating player introductions, highlighting key moments, supporting performances, or lighting post-game interviews, the lighting systems are designed to look as good on camera as they do in person.

At the United Center and American Airlines Center, improvements in colour quality and beam consistency have enhanced both live and televised experiences. Another advantage of the Paragon fixtures at American Airlines Center, for example, is their ability to adapt, rather than being limited to a single CRI or colour temperature, they can adjust to suit any situation.

At Intuit Dome, LD Robert Sanders can easily tune the lighting to broadcast standard. “Because we do a lot of presentation-style lighting, I need to illuminate the court like a stage and ensure it looks great on camera. Skin tones, makeup, costumes, outfits; everything has to look perfect





for broadcast. With the Elation fixtures' high CRI and excellent colour mixing, I can achieve the ideal colour temperature right from the front of the light."

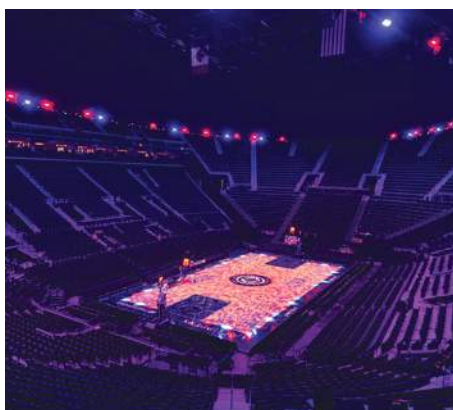
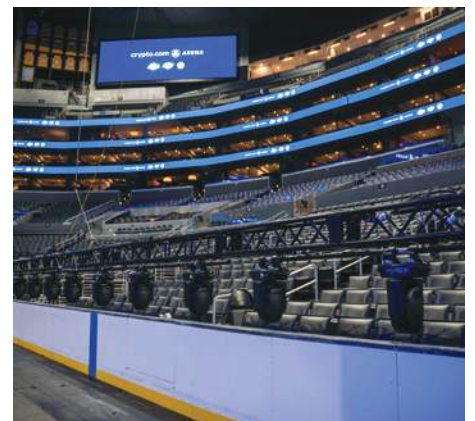
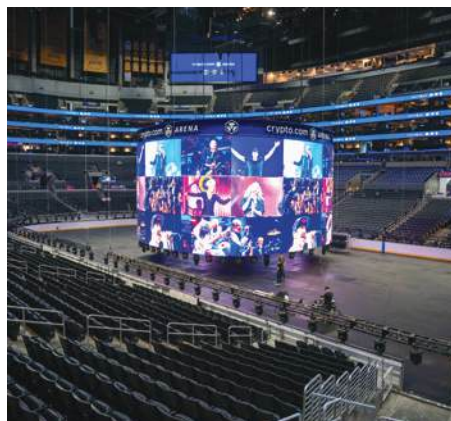
Meanwhile, Crypto.com Arena's system includes custom solutions to reduce glare while maintaining performance, another example of the level of detail now required in modern arena design.

Reliability and Reduced Maintenance

While creative capability is critical, practical considerations are another major factor driving adoption and are often what determine long-term success. Arena lighting systems are often installed in hard-to-reach locations, from overhead catwalks to integrated scoreboard structures, where maintenance access is limited and costly.

The transition away from lamp-based sources to LED and advanced light engines has therefore become a key driver in specification decisions. Eliminating routine lamp changes reduces both labour and downtime, while also improving consistency over the lifespan of the fixture.

This was a clear factor in projects such as Crypto.com Arena, where long-term operational efficiency.



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was prioritized alongside performance. At Intuit Dome, where fixtures mounted on the Halo LED display have limited access, reliability was a non-negotiable requirement. The installed system delivers the robustness needed for continuous, high-pressure use without frequent intervention.

IP Indoor

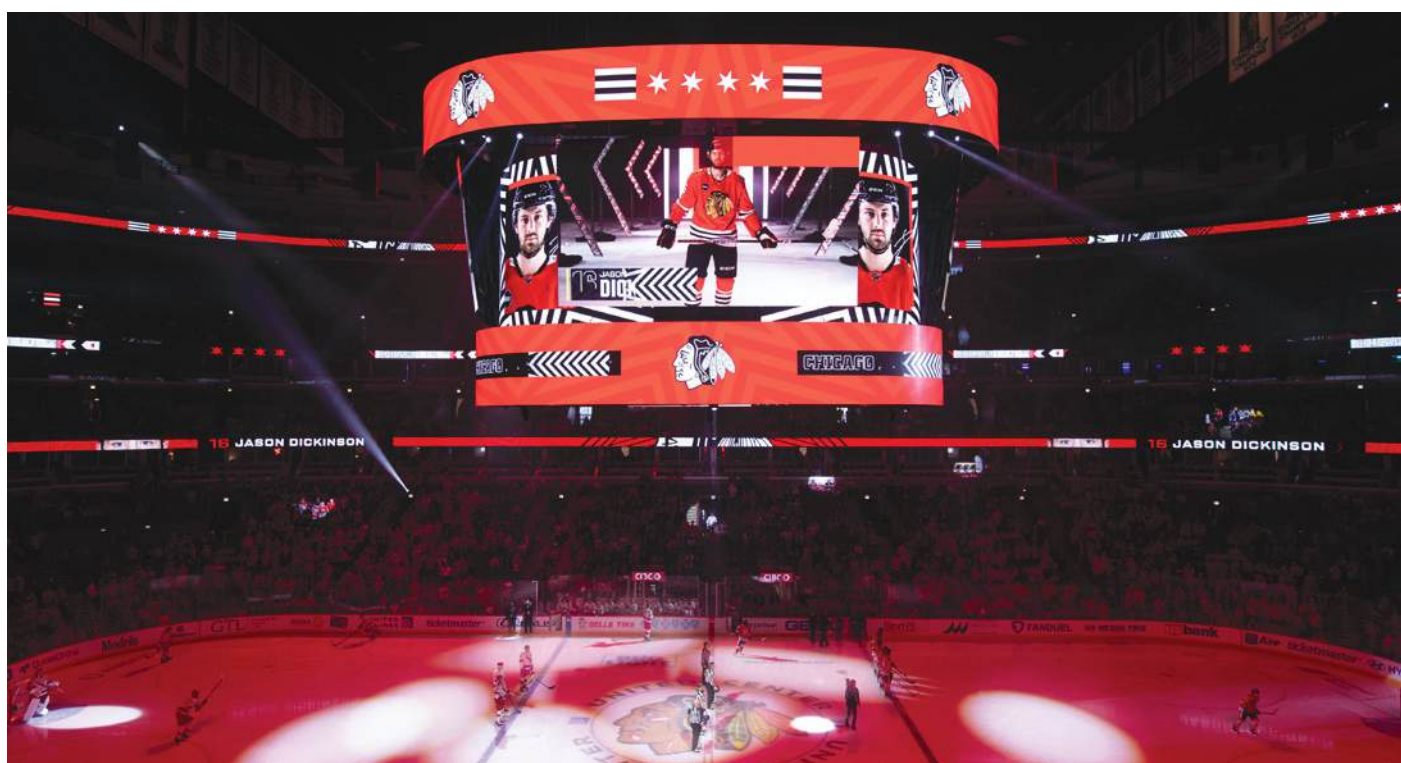
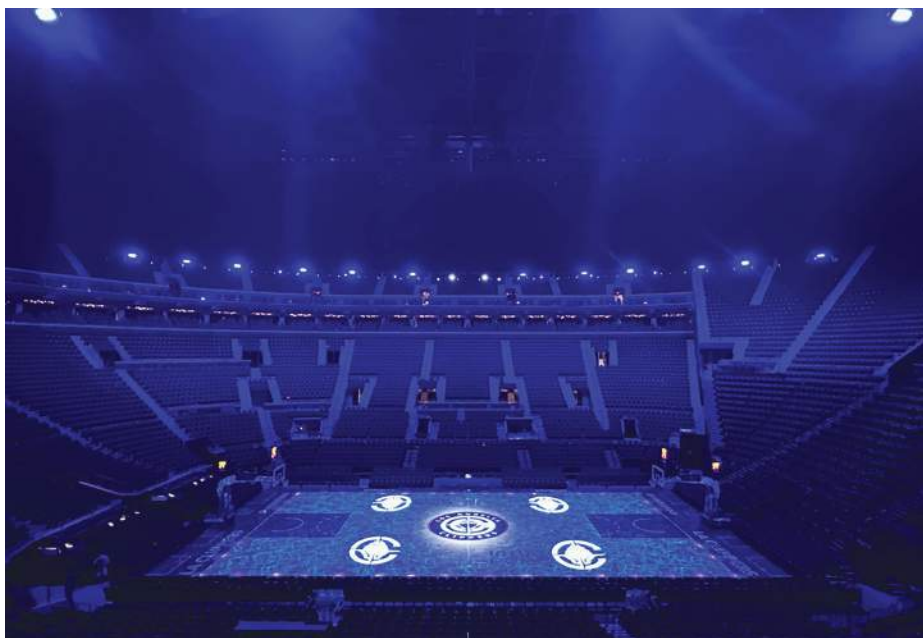
Ingress protection, traditionally associated with outdoor use, is also becoming more relevant indoors. In fact, these latest installations all incorporate IP-rated fixtures. Dust, debris, and the general wear of multi-event venues can impact fixture longevity, and sealed units offer a level of resilience that aligns with the realities of arena operation. This added durability translates into fewer cleaning cycles and longer operational life, particularly in today's multi-purpose arenas that host concerts and a wide range of events year-round.

