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Contents Photo – Idomeneo – Tasmania Stars in Mozart Opera  
Photo Credit: Keith Saunders

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# Wireless Audience Experience Devices Operating Illegally in Australia

The summer season of 2023/24 was not only busy for Profiles RF Management (PRM), it also provided us with some new challenges. Our clients included major sporting events, multicity music festivals, cultural events, multi-artist concerts and large-scale corporate events. Aside from the expected wireless mics and IEMs, what do you think they all had in common? New devices that were intended to create a more immersive or inclusive experience for the audience.

These devices were all quite different in their form and application. They included headphones for lectures in open theatres and silent discos, haptic vests and LED wristbands that were wirelessly controlled for colour changes. These are great innovations that make events more accessible and exciting for the whole community.

As wireless devices, their transmitters need to be included in any spectrum plan being used for an event. This is easy to do if you have the right tools and experience. The problems we came across were that most of the devices could not be used legally in Australia.

The use of most wireless devices in Australia is governed by the Radiocommunications (Low Interference Potential Devices) Class Licence – commonly referred to as the LIPD – which covers mics and IEMs, and the Cordless Communications Device Class Licence, which covers other communications devices commonly used at live events and broadcasts. These laws are administered by the Australian Communications and Media Authority. These legal instruments outline the technical specifications of different types of devices for use in the frequency bands that can be used in Australia.

Failure to use a compliant device can result, not only in interference that may ruin an event, but heavy fines and jail terms for the user and the person putting the device on the market. (The ACMA defines the person putting the device on the market as anyone who manufactures or imports a transmitter into Australia for sale or rental.)

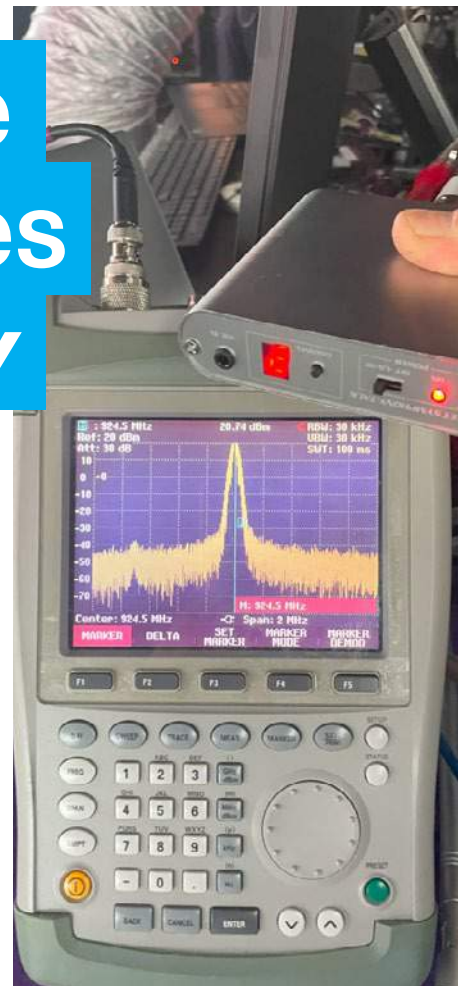
A significant number of the transmitters we came across this summer were not compliant under Australian law. They were either transmitting on an illegal frequency or their transmission power was too high for the frequency to which they were programmed.

In one case, the end client engaged with PRM ahead of the event to undertake testing of their devices prior to purchasing the product they had intended using. The product was found to be transmitting on an illegal frequency, so the client decided not to purchase the product for their event.

But this is the exception. Often, the first we are told about a device of this type being used is in the few days leading up to the event, when we are contacted by a stakeholder who is registering their devices with us to include in the spectrum plan. This puts everyone in a difficult position as programming has already been done and punters are expecting to use the devices as part of their event experience. But persisting with the devices may lead to a sub-optimal user experience or legal issues for the event owners.

This situation can be overcome fairly easily. Firstly, educate yourself on the rules around use of wireless devices in Australia. There are some helpful links at the end of this article. If you're not sure about anything, talk to someone who is. Here at PRM, we do that all the time.

Secondly, make sure your local supplier is reputable and can provide you with the specifications of the product showing the operating frequencies and rated power.



Look to see that the product is labelled with the Regulatory Compliance Mark (RCM). If you haven't yet bought or rented the product, you should check in advance as you can usually see it on the spec sheet or user manual.

Susan Twartz is an owner of Profiles RF Management ([www.prm.com.au](http://www.prm.com.au)). PRM specialises in RF Spectrum Management for large live events throughout Australia. Susan was also the Chairperson of the Australian Wireless Audio Group from 2007 to 2015. This was an industry peak body established to represent the needs of wireless audio users during the Digital Dividend and subsequent restack of the UHF television spectrum in 2015.

## Helpful links:

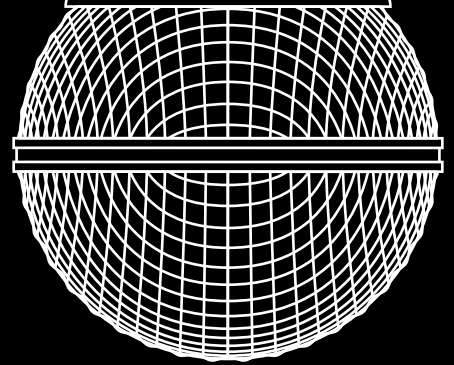
LIPD: <https://www.legislation.gov.au/F2015L01438/latest/versions>

Cordless Communications Class Licence: <https://www.legislation.gov.au/F2014L01800/latest/versions>

ACMA: Buying Radiocommunications Devices <https://www.acma.gov.au/buying-radiocommunications-devices>

ACMA: Wireless Microphones <https://www.acma.gov.au/wireless-microphones>

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# MEYER SOUND COLLABORATES WITH UCSD ON SPATIAL

**Meyer Sound collaborated with staff and researchers at the University of California San Diego's Department of Music to beta test NADIA, the next generation processor of Meyer Sound's Constellation acoustic system. Cutting-edge spatial sound and variable-acoustics technology upgrades were installed in the department's Experimental Theater, which enabled real-time development with faculty and students while offering the opportunity to gain skills, learn in interactive ways, and accelerate experimental music research.**

UC San Diego is the first educational institution to integrate Meyer Sound's NADIA hardware platform in its facilities. The installation highlights Meyer Sound's commitment to audio education and illustrates the potential to apply the company's technologies in diverse learning environments.

"With the emergence of spatial headphones, immersive art installations, and concert venues like the Sphere, everyone is excited about the idea of creating content for these experiences, but rarely do students have access to these facilities," said Jeremy Olson, UC San Diego's Theatrical Production Specialist.

The 150-seat Experimental Theater, part of UC San Diego's Conrad Prebys Music Center, doubles as a laboratory and performance space and offers a range of multimedia capabilities including video projection, custom lighting, and live computer interfacing. The facility was equipped with the Constellation acoustic system when it was built in 2009. With Constellation, the acoustic properties of the space are transformed at the push of a button, supporting everything from spoken lectures to

chamber music to electronic compositions.

"UC San Diego has been an early adopter of our technologies since the mid-nineties," says Steve Ellison, Meyer Sound's Director, Spatial Sound. "For 15 years, the Experimental Theater has used Constellation to transform its acoustic signature for any type of performance or event, so equipping the facility with NADIA was a natural evolution. The upgraded Constellation system, combined with the flexibility of Spacemap Go, has brought a new dimension to an already high-level facility."

The update integrates Meyer Sound's new NADIA-CP digital processor, which brings new levels of performance and MILAN-based networking to Constellation and supports spatial sound using Spacemap Go software. An upgraded Meyer Sound loudspeaker system delivers more powerful sound that supports multichannel spatial sound and a broader range of amplified music.

Olson has been closely involved in the beta testing process, assisting students and faculty in learning the system and testing its capabilities. Throughout the process, he noted

certain spatialisations could be achieved more quickly. "Audio routing that sometimes took me days to set up could be accomplished in just a few minutes," he explained. "Typical speaker routing took less time than explaining the process."

The NADIA digital audio processing and distribution platform brings new active acoustics capabilities to Constellation, allowing more discrete zones for even higher resolution at lower costs. NADIA seamlessly integrates with Meyer Sound's Spacemap Go software, providing separate inputs, processing, and matrixing to enable spatial sound with no performance compromises.

The Experimental Theater upgraded its audio playback capabilities with Meyer Sound's latest model loudspeakers, including ULTRA-X20 compact wide-coverage loudspeakers and UP-4slim ultracompact installation loudspeakers. In the new system, 20 ULTRA-X20 and 20 UP-4slim loudspeakers complement the existing three left-centre-right UPJ-1P and eight MM-4XP loudspeakers, and 10 UMS-1P subwoofers.



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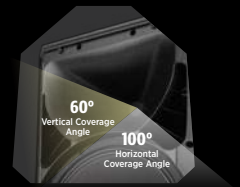
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Integrating Meyer Sound's advanced technologies at UC San Diego doesn't just elevate immersive sonic experiences; it also opens up new avenues for integrating spatial sound into classes and performances, with instructors incorporating the new tools into classes across the music curriculum.

**“All of our graduate students can utilise spatial audio for any performance, be it one mic, stereo playback, or a full band with multitrack playback,” Olson says.**

“In fall 2023, [composer, sound designer, and producer] Shahrokh Yadegari held our first spatial audio class designed with this room in mind. Our hope is to continue the class into the foreseeable future.”

With Spacemap Go, students can actively engage in spatial sound design by mixing their own content using iPads, offering a uniquely interactive learning experience. “UC San Diego's journey with Meyer Sound showcases the transformative power of cutting-edge audio technology in education,” says Ellison. “And now, with the integration of active acoustics with spatial sound, this program is poised to provide unprecedented creative opportunities to aspiring musicians and sound artists, setting a new benchmark for educational institutions everywhere.”



*Jeremy Olson, Theatrical Production Specialist, UC San Diego*





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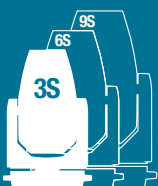
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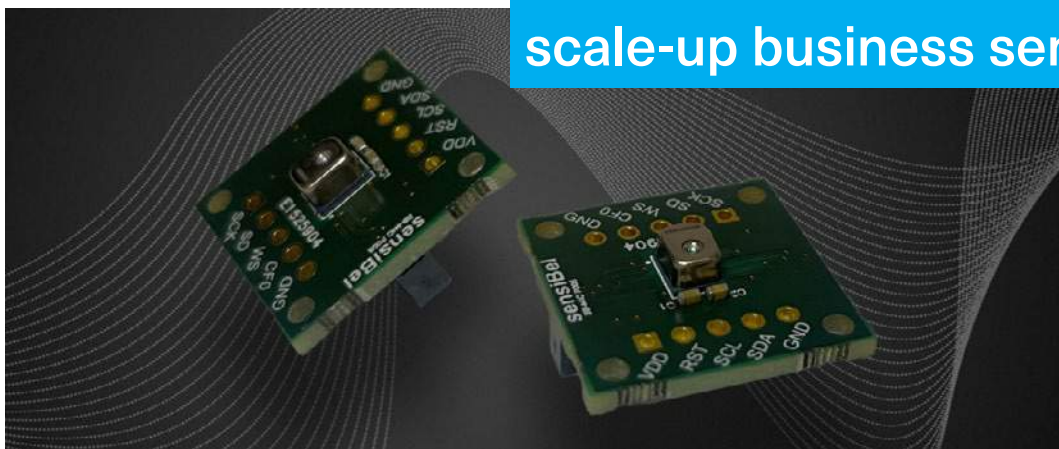
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## Sennheiser invests in Norwegian

## scale-up business sensiBel



**Sennheiser, together with existing investors, is investing seven million euros in the Norwegian scale-up business sensiBel. The company has developed optical MEMS microphones which demonstrate first-class sound quality despite their miniature size. The miniature microphones enable a completely new and improved experience in application areas such as consumer electronics, automotive, conferencing solutions, and medical devices.**

Constantly building the future of the audio world and creating exceptional sound experiences; that is the aspiration that drives the Sennheiser Group. Driven by this aim, the family-owned company is further expanding its strong position as a provider of professional audio solutions. "We want to grow sustainably as a company. In addition to investments in our existing business, this also includes

investments in promising future fields outside of our company, providing these align well to our company and our vision," explains Co-CEO Daniel Sennheiser. Andreas Sennheiser adds: "sensiBel's innovative optical MEMS technology is clearly this type of promising emerging field. As investors, we look forward to actively driving forward this groundbreaking development."

sensiBel has developed a miniature microphone using optical technology that enables a generational shift in MEMS microphone performance, which is now testing with lead customers. "sensiBel shares the same vision as Sennheiser and we are proud to welcome Sennheiser as an investor," says sensiBel CEO Sverre Dale Moen. "We believe an investment from such a highly recognised audio company speaks of the merits of the technology and the potential for optical MEMS technology to shape the future of miniature microphones."

The distinctive feature of sensiBel's unique technology is the use of light waves to measure the movement of the diaphragm. By contrast, conventional MEMS microphones measure an electric field between the moving diaphragm and a backplate. In sensiBel's optical system however, a laser generates light beams that are projected onto the microphone membrane and

reflected on a photo detector. The reflected beams are captured and processed in an Application Specific Integrated Circuit (ASIC) with a digital output data interface.

In contrast to the conventional method, this new technology makes it possible to measure very small movements and therefore capture very low noise levels, even when there is a high level of loud background noise. Additionally, the optical MEMS microphone can withstand high sound pressure levels providing a large dynamic range to the users. As a result, the microphones generate significantly better sound quality than previous MEMS solutions on the market, with a specification of 80dBA SNR (14dBA noise floor), 132dB dynamic range, 24-bit digital output, and with low power consumption, while being just as compact.

### About sensiBel

sensiBel is a Norwegian deep-tech company developing next generation MEMS microphones. The sensiBel team consists of MEMS, electronics, optics and acoustics technology experts as well as an experienced business and leadership team. sensiBel's goal is to bring high quality MEMS microphones into a wide range of products world-wide and set a new standard in miniature microphone performance.

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# Why am I still doing this?



David Quinn, Dutchie, Peter Quinn

## Dutchie has some bad news

**Nine-year-old Robert 'Dutchie' Vanderent hopped off the DC8 on Valentine's Day 1969 and was knocked over by the summer heat. From winter in Holland, the family flew to Frankfurt, then Athens-Karachi-Bangkok-Singapore before Sydney. Not speaking Australian, they ended up in the Western suburbs of Sydney.**

He joined band 'The Schlem Men' as a lighting guy after school. It was 1975, and a real job beckoned as a grader driver for the council not long after. One night the old bakelite phone at home rang and a mate suggested he come drive a truck. For a band. Then 20 years followed, Dutchie most often on lights.

The best times were when he worked at Sound and Stage, and he would pack 10 tonnes of gear into a jumbo and do shows in Pacific nations. A stint at Grafton's Lighting and Sound followed. Strangely, I keep running into people who worked there after I, the writer, sold it.

Next came Almost Anything Audio. "A chap in Gladesville, Walter Gearin, started it and then years later he passed away. My mate Jeff Stewart bought the business and then later

on he had serious medical issues so I bought the business. He's over in NZ now. It has a great client base, I run it from home. We are an internet sales business, selling portable little PAs. We do school and church installations, and 100v line systems into shopping centres."

"Just last week I made \$1,000 on one sale. The growth opportunity is enormous. It just needs someone with some drive."

"Last 10 years on the side I was mixing bands at West HQ, formerly known as Rooty Hill RSL. I stayed on the old side looking after small bands, DJ's and Trios in 'Eat Street Bar'. It is only five minutes down the road."

Which brings us to the bad news. Dutchie is in palliative care with stage four liver cancer and doesn't have much time left.

"End of the line, no more they can do. A lot of us roadies who toured late 70s and 80s ended up with a dose of Hep C. I lived with that a long time. The alcohol didn't help. I loved drinking!"

"My goal is to sell off Almost Anything Audio as soon as possible, to avoid stuff ending up in a dumpster."

How do you re-evaluate your life when you know it is going to end, I ask?

"I've never had a fear of dying. The best thing I can do is tidy things up as best I can so my missus can have a fresh start without all my shit in the way".

As to the industry: "It's destroyed me to see how lights are being used. It should be about mood, theatrics, accents. But there is too much flashing! I don't want to know what your light is doing! I don't give a fuck about your light. They're blinding the audience half the time. Light the money!"

As for audio, "One different page of glory, one missed button, and it all shuts down."

"I have two daughters, one just had twins! Tamara has twins, Mia and Ava. Other daughter Kayla is having a child in June. Mum, dad and two sisters are in Queensland - I just got back from my last visit. It got a bit emotional. Piggy Peel took me out for lunch, that was nice."

Dutchie is supported by his wife Corrina and is at home in Sydney's west.

### Let's help Dutchie find a Buyer

If you (or anyone you know) are interested in owning a neat little audio business with decades of customer loyalty, please contact Julius Grafton on 0408 498 180 or email [juliusmedia@me.com](mailto:juliusmedia@me.com)

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# IDOMENEEO



## TASMANIA STARS IN MOZART OPERA

Whether you're a devout fan or harsh critic, you have to admit, there's something extraordinary about opera. For over 400 years, this art form has been captivating audiences around the world. The music has survived in its true form for centuries. Orchestras have remained relatively unchanged in all their acoustic glory. You will still hear every perfectly enunciated piece of libretto out of an opera singer's mouth from anywhere in the audience without a microphone strapped to their face.

Timeless conventions and structure continue to be honoured and adhered to throughout the global performing arts community. At the same time, behind the scenes, production designers are gaining access to emerging and advancing technologies, allowing them the opportunity to transcend boundaries like never before seen. We are apparently in the midst of the opera "digital revolution"!

LED screens, projection mapping, lighting effects beyond Mozart's wildest dreams - it's all coming into play (no pun intended). So why is it that the other stuff - the music and the acting and singing - has not been turned on its head by digitization and mind-blowing technological capability?

"No matter how spectacular the digital imagery, in live performance the humans on stage will always be more interesting. If they're not, there's a problem with the storytelling," Lindy Hume, director of Opera Australia's *Idomeneo* states.

The spectacular digital imagery to which Hume refers in particular is that of the raw and rugged coastline of lutruwita (Tasmania). After spending the last six years in the island archipelago, Hume was inspired by the extraordinary beauty of the land, so much so that capturing some of the spectacular scenery became the perfect answer to representing the setting for *Idomeneo*, a story which unfolds along the ancient, rugged,

unforgiving coastline of ancient Crete. Sending Tasmanian filmmaker Catherine Pettman of Rumin Productions out on location was one of the first steps in creating the immersive environment for *Idomeneo*.

"The scenery filmed was chosen to progress the narrative through anchoring the world in physical space whilst symbolising the vigorous *pneuma* within the characters and story arc," explains Pettman. "The majestic images in *Idomeneo* are from the precious lands of lutruwita/Tasmania, the remote namanu rruni/ Albatross Island in the north all the way down to its towering cliffs and rolling seas that fortify its deep southern coast."



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Pettman captured the images on a Blackmagic Design pocket cinema camera in 4K and 2K for slow motion sequences, using a variety of Canon Prime lenses. A Canon EOS 5D Mark IV was the tool of choice for stills.

Rummin Productions provided their scenic footage to Lindy Hume and Idomeneo's Video Designer, David Bergman, to be edited, timed, and mapped to scenic requirements. "I had a recording of the whole opera laid out on a timeline in our editing software, DaVinci Resolve. This way, every cue could be considered, timed, and synced to the music" recalls Bergman.

"We spent a week in a room doing a rough cut of the entire opera to the Mozart score. This involved editing crashing waves, flying albatrosses, storm clouds gathering and kelp islands floating in the Tasman sea to coordinate with the conductor's tempi and dramatic key points," adds Hume. "It was terrific fun playing God."

To bring the digital imagery to life, Hume had the idea to repurpose and reimagine American theatre designer, Michael Yeargan's 1989 set from Massenet's Werther, a giant, three-sided room with beautiful white gauze walls and a black floor, featuring over-sized white timber doors and cornices.

The video and images are splayed across this set using three 22K Epson projectors. To run the show, two disguise GX2c servers are employed, triggered by the lighting console.

"I always think of a video component as one more element in the visual composition of the stage. It doesn't change how I approach the look of the scene. I just have to balance it with the other visual aspects of the picture."

Award-winning lighting designer Verity Hampson identifies one of the challenges in negotiating these visual aspects, particularly in Idomeneo, as creating a smooth transition between the video and the lighting effects.



"I always think of a video component as one more element in the visual composition of the stage. I just have to balance it with the other visual aspects of the picture."



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"The natural landscapes looked more realistic and immersive when they blended with the light," describes Hampson. "To achieve this, Dave Bergman and I had to carefully plan the cues for both elements and make sure they matched in timing and intensity. It was not easy, but it was rewarding to see the final result."

Hampson's technique to create the rainforest effect in *Idomeneo* is a testament to her ability as a lighting designer to provide seamless, almost unnoticeable, yet highly effective results; "I chose a part of the video that showed the greenery and colours of the forest. I asked Gobotech in Brisbane to make eight custom full-colour glass gobos from that part. I placed these gobos on the edge of the stage to frame the scene. This way, I could match the lighting to the video better than using standard gobos."

The *Idomeneo* lighting rig consists of 110 Martin Mac Encores, 36 ETC Lustre 2 and 14 additional Lustre units. "The Encores are divided into six lighting bars and an orchestra position, with different colour temperatures for the onstage and offstage units. The Lustre 2s are placed in the perch positions, the box booms, and the pit rail. The circle rail also has two more Encores. The Martin Mac Encores are ideal for situations where low fan noise is required," Hampson details.

Syncing a large video element to live performance presents its challenge differently to each member of the creative team. From a lighting perspective, the biggest challenge is time. Trying to solve physical challenges before going to theatre helps alleviate the issue, but the potential for unexpected issues requiring more stage time can be stressful. According to video designer David Bergman, the challenge lies in "creating a show that feels and moves tightly with the performances as well as remaining flexible enough to allow for timing fluctuations that inevitably happen as part of a live performance...I've had to revisit a few key sequences in the opera quite regularly in the lead up to opening night to shift the timings of the edit as the tempi settle".

For the director, "when the soundtrack to the visuals is performed live by humans with extraordinary, unamplified human voices, on man-made instruments and singing music and words created centuries before the performance, a director simply must not set up a competition for the audience's attention." Underscoring the importance of upholding operatic tradition in live stage performance and appropriate use of digital innovation for both aesthetic and functional purposes, Hume quite simply and sensibly states: "My job as director is to forefront the story and the people. The design must amplify and support that objective, not overwhelm it."

Mozart's *Idomeneo* is a collaboration between Opera Australia and Victorian Opera. It ran from 20 February to 15 March 2024 at the Joan Sutherland Theatre, Sydney Opera House.



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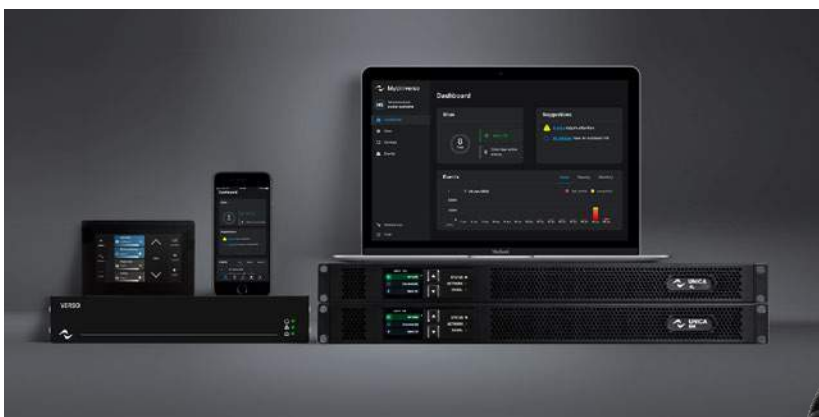


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**NEW GEAR**



**Powersoft Verso gateway**

Verso gateway is a half-RU device designed to enable access to the MyUniverso cloud platform and all its related functionalities for the entire current Powersoft amplifier portfolio. It allows monitoring and centralised remote firmware updates for all connected amplifiers, and supports Powersoft's Dynamic Music Distribution (DMD) solution.

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



**Astera ProjectionLens for PlutoFresnel**

Astera have added a lens option for their battery powered PlutoFresnel LED luminaires. ProjectionLens adds precision optics and zoom functions. Includes four-leaf shutters for highlighting specific areas, plus a slot for E-Sized gobos. Integrated manual zoom has a range of 16° to 36° for projection. Two focus wheels are included in the ProjectionLens to assist in producing crystal-clear gobo projection at any distance.

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*New Zealand: ULA Group ulagroup.com 09 218 6532*

**ETC F-Drive Now Available for Source Four Mini and Irideon**

With F-Drive compatibility, Source Four Mini LED and Irideon fixtures can now be controlled via DMX for the first time. This provides a smoother dimming curve in any Source Four Mini LED, Irideon FPZ and Irideon WLZ installations.

*Australia: Jands jands.com.au 02 9582 0909*  
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**Elation SIX+ PAR Wash**

Elation's SIX+ PAR fixtures come in two sizes: 7x (SIX+ PAR S) or 14x (SIX+ PAR L) 20W RGBLA+UV LEDs. SIX+ PARs offer ultra-wide colour spectrum, and colour rendering with high CRI (93). SIX+ PAR house the same LED engine as Elation's new SIX+ BAR series for a perfect colour match. Output is 3200 lumens for the SIX+ PAR S and over 7000 lumens for the SIX+ PAR L. Colour temperature control via a dedicated variable CCT control channel with adjustments capable from 2400K - 8500K. A CMY Emulation mode plus an integrated library of calibrated colour presets that match the most popular gel filters is also included. IP65 rating for both indoor and outdoor events. Its marine-grade coating makes them safe to use in harsh coastal environments. Includes fanless cooling system.

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### Lightware Taurus TPX UC Room Ecosystem Expansion

The UCX-2x1-TPX-TX20 from Lightware is a USB Type-C and HDMI switcher transmitter. Single CAT connectivity between TX and RX devices, up to 100m, with power delivery from TX to RX, video, USB2.0, Ethernet, OCS and serial. USB-C input connectivity on the TX device for 4K video, audio, data, and power (video, audio, data and power over a single USB-C connection). Multiple USB .0 connectivity for any type of USB device (camera, speakerphone, touch monitor, USB-HID devices etc.) Both on the TX and the RX Independent USB host switching layer for multiple USB hosts, up to 8 devices (4x at the TX side, 4x at the RX side). Room device control via Ethernet (TCP/IP) or serial (2x at TX device, 1x at RX device). USB-C charging up to 100W on the TX.

**Australia:** Lightware Australia Pty Ltd [lightware.com](http://lightware.com) 02 9188 0658  
**New Zealand:** Pacific Audio Visual Ltd [pacificav.co.nz](http://pacificav.co.nz) 09 947 5230

### DiGiCo Fourier Interface Card

DiGiCo's new Fourier Interface Card will soon be retrofittable on all Quantum consoles (as well as on the majority of SD-Range desks). The new module delivers 64 channels of bidirectional audio at both 48k and 96k connections to the Fourier Audio transform.engine, which is a 2U outboard Dante-connected server designed to run VST3 software plugins in the live environment. Fourier Interface Card is based on Dante, allowing most of DiGiCo's consoles - even those without DMI card slots - to readily join the Dante ecosystem, and without requiring MADI on the transform.engine.



### DiGiCo Pulse Updates

Mk 2 software packages, known as Pulse, will increase the input channel and buss counts of each desk model, plus add other notable features. On the Quantum338 and Quantum338T, the new upgrade will increase the number of input channels to 156 (from 128), busses to 72 (from 64), Mustard Processors to 48 (from 36), and Nodal Processors to 72 (from 64). Other perks include the addition of Mix Minus functionality, plus a larger 36x36 Matrix on the "T" theatre-software model of the console (up from 24x24). Similarly, Pulse will enhance the Quantum225, raising its input channel count to 96 (from 72), buss count to 48 (from 36), and Mustard and Nodal Processor tallies to 36 and 48, respectively (from 24 and 32). Mix Minus is also included in the new feature set.



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## Neumann MCM system capsules

Neumann capsule heads were once exclusive to users of Sennheiser handheld transmitters. KK 104 U (cardioid) and KK 105 U (supercardioid), are now available for wireless systems from other third-party manufacturers: Sony (all models), Lectrosonics (all models), MiPro (ACT Series), Shure (Axient Digital, ULX-D, QLX-D und SLX-D Series). These new capsule heads are available in black, silver and also in individual designs (made to order).

### Neumann KK13 capsules

Neumann's KK 13 is an omnidirectional capsule for the Miniature Clip Microphone System (MCM) as an alternative to the standard KK 14 cardioid capsule.

### Neumann MCM-SH goosenecks

Neumann's MCM system is complemented by two new goosenecks SH 100 and SH 250, which are 50mm shorter and 100mm longer respectively than the standard gooseneck SH 150 at 150mm. The popular MCM 114 set via/vla for violin and viola will from now on be supplied with the shorter gooseneck SH 100.

### Neumann MT 48 Monitor Mission

Neumann have released a feature upgrade for the MT 48 audio interface. Designed for the mixing and mastering audio sector, Monitor Mission transforms the MT 48 into a configurable monitoring controller, supporting 5.1, Dolby Atmos 7.1.4, and immersive audio formats. New features include ability to downmix (for headphone playback), flexible bass management, room alignment of the connected speakers in frequency and time domain, Remote Application and Web Control support.



**Australia: Sennheiser**  
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[en-nz.sennheiser.com](http://en-nz.sennheiser.com) 09 580 0489



# NEW GEAR

## Shure SLX-D Portable Digital Wireless Systems

Shure's SLXD5 Portable Receiver is in a miniaturised form factor and can be installed on-camera through the provided cold shoe mount, as well as in an audio bag. SLXD5 offers Multi-Mic Mode, which facilitates management and monitoring of multiple sound sources from a single receiver. SLXD3 Plug-On Digital Wireless Transmitter transforms any XLR source into a wireless one, including dynamic and condenser microphones. The SLXD3 provides phantom power and is ideal for wireless transmission from boom-mounted shotgun mics. SLX-D portable systems use 24-bit digital audio and >118db dynamic range. Features include UHF-band RF performance of 32 channels per 44MHz band and 100 metre transmission range, high luminosity OLED screen for users to monitor battery life, meter audio and RF quality, and frequency tuning.



## Shure Axient Digital ADX3 Plug-On Transmitter

ADX3 transforms any XLR-terminated microphone into an advanced, portable Axient Digital ADX Series wireless microphone, delivering the same audio quality, RF performance and tuning of the AD3, with the addition of Shure's proprietary ShowLink technology. ADX3 features a dust and moisture resistant, rugged metal construction, as well as an OLED display with an easy-to-navigate menu. A patented locking mechanism ensures a secure, wobble-free connection that readily interfaces with handheld and shotgun microphones. Users can select High Density mode to increase maximum system channel count or run ADX3 in standard mode for optimal low latency coverage. The line-of-sight operating range is 100 metres. ADX3 features automatic input staging and uses AES 256-bit encryption for secure transmission.



**Australia: Jands** [www.jands.com.au](http://www.jands.com.au) or (02) 9582 0909  
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## L-Acoustics Xi Series Coaxial Speakers

Xi Series is a range of installation-focused coaxial enclosures with distinct formats, bandwidth, and SPL specifically tailored for short throw applications. X6i and X8i passive loudspeakers boast a 1.5" neodymium compression driver coaxially loaded by a 6" or 8" low-frequency transducer in a bass reflex cabinet. The 90° axisymmetric directivity imparts a smooth tonal response, free of secondary lobes over the entire frequency range. When used alongside a subwoofer, X6i boasts a maximum SPL of 123dB and a frequency response down to 69Hz, while the X8i features a maximum SPL of 129dB and a frequency response down to 67Hz. For standalone applications and close proximity listening experiences, the X6i\_50 preset delivers full-range sound reproduction down to 54Hz and produces a maximum SPL of 117dB. The X8i\_40 preset reaches 43Hz, producing a maximum SPL of 123dB. Both made with weather-resistant IP55 rating.

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## Lightware HDMI TPX-RX109AU2K and TPX-TX209AU2K

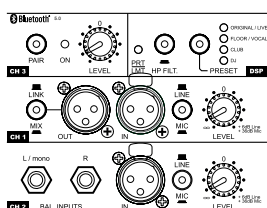
Lightware AVX (non-switchable) HDMI 2.0 transmitters and receivers use SDVoE technology and allow users to extend HDMI 2.0 compliant video, audio and control signals from a single source to a single destination. USB2.0 transmission with support for USB2.0 devices e.g. cameras, microphones, touch screens, pen drives, keyboard and mouse. They can send or receive remote power through CATx cable (PoE PSE, PoE PD), and allows for the transmission of HDMI 2.0, embedded audio, Ethernet, RS-232 and USB2.0 between an extender pair directly connected together. Supports HDMI 4K signal formats (4K UHD @60Hz RGB 4:4:4, up to 18 Gbps). HDR and low latency Dolby Vision support.

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Woo-hoo!

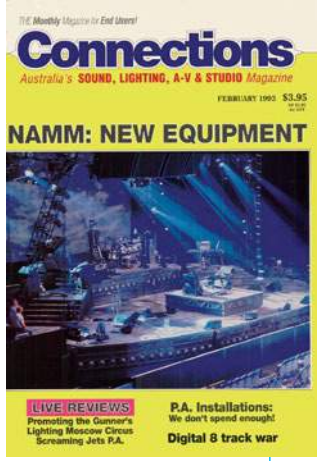
# CX Magazine's 200th Edition!

Happy Birthday to us! This very edition, CX200 March 2024, is our bicentennial! In truth though, CX is actually older than that. Let's have a look back through our chronology through some milestones and how we came to be here:

105 issues of Connections later...