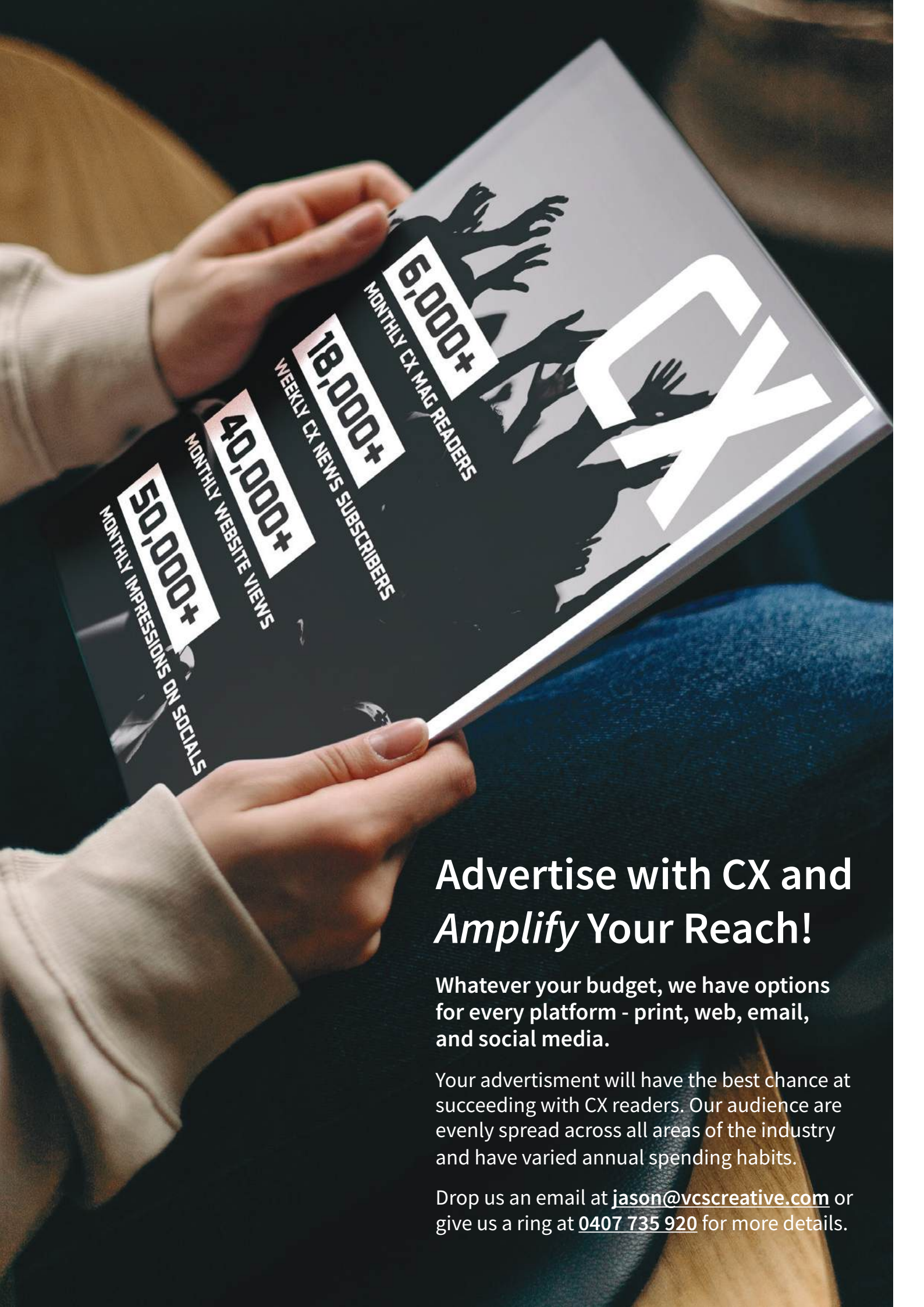
In Partnership

From early-stage demos and evaluations to final commissioning, these projects were delivered in partnership with trusted integrators and long-term collaborators, ensuring that each installation was tailored to the specific needs of the venue. Companies like JRLX, Volt Integrated, Gemini Light, Sound & Video, and others provide valuable professional advice and support, often working within tight off-season (and even in-season) windows.

Lighting's Changing Role

Ultimately, the evolution of arena lighting reflects a broader shift toward fully integrated venue systems. Lighting must do more than illuminate; it is no longer a standalone system, but part of an interconnected infrastructure that supports fan engagement. Elation's increasing presence in this space reflects how manufacturers are responding to these demands. As offerings continue to evolve, lighting is taking on a more defined role within this ecosystem, not just supporting the experience, but actively shaping it.



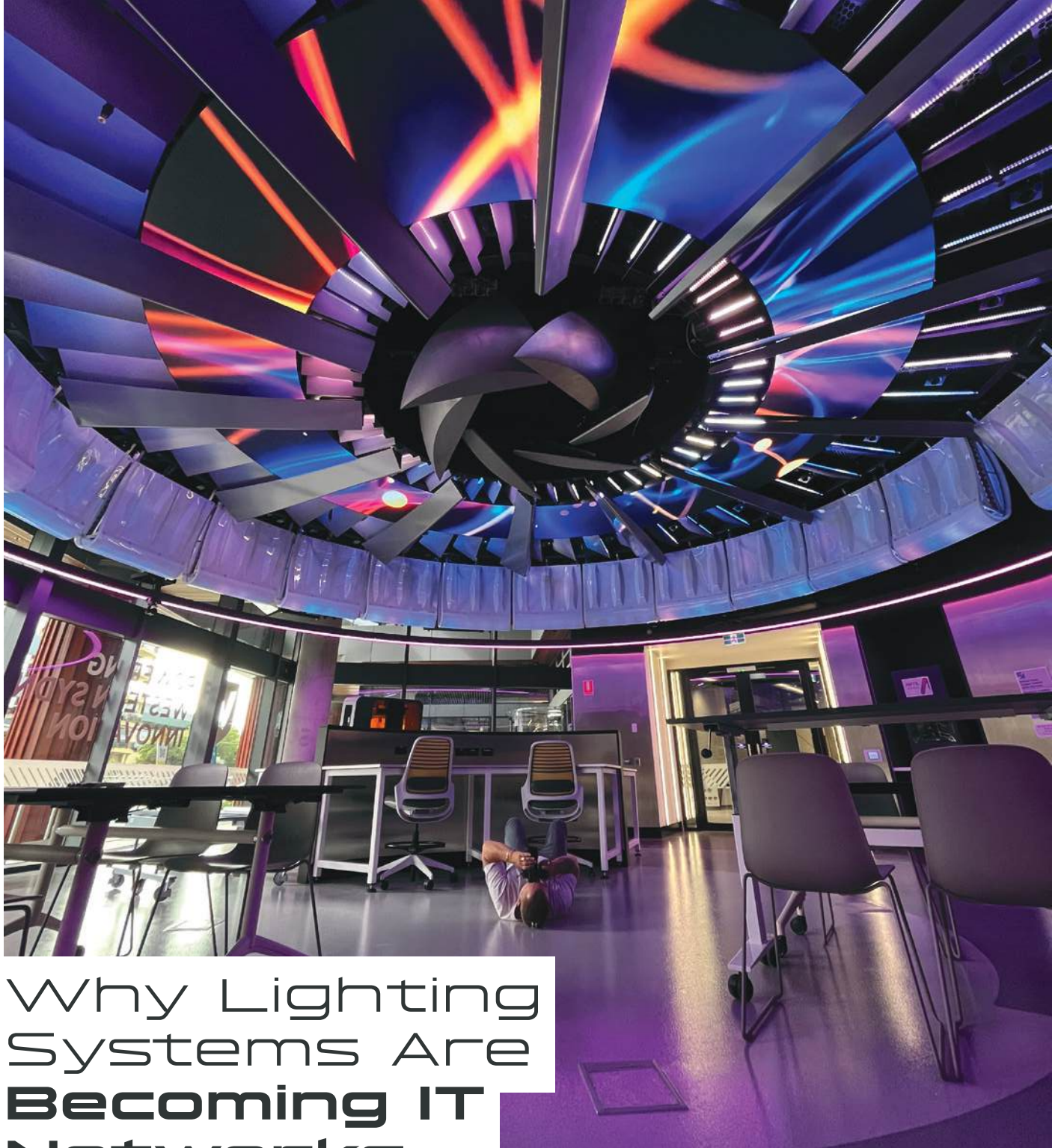


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Why Lighting Systems Are Becoming IT Networks

HOW MODERN CONTROL IS CHANGING THE WAY LIGHTING PROJECTS ARE DESIGNED, DEPLOYED AND MAINTAINED

There was a time when a lighting system could be understood by following a cable.

A console sent DMX down a line. Fixtures were addressed in sequence. If something went wrong, the fault was usually physical: a bad cable, a missing terminator, a wrong address, or one fixture in the chain behaving badly.

That world has not disappeared. DMX is still everywhere, and for good reason. It is simple, robust, widely supported, and perfectly suited to many lighting applications.

But the larger and more ambitious a lighting project becomes, the more it starts to behave like something else entirely.

A modern lighting installation may now involve software, network switches, Art-Net or sACN data, pixel controllers, show playback devices, remote user interfaces, scheduled events, sensors, triggers, and long-distance data distribution. The lights may still be the visible part of the system, but behind the scenes, the job increasingly resembles network design.

Lighting has not stopped being lighting. It has become lighting plus IT.

The point where DMX stops being enough

DMX512 was one of the great standardising forces in entertainment technology. One universe. 512 channels. A clear method of getting control data from one device to another.

For conventional fixtures, that model still makes excellent sense. A dimmer, a PAR, a moving head or a smoke machine can be addressed, patched and controlled reliably within that structure.

Pixel lighting changes the equation. An RGB pixel uses three control channels. RGBW uses four. Multiply that across strips, dots, panels, tubes, sculptural forms or architectural elements, and a single universe disappears quickly.

That is not a problem in itself. The issue is that large pixel projects do not only require more channels. They require a different way of thinking.

Instead of asking, "What address is this fixture?" designers may need to ask:

Where does this pixel sit in physical space?



How does the mapped content travel across the structure?

Where should data be converted from network to pixel protocol?

How far can the signal travel?

How do we keep multiple outputs synchronised?

How do we update, trigger or monitor the system after installation?

Those are lighting questions, but they are also networking questions.

From fixture layout to system architecture

One of the clearest examples is the growth of large-scale pixel mapping.

In a small rig, the control path might be obvious: software to interface, interface to fixture, fixture to fixture. In a large installation, the control path becomes a system architecture.

At the 2026 Taiwan Lantern Festival in Chiayi, for example, the main lantern installation combined LED pixel tape and neon flex into a large, animated structure. The creative goal was visual storytelling: mist, colour, animation, cultural symbolism and nightly show playback.