## Our Ancestor Channels

- 1990 — The magazine that would one day become CX started life as 'Channels', an in-house magazine started by Jands for its dealers and customers. It's first edition came out 15 Dec 1990, and quite famously had the date '15 Dec 1991' printed on the cover. It was edited by one Julius Grafton and contained news about Jands' purchase of concert production company Samuelsons, piggyback plugs being banned, a review of the Soundcraft 200 Delta mixing desk, and a Production Diary including Aerosmith and The Angels. 18 editions of Channels were published, the final being in December 1992.
- 1992 —



## Our Parent Connections

With Channels outgrowing its in-house status and starting to carry ads from Jands' competitors, it was sold to Julius Grafton, who renamed it Connections and set about covering the industry as a whole. The first edition in February 1993 had Elton John's stage set-up on the cover, a review of Guns N' Roses at Eastern Creek Speedway, an interview with Bruce Jackson on his days with Elvis, and a huge classified ad section (remember those?) Connections became the industry bible at a time when concert production was becoming more sophisticated and the gear more complex. Installations and AV were expanding. Connections started at the height of the analog era, presided over the birth of digital, and ended 10 years and 105 editions later in January 2003, as we entered the dawn of networked technology.

1993



2018

## Change of Editorship

*CX135 April 2018*

In March 2018 while we were touring on ENTECH Roadshow, Julius Grafton announced that after 28 years, he was handing the editorial reins over to me. The April 2018 edition was my first full magazine as editor. I was also writing features. To be honest, I was not prepared for the dramatic increase in workload, but with Julius's guiding hand, I got on top of it.



2019

## New Layout Team

*CX139 August 2019*

In a classic 'new guy' move, I brought in a team I'd worked with before. Mark Underwood and Alisha Hill, who I'd worked with at Yamaha, had both started their own businesses in graphic design and layout, and I hired them to do CX each month, bringing layout back home to Australia. For many reasons torturous and involved, layout was being done by a company based in Ecuador for the couple of years previous. Mark and Alisha still do excellent work, including on this very issue!



2020

## Change of Ownership

*CX155 February 2020*

The deal was done in December 2019. Julius Grafton sold us the media company and all of its assets, and kept the events business that still runs ENTECH and other travelling trade shows. The first issue with VCS Creative Services as owners and publishers of CX was the February 2020 edition. For the record, the 'under new management' graphic on the cover was all Mark and Alisha's idea.



2020

## Crisis

*CX157 April 2020*

We had two good trading months in January and February 2020. Then, Black Friday 13 March happened. The events industry shuttered overnight. Monday 16 March I took phone call after phone call from advertisers regretfully pulling out. CX lost 80% of its revenue that week, though that was a mercy compared to the 100% loss most other business in this industry suffered. As we had started a new business entity to own the magazine, we didn't qualify for support for months. The magazine didn't start to recover financially for a year. Again, Julius Grafton was an invaluable source of support through this hellish period, in which we continued to print and distribute a magazine every month.



2022

## Recovery

*CX177 February 2022*

By February 2022, Melbourne had emerged bleary eyed from the world's longest lockdown. Hope was back in the air, and (some) money was once again in the bank. We celebrated with a new look, provided by Mark and Alisha. We love our RGB-shift branding!



2024

## 200!

*CX200 March 2024*

Spoiler alert – we survived! And in fact, we thrive. We have a bigger writing team than ever, we've expanded the subscription base, and we're loving what we do. A huge thank you to everyone who kept us alive during the pandemic, and a shoutout to everyone who's come on board to support us since!



All of the publications mentioned above right back to Channels 01 and everything in between, are all readable and downloadable from our website: [www.cxnetwork.com.au/cx-magazine/](http://www.cxnetwork.com.au/cx-magazine/)

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# PEOPLE ARE VALUABLE

**The last few years, perhaps more so than ever before, certain people in our audio industry have become devalued, underpaid, and overworked, regardless of their level of expertise, years of experience, or credentials. I can't think of another industry that does this. Moreover, no one in our industry seems inclined to talk about it, do anything about it, or in some cases even appreciate that this uncontrolled slide is destined to drive certain parts of our industry into the ground.**

**Is this problem peculiar to Australia? Nope.**

Is this perpetual slide the result of decades of record company neglect, where nowadays there's little or no investment into unknown artists by anyone other than the artists themselves? To some degree, certainly.

Is it because every person and his or her dog has a recording studio at home, which allows them to be an engineer, a producer, a performer, and a mix engineer? (The person, I mean, not the dog.) No question.

Does the ubiquitous nature of the home studio owner/operator also insidiously create the false impression that paying someone else to engineer, mix, perform or produce music, constitutes a giant waste of money, i.e. a 'luxury no one can afford'? Definitely.

So who is at fault here; who's to blame for this sorry state of affairs, where 30 years ago there was money in our industry to pay a vast array of people to perform all the mechanical functions involved in making it tick, and now there's almost none?

Was it, at first, the legislators in the US who allowed a couple of companies to buy almost every radio station in that country, rationalise its programming staff from hundreds down to one, thereby preventing DJs from ever again playing new, unprescribed music by an unknown band? Was it record companies leeching money from the industry? Was it the 'digital revolution', which made both the recording equipment cheaper and the music it produced valueless? Was it graduates from audio engineering schools flooding the job market that broke the camel's back, or was the demise of small venues around the country that prevented unknown bands from finding their audience what did it? Was it, more recently, streaming services abandoning small artists in favour of giant lucrative ones, treating the fledgling artists with about as much respect as the fourth decimal point on percentage calculator. I mean, who in their right mind thinks it's fair or equitable for Tay Tay, for example, who could afford to bail out a small country, to earn money from an artist

whose music doesn't exceed 1,000 streams? It's insane, and totally outrageous, but we cop it...

Clearly, it's a complex combination of all the mechanical aspects of our industry (and a hundred other factors besides) that have led us down this sorry, inequitable path. All of us bear the collective responsibility to some degree or other. No one can be singled out – not easily anyway – and nothing will change unless there's a concerted effort to make things better.

## The Downward Spiral


There's one distinction to draw here, however, that's significant when using the term 'audio industry'. There are several arms to this many-limbed beast, as I've said countless times before, and not all of them are on the skids. On the contrary: if you're a manufacturer, for example, or distributor of audio equipment, you'll almost certainly be on a far better wicket than a recording musician or record producer.

Most musicians, recording studio owners, artists and producers live hand-to-mouth, mostly earning less income than a kid flipping burgers at McDonald's. They drive old cars, wear old clothes, and have no superannuation. They certainly don't drive around in Ferraris, like at least two Australian pro audio manufacturers and retailers (that I can think of) do.

That's fine, of course. If these individuals have earned the money and want to drive around in such a vehicle, that's entirely up to them, and



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good luck to them. I'm not concerned about the car they drive. It's merely an indicator of where the money in our industry resides. Frankly – and to labour the point somewhat – I can't think of one muso, producer, engineer or audio editor who wouldn't laugh in your face if you suggested they buy a Ferrari as their next car purchase. And that includes several rock stars I know!

If you're a 'working' musician, composer, producer, engineer, editor or in other ways involved on the 'creative' side of the industry, regardless of your level of experience, skillset, or credentials, the prospect of you increasing your earnings in our industry as you advance are extremely poor. Whether this cold fact is taught in the various audio schools around the country, I very much doubt it. So let's mention it here, shall we?

Where once there were thousands of jobs, and by far the most common foot in the studio airlock, radio station foyer, venue or live production company was through a poorly paid apprenticeship, the numbers for which were self-regulated by businesses' individual employment needs, these days there are vastly fewer jobs, and thousands upon thousands of

well-meaning graduates, searching for jobs in this rapidly shrinking pool of opportunity. All this does is put severe downward pressure on wages for the people already involved.

The numbers tell the story. Are there jobs for all these graduates? Absolutely not. Would you be more employable in the wider workforce if you earned a Bachelor's Degree in Western European Philosophy?

### It would be a hair split

And for those who have carved out a living working on the creative side of our industry, either by employment, or more commonly, self-employment, the earnings have not grown, they've shrunk. Things have grown tougher, not easier, and even amongst the top echelon of audio professionals, the earnings have diminished to the point where many are now abandoning decades-long careers as their economic prospects hit home. It's a crying shame.

Australia wastes its creative talent, callously throwing it on the scrap heap rather than celebrating it. Many other countries around the world do the same.

### So Change What Exactly?

There are countless reasons why we find ourselves in this predicament, far beyond the commentary of this short article, but turning back the clock or moaning about 'how things were before' certainly won't change anything. Au contraire, griping about things just makes it far worse.

But historical facts can sometimes provide a path forward, and it's important to appreciate why things were better in decades prior, when that fact holds true.

However, it's a very subjective truth to say that more people earned a middle-class wage in the audio industry in previous decades, when the opposite could also be strenuously argued: that indeed far fewer people even had access to recording facilities decades ago, let alone money for a costly film-clip or the prospect of that video being played on TV.

And in decades past, particularly last century, everything cost 100 times more than it does now: ads on community radio cost thousands, billboards on the street were a similar sum (which also included the very real prospect of you getting arrested by police or fined by local council). There were no such things as free mailing lists, video streaming platforms or global portals through which bands could sell their wares. Studios cost thousands per day, tape was 300-odd bucks for 15 minutes at 30IPS, and PA hire was exorbitant. Even entry to gigs was significantly more than it generally is today, particularly if you factor in inflation.

In short, there's no straight line of logic to say that everything is worse now than in past decades. There's far more complexity to the story than that.

But I think generally we value people and their skills far less nowadays and that's harmful to the health and wellbeing of our industry, as well as detrimental to the wider community and Australian culture.

I don't expect things to turn around any time soon, but it would be nice – once in a while at least – to see a bit more honesty coming from the healthier arms of our industry about where things stand. Wouldn't it be nice, for example, to see an ad from a pro audio equipment manufacturer that read something like this: "Our new DAW software, in the hands of a clueless nitwit, isn't gonna shake the audio industry to its core, but a great mix by a professional engineer just might." Or maybe a venue owner might sing the praises of the FOH engineer who mixed the incredible show at the venue last weekend on their Facebook page. Or perhaps some of the more lucrative arms of our industry might wake up one day and realise that the only reason they are successful at selling their wares is because there are still people out there using their gear to produce stellar audio outcomes. If they all disappear because people are financially ruined by the very same industry, the manufacturers, distributors and retailers will be next.

They say that in a gold rush you should sell shovels. But when the rush ends, so does the market for shovels.

People matter in the wider audio industry, and it's high time we stood up collectively and created a more resilient workplace, where people might get paid two or three times what they did in 1984, not thirty percent less. It's unsustainable – has been for 20 years. We can't all drive Ferraris, no one is expecting that, but I'd like to think that 10 years from now, talent in our industry is in some structural way financially rewarded, regardless of the role.



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](mailto:andy@themill.net.au) or visit: [www.themill.net.au](http://www.themill.net.au).

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by Taki Rua, YOOCrew and Artificial Imagination



## Hatupatu Kurungaituku brought to life with captivating aerials and immersive multimedia

'Hatupatu Kurungaituku - A Forbidden Love' from Wellington-based Taki Rua Productions opened Aotearoa New Zealand Festival of the Arts on 20 February, subsequently touring Auckland and Christchurch, and closing in Rotorua, the home of the legend, on 17 March. The iconic Te Arawa story of Hatupatu and the bird woman Kurungaituku was brought to life using gravity-defying choreography, kapa haka, and an immersive multimedia set that transformed the forests and geothermal landscape of Rotorua to create a fantastical bird realm.

The technical team for this breath-taking immersive dance performance was led by Sam Johnston, Director of YOOCrew, and multimedia was created by Delainy Kennedy, Director of Artificial Imagination and team. Sam Johnston became involved in October 2022, "I was having a beer with Tāne (Director and also Taki Rua Productions' Chief Executive), talking rigging supply when he asked if I would like to come on board as Technical Manager, reviewing the original specs as the show evolved and making recommendations for appropriate gear and suppliers."

Delainy had joined forces with Tāne earlier in 2022. "The brief was somewhat loose," Del

chuckles, "Tāne gave me the script and the book and said to go from there. Most daunting were the notes in the AV sheet, for example 'shot of bubbling mud.' My challenge was to use the physical locations, the forests, the lakes and of course the bubbling mud, whilst avoiding the video simply becoming footage of Rotorua portrayed on a large screen." Delainy brought in colleague Rachel Naser and rather than rely on standard photography, they used photogrammetry to create point clouds of the environments and generative AI to take the data and push it into a more metaphysical form, "We created particles that responded to turbulence, from a gentle breeze to a tornado, portraying the emotions and locations in the script, be it forest or geyser, but in an abstract way."

Delainy's biggest challenge was the budget, "Tāne is an amazing visionary and in the original design we had multiple screens including in the ceiling. Unfortunately, financial constraints meant we had to scale back to the one 5.5 by 9.6 metre screen. That's definitely not an issue unique to this project though!" The sheer amount of data has also tested Del and his team's creative processes, "We have worked hard on our workflow and choice of

software, to enable us to move from some one to two thousand images of an object to one 3D model that we can manipulate in real-time. Our workflow consists of location capture with DJI drones and Canon DSLR cameras. The captured images are processed through Davinci Resolve or Lightroom, then these images are fed into Reality Capture to create 3D models. The models are then brought into Notch, which enables us to create our content in real-time. Final renders are put into disguise d3 for show playback. We also used some stable diffusion models with ComfyUI to generate a base layer of moving imagery that we could manipulate in Notch."

Meanwhile Sam set to work on designing a build requiring a huge amount of customisation. "Tāne's vision has human counterweighted aerial performance, traverse automation, human swings and multiple stage trapdoors. Factor in a high stage with large scaffold gantries and a very tight time frame for removal, transportation, and reinstallation, and it is a hell of a build! While the show does not have a massive footprint, there are customised elements at every turn, from custom made lengths of truss, to effects built into the stage, to a touring black scaffold structure, supplied

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by Geeves Scaffolding.”

The first challenge was choice of venue, with many just too short or too tall, or unable to meet the required weight specifications. The team finally settled on Tāwhiri Warehouse in Wellington, Q Theatre in Auckland, Wigram Airforce Museum in Christchurch and the Energy Events Centre in Rotorua, using the same build with only minor tweaks, apart from in Auckland, “For Q Theatre we are using a different scaffold structure and taking advantage of the seating upstairs.” Hatupatu was the first ticketed production for Tāwhiri Warehouse, a cavernous new Wellington venue located behind Te Whaea National Dance and Drama Centre.

The amount of gear, the numerous aerials necessitating safety verification, and the tight touring schedule saw Sam invest a significant amount of time on logistics planning, “We have two trucks of customised scaffolding and two trucks of production equipment. And we are doing 29 shows in 28 days, with a timeframe that means if there are any issues with the ferry crossing between the Christchurch and Rotorua shows, it will delay pack in. There is no downtime in the schedule and from the technical management perspective we have a lot of complex elements that could go pear shaped.”

Whilst Delainy largely worked independently of the production team in advance of rehearsals, Sam engaged closely with Tāne, “I can’t speak highly enough of Tāne. He had an amazing vision and the law of physics didn’t really apply! So I did a lot of work on the development and design side of things, ensuring we achieved the deliverables safely and balanced budget practicalities.”

Sam has also collaborated extensively with the

performers, “I have had hui with the dancers, and remain in constant contact via our Head Climber Connor Leech, to ensure that they have confidence in the structure. This is the first time I have had an entire cast who have never used a harness before, so it has been an interesting process. Doing 29 shows over 28 days, they need to know that bruising is to be expected but be able to identify the difference between normal ouch and concerning ouch!”

At the time of writing both Sam and Delainy were heading into rehearsals at Tāwhiri Warehouse, excited to see their vision of the build and visuals come to life. Tāne was equally as animated, “This unique experience elevates, quite literally, a beautiful Māori story which so many in Aotearoa have read from a young age, and inserts the audience right inside it. The forests, geysers, and the bird realm are visceral for the audience – the story unfolds above and around them. It is an experience we hope sheds new light on this legendary love story and secures its place in the hearts and minds of New Zealanders long into the future.”

### About Sam:

With strong roots in production rigging, Sam launched YOOCrew in 2019 with Nic Balkum and despite COVID, the company has grown, answering the need for qualified and experienced crew in specialist roles throughout New Zealand. With over 20 years in the events industry, Sam holds a variety of technical skills and qualifications. He is an electrician by trade, previously sat on the Executive Committee of Entertainment Technology New Zealand (ETNZ) and is a co-author of the ETNZ Guide to Safe Rigging Practices for the Entertainment Industry in New Zealand. Over the years, Sam has

been a venue technical manager for arena, proscenium theatre, and concert halls in Wellington. In addition, he has toured both corporate events and productions throughout New Zealand.

## IN NUMBERS

### The Build:

1.5m high stage with 6 trapdoors, 3 of which are double leaf or articulated

2 scaffold gantries, each 12.5 x 8m

4.4T of truss and lighting accessories suspended

92m 5 chord 300mm Truss

20m 5 chord 400mm truss

81m 4 chord 400mm truss

2 automation winches

8 sticks of customised truss

2 B trains of custom painted black scaffolding (leap frogging cities)

10 Axis of Human fly systems

### The Multimedia:

1x Panasonic RQ25k

1x disguise Solo

750GB show content

6000 images taken for photogrammetry

30 million vertices across 6 3D Models

300 hours capture and creation

Less than two hours of render time



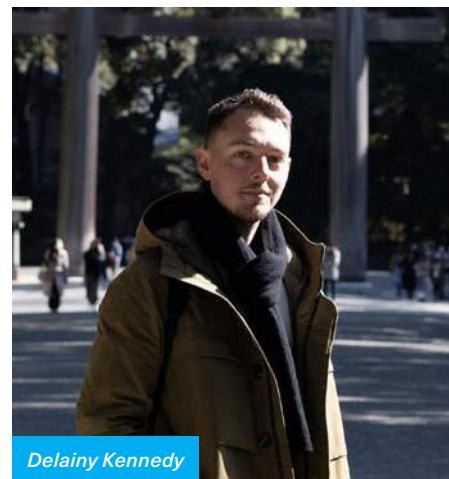


"Tāne's vision has human counterweighted aerial performance, traverse automation, human swings and multiple stage trapdoors."