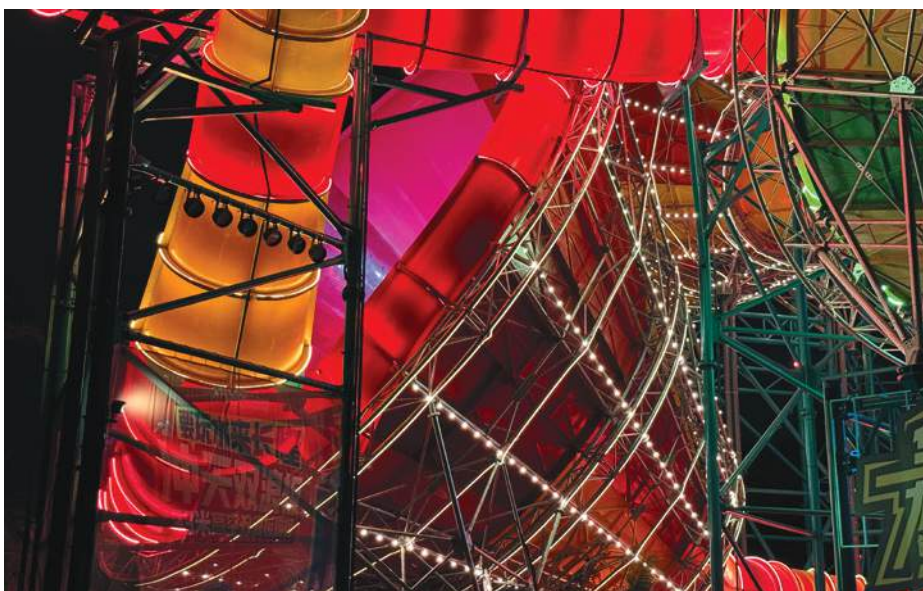
Technically, however, the system depended on a layered control approach. Content was created and mapped in ENTTEC LED Mapper, then distributed through a Pixelator Mini and PLink Injectors to reach fixtures positioned across the structure. The PLink layer allowed pixel data to travel long distances before being converted locally near the LEDs. That is a very different model from simply running DMX down a chain.

The creative result is light and motion. The technical reality is data management.

Ethernet as the lighting backbone

This is why Ethernet-based control has become so central to modern lighting.

Protocols such as Art-Net and sACN allow lighting data to move across network infrastructure in a flexible, scalable way. Instead of being tied to one physical DMX run, control data can be routed to different devices, zones or controllers across a venue, building or installation.





That flexibility matters because scale, distribution and integration are now deeply connected. Large projects may involve multiple universes spread across a venue, with processing happening at different points in the system, from playback devices and Ethernet nodes to controllers positioned near the fixtures themselves. At the same time, lighting increasingly needs to interact with scheduling systems, sensors, media servers and custom interfaces.

At that point, the lighting network is no longer just carrying control data. It effectively becomes part of the experience itself.

This is also where products that once seemed like separate categories begin to overlap. A DMX Ethernet node, a pixel controller, a show recorder and a software mapper may all be doing different jobs, but they are often part of the same data ecosystem.

The new role of the lighting technician

None of this means every lighting person needs to become a network engineer, but it does mean that basic networking knowledge is becoming harder to avoid.

A technician working on a modern system may need to understand IP addressing, universe routing, switch behaviour, cable distance, multicast traffic, bandwidth, DHCP, static IPs, and why “it works on my laptop” does not always mean it will work once installed in a venue.



These are not abstract IT concerns. They affect whether the lights respond correctly. A wrong IP range can make a controller effectively disappear from the system, while poor network topology may create unnecessary traffic or unstable behaviour. Even something as simple as a cheap switch or badly managed long-distance pixel run can introduce flicker, dropouts or strange colour shifts.

In other words: networking mistakes now look like lighting faults. That is why good lighting design increasingly begins before the fixtures are mounted. It starts with signal flow.

Software is now part of the rig

The other major change is that lighting systems are no longer defined only by hardware. Software has become part of the rig. A project might be designed in a visual pixel mapper, tested on a laptop, recorded into a show

controller, edited in a desktop programmer, deployed to hardware, then scheduled to run automatically for months or years.

ENTTEC's S-PLAY ecosystem is a good example of that shift. The S-PLAY itself is a standalone show controller, but the workflow around it now extends into browser-based programming and the newer S-PLAY Programmer desktop application.

That matters because many real-world projects are not programmed once, perfectly, on site. They evolve.

In practice, different people often interact with the same system in very different ways: a designer building cues in the studio, an integrator testing playback before installation, or a venue operator updating schedules months later.

This is where lighting starts to feel less like a fixed electrical installation and more like a managed

digital system. The hardware may play the show, but the software increasingly defines how that show is created, edited, deployed and maintained.

Automation changes expectations

Once lighting is networked and software-driven, it becomes much easier to automate. This is one reason why show controllers have become important far beyond traditional entertainment venues.

A bridge may run different looks on public holidays, while museums, façades, playgrounds and public artworks increasingly rely on automated lighting behaviours that respond to schedules, visitors or time of day.

Guangzhou's Central Axis Park is a useful example. Its illuminated sculptural forms combine architectural lighting, mist and laser effects, with an S-PLAY controller managing scheduled playback and coordinated show elements. The system is not just turning lights on and off. It is controlling an experience over time.

That is the key distinction. A networked lighting system is not merely a bigger lighting rig. It can become part of the operational life of a place.

When lighting becomes infrastructure

The larger the project, the more important that operational thinking becomes.

Arena Milano's media façade for the Milano Cortina 2026 Winter Olympic and Paralympic Games is an extreme example. The façade required precise control over a vast architectural LED system, with content mapped and distributed across thousands of universes.

At that scale, the lighting system is no longer a decorative layer applied to a building. It becomes part of the venue's communication infrastructure. It carries branding, ceremony, wayfinding, atmosphere and public identity. It needs to be reliable, repeatable and manageable. It needs to work during major events, not just during commissioning.

This is where the convergence between lighting, AV and IT becomes obvious.

The same project may involve architectural designers, lighting programmers, network specialists, content creators, control system integrators, venue operators and client stakeholders. Each group sees the system slightly differently, and the successful installation is the one where all those layers work together.

Keeping complexity usable

Of course, there is a danger in all of this. As systems become more powerful, they can also become more intimidating. A beautifully designed lighting network is not much use if only one person understands how to operate it. That is why interface design matters.

For a touring programmer, the ideal interface may be detailed and technical. For a venue manager, it may be a tablet page with three buttons: open, event mode, close. For a public artwork, the best interface may be no interface at all: just a schedule that runs quietly in the background.

The aim is not to make every user think like a programmer, it is to put the right level of control in the right hands. This is one of the more interesting shifts in modern lighting. The back end may be

more complex than ever, but the front end often needs to be simpler than ever.

The future is connected, not complicated

Lighting professionals have always combined art and engineering. All that has changed is the kind of engineering involved.

The next generation of lighting systems will not only depend on good fixture choice, careful patching and strong creative programming. They will also depend on network planning, software workflows, remote management, data distribution and long-term maintainability.

For some, this may sound daunting, but it also creates enormous creative opportunity.

When lighting becomes networked, it becomes easier to scale and distribute. When it becomes software-driven, it becomes easier to evolve over time, adapting to new spaces, audiences and experiences.

The challenge is not to turn lighting designers into IT departments, it is to give lighting professionals enough network literacy to keep control of increasingly connected systems, because the future of lighting will still be about colour, movement, timing, atmosphere and emotion. It will just travel through a lot more Ethernet cable on the way there.





HOG POWERS BTS “THE COMEBACK: ARIRANG” IN SEOUL

In late March, ETC’s Hog family played a vital role in what is sure to be one of the biggest live events and concert productions of the year. When Korean Pop band BTS took the stage for their first show in four years, “The Comeback: ARIRANG,” in Seoul, it was the Tour Hog and Hog OS running the fixtures that illuminated the band and dancers throughout. The Hog setup was crucial, ensuring every cue and look was kept in sync for the estimated 100,000 fans in attendance and Netflix’s worldwide broadcast of the concert.

The Tour Hog is a compact, all-in-one console designed for demanding live environments. It delivers professional performance on the move, featuring 64 universes of output as standard. The console provides RGB-backlit keys, motorised faders, and five high-quality encoders with assignable wheel buttons. It also offers user and function keys for console customization, dual multitouch dashboard displays, and an articulating, high-resolution 24-inch multitouch display. This design provides

programmers with the control and flexibility needed for complex productions.

Speaking on his experience with the next generation Hog consoles, Lighting Director Ross Williams said, “Tour Hog truly played an intrinsic role in enhancing the concert’s lighting experience. This was my second time using Tour Hog, as I had previously worked only with the legacy Hog 4 hardware.”

“Thankfully, the transition felt incredibly smooth, and having access to 64 universes straight from the console was a game changer. We used most of that capability during the concert, which was a wonderful experience.”

With over 230 fixtures being run off the Tour Hog, this production was another example of Hog supporting major live events with flexibility, a familiar workflow, and the capacity needed for touring and broadcast environments. Hog family consoles combine a powerful OS with road-tested hardware, making it a perfect pick for events where there is no room for error.

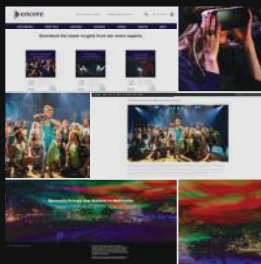
Project Credits:

Lighting Design: Al Gurdon/Harry Forster Lighting
Director: Ross Williams

Programming: Alex Mildenhall, Alex Silvester,
Alex Passmore **Set Design:** Florian Wieder



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ASTERA QUICKBEAM



The Astera QuickBeam is a new static battery powered IP65 LED fixture. It plugs in seamlessly to the Astera Ecosystem. It has a Fresnel lens and has been designed to emulate a 200W tungsten light.

Astera is a German hardware, software and manufacturing specialist. Since the mid-2000s, Astera has been producing battery-powered, remote controlled LED lights. Arguably best known for the Titan Tube, they have a range of static lights and an accompanying ecosystem that supports them.

Construction

Astera have built a really good reputation over the years for creating durable and hard-wearing lights that still look good and are easy to move around. The QuickBeam continues this in what essentially looks like a smaller version of the QuickSpot and the QuickPunch. It is durable enough to be used

When shopping for a battery powered IP65 fixture, take a closer look and make sure that the IP rating still stands when cables are plugged into it.

outdoors, and it looks good enough to be used in a TV or corporate setting.

It has dimensions of 241 x 174 x 125mm (with yoke) / 136 x Ø 120mm (without yoke) and weighs less than 2kg; a good compact size. It is IP65 rated too, and it is still IP65 rated when cables are plugged into it.

The QuickBeam has removable yoke and foldable feet, which provide flexibility in mounting and positioning, while Astera's KickStand balances the light while being used as an upright and allows for quick and accurate tilt adjustment. TrackPins, TrackSpigots, and airline-track accessories are available as well. They make it that much more useable and valuable, especially on a film set. These features are also available with the QuickSpot and the QuickPunch, building up a very solid and uniform Astera Ecosystem. The Astera Ecosystem itself is one of the main features with any Astera fixture, including the QuickBeam.

Noteworthy too is Astera's new QuickBrick, a swappable battery system. Batteries can be changed over in a few seconds, about the same amount of time as a V-lock battery. You can also operate the fixture without a battery via Power over Ethernet (PoE), making the QuickBeam that much more versatile.

The Astera stuff goes the distance. You buy it today and it is still good in 10 years' time, provided you look after it.



Optics, Colour and Brightness

The QuikBeam delivers impressive output for its size, with it being positioned as a 200W tungsten equivalent. It is powered by the Titan LED Engine, the same LED engine used in all of Astera's new products. QuikBeam uses Astera's additive RGBMA (Red, Green, Blue, Mint, Amber) colour mixing system. The QuikBeam gives rich and true colour reproduction across the spectrum and has a colour temperature range from 1750 to 20,000K.

Colour rendering and optical quality would have to be one of the fixture's biggest selling points. With a CRI and TLCI rating of 96+, the QuikBeam produces clean skin tones and accurate colour rendering that exceeds the demands of film, television, and high-end corporate events.

High CRI benefits extend beyond skin tones on TV. Light any object (the lighter the better) with a high CRI (90+) and a low CRI light at the same colour and you will be able to see the difference with your own eyes.

The Fresnel lens and twisting zoom system offers a beam angle range of 12.6° to 58.5°, with a field angle of 16.9° to 78.2°. You can move quickly and effortlessly between narrow spotlight out to a wide wash.

The QuikBeam also includes the OutputGain feature, allowing users to choose maximum brightness when colour precision and battery run time are less important. The trade-off here is that you have less battery output and lower quality light for more lumen output.

Battery runtime is impressive considering the fixture's size and output. You can get up to 20 hours depending on settings, while maximum brightness runtime sits at approximately four and a half hours. Swappable QuikBricks mean you can technically run it for as long as you need.

Applications and Features

The QuikBeam has been designed with quality and versatility in mind. It can be used in just about any application. Those who know the Astera range will be able to speak highly of its use in film, TV and corporate settings. They would also work really well in any kind of activation due to their size and aesthetics. I think something like this is underrated as an architectural lighting fixture. Small enough to fit into a recess in a wall, yet powerful enough to uplight a two or three storey building at night.

Another underrated feature is the integration of Power over Ethernet (PoE). PoE allows both power and data to travel through a single Ethernet cable, as opposed to having a power cable and a DMX cable. This simplifies cable management and reduces setup time. Keep in mind, you can run these wirelessly too. At first glance it may not seem like much, but it's a real game changer when quickness and convenience are key. QuikBeam's PoE is compatible with sACN and Art-Net protocols while also charging the fixture battery.

Astera has accessories such as the NetBox and PowerInjector. The NetBox lets you prep, configure, and monitor multiple fixtures, saving all kinds of time and effort. PowerInjector helps prep too. The QuikBeam takes about two hours and 40 minutes to do a full charge.