#### About Delainy:

"My roots are as an AV technician before moving into the creative. I've spent 12 years building projections for live concerts, conferences, anything large-scale. More recently I've been working in the virtual production space, I developed my skills with video systems, particularly disguise." Delainy learnt the ropes with Spyglass and Darkroom Motion Graphics, and his own business Nocturnal, before heading to Berlin to Pixway GmbH touring auto shows in the US, India and Asia. His contribution to Pixway GmbH's trade shows continue to this day, most recently at the Frieze Art Fair in Seoul, mapping a BMW i5 with nine 20k projectors. In August 2021 he established Artificial Imagination, currently as a team of three, "We have a strong base in the arts. Recent projects have included The Art of Black Grace 1/5 & 2/5, combining motion graphic animation, footage manipulation and VFX to create a seamless 360-degree short film of immersive dance performance."



Delainy Kennedy

# The People of CX MAGAZINE

Our little family of tech-obsessed writers has grown considerably over the last few years, despite, and almost because of, the pandemic slowdown. The subsequent recovery and massive increase in activity meant we had to scramble to put enough bodies on the job to keep the mag and the web working as they should, and now the team is bigger than ever!

So, in this 'People Issue', we introduce our people, helping you to put a face to the bylines.



## Jason Allen

*Owner and Publisher*

I got my Bachelor of Music majoring in composition at The University of Adelaide's Elder Conservatorium in 1995. I followed that up by moving to Melbourne in 1996 and taking on a much more practical Graduate Diploma in Contemporary Music Technology at LaTrobe University, which oriented my way around a mixing desk (at least in a studio!). I started out mixing my friend's bands up and down Brunswick Street, Fitzroy, before becoming a casual at Arts Centre Melbourne, while doing

freelance monitoring engineering for cover bands, then finally became a Senior Sound Technician at Arts Centre Melbourne.

After a three-year stint in Europe, I returned to Melbourne in 2006 and became a Sales Manager, then National Sales Manager, in the Commercial Audio Division of Yamaha Music Australia. In 2013, I started the company that now owns this masthead, VCS Creative Services. Originally a specialised content creation service for the AV and entertainment technology sector, VCS is now a full-service marketing and business development company with its own integrated electronic and printed media company.



## Andy Stewart

*Sub Editor and Regular*

Andy Stewart is an internationally recognised recording, mixing and mastering engineer, whose studio, The Mill, is tucked away in the rolling hills of Bass Coast Shire in Victoria. Set on 21 acres, with ocean views and rural surroundings, The Mill offers a secluded artistic environment, combining privacy, spectacular vistas and comfortable accommodation. The equipment list is to die for, as is the friendly, relaxed atmosphere. Some of the best sounding Australian music productions of the last decade have come from The Mill.

Andy is well known for his epic audio productions, incredible gear list and extensive musical instrument collection. His most recent production of note was Circling Time by legendary Mutti Mutti elder Kutcha Edwards, on which Andy also played several instruments.

Andy was the editor of Audio Technology Magazine for a decade before joining the ranks of CX magazine well over 100 issues ago now – how time flies! He contributes his highly regarded Listen Here article to this mag every issue, as well as the occasional insightful, real-world equipment review.

Andy lives on the farm with his wife Sierra, whom he met at the AES in San Francisco back in 2006 – Sierra previously worked in the US for Universal Audio. They have two amazing kids: River and Ava. Andy is also the captain of his local CFA fire brigade, volunteering his time and efforts, which occasionally include putting himself in positions many of us would generally run a mile from...

With nearly 40 years' experience producing, mixing and mastering, Andy is widely regarded as a one-stop shop for all things audio. He is as comfortable mastering an album as he is producing or mixing, and his production facility, The Mill, has become one of the most sought-after studios amongst artists and producers Australia-wide.



## John O'Brien

*Regular, Sub Editor of 'New Gear', Web Wrangler*

Architecture and construction == labourer / assistant PM. Concerts and theatre == lighting up the dark, making it pretty or making it noisy. Corporate theatre and AV installations == making it happen, from tech to project manager. Control systems == programmer / tech support / trainer / sales designer. Magazines == wrangler of words.

Owner builder. Practical artist. Photographer. Volunteer.

Living regionally among rocks I arranged myself.

## Jenny Barrett

*New Zealand Correspondent*

A desire to travel far from Birmingham saw me morph from English Language Teaching, into educational technology, into the audio-visual sector. I successfully ticked off stints in Europe, North America and Asia before settling in Whakamarama (say it carefully), New Zealand. After a decade on the AV/tech sales frontline, I moved into a marketing role and was astonished to find that staying in one place had its benefits.

I established 'The Writing Room' nine years ago to provide marketing and copywriting services to the AV and tech sectors, although now over half my business is tender writing for the engineering and construction industry. Luckily my gig with CX Magazine keeps me in touch with the amazing Kiwi audio visual sector. I am inspired on a monthly basis by the passion and creativity of the wonderful people that I have the good fortune to interview. Thanks CX Magazine and all the visionary individuals that I have chatted with over the last eight years!



## Brian Coleman

*Regular – The Gaffa Tapes*

Brian played in various bands in the 70s and 80s before finding his niche in sound, lighting, and band management. After the mid-life employment crisis most of us in this business experienced, he spent 10 years (heavily medicated) in sales. The audiovisual boom of the 90s was the lifeline, and he went into audiovisual management. In 2003, he became editor of Broadcast Engineering News (BEN Magazine). The story around the traps goes something like this: Brian actually applied as a janitor at Reed Elsevier, which was the largest publishing company in the world, with headquarters at Chatswood. They were so impressed at how cleverly he demonstrated changing the towel in the men's room that they offered him the job of editor of their broadcast journal. In 2005, Brian jumped ship and started writing for CX.



## Artemis Horton

*Feature Writer*

Canadian born and raised, Artemis came to Australia nearly 20 years ago to take a much-needed break from the pressures of full-time music performance and teaching. Blue sky and red sand was the life she envisioned. Speakers and mixing consoles was the life she found. Happily transferring her skill set from onstage to backstage, Artemis and her partner Peter have co-owned/operated an audiovisual production company together for the past eight years. They currently reside in Newcastle, NSW with their two children and two boisterous Great Danes. Travel, music and viscous dog drool are abundant in family life.



## Kurtis Hammer

*Writer - Lighting*

Kurtis started in the industry in 2011 as a theatre followspot operator on Jersey Boys. He has been writing content for CX Magazine since 2022. Since 2018 Kurtis Hammer has been employed as Head of Lighting at The Star Events Centre, Sydney, which typically does around 200 events per year. In that time the 3,000 seat venue has hosted many large scale events such as The ARIAs, The Logies, Lionel Ritchie, and The Dally Ms.



## Alle Richards

*Feature Writer*

Allee Richards is a theatre lighting technician from Melbourne. Over her six years in the industry she has worked for the Australian Ballet, Opera Australia, Melbourne Theatre Company, Melbourne Symphony Orchestra and countless other musicians, comedians and independent theatre companies. A bit of an all-rounder, with board op and programming skills, her first and enduring love is for doming. Her career highlight to date was being a dome op on Harry Potter and the Cursed Child which she did for three years. When not inside a theatre (and also sometimes when she is) she writes fiction. She has published two novels, Small Joys of Real Life and A Light in the Dark that both draw inspiration from her work in the performing arts.



## Fiona Davis

Feature Writer

Welcome to the colourful world that epitomises my life. My name is Fiona and I've lived many chapters of a life that's still unfolding in all its synchronicity. If Wes Anderson were to capture my story in his perfect cinematic essence, I'm writing deliriously fantastical stories in my childhood brain that transferred to a passion for writing in the adult realm. From teaching high school English, writing magazine articles, travel brochures, blogs, a weekly newspaper column, writing/self-publishing a book and a myriad of other interludes that also combine my passion for music, animals and all things retro.

In one chapter of my life, I lived in the USA travelling with a band on tour capturing the highs and hideous lows through an eye watering blog. To combine my affection for music, animals and the world of retro, I more recently owned and managed a dog friendly retro bar/live music venue. The perfect trifecta! I currently do freelance writing, seeking out the next chapter of my life which hopefully sees me penning a best-selling novel from a cabin in the woods; the director's cut of my life's movie.

## Julius Grafton

Correspondent at Large

Julius Grafton founded this journal of note, the origins of which lay in December 1990. Having published Channels magazine, then the independent Connections (1993 - 2003), CX was born as the new century evolution. In December 2019 Julius sold this media channel to Jason Allen's VCS Creative Services and the result was sufficiently strong to survive lockdown. You're reading it now!

A throwback to an almost primal time 50+ years ago, Julius mixed with the legendary founders of today's high-tech AV and entertainment technology industry. So much so he still owns and runs ENTECH, which has become the go-to place for buying, specifying, and choosing expensive and mission essential equipment and tech each year. ENTECH celebrates 30 years in 2024 having first rolled out in 1993.

Julius is a 'correspondent at large' for CX, authoring articles series such as 'Theatres at Large' and 'Why Do I Still Do This?' In 2024 he left a side hustle as a live sound engineer. Catch him and his wife Kate at ENTECH across NZ in August, or AU October.



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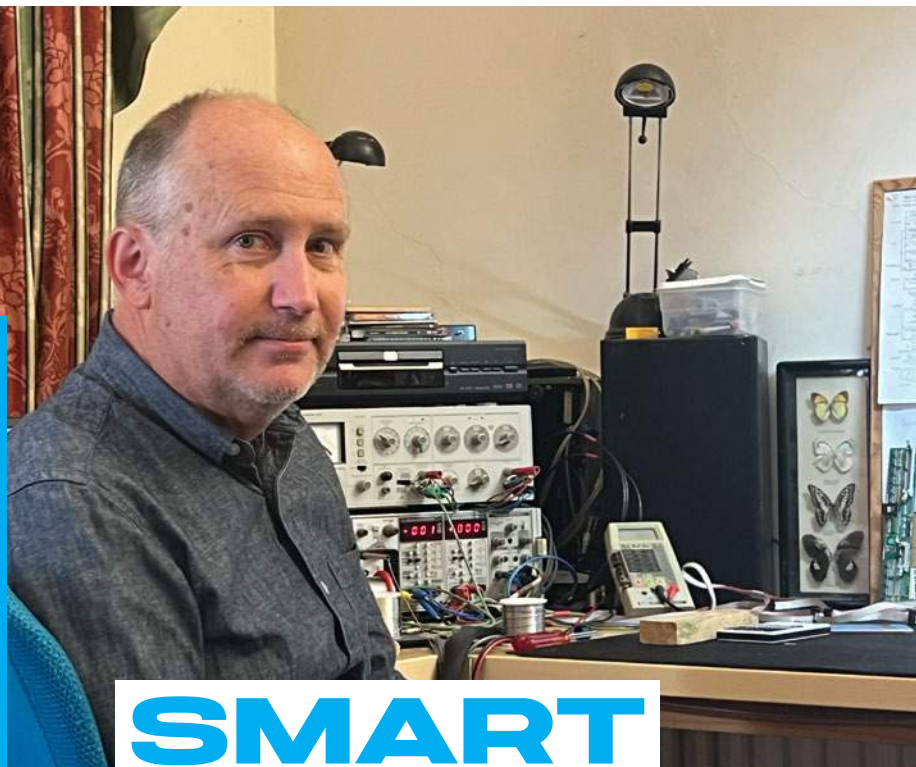


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## ALAN SMART



## SMART RESEARCH

He's the caped crusader of audio: no one knows what he looks like or where he lives, and yet his compressors sit in pride of place in the outboard racks of almost every professional recording studio the world over. He doesn't advertise, spruik his wares at trade shows, or boast about his impressive career. And as far as I'm aware, I'm the only person in this industry who knows his whereabouts.

Al Smart is an enigma wrapped in a riddle: a man unique to the audio industry. His gear is ubiquitous; his Smart Research C1 and C2 compressor/limiters have been conspicuous in the outboard racks of almost every studio worth its salt for decades. His only 500-series module released thus far, the C1LA stereo compressor/limiter, has sold by the shedload, and yet he has never advertised it. Indeed, he doesn't advertise his gear anywhere, in some cases, even on his own website. And somewhat incredibly, he still manufactures most of his Smart Research products by hand, himself – I kid you not – ultimately testing every single unit personally on his workbench, including all the 500-series C1LAs, before anything heads out the door. Why? Because, as Al sheepishly admits: "I can't help myself; I just have to test everything, otherwise I can't sleep at night. And besides, I don't like anything coming back."

Unlike so many other notable designers in the audio industry, Al's ego is firmly in check, almost to a fault. He never boasts about his considerable achievements or takes advantage of his hard-earned reputation. To Al, that sort of behaviour somehow feels tawdry, tacky

even. And if you so much as suggest that his products have a cult-like following, or infer that his reputation precedes him, like Batman, Al will disappear in a cloud of purple smoke faster than you can say Attack or Release.

But his reputation most certainly does precede him, and his gear is iconic. Just don't mention that to Al.

But I'm getting ahead of myself here. I suspect many people reading this article won't know who Al Smart – or his company, Smart Research – even is. Let me back-track briefly and cast an historic eye over Al's amazing career in audio thus far.

### Mr. Commissioner

In classic fashion, Al began his early career working in studios in England first as a tea boy, then tape operator, tape machine repairer and finally a console 'modifier' for Peter Gabriel at the ex-Genesis frontman's early Ashcombe House 'barn studio', before finally meeting Colin Sanders from SSL in 1981, back in the day when that company owned a small studio in Stonesfield, Oxfordshire called Acorn. Colin's company had, to that point, already been highly

successful in the '70s revolutionising pipe organs around the world, replacing mechanical systems with solid state logic – hence the name – and by the end of that decade SSL had also designed and manufactured a handful of A and B Series consoles. In 1981, SSL was on the cusp of releasing its new flagship E Series console when Al was invited to join the company.

This came as a distinct surprise to Al, who prior to this invitation, had worked with Colin Sanders at Stonesfield masquerading as a 'recording engineer'. On this fateful day he worked on the very console that Colin had originally designed on a paper napkin at two in the morning a few years prior. Colin sat quietly beside Al during the tracking session, occasionally leaning over to suggest that maybe it would be a good idea not to have the red overload lights flashing on every single channel across the console! Like so many who started out pushing faders around on an analogue board, Al was in the deep end.

When Al was subsequently offered the job at SSL as its new 'commissioning' guy, he was suddenly thrust into the limelight. After two or three months working in the test department,

right when the E Series console was exploding in popularity amongst the top studios around the world, AI became the person SSL would fly around the world to oversee the installation of its substantial (and expensive) analogue consoles.

AI commissioned SSLs for George Benson's Lahaina Sound in Hawaii, Virgin's Townhouse (1 and 2), Sarm West, Abbey Road, Air Studios and countless others, in countries far flung as Denmark, Japan, Holland, France, Germany, Italy, South Korea, the West Indies and the USA. He can recount a million stories about this period of his life: everything from flying an SSL console high across the London skyline on a crane, to breaking out a jackhammer to free a console stuck in a concrete stairwell in Soho.

After AI's short but highly eventful tenure at SSL, where he gained a reputation for being able to service just about anything, AI moved to Barbados (as you do) to become chief engineer at Eddy Grant's Blue Wave Studios, where he ran the facility for projects such as Sting's 'Dream of the Blue Turtles', and worked with the likes of Bryan Ferry, Mick Jagger and the Thompson Twins, amongst countless others.

He moved back to the UK the following year, working as a freelance engineer on projects with Peter Gabriel, Paul McCartney, and Joni Mitchell. It was through his working relationship with Mike Large, who had earlier joined Peter Gabriel from SSL, that AI subsequently became heavily involved in the planning and construction of Peter's now iconic Real World Studios.

AI was, by this point in his career, already a highly credentialled audio engineer, as well as expert in everything from electronic design and maintenance to studio construction. Everywhere he went from then on, AI was either designing studios (for people like Jamiroquai and Tears for Fears), developing customised in-house circuitry, modifying

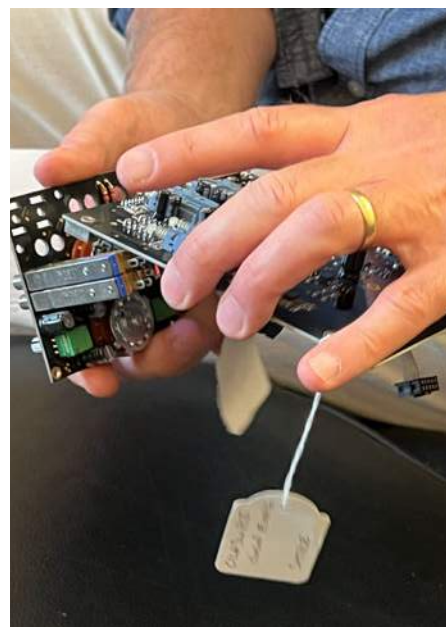
existing equipment or servicing and repairing endless faults. He even built entire music equipment systems for Peter Gabriel's live tours.