The ecosystem also has a PrepCase Kit, which helps save time with charging and setting DMX addresses and other attributes while the 2-Unit Backpack Kit is a smaller, more portable version, which comes as a backpack.

There are even more accessories such as barndoors, FlexCovers, TiltMeters (a personal favourite), and a range of other mounting adapters, all aimed at making the QuikBeam more useable and versatile. The Astera Ecosystem is really impressive and should definitely be factored in as a major positive. It is one of the main selling points of any Astera fixture.



Control and Programming

Built-in LumenRadio CRMX provides wireless DMX and RDM control for the QuikBeam. Wireless control has always been and remains one of Astera's greatest strengths.

The AsteraApp is one of the best on the market, enabling you to set DMX addresses, create groups, change colours, and manage effects directly from a mobile device. Used properly, it's a game changer.

QuikBeam supports ArtNet, sACN, Bluetooth, UHF, and Wi-Fi protocols. It can integrate into virtually any professional control environment/network.

If you run them powered, they only draw 20W, meaning you can fit a lot on a single circuit.

Verdict

If you have a real eye for detail and are chasing a top-quality, high-end look from a compact, static fixture, check out the Astera QuikBeam.

Product Info: astera-led.com/products/quikbeam/

Distributor: www.ulagroup.com

THE SPECS

Astera QuikBeam

LED Engine: Titan LED Engine

Colours: RGBMintAmber

LED Power Draw: 20W

CRI (Ra)/TLCI 1750 – 20000K (OutputGain disabled): ≥96

Beam Angle: 12.6° – 58.5°

Field Angle: 16.9° – 78.2°

Strobe: 0 – 25 Hertz

Battery runtime up to: 20 hours

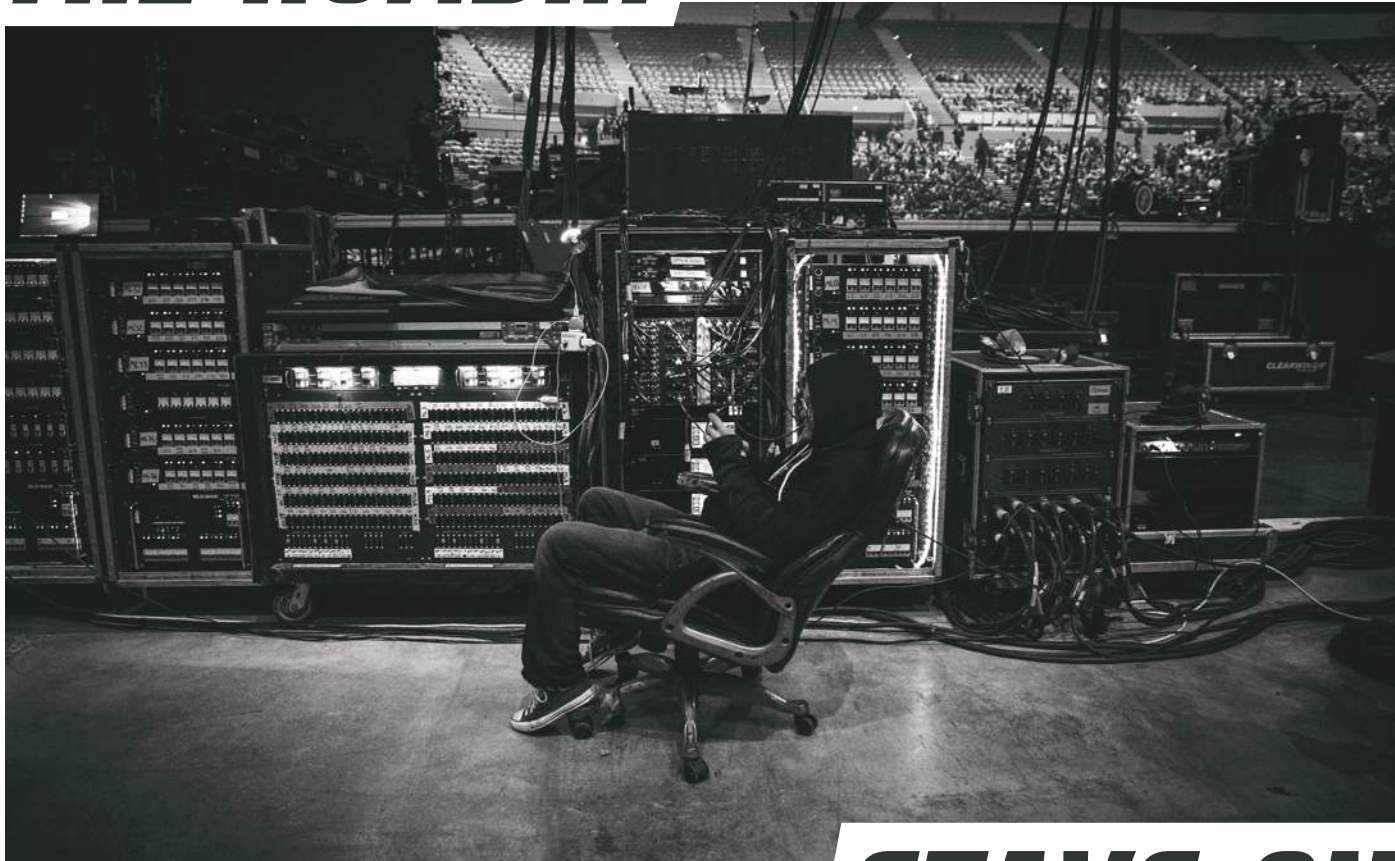
Battery runtime (max. brightness): 1h 20m

Battery lifetime: 70% after 500 cycles

Charging time (nominal): 2h 40m

Wireless range: CRMX/UHF up to 300m, Bluetooth up to 3m

WHAT GOES ON THE ROAD...



MATESHIP OR COVER UP?

I heard about this concept long before joining the touring troupe. Initially, it added an air of mystery, of an exclusive club full of enigmatic aura. You know, where all the cool kids hung out, winking with insider knowledge ... of who knows what?

And I get why it is there. Keeping a disparate group functional under duress (which is what touring events essentially become) relies on everyone trusting each other. As is true of all relationships.

On tour, you are in each other's pockets all day and all night (sleep and toiletry time aside). You travel as a team and face adversity as a group. You are at your best, and worst, together. Everyone must make some allowance for others having off moments, just as they do for you. If someone gossips about another's anomalies, it could easily turn around and bite them elsewhere. So, mum's the word.

In most jobs, you clock off to leave behind your work problems or frustrations with colleagues. Ideally, all packed away until clocking on the next morning. On tour, you don't have this luxury.

If you get the shits with a workmate during setup, they will still be there at dinner, show and pack down. There is a limited window in which to sort out your differences. Get it wrong and someone is off the bus and heading home next morning. Apart from the feelings of the poor sod who got shafted, the tour vibe can go a bit weird after such an event. I saw this happen a few times and it wasn't fun for anyone.

There is also the weird power dynamic, with artiste held up as supreme being and all other minions should serve them and their whims. The pay sheet dictates this hierarchy. For this, party members are expected to turn a blind eye to any behavioural oddities of the paymaster. It's a good thing that green room walls cannot talk.

STAYS ON THE ROAD

Discretion assured

So how did this 'stays-on-tour' convention come about? I suspect because performing artists are humans too. While they may crave the limelight professionally, they also need time to relax and be themselves, away from the expectations of cameras, media and pestering hangers-on. They certainly don't want to feel like they'll be 'papped' before their public persona is switched on. Particularly by their crew.

The nature of this union requires all party members to recognise this need and not be a dick by tattling. Discretion is a necessary part of dealing with people in the public eye. Be mindful of revealing too much in photos and socials.

The rest of the crew making up the touring party can shield the talent to an extent but also need their own version of privacy. We can't be permanently switched on all day and all night.

In this environment, it is inevitable that some tight bonds form. When you enjoy working with others under such conditions you all want this to continue. Of course you'll be recommending your mate to join that next run, and then you.

If a particular tech has a close personal relationship with the artist or manager, they probably have more chance of ongoing employment than those with greater technical skills. The industry runs on 'who you know', not 'what you know.' Insiders in label and tour management know this best. After all, they always seem to keep coming up with the bulk of the spoils.

Covering up bad conduct

It is also foreseeable that unfortunate outcomes can occur in the boiler room of touring. Unchecked interpersonal friction can soon slide into controlling or manipulative behaviours.

I've seen bullying and intimidation occur in a few workplaces. I saw it happen on tour. Where I could, I called it out. At other times, I was more subtle and undermined the bullies in ways that they still

do not know. Reverse bullying? Maybe, but it still feels cathartically karmic.

Drunken punters and star struck groupies hang around the scene every night. The promise and allure of easy sex often leads to infidelities. When younger and more stupid, I was guilty of this misdemeanour. Guilty of forgetting about a loved one back home in search of a quick thrill. A lesson hard learned at the expense of others.

Perhaps easier to hide are substance use and abuse issues: a particular trap in the entertainment game. Again, guilty as charged. My chemical crutches were fun until they became impediments. I've chosen to make mine public but other people's medicinal issues are theirs to resolve in their own time.

Much more concerning is sexual assault - an insidious problem across the whole world. Nightclubs, alcohol, drugs and inherent power imbalances can fuel this abhorrent behaviour. That cannot stay hidden. Call it if you see it.

Excusing a poor working environment

It's no secret that life on the road is a tough working landscape. The long hours, endless physical exertion, and dislocation from home come with suitcase life. The lack of job security and entitlements taken for granted by regular wage earners can eat at your soul. Which it eventually did for me.

If no-one talks and everyone winks, how are these conditions going to improve? Which terms should you accept and which ones not? How much should you charge? Award rates are recognised for temporary crewing, production houses and government venues, but don't really apply when negotiating a tour package. Will you get per diems, paid days off, or other perks? How are you travelling (three up the truck or first-class flights)? Do management expect you to share rooms? If there are NDAs involved, best consult a lawyer before signing.



Even with legal muzzles, people do talk. After a while, the word gets around and most know who the problem artists are, who the weirdest techs are, and which promoters are most likely to stiff you.

I have no need, nor desire, to name names for any events allegedly occurring 35 or so years ago. My memory was compromised enough at the time, let alone decades hence. Further, I have become a confidante to many friends and colleagues over that time. This takes trust - a trust that I will never break.





Humanising AI in the Studio: When a Plugin Needs a Pulse

SNIPPETS FROM THE ARCHIVES OF A BYGONE ERA

In April of 2026, I visited Opus Productions, a recording studio in Newcastle, NSW, operated by Matt McLaren and Nick Gill. I wanted to investigate a major shift, where a niche studio can now offer specialised services that were once the exclusive domain of the major recording studios. Additionally, I wanted to investigate how AI and digital plugins were reshaping the studio environment.

Today's niche studios are a far cry from the 4-track joints of past eras that used 1/2-inch tape and were often located in basements and small business units. Technological advances have elevated studios like Opus to a level where they can now offer services like remote mixing, mastering, and specialised guidance for artists including bands, solo singers, songwriters, rappers, podcasters, and fledgling artists wanting to take their creations from the bedroom to the big time.

In all their projects, Matt and Nick still consider AI an assistive tool, sometimes taking the best of what it can provide within a plugin or other tools; however, they maintain firm reservations regarding generative AI models that may breach intellectual property by 'scraping', which is the automated process of extracting large volumes of data from websites to copy information into a new format without creator permission or remuneration. And Matt and Nick emphasise that performance and the human touch remain crucial ingredients at Opus.

"Despite the fact that things like AI are coming for us, we try to offer more things peripherally to the digital hardware and software we use. A huge majority of our clients are singer/songwriters," says Nick, adding, "One thing we really enjoy is taking a very green singer/songwriter, someone who might have never been in a studio before or never even written a complete song, and providing help and guidance to them."

Nick points out that a lot of the former corporate production work has diminished. "That's a space that is being eaten up by artificial intelligence at the moment. So, the sad reality, from a corporate perspective, is that I don't know which decision-makers are going to decide to pay someone to create some backing music for an ad when they could put a prompt into a generative AI site and



MATT AND NICK IN THE SOUND BOOTH

create it in seconds for a fraction of the price,” says Nick.

It was during his eight-year tenure on Newcastle’s Hit 106.9 breakfast show that Nick Gill met multi-instrumentalist Matt McLaren. At the time, Matt, who was born blind, was running a music company, S&M Productions, which specialised in recording, writing, teaching, performing, mixing, mastering and producing music. He was invited to play keyboards on a project that one of Nick’s friends had brought into the radio station. Nick was so impressed by Matt’s musicianship and production expertise that he commissioned him to produce a children’s song he had written for his daughter.

Matt’s talent was further demonstrated when he made it to the Grand Final of Australia’s

Got Talent. And when Nick Gill conceived the children’s group The Quokkas, the inclusion of Matt McLaren completed the final line-up. In their joint venture at Opus, Nick and Matt work as producers and audio engineers on several client-based projects as well as writing and producing songs for The Quokkas.

While technological advances have simplified audio production, the technology has also ushered in a confusing plethora of ‘must-have’ outboard equipment, including microphone preamplifiers, EQ, analogue compressors, and a mass of digital plugins.

“There’s a lot of options out there, and I think that can be creatively inhibiting. You pull up a project, and you’ve got 600 plugins to choose from; where do you start? What do you use? Back in the day,

even with digital, you didn’t have that many options, so you just used what you had, and you made it work, and there’s definitely something in that. I try to limit myself to certain plugins that I know really well, and I only use those.”

“The plugins I’m using now are the ones I’ve been using for about five years, and I’m really happy with those, but it took me a long time to find the ones I was happy with. I use FabFilter suite a lot; that’s my main go-to for compressors, saturators and EQs. I also use Soundtoys; that’s very good stuff, and Valhalla is a great reverb. It’s really important for me to work fast and efficiently, so I need to know my plugins really well. I need to be able to pull a sound really fast, and you don’t do that from drawing through 80 plugins,” says Matt.