Needless to say, as far as knowing how studios worked, or how they might be modified or improved, AI was all over it.

## Smart Alan

It was probably inevitable then that AI Smart would eventually start making products for the wider world, rather than one-offs for individual studios where he worked, and so Smart Research was born.

Nowadays the brand is extremely well known amongst the professional audio community, and many who use Smart Research C1 and C2 compressors – which have been around for decades now – know them to be among the world's best stereo mix bus compressors.





They have been strapped across countless mixes over the years, the C2 in particular, with its iconic 'Crush' feature that magnificently exaggerates compression effects, being the go-to compressor for countless engineers (including this one).

But what might come as a considerable shock to many who know the Smart Research name is that AI, these days, lives in Australia... somewhere in Melbourne... having married an Australian some years ago. Consequently, the Smart Research C1, C2 and C1LA compressors (amongst other variants and products) are made in Australia. AI is now even an Australian citizen, although he still has one foot firmly in the UK, communicating with people he knows over there in the middle of the night, most nights.

AI does have a second electronics wiz who also builds units for Smart Research in the UK, but these are subsequently tested by AI himself, in a somewhat extraordinary act of refusing to let go of the company reigns!

### Future Smart

At his secret hideout in Melbourne, where AI and I recently spent a day talking the leg off a chair about all things audio, I was unexpectedly shown a small selection of AI's many designs that are slated for future release (hopefully) – some of which are close to completion, while others are in their theoretical stage. I can't divulge here what these consisted of, but what was extraordinary was just how many there were. Indeed, the accumulated stack of design paperwork stands taller than the man himself and grows nightly.

Which begs the question: how can one man be the designer, developer, manufacturer, builder and then promoter of a catalogue of products without the whole enterprise remaining tiny, and never quite reaching its full potential?

In truth, it can't.

This is why Smart Research has remained so esoteric, and the man himself remains less recognisable than the kid who knocks on your door delivering pizza. AI never goes out because he's too busy building stuff!

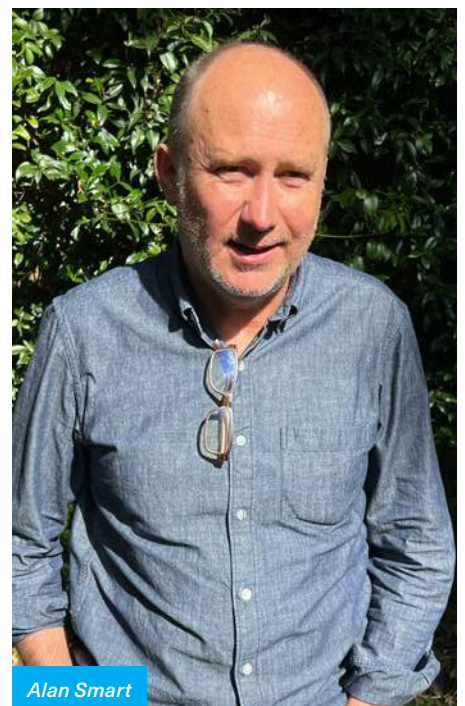
So while Smart Research may be a well-known brand worldwide, much has changed in the last two decades in our industry, and in that time fledgling audio companies have grown into behemoths, older ones have passed into history while others still have enjoyed a renaissance.

Smart Research meanwhile has seemingly done none of these things. It has remained at the top of its game, albeit on a far smaller scale than other brands that have exploded in both scope and fortune, taking their owners away from the soldering iron (if indeed they were ever there) and onto a beach somewhere.

There are more pro audio brands and products on the market now than ever before, and the competition is fierce. AI Smart, meanwhile, has so many ideas and designs in the pipeline that Smart Research may yet become one of the world's larger players. But to do that someone will need to lock AI in a cupboard for 12 months and ban him from touching a soldering iron for years to come.

*I put this idea to AI, who paused briefly, then self-effacingly said:*

*"Andy, you're right of course..."*



Alan Smart

# Design Quintessence's

# DYNAMIC DUO

## Lusia Ah Kuoi and Ian Wood

These two hard-working personalities epitomise the ethos of the Design Quintessence family. Design Quintessence has proudly nominated Lusia Ah Kuoi and Ian Wood for our 'People' Issue.

Lusia's remarkable journey from running a family store in Samoa to becoming an integral part of Design Quintessence's success story is truly inspiring.

Lusia's unwavering commitment to personal and professional growth, demonstrated through her pursuit of education – gaining

diplomas in both Business Administration and Human Resources – while balancing single parenthood, reflects her dedication to excellence. Lusia's core values of integrity, humility, and exceptionally hard work are evident in every facet of her life, embodying with every cell the ethos that propels Design Quintessence forward. As she marks her 18th

year with the company, Lusia continues to epitomise the spirit of teamwork, innovation, and positivity. Her contributions to the industry, characterised by her infectious enthusiasm and genuine empathy, make her an exemplary figure among the exceptional individuals shaping the landscape of customer experience.



Lusia Ah Kuoi



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Lusía Ah Kuoi

Lusia's story serves as a testament to the power of perseverance and resilience in the face of adversity. Starting off her working life as a child, where she helped out in the family's corner store in her small village in Samoa seven days a week, has made Lusia resilient beyond measure. Her strength of character shines through, particularly during personal challenges such as her son's battle with cancer, where her unwavering dedication to her family and work remained steadfast. Lusia's reputation as "Mrs. Reliable" speaks volumes about her ability to deliver solutions with dependability, even under the pressures of the industry, although the phrase is, in every respect, an understatement. She exemplifies the type of individual one wants to engage with in an environment where deadlines are non-negotiable, consistently exceeding expectations and showcasing a remarkable ability to get the job done.

Of the company she works tirelessly for – Design Quintessence – Lusia says this:

**"They say that you associate with people that share the same values as yourself. DQ's values of sense of humour, integrity, problem solving, pride and loyalty resonate with me strongly. I only hope that I have projected these values to my workmates, clients, customers and everyone that I've had the distinct pleasure of working with!"**

That she has!

**Not to be outdone (or perhaps expecting to be outdone!), the founder and director of Design Quintessence, Ian Wood, initially humbly declined his DQ colleagues' nomination for CX Magazine's People Issue, citing a perceived lack of impact on the industry. However, through a series of questions, we uncovered his remarkable journey and why we affectionately refer to him as "Woody," recognising him as well deserving of such recognition.**

Delving into his story, one customer's query stood out most: "Does your business define you?" Initially, Ian might have shrugged this off, but upon reflection, the essence of his character shines through in the company's values. From humour to integrity, to problem-solving, maintaining exceptional standards, and fostering loyalty and trust, Ian's admiration for the Staging and Production community resonates

deeply. He acknowledges the industry's ethos, where regardless of challenges, the show must go on, underscoring the importance of supporting these dedicated professionals. Ian confides that his greatest fear is letting people down, a testament to his commitment.

The staff at DQ can attest to Ian's unwavering support, care, and loyalty, all rooted in these shared values. His journey began in North Sydney as Ian embarked on a traineeship with the Water Resources Commission, delving into survey drafting – an opportunity that sparked his independence and passion for learning.

Facing the prospect of relocating with government decentralisation initiatives, Ian seized a unique opportunity, taking extended leave to explore his options. It was during this time that he came upon a drafting position in a lighting company, marking his entry into the entertainment realm. Despite the initial challenges of stepping into a designer role, Ian swiftly adapted, showcasing his aptitude for rapid learning.

Ironically, his journey first led him overseas to London, where he flourished in the oil industry while continuing his drafting work. A return to Australia then ensued, prompted by his father's illness, ultimately paving



'Woody'

the way for the establishment of Design Quintessence.

Ian's lifelong passion for music found resonance in DQ, offering him a bridge to the industry he admired. His profound respect for production professionals, who labour tirelessly behind the scenes, fuels his dedication. Ian recognises the immense pressure and challenges they face, and admires their unwavering commitment to ensuring a seamless execution of events. He takes pride in being part of a support network that enables these incredible productions to come to life, knowing that their efforts often go unnoticed by event attendees.

In essence, Ian Wood embodies the values of dedication, determination, and professionalism, and his deep-seated commitment to excellence make him a deserving nominee in our eyes.



## THE P.A. PEOPLE

# Our People Make The Difference

Based in Sydney with growing interstate representation, The P.A. People have built a team with broad-based skills over its more than 50 years of continuous operation.

MD, Chris Dodds said of his crew: "Tasks, systems, equipment, and locations change over time, but our people have always made the difference. It's significant to hear from our clients and suppliers that we are considered a 'partner' in their business – that's simply not possible without consistently good people."



Chris Dodds



**Peter Grisard**  
*Venue Engineering*

Peter Grisard heads Venue Engineering: "We have a reasonable amount of grey hair in my Venue Engineering team," laughs Peter. "We are a unique combination of young talented designers with new ideas, working with highly experienced senior staff to deliver the largest staging projects in Australia and New Zealand. Part of my role is understanding the client needs and bringing these back to the team to determine what's possible, what isn't, and what the options are."

"Safety is always of paramount concern in our job and we're always constantly reminding both ourselves and our clients that in this field of work, we lift, suspend and move objects over audiences and performers." The grey hair in the Venue Engineering team extends to Andrew Mathieson, and Jim Parmley, two of the country's most experienced theatre equipment engineers.



## Brett Steele

### Installed Systems

"With audio, AV, lighting, stage control, foyer systems, theatre machinery and the relevant design, fabrication – metal, timber, fabric – and sewing room all in-house, The P.A. People has the ability to control the entire process in one location," said Brett Steele, head of Installed Systems. "This adds to the confidence of our whole team and better informs the solutions we can bring to a client's task."

"Our team members have a keen interest in what they're doing; it's not just a job," said Brett. "For them, it's about understanding the client's functional requirement and unpacking that to bring an appropriate solution to their task." In a recent project, all these collective team skills were involved across three projects for Sutherland Shire Council in NSW: Pavilion Entertainment Centre, Memorial Hall and Council Chambers; from a sensitive heritage project to an entire 'new build' performing arts facility.

The Installed Systems team also includes AV Design Manager Ian Laird, Drapery Manager Nayana Ratnawardana, and a significant team of more than 20 project managers, control system engineers, fabricators and installers.

## Nicky Dodds

### Event Communications

The P.A. People Event Communications team is headed up by Nicky Dodds. Nicky returned to the business during COVID but is no stranger to the rental side of the business, having worked as part of the team on many of our projects since the late '80s.

"While we're known internationally as a key supplier of large-scale communication

systems for Olympic-scale events, our local work also involves a significant audio component," says Nicky. "With clients that include the Australian F1 Grand Prix, the Vivid Festival for Destination NSW, New Year's Eve Fireworks for the City of Sydney, Tennis Australia and the Sydney Kings, we can provide audio and communications systems for almost any event," she added. "From a distributed speaker system for a street parade, to a concert system with multiple Yamaha Rivage consoles and our ShowMatch array

systems, through to hundreds of radios, beltpacks and keystations, we have the people and gear to assist any production or event."

A key ingredient to the Event Comms team's capability has been the retention of all its key personnel through the pandemic, something that has reaped dividends in recent times. "Communications is all about the people; we were able to increase our in-house training regime during those years and now we have one of the largest, most capable teams in Australia," Nicky concluded.

The Comms Team



## Angie Doyle

### Service

Angie Doyle leads Service and Maintenance for The P.A. People. Angie describes her team's recent service response for a major transport hub: "Our service team was faced with a critical incident where a major client's system (installed by others) went down unexpectedly. Our team was urgently mobilised to assess the issue; identified the root cause and implemented a solution in record time – minimising disruption to the client's operations. Performance under pressure is part of what we do, and this instance highlighted our team's ability and commitment to service delivery," said Angie.

Ably supported by Tim Pike and Cheryl Gunders in the Gold Coast office, The P.A. People service team's diverse skills are comprehensive, enabling it to handle multiple audio visual and venue engineering systems simultaneously for a single customer – a large performing arts venue, or a comprehensive site-wide systems audit for an education facility – right through to a basic single-issue equipment service call. Asked to sum up her department's credential, Angie responds: "A diverse skill set and experience. Our youngest employee is 19 and the eldest is 78. The team is mixed with senior experience in both AV and Venue Engineering fields, and we're continually training, developing and upskilling our technicians. We have technicians operating across all Australian states (and New Zealand). We stay at the forefront of industry advancements with tools, diagnostic equipment, software systems etc and we offer flexible scheduling to accommodate customers. We offer a range of services: routine maintenance, troubleshooting, in-house/onsite repairs and installations, and 24/7 support availability (by maintenance agreement).



**At their new 3600m2 Head Office location in Greenacre NSW, The P.A. People houses all its design through to manufacture under one roof. But it's the team's collective skills that make all the difference. "I am proud of our team and the way they are motivated to continually step up," concludes Chris Dodds.**

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## The P.A. People have moved!



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# DVOX



Sebastien Boulanger at the AO

## Audio for the People

It's always great to be able to go to The Australian Open tennis and call it 'work'. Held at Melbourne's Olympic Park precinct from Jan 7 to 28 2024, it's a great vibe hanging around outside on a sunny day, even if you never see a ball hit. There are bands, food, drink, big LED screens relaying games, and hundreds of deck chairs. It's entirely possible to have a great time without getting an expensive seat courtside.

It's those many LED screens relaying live matches that require an audio solution. Having a PA with sufficient volume to cover each of their viewing areas would create noise havoc and total incomprehensibility. The screens do have a couple of small speakers on the sides, but they run at low volume, and you need to be within a couple of metres to understand them. Many solutions exist to give people personal assisted listening devices to tune into the screen broadcast via headphones, but they require either a lot of equipment and people to run it, are digital solutions that don't scale, or are clumsy, app-based, and too laggy.

AO StartUps is part of the Tennis Australia innovation and venture capital strategy. Founded in 2022, it selects creative technology startups and gives them the opportunity to crack the global sport, events and entertainment markets by piloting their technology at the AO and within other areas of Tennis Australia's business. Canadian start-up DVOX was one of those selected companies.

Machar Reid, Head of Innovation at Tennis Australia commented; "We believe audio is a critical part of the fan experience and often under-served. It's ripe for innovation. DVOX's ultra-low latency tech enabled us to take the really important step of offering real-time broadcast commentary to fans in-stadium in real-time."

Sebastien Boulanger, president of DVOX, is an electrical engineer with a background in live events. His native Quebec, Canada, is bilingual by law; government communication must be in both French and English. Needing a good hardware solution for handling live translations at corporate and government functions, he looked around the market and found all existing solutions wanting. So he built his own.

The DVOX system is one of those incredibly simple solutions that's really quite complicated under the hood, but you'd never know as the one deploying it, or as the end user. Ease of use and simplicity of delivery is its hallmark.

You simply choose which and how many of the four DVOX rack-mount units you need (they're ranked by bandwidth and listener capacity), plug your mono or stereo analog audio inputs into the back, and the unit into the local LAN connected to your Wi-Fi network. There's some configuration of the end-user GUI to be done on DVOX Manager, its software control and management platform, and then you're live.

On the listener side, you take your device, which is usually any smartphone but can be anything with a browser, connect the local Wi-Fi, then either scan a QR code or go to the DVOX website in your browser. QR codes get you straight to your event audio page, and the website uses your GPS to figure out where you are. At the AO, I used the second method and had my phone streaming the audio from a nearby screen in seconds. What really struck me was the lack of latency. I was about 10 metres away from the screen and could hear (but not understand) the commentary coming from its speakers. The audio was arriving in



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my earphones significantly ahead of the audio arriving from the speakers.

The DVOX GUI setup for the AO allowed me to switch between seven different screen feeds, or tune into the AO podcast. In DVOX parlance, that's eight streams. With the rack of DVOX hardware on site at the AO, each stream could be listened to by up to 25,000 people.

The great beauty of this solution is that it is browser based. Not only do you not have to install an app, but you can use any old smartphone that you have sitting in drawer to listen in. Being browser based also means your phone treats it as web audio and will happily lock the screen and turn dark while you're listening, meaning your battery will last all day.

The applications for DVOX go way beyond the tennis. Every venue that needs to provide assisted listening solutions are a potential user. Every stadium, every sport, every theatre, convention centre, educational institution, art gallery – the potential is huge. Even DOOH (digital out-of-home) advertising – a QR code scan can give you audio from that big LED billboard in the city, or a smaller one in a shop. Airports. Projection mapping events. The audio mind boggles.

Sebastien Boulanger was onsite at the Open proudly showing off his baby and answering my questions. Newly minted local DVOX supplier and reseller Monitor City were also there, represented by co-owner Matt Dufty. As a production and technical management

company, Monitor City have had a long association with Tennis Australia and the Open. It's usually their loudspeakers you see cunningly hidden on the courts of the main arenas relaying the Chair Umpire's calls. Behind the scenes, they're also supporting broadcasters with technical infrastructure, as Matt was that day.

"We met with Sebastien and DVOX a few months before the AO, after they'd won the AO StartUps funding," explains Matt. "It's a great audio solution for the Open. We've also decided to invest in systems for our own rental stock and become a reseller. We see huge potential, in the conferencing market and beyond. For example, you can have rooms with multiple presenters and no PA and the



L to R - Pierre Angell, Matt Dufty, Sebastien Boulanger and Patrick Prefontaine at the AO.

## The DVOX Ecosystem

### Hardware

There are four rack mount units, all the same 2RU in size; the Auditorium, Stereo, Arena and Stadium.

Auditorium gives you four mono audio streams, a frequency range optimised for speech, and 1000 users per stream.

Stereo gives you two stereo audio streams, full frequency range, and 500 users per stream.

Arena gives you two mono audio streams with 5,000 users per stream.

Stadium gives you two mono audio streams with up to 25,000 users per stream, though this can go higher.

### Software

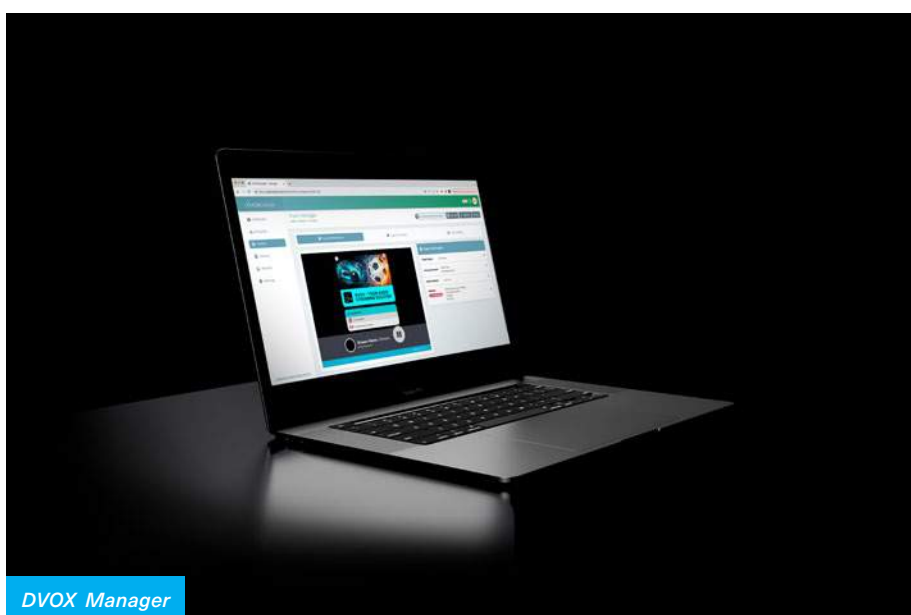
DVOX Manager is the management web portal of the DVOX system. It provides your team with a full live audio streaming setup. The Manager allows you to create and customise your events from one central point of control. Features include event creation and management, event skin customisation, audio stream assignment, inventory administration, and key performance indicator reports.

DVOX.LIVE is the end-user interface, accessed via browser and customised and configured in DVOX Manager.

We had a (very quiet) look in the broadcast control room, where a single modest rack of DVOX units sat in the corner, taking their feeds straight from the broadcast audio console. Considering 200,000 people could have been streaming on the other end, it was remarkably compact. Sebastien explained that they were taking in analog audio and converting it to browser-friendly digital running at 48kbps before it streamed out. The system can run up to 320kbps in stereo, if desired.

DVOX's Pierre Angell (Vice President, Sports Division) and Patrick Prefontaine (Vice President, Business development) were flanking Sebastien at the Open, and were in Australia to take meetings with a galaxy of large potential clients, some of which were internationals representing globally significant sporting events and codes. Monitor City's Matt Dufty was also accompanying the team on visits to prominent Melbourne potential customers. I think DVOX and Monitor City are going to be very busy in the near future.

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



DVOX Manager

audience can decide who they want to listen to. And of course, there's the whole assisted listening market."

Knowing that IT managers generally get quite defensive about huge amounts of audio on their networks, I ask Sebastien how much admin and bandwidth management is needed to make something the size of the AO work. "It's just audio; it's almost nothing in terms of bandwidth," he outlines. "The only real bit of back-end configuration is allowing our DVOX devices to stream across the network, which

is just a simple matter of the admin granting permission to their MAC address. It takes five minutes."

Another ingenious part of this system is there's no cloud involvement, therefore the audio never physically leaves the area. I looked at Sebastien blankly when he said this, as I didn't understand why that's important. "The audio is Channel 9's broadcast audio feed," he told me. "Taking it out of the AO would be a breach of the broadcast rights contract." Aha!



# One show to rule them all and in the darkness bind them

The 2024 edition of ISE was the biggest, most OTT show in its 20-year history. Far outgrowing its pure AV roots, the show has now added a dedicated Hall for lighting and staging, complete with smoke isolation, darkness, and lasers. It's also added another Hall to boot. These additions are roughly the size of one and half Integrates, for example, meaning the whole show is roughly the equivalent of eight or nine of our homegrown shows.

The addition of this dedicated lighting and staging Hall now firmly cements ISE as your international 'one and done' show for anyone operating in production, AV, events, venues, corporate, UC and more. And the thing about the Australia and New Zealand markets is that we're so much more generalist than other larger countries,

and most of us operate across markets and disciplines. ISE has you covered, no matter what you're into.

Touring through the newest additions, I could have actually spent most of my time between Hall 1 and Hall 7 (audio), with a couple of visits to Hall 3 (LED, AV, a bit of audio), and probably still not see all of just

those Halls. I also talked to some lovely video processing people in Hall 5. Luckily, I had some helpers from Harry the hirer Productions who are deeply into video, media servers, LED, content capture and more - their coverage begins on page 61.

So first up, my standout product highlights!

## Sound Devices A20-SuperNexus Receiver

A relatively unassuming 1RU rackmount unit that totally blew my mind. Sound Devices, well known in the film and TV industries for their 'bag mixers' and location sound recording equipment, have gotten into wireless in a big way. The A20-SuperNexus Receiver at the stand was a prototype and is a bigger version of the current A20-Nexus. This unit potentially replaces RACKS of gear. It receives and manages 16 channels of wireless audio transmitters out of the box and is expandable by software licensable to handle 32. It can operate anywhere in the world, and the unit links to your phone's GPS to set what frequencies it can legally use where you are. It handles all the scanning, there's real-time RF monitoring via the screen, and of course there is software. Transmitters sync automatically, and it's ridiculously easy to change frequencies. The transmitter packs have either built-in memory or microSD card and can record with a time code strip sent from the receiver/transmitter, so you can dump the files into any DAW and have a totally synced multitrack. And it does this using standard digital wireless audio, just ruthlessly managed!



Sound Devices A20-SuperNexus



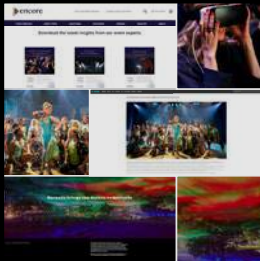
L-Acoustics' Chris D'bais with Xi Series

## L-Acoustics Xi Series

L-Acoustics were showing off two additions to their high-end installation-focused range in the X6i and X8i. They are equally at home in a high-end corporate AV install, an extremely well-kitted out home, or on a stage. This hybrid market, where the product is just as likely to end up in retail or a very nice yacht, has become the focus of a big push by L-Acoustics as they expand aggressively in that market.

The X6i and X8i feature slender, streamlined designs that seamlessly integrate into high-end architectural settings while providing clear, studio-like sound. These passive loudspeakers boast a 1.5" neodymium compression driver coaxially loaded by a 6" or 8" low-frequency transducer in a bass reflex cabinet. The 90° axisymmetric directivity imparts a smooth tonal response, free of secondary lobes over the entire frequency range.

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d&b audiotechnik's Marcus Rembold with the DS100M



## d&b audiotechnik goes to Milan

d&b were showing the fruits of this (Avnu) alliance on the stand in the shape of their DS20 Audio Networking Bridge, the DS100M Signal Engine, and the D90 power amplifier. Product Manager Marcus Rembold explained that the two marques have been working together through the Avnu Alliance to provide a mutually operable solution for quite some time. Now these two market leaders are on the Milan AVB train, everyone else is going to have to get on too.

"Milan represents one of the most significant technological advances in the audio industry, and it's been equally important for d&b to incorporate it," said Marcus. "Our commitment to providing these solutions is evident in our approach, allowing users to embrace the future with confidence, while retaining the flexibility to choose between Milan and Dante."

The DS20 Audio Network Bridge provides a seamless and cost-effective connection between d&b systems and Milan. Acting as an interface between d&b amplifiers and the Milan audio transfer protocol, the DS20 boasts 16 digital AES 3 output channels, 4 digital AES 3 input channels and an integrated, fully AVB capable 5 port network switch.

The DS100M Signal Engine is the Milan-enabled iteration of the DS100 processor with Dante. Extended functionality includes more audio channels via Milan, MADl, and word clock inputs, making it an essential part of a complete Milan system for both d&b Soundscape and matrix applications.

The D90, d&b's new flagship amplifier, delivers increased system efficiency and power saving features. As well as providing maximum loudspeaker performance, it maintains lower internal temperatures at highest output, ensuring long and reliable operation. By incorporating Milan networking technology, its robust design allows seamless configuration for redundant system setups for audio signal transport, complemented by fallback capabilities for all inputs and device communication.

## BSS Soundweb OMNI

To say it's been a long time coming is an understatement, but BSS have finally released a new open architecture DSP; Soundweb OMNI. And it's big. The two flagship processors, the 512p and 256p, can deliver 512 in and 512 out at 96kHz. The two expansion devices, the 32e and 16e, have flexible I/O. Each audio I/O port is 'format configurable' as either analog or stereo AES3 digital. Certain audio I/O ports and all GPIO ports are 'direction configurable' as either inputs or outputs - all easily managed through software on an individual port basis.

And it was the new software at the heart of Soundweb OMNI and indeed the entire Harman range that Harman's Nick Screen (Director, Account Management, APAC) and David Glaubke (Director of Global Corporate Communications) were keen to emphasise. The new AVX Software Suite streamlines Soundweb OMNI system configuration, control, and monitoring. The AVX Architect app simplifies system diagramming, device configuration, network management, and custom UI design while the AVX Control app enables easy access to custom UIs for controlling and monitoring devices across a multitude of platforms, including Windows, iOS, Android, and AMX Varia touch panels. And it's going to be incorporated into Crown, JBL, and even third party workflows too!



## Magewell Director Mini

I love finding tiny things at big tradeshows! And this amazing streaming and production studio in a box measures just 147.2mm long, 90mm wide and 28.5mm thick. It combines multi-input switching, graphics, streaming, recording and monitoring in one extremely compact device. It somehow incorporates two HDMI inputs, two USB AV inputs, three simultaneous live IP sources (SRT, RTMP, NDI HX2, NDI HX3), and can store media files. It can also handle chroma keying, graphics, titles, lower thirds, a scoreboard, timer, or stopwatch!



Magewell Director Mini

## Holoplot X2

While Holoplot's X1 powers concert and immersive audio in the Sphere in Vegas, the X2 has been designed to solve audio problems in almost every other application. The company's amazing wave field synthesis and beam steering technologies are employed in the smaller, cheaper X1 optimised for speech, but is still pretty damn good for music. Anywhere with difficult acoustics, e.g. most of the world that has trouble with announcements or speech, will be improved by this slimline and easy to control revolutionary audio product. And to make a point, it won a Best of Show Award in the AV Technology category, marking three years in a row that Holoplot have taken home a trophy from ISE.



Holoplot's CEO Roman  
Stick with their Best in  
Show award for X2

## Hive Media Server

I was extremely impressed by the modular and flexible Hive media server system, a relatively new company and product, but boasting staff and engineers from some other quite notable media server makers. I'm going to let media server expert Craig McPherson from Harry the hirer Productions tell you all about it on page 65, but I'd like to point out that the product demo I got made me, a video novice, feel like I could do a show on it. Lots of its workflow reminded me of Ableton Live, and I sense a strong music production background in their staff, as they'd even made a customised control screen based on the legendary Akai APC40 controller.

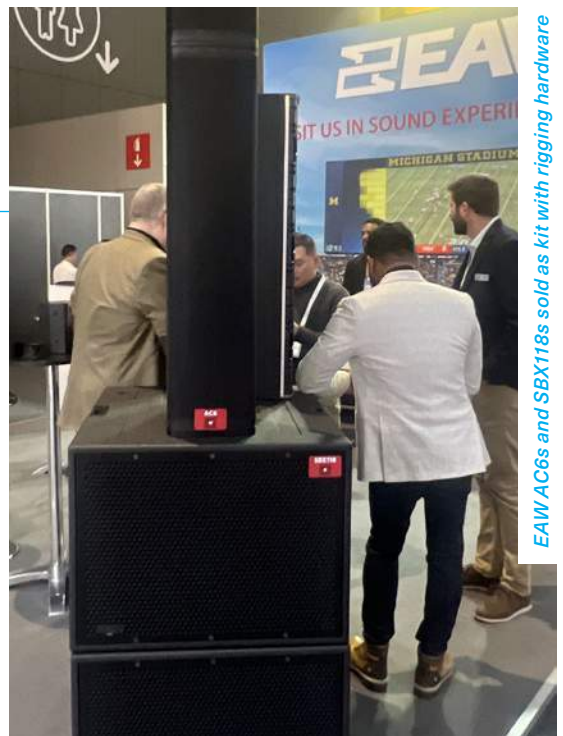


Hive APC40 control screen

## EAW AC6

Hang on, this advanced Adaptive column loudspeaker was released back in 2022? What's it doing in here? Well, I love it when a business creates a product (or service) which does what it does very well, but then people start using it for something else entirely. The market initially reacted to the AC6 like it was a beam steering column (it's not) and decided it was primarily for installation and speech reinforcement in difficult acoustics. But it goes down to 65Hz and is amazing for music, plus its Adaptive technology allows vertical coverage to be easily customised via EAW's Resolution 2 software across the entire 20KHz to 65Hz operating range.

And a prominent US AV company started taking out first one column and sub aside, then two columns and subs aside for bigger music gigs. The results are excellent, totally controllable, and incredibly easy to deploy. So EAW had to release special rigging for them to be ground stacked in this manner safely, as they are pictured here with two ACS6s and two SBX118 subs, which they're now selling as a kit that is flying out the door!



EAW AC6s and SBX118s sold as kit with rigging hardware

## Honourable Mention – The Elgato Stream Deck

Speaking of things being used well outside the purpose they were invented for, I have to applaud the Elgato Stream Deck, in all four of its hardware models, for being the hardest working piece of tech at the show. Every stand had at least two, and some many, many more, and they were used to trigger every kind of demo on any kind of technology you'd find at the show. Originally invented for gamers to control their livestreams and free up their hands, we sang their praises back in CX149, July 2019. Stream Deck, we salute you!



The humble Streamdeck

# HELLO DARKNESS, MY OLD FRIEND

ISE management promised it at the 2023 show, and in 2024 they delivered. There is now a dedicated lighting hall, smoke isolated and dark, so all the lampies can shine. Almost all of the big players were there in this first year, but not yet at the scale and polish they bring to PL+S or LDI. I think they will be next year, and the lighting hall will get larger. This more than anything likely heralds the end of PL+S in Frankfurt as a big international show.

## Claypaky Goes One Better

While Claypaky released the newer fixtures on their ISE stand at LDI in November 2023, this is the first time they've been seen by the European market (and me). The Shield Family of IP66 rated fixtures has expanded, and IP66 is of course a slightly higher rating of ingress protection than the more common IP65, meaning the fixtures can withstand bigger (12.5mm) and more pressurised (100kPa) jets of water, as opposed to lower pressure 6.3mm jets of water. It's one better!

The HY B-EYE K15 Aqua is based on the unique Claypaky ALEDA B-EYE technology

with rotation and pixel-mapping. Aqua boasts true IP66 protection and has been rigorously tested to endure vibration and shock during transportation, extreme temperature fluctuations, impacts from hailstones, electrical stress, harsh surroundings, UV exposure, and more.

Back on dry land, the Rhapsodya theatrical fixture is a high power, low-noise multi-spectral LED-based fixture. It uses a custom 1200W multicolour RGBAL LED engine, is capable of a 24,000 lumen output and offers many exclusive features, such as the Accuframe framing system using two focal planes for better resolution and focusing;

Tonedown, which ensures whisper-quiet operation at just 27dB; Absolute Position for advanced pan and tilt control; the Lineguard frost system using two pairs of blades for much higher beam uniformity and truly incremental adjustment of frost levels; and ColorMatch calibration for matching colour temperatures to other fixtures when using Claypaky CloudIO software.



Claypaky Shield Family



Claypaky HY B-EYE K15



Claypaky Rhapsodya



Robe iBolts left and right

## Robe iBolt

The Robe stand was the closest thing to a big tradeshow light show in the hall, minus the dancers they usually bring to their more extravagant outings. See those incredibly bright fixtures sitting on the truss left and right? They are the as-yet unreleased iBOLT, a hugely bright fixture with a laser source, 500W phosphor conversion, and 300mm lens. It's the first real replacement for conventional 7K Xenon searchlights on the market. With the same feature set as Robe's MegaPointe, the iBOLT can be a beam, spot, wash and effects luminaire for stage and outdoor use. It has been described as "a MegaPointe on super-steroids" and I can attest it was blindingly bright, while barely idling in the confines of the hall.