Are you concerned about your mate’s mental health?

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

Support those around you and register for free mental health training



¹Passion, Pride, Pitfalls Dec 2014

www.entertainmentassist.org.au

Supporting the mental health of Australian entertainment industry workers

Nick and Matt both stress the importance of the performance of the artist and getting the right signals into the mix. “It’s important to get the gain staging right on the way in, and the performance is everything, or there’s no point; you can’t squeeze life out of something that has no life to start with, no matter what plugin it is. I’m never out to criticise anyone’s work; that’s never been my goal at all. But I think it’s important to realise that the potential of the song could be so much greater if you get the performance right at the start,” says Matt.

Along with capturing the best performance, which is essential for maintaining a human element in an increasingly AI-driven world, Nick and Matt argue that channelling signals into the mix with the intent to fix them later in post can be counter-productive.

“There’s so much emphasis now on corrective editing. It’s really a sad way to record music because it defeats the purpose of what we’re trying to do in the first place, which is record something human and unique and all those good things,” says Matt.

Nick adds, “One thing I focus on is backup vocals. And often people are just like, ‘Well, it’s just an ‘ooh’ or an ‘ah’ or a harmony’ or something like that. I reckon you can convey a lot of emotion by doing a really good performance of the backup vocal as well and really leaning into a well-executed, just buried acoustic part. It can still give you emotion and vibe.”

With Matt’s expertise as a multi-instrumentalist and vocalist, paired with Nick’s experience as a guitarist and songwriter, the duo offers exceptional guidance for both emerging and established performers.

“We do a lot of guiding with them, including with backup vocals. Like, I’ll play the part on the piano and help them work it out. If they haven’t already got the harmonies all figured out, we’ll guide them through that and say, ‘Sing this G here and then go up to the A and change from ‘ooh’ to ‘ah’ here,’ and we sort of teach them as we go. A lot of people haven’t worked that much in backup vocals before, especially if they’re a lead vocalist, so it’s a bit of a different mindset for them,” says Matt.

Nick adds, “As Matt said, a lot of lead vocalists can’t hear the harmony. And even when you sing

it to them, they revert back because they’re so used to singing the lead; they can’t execute the harmony. And so, Matt, in particular, is really good at playing along with them as they go so they can hear exactly what they’re supposed to be singing.”

Matt’s parents encouraged him to play piano when he was three and a half years old, and he later branched out into other forms of music that he felt more comfortable with.

“Yeah, so I grew up doing classical grades and all the rest of it. And then when I sort of got over that when I was a teenager, I started branching out and finding other music, and so that sort of took me on a bit of a different path. I’ve always been interested in recording. I was that kid running around with a tape recorder recording stuff like a weirdo, just making recording sounds and whatever,” says Matt.

Matt got his first computer in the 90s and started recording on Windows Sound Recorder. “So it was not great! But it was the start of something. I learned about how computers routed audio and how to think about it conceptually, and I just played with every single piece of software I could get. That sort of led me to doing some production for some online companies when I was doing my HSC. I wanted to get into actually producing sound for movies and stuff like that, but as it turns out, I sort of moved back towards music, and that was actually way more fun because you get to work with people and recording bands and stuff.”

Matt didn’t get into MIDI in the early days of computerised recording because early DAWs were visual black boxes for the vision-impaired; they lacked the accessibility scripts and screen-reader compatibility that are available today.

“I need a screen reader to use my computer, and I couldn’t use it (MIDI),” says Matt, who used Cakewalk Pro Audio 9 as his first software DAW. “I don’t know how I did anything on that because nothing was accessible at all. I used to move the mouse around and click on things and see what happened. Cakewalk Sonar was the first one that I could actually navigate because there was a guy who lives in Brisbane who developed scripts for it to make it accessible and navigable with a screen reader. That was when I could first record things and arm tracks and know when they were armed. It was like non-linear and non-destructive editing for the first time.



REAPER DAW



THE QUOKKAS

“I’m so disinterested in the whole conversation around who uses what; like, I use Reaper, and that allows me to have a job. And people say, ‘Oh, it’s not a proper DAW because it doesn’t cost eight grand’. It all sounds the same to me; they’re all using the same plugins,” says Matt.

At this stage of the interview, Matt sits at the workstation and opens up Reaper (see image). As he scrolls through the audio tracks, a specialised extension called OSARA (Open Source Accessibility for the REAPER Application) acts as an audible translator. As Matt navigates with keyboard commands, the audio announces details like “Track 2: Vocals, Muted” or “Track 3: Bass, Armed for recording”. However, I couldn’t discern these readouts, as Matt utilises a skill called ‘speed listening’, which sounded alien and unintelligible to me because Matt speeds the audio up to rates far exceeding normal human speech so he can have a faster-paced workflow.

Prior to visiting Opus Productions, Nick briefed me over the phone on the unique synergy he and Matt brought to the studio.

“We work as a duo with very complementary skills. Matt is an absolute master arranger with perfect pitch. He can hear a song for the first time and not only play it, but he understands the internal workings and can execute an arrangement immediately. My strengths lie more in the early and final stages. I’ve written hundreds of songs, so I’m experienced in that area. And because I’ve released so many songs, I know how to guide artists through the post-mastering phase, how to give a release the best chance, how to try and get them playlisted on editorial playlists on streaming services, et cetera. I think a lot of studios ignore that. They give you the master and send you on your way, but we want to be a ‘snout-to-tail’ service. We can take a recording from a phone, even if it’s just you singing a hook, and turn it into a fully realised, radio-ready tune with a release plan. That’s why we started the business,” said Nick.

After learning that Matt McLaren had perfect pitch, I couldn’t resist attempting to sing a middle C note for him in the studio to see how close I could get. This was a task that my 1970s singing teacher insisted upon before I commenced each lesson. I think Matt had an inkling that I was testing him, as he knew my little Sony Notetaker recorder was running, and I could check it later. Matt instantly told me that I sang the E above middle C. I did check it, and he was right!



MATT McLAREN AT PIANO

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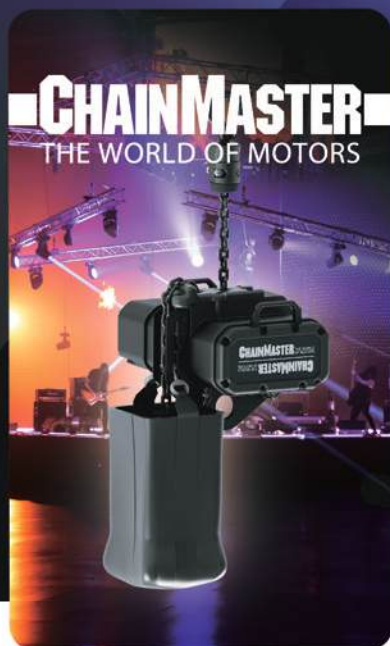
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