Cameo Dura Spot Series



Cameo Otos W12



Cameo Otos W3



Cameo Oron H2

### Making a Cameo

Part of the massive Adam Hall Group, Cameo had one of the larger stands in the hall, neatly divided into indoor and outdoor fixtures, the latter denoted by sitting on the half of the stand built on fake grass. IP65 rated fixtures are becoming the standard rather than the exception in new lighting releases, and Cameo had a bewildering array of new product in that category.

The IP65 Cameo Otos W12 runs 32 50W RGBL-LEDs with a total output up to 19,500lm luminous flux. Its LED FX ring is totally controllable, and the fixture as a whole is controllable down to the individual pixel. t's smaller sibling, the IP65 Otos W3 runs seven 50W RGBL LEDs with a total output of 3,100lm luminous flux, also including an FX ring and pixel-level control.

On the architectural/outdoor event wash side, the Dura Spot series are rated at a hardcore IP67 and come in four sizes; the 400 (20 RGBW LEDs), the 200 (12 RGBW LEDs), the 100 (six RGBW LEDs) and the 60 (three RGBW LEDs).



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Elation SÖL I Blinder



Elation Proteus Hybrid Max

### Maximum Elation

Technically not in the lighting hall but just next door, Elation Professional continued the IP rated theme with the Proteus Hybrid Max, rated IP66. It's described as an "Extreme Output Hybrid" and uses a Philips MSD Platinum FLEX 500 lamp. Kicking out 22,000 lumens from its 170mm front aperture, it includes Elation's 'Sky Motion' system, which

lets you use the fixture as a searchlight effect without a lighting controller. Multiple fixtures can be interconnected, and with the simple assignment of IDs, the fixture provides immediate access to a variety of movement patterns that are easily adjustable in size, speed, and colour directly from the display.

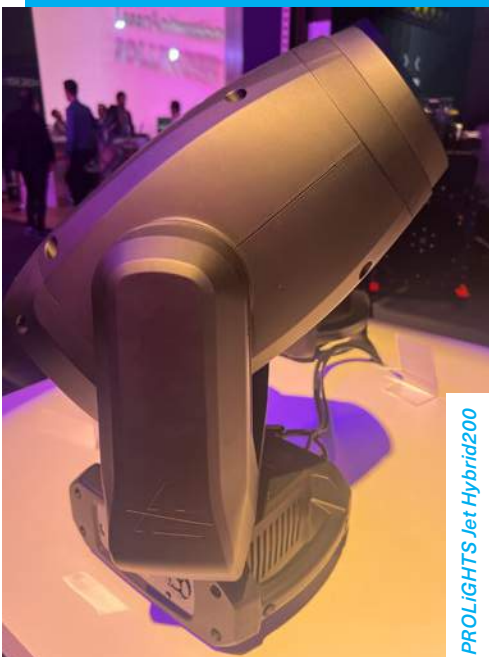
More eye candy sat next to the Proteus in the shape of the SÖL I Blinder. Its ingenious modular design means LDs can make an

almost infinite variety of configurations using its simple fixture interconnectors, threaded adapters, mounts, and yoke accessories. Its light source is a 250W RGB+Lime+Amber+White LED engine with 93+ CRI, punching out a suitably blinding 8,000 lumens!

### PROLiGHTS Takes it Outside

Italian manufacturer PROLiGHTS brought a huge selection of fixtures for almost every application and were definitely not going to ignore the IP65 trend. The Astra Hybrid330IP, billed as "the industry's first IP LED moving hybrid" is IP65 rated, and runs a 330W LED. It includes CMY colour mixing, three colour wheels, an animation wheel, dual overlapping prisms, a frost effect, and two gobo wheels. The front lens measures 140mm and the zoom range is 3° to 50°.

Going back inside, the extremely compact 200W Jet Hybrid200 moving head runs a 200W LED source outputting 8,000 lumens. Designed for mid-air effects and image projections, The Jet Hybrid200's dynamic effects suite includes a colour wheel with 13 dichroic filters, two gobo wheels featuring eight rotating and 17 static gobos, along with prism and frost. Zoom range is a flexible 3.5° to 40°



PROLiGHTS Jet Hybrid200



PROLiGHTS Astra Hybrid330IP



Small but important - ChainMaster CellMaster

### Safety First with ChainMaster

The lighting hall was also home to lots of truss, staging and rigging companies, including Germany's ChainMaster. In addition to their excellent range of hoists, they debuted their CellMaster, a wireless load monitoring sensor and shackle system. Developed in conjunction with English sensor experts BroadWeigh, the CellMaster beams accurate load data to your choice of receiver, making complex rigging environments with strict load limits safer for everyone.

# Sometimes it all gets too much...



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



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## Barcelona Forecast

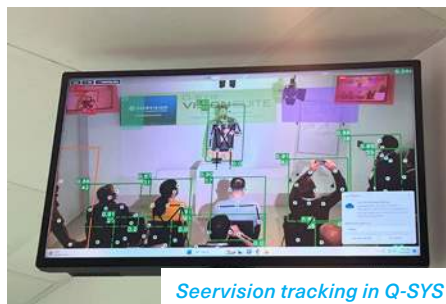
# Cloudy with a Chance of AI

I went into this show expecting to see a lot of new products with AI running under the hood. Last year, Biamp's Parlé video conferencing bar and Williams AV automatic language captioning systems blew me away with capabilities that I'd never seen before. Both used AI, and I was particularly struck by Biamp's use in noise reduction – what I heard was impossible using any form of traditional audio processing.

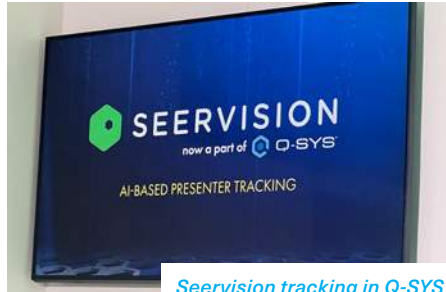
I expected a flood of new products that used this powerful technology in a range of ways I'd never thought of. After all, the real value in AI is that you can train it to change what's 'bad' into what's 'good' and apply that to any digital data. So I was surprised to see... not much at all. Sure, the term AI was everywhere at the show, especially in the lectures and keynotes made by numerous artists working in digital fields, who were all using it to create spectacular visuals, music, and text. But not in the gear. Yet.

### Q-SYS is Tracking You

One notable exception was QSC Q-SYS's integration of Seervisions' AI-based presenter tracking technology. Its AI brain can identify what's human and what's not, and track the body, giving it the ability to direct PTZ cameras to follow a whole person, or go to a headshot. It can also have 'zones' designated in it that will cut to a different camera, or tell the presenter to get back in the shot when they go outside the area.



Seervision tracking in Q-SYS

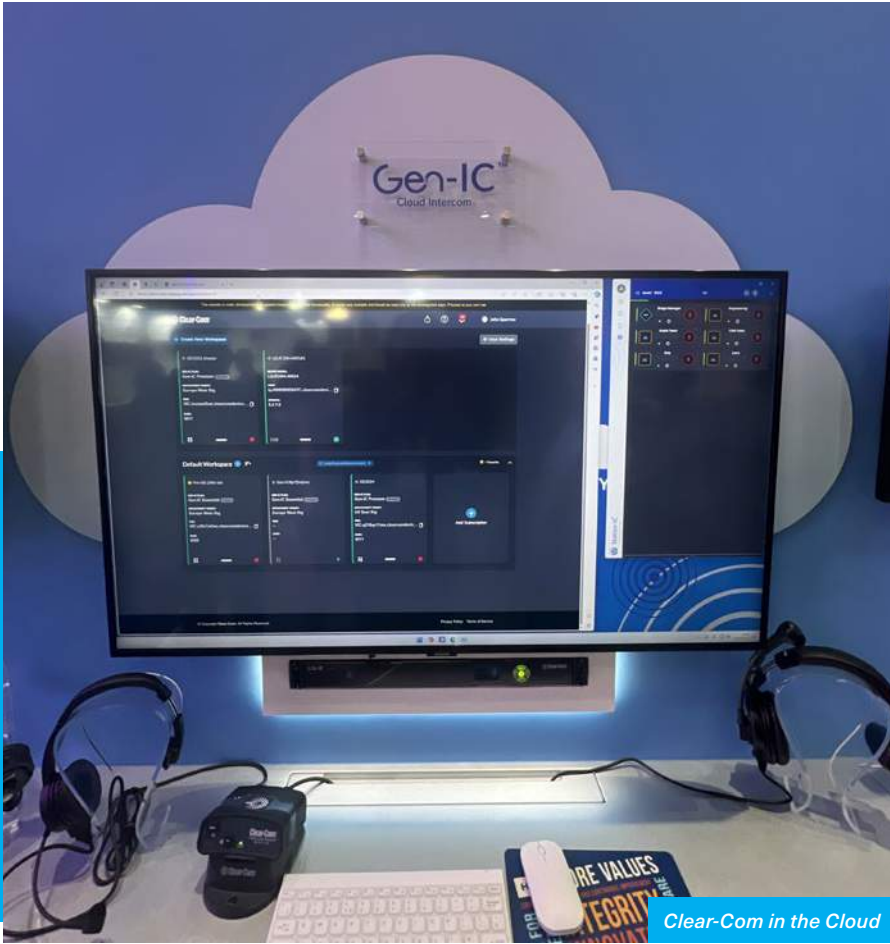


Seervision tracking in Q-SYS

# Getting Cloudy

What was a solid trend in the digital realm is putting everything in the Cloud. Yes, control and monitoring of your gear, but it's so much more than that.

The most extreme example of going into the Cloud was a teaser of Clear-Com's new Gen-IC cloud intercom system. This audacious leap from hardware to software-as-a-service enables event teams across the world to connect virtually using computers, tablets and phones. Clear-Com 'spin up' an instance (to use Amazon Web Services parlance) and you pay according to size and duration. Of course, you can connect it to Clear-Com hardware too. It's scalable; 12 or 24 Channels, 8 to 384 Virtual Clients, and up to six linked Gen-IC instances, running securely on public internet and cellular networks.



Clear-Com in the Cloud



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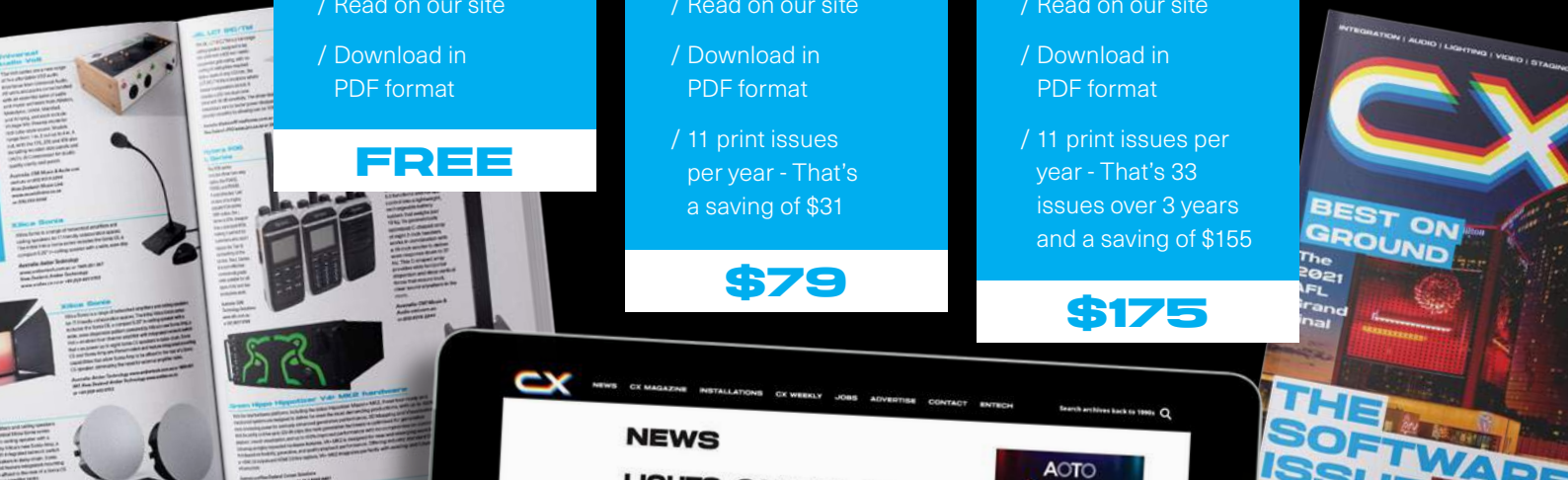
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Shure Cloud



Shure were previewing a beta version of Shure Cloud, a powerful new software platform to control, monitor, log, maintain and measure performance across their now huge range of products for education, corporate, institutional and more.



LEA Cloud



LEA Connect Series



Fohhn Gateway

While most manufacturers approach Cloud management by having every single device connected directly to the network, German loudspeaker and amp manufacturer Fohhn have taken a simpler, and possibly more secure approach. This unassuming black box is the Fohhn Gateway, previewing at ISE. The Gateway provides a single point of connection to the internet for a Fohhn system, eliminating the need for every single piece of the system to have a network connection. Instead of what could be hundreds of connections, this single point of entry is easier to keep secure, while still allowing full access and control.

Similarly, loudspeaker and amp manufacturer dBTechnologies are moving their AuroraNet control and monitoring platform into the Cloud, supporting their growing range of installation products. Chatting with their product manager, it was interesting to see Cloud migration from a manufacturer's perspective. Yes, the end user gets to oversee their systems from a laptop wherever they are in the world, but the manufacturer gets data; lots of data. They can see how their products are actually used, globally. Are most users dropping in a filter at 1.6kHz on a certain speaker? Let's revisit the design to make it flatter. Are certain features never used? Cut them to make the product cheaper. The potential for improvements in product, price, and customer experience are huge.

## AURORA NET CLOUD



dBTechnologies Aurora Net Cloud

LEA Professional amplifiers were born Cloud-ready. The company is only four years old, and their amplifiers were built from the ground up for the network era. Uniquely, LEA Professional amps use a built-in Amazon Web Services IoT Core. The LEA Cloud Platform offers remote control and monitoring capabilities that can be accessed from anywhere without the need for a VPN connection. Integrators can connect, manage, and deploy amplifiers at scale and maintain peace of mind with secure connections and data with end-to-end encryption. This provides a unique opportunity for new recurring revenue streams for integrators to add to their service contracts.

# AROUND THE GROUNDS

To paraphrase Douglas Adams, ISE is big, really big. You just won't believe how vastly, hugely, mindbogglingly big it is. OK, try this for size – the exhibition space and stands occupy the equivalent of 9.3 MCG ovals. It dwarfs every other tradeshow I have ever visited. As such, seeing it all is now impossible. You have to go in with a clear strategy, accept that you're going to miss things, and wear sensible shoes. Pre-show training in the form of jogging or brisk walking is also a good idea.

Bearing that in mind, and in no particular order, here's a few products that grabbed my attention as I made my way from one end of the show to the other to make appointments that couldn't be organised in any kind of sensible or physically logical progression.

## Shure Things

You know a stand has hot products when it's more or less impossible to move around it due to the sheer mass of humanity. Shure's huge range of solutions now include the Axient Digital Plug-On Transmitter with ShowLink, or ADX3 as it's more pithily known. Designed for broadcast and TV, plug it on to any mic and you have total control of transmitter parameters wherever you're sitting.

The new MXW neXt2 could be an absolute category killer for hybrid classrooms, training rooms, and lecture halls, providing superior audio for conferencing and presentations at the same time. It's idiot proof while being clever, runs in the DECT range, and is totally remotely controllable.

## Plug Me In

Housed in a 2U touring-grade chassis with dual redundant power supplies, the new transform.engine is a Dante-connected server designed to run all VST3-native software plugins in a live environment, bringing premium studio software to live sound and broadcast applications. Fully compatible with any VST3 plugin that can run on Windows, the new device gives engineers and creatives access to the very best studio-grade processing on a robust platform that is specifically designed for the rigours and complexities of live productions.

## Wow Factor

At a show with more LED than you ever thought imaginable, with ever decreasing pixel pitches, the always impressive Infiled stand stood out. Its stunning WT Series has three pitches and goes down to 0.78 mm, making it the finest pitch I saw at the show. With 3840Hz refresh rate and 15-bit greyscale, I did not see a better screen at ISE.

## Networking Opportunity

The ever-reliable backbone of show networking, Luminex, released the GigaCore 10t, an eight Ethernet, two fibre port switch with 10GB capacity and PoE++ on every copper port. Setup and management via their Araneo software couldn't be simpler or more beautiful, giving you maps of your whole network and warning you if you patch something the wrong way. It couldn't be easier.

## SCION-tology

SCION is descended from MediaMatrix's NION, running an ADI SHARC dual core Digital Signal Processor with ARM Cortex Processing Unit. It's five times more powerful than its predecessor and has optional dual DSP-CPU boards. SCION can handle up to 32 channels of local analog I/O plus 64 channels via an audio network card slot, and an enormous 512i x 512 channels utilising MediaMatrix sNET, an AES67 streaming audio protocol, via an optional factory installed sNET card and built-in dual redundant IEEE 802.3 compliant Gigabit managed switch network ports.



Killer for Unis and Conferencing  
- the new Shure MXW neXt2



Shure's Stuart Stephens  
with the new Shure ADX3



Fourier Audio  
transform.engine



Infiled WT Series



Luminex  
GigaCore 10t



MediaMatrix Scion

## The Winner's Zone

Optimal Audio's no-nonsense Zone is a series of simple yet powerful zone audio controllers. With onboard DSP, highly flexible signal routing and HDMI connectivity, Zone provides everything required in a single compact unit to deliver high-quality multi-zoned commercial sound systems. The real genius is in its browser based WebApp, which can run on anything, and allows deep system configuration plus extremely simple GUI creation for non-audio staff who need to control volumes and so on. ISE was so impressed that it won a Best in Show award in the Audio category.



## Amps with a Pedigree

Biamp have recruited some deep technical knowledge for the creation of their Voltera D amplifier series. They include alumni of both Lab Gruppen and Powersoft. Voltera D are networked amplified loudspeaker controllers (ALCs) with powerful onboard DSP, sophisticated tools for tuning rooms, and a host of other one-of-a-kind features. Voltera D ALCs are available in 1200-watt or 2400-watt configurations across four or eight channels. Voltera D is one of the very few ALCs in the market to feature redundant network audio, support of failover between mains power and backup generators without a reboot, and group-controlled raised cosine EQ, making it attractive for large systems.



## Do You Want Fries with That?

In the "I didn't know they did that" department is Clear-Com Equip, an industrial/retail comms solution designed to be simple to use and workable in hostile RF environments. It's aimed squarely at fast food restaurants, warehouses, factories, and other industrial applications. With two channels of full-duplex comms, up to 40 wireless headsets can be supported by transceivers placed wherever wireless coverage is needed. Headsets are easily paired to the system using NFC communication and have voice alerts with status details. Set-up, configuration, and monitoring are via a simple touch screen.

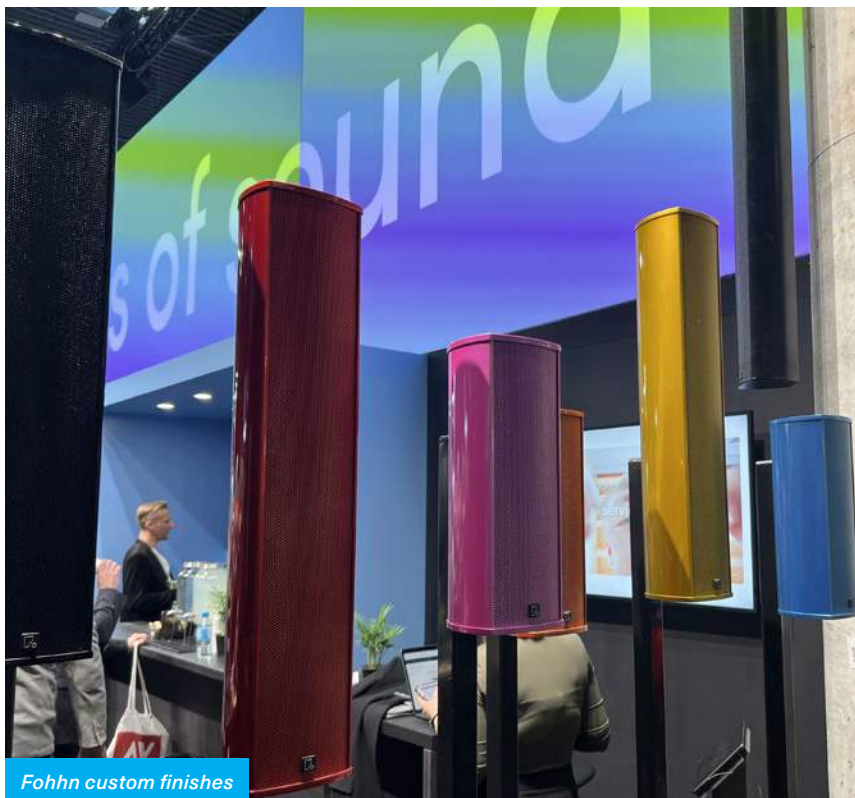


## Blazing a Trail

Who are Blaze Audio? They are the people who have likely been making the amplifiers in whatever you've been using the whole time. They are the in-house brand of famous OEM manufacturer Pascal Audio and took out a Best in Show award in the Installation category for their PowerZone Connect 508, 1008, 4008, and 6008 amps. Technical Sales Manager Anders Wisbøl gave me a personal tour of their simple and solid offerings, distributed now in Australia by Jands.

## Shiny Things

Fohhn Audio not only make beautiful sounding loudspeakers, they also make them beautiful to look at. Fohhn recently went on a hiring spree and recruited passionate staff expert in paint finishes from the automotive industry and have started applying it to speakers. The results are gorgeous, and they can customise high-quality finishes in just about any way possible.



# Harry the hirer®



A few weeks before getting on the plane to Barcelona, I was chatting to Harry the hirer Productions' General Manager Simon Finlayson about the upcoming trip.

Turns out, Simon was going too, and taking four of his staff on a mission to find solutions and fix issues. "Why don't I get my crew to write up what they find for the magazine?" Simon suggested. I agreed, and we set up a tentative strategy meeting at a yet-to-be

determined bar in Barcelona the night before show opening.

Over beers ordered in our collectively non-existent Spanish, I told the Harry crew how I usually cover shows, and they explained what

they were after. They had a very targeted list of tech across video, LED, and lighting that they needed to address gaps in their inventory, and a wish-list of features in all areas to improve their workflow. For example, Simon Finlayson was seeking lighting fixtures that could offer a 'wow' factor that Harry's competitors don't have, and Product and Technology Manager Craig McPherson was looking for a competitive media server solution in a market he viewed as having a low end and high end, but no real middle.

At a show that has now become so large that no one human can even see all of it, let alone report on it, it was fantastic to have a group of passionate technology professionals working with me to bring a proper working technician's perspective to show. Here's what they found...

## Media Distribution Evolves with HIVE Streaming

by Craig McPherson, Product and Technology Manager, Harry the hirer Productions

As the world of immersive video installations grows almost daily, with arts, culture, business, and entertainment sectors deploying customer engagement through video projection, LED displays or a mixture of display solutions, the demand for large high-resolution output media servers grows with it.

One of the standout new products in this field in Barcelona at ISE 24 was the Hive media system. A relatively new company in this space, with a different outlook and different approach on how to structure and drive media rather than using traditional server-based content playback.

As the name 'Hive' suggests, the system works like a hive of bees with one device being the Queen bee (which can be any device in the network) with many worker bee devices. The system becomes a fully networked solution with the workload distributed among the worker bees. This allows the system to be more reliable and scalable with end points that are SDM compatible for onboard playback in compatible displays and projectors.

With three sizes of device, both in SDM cards (Beeblade), a standalone box (Beebox) or the new 'Beehive' enclosure that can hold up to 16 Bee Blades of any combination of HD playback and output. The Bee Blade also supports 4K and 8K playback and 4K output. With storage from 500GB to 4TB these devices cover virtually all

applications of media playback, where you need a system of two units to 120 units, as used on the recently installed BBC David Attenborough experience currently showing at the Melbourne Convention and Exhibition Centre.

The Hive system is managed via a web interface, supports ArtNet or SMPTE MTC Timecode, as well as onboard playback. Each device can display NDI, RTMP and USB captured streaming video sources, extending its use to live performances. With onboard mapping, blending and warping effects, Playlist, Timecode, Live control, and Timeline playback with a bundle of basic effects, each box becomes a very powerful playback media device and a huge standout in the world of media servers.





# International Trade Shows

## Why Bother?

by Ian Kirkwood, Operations Manager, Harry the hirer Productions

Is the expense or travel effort to get to overseas trade shows really worth it? This question is considered by many business leaders in the technical event and integration sectors, with annual reconsideration. Australian domestic trade shows can involve a simple trip interstate but the real effort vs. reward stakes are high with the overseas meccas like ISE, PL+S, LDI, InfoComm, and NAB. These shows can be a gold mine of fresh ideas and supply opportunities, but expect an investment of many tens of thousands of dollars to send staff each year.

The journey to ISE, hosted in Barcelona, takes approximately 30 hours with stopovers that can see attendees sitting bleary-eyed in foreign airports for hours between connections. While Barcelona is a unique location, the pressure to follow through with measurable outcomes and procurement results should counter-balance any sense of extravagance. The 2024 ISE show at Fira Barcelona boasted eight enormous halls of exhibition, product demonstrations and seminars. To put this in scale, the seven halls of

exhibition space alone occupied a staggering 166,000 square metres, more than six times the full ICC or MCEC; a lot of ground to cover in the show's four days.

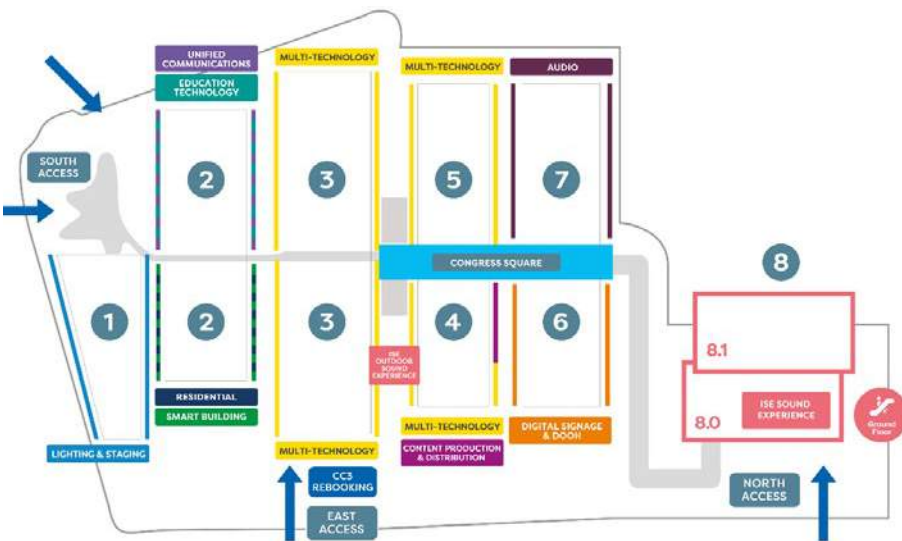
Despite fatigue from international travel and hiking around 40,000 m2 per day, trade shows produce tangible results for those who stay focused on their target lists and refuse to relax between the hours of 9 am and 6 pm. And then there's the factory dinners and events that make each day an 18 hour day, but help maximise the investment in attending. Every stand at ISE, from the huge brands to the poorly presented 3 x 3s, can provide niche solutions which can't be found or sourced from a web browser in Australia.

Harry the hirer Productions has been drawing market leading outcomes from trade shows around the globe for decades. This is not achieved by a technical team junket once a year hidden from business leadership, but a tenacious and eyes-wide-open approach to new equipment ideas. Harry the hirer

Production draws strengths from all levels within its team and it's no different at ISE; led by Harry the hirer Productions' General Manager, Simon Finlayson, a team of five hit the floor this year and each voice on that team brought vital perspective and ideas.

The relationships that Harry the hirer Productions has grown at ISE and other international trade events have translated to support, growth and ultimately event success long after the events close. Whether we are talking about how to get a piece of gear into Australia or discussing feature development with a manufacturing engineer, supply relationships are formed and maintained at trade shows.

When it comes to investment in technology, tangible market advantages exist for the business leadership who can sustain gear investment strategies, year on year - deliberately and organically. International trade shows are a vital part of that success at Team Harry's Productions.





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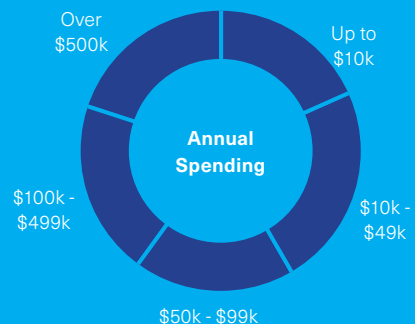
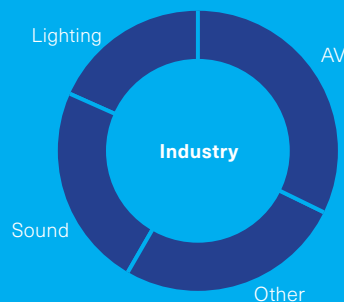
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# 2024

## The Transparent OLED Revolution Takes Center Stage at ISE

by Scott Anderson, Technical Director/Account Manager, Harry the hirer Productions

Fira de Barcelona, a sprawling exhibition space, served as the backdrop for an undeniable trend in 2024 – the dominance of Transparent OLED technology. This cutting-edge marvel wasn't just a showpiece; it permeated every corner, embraced by manufacturers, commercial exhibitors, and professional AV enthusiasts alike.

The Transparent OLED displays were not just screens; they were interactive canvases. Manufacturers showcased the technology

by displaying the very panels that powered its brilliance. Visitors engaged intimately, appreciating the fusion of form and function. The transparency, coupled with vivid visuals, provided an immersive encounter that left a lasting impression.

A standout application of Transparent OLED was the use of double or triple-stacked arrays. This configuration turned ordinary displays into captivating spectacles, with products appearing suspended in mid-air. The immersive nature of these setups drew crowds magnetically, underscoring Transparent OLED's capacity to elevate the presentation of products and ideas.

A personal highlight was the creative use of Transparent OLED screens as foregrounds for front-lit products, enhanced with imaginative content. This seamless integration of technology and creativity showcased a harmonious dance between the physical and digital worlds. The potential for innovation sparked a cascade of ideas, particularly considering the availability of 55" OLED screens for rental at Harry the hirer Productions.

In the realm of events and productions, Transparent OLED emerged as a game-changer. Its potential to redefine spaces and captivate audiences with dynamic





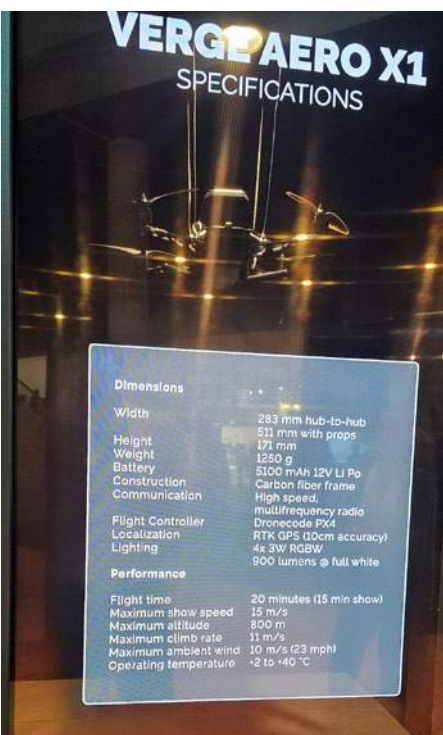
"In the realm of events and productions, Transparent OLED emerged as a game-changer."



visual displays was now within reach. As possibilities unfolded, the 55" OLED screens at Harry the Hirer Productions took on new significance, promising to transform events into unforgettable experiences.

However, amidst the technological marvel, one recurring theme resonated – content is king. The magic of Transparent OLED unfolded when paired with compelling, relevant content. The synergy between technology and content emerged as the key to unlocking Transparent OLED's full potential.

Leaving ISE, the air buzzing with innovation, I carried a newfound appreciation for Transparent OLED technology. It wasn't just a tool; it was a canvas awaiting captivating content. The year 2024 had unveiled the transformative power of Transparent OLED, and as we at Harry the Hirer Productions embrace this technology, we look forward to creating immersive experiences that push the boundaries of what is possible. In the age of Transparent OLED, content reigns supreme.



# Canvas Video Switching

At the 2024 Integrated Systems Europe event, there was intense competition among leading companies in the field of canvas switchers. Barco unveiled their Event Master Series 3, Analogue Way showcased their new 6 RU Aquilon, and Pixel Hue introduced their P and Q series.



Barco's latest offering, the Event Master Series 3, supports a 4k 60-frame workflow.

It consists of seven cards, including a link card, four input cards (providing 16 x 4k inputs), and two output cards (offering 8 x 4k outputs). The system utilises Gen 2 E2 cards. During my conversation with the team at their booth, they emphasised that the E3 should not be seen as a replacement for the E2, which is designed for HD workflows, while the E3 excels in 4K workflows. At launch, the E3 allows for a maximum of two linked chassis, with a minimum of eight mix layers at 4K and one native background.

Back in Melbourne, I had the opportunity to explore Pixel Hue's P series, which seemed like a suitable choice for smaller events with only two 4K 60-frame outputs.

The user interface was user-friendly, and the overall operating experience appeared promising. However, upon speaking with the Pixel Hue team and going through various scenarios, it became evident that the software lacked essential features that are commonly found in Barco and Analogue Way workflows. The engineers acknowledged this gap and expressed their intention to incorporate features that optimise outputs for LED workflows, preventing unnecessary consumption of outputs and adding LED processors to the equation.



**My visit to the Analogue Way booth at ISE left me with mixed feelings.**

Previous experiences with their products, such as the Ascender range, were not particularly pleasant. However, the team at the booth acknowledged the lack of support the Australian market had received in recent years due to changes in distributors and support systems. Surprisingly, the standout system was the Aquilon, specifically its RS4 model. It boasted 24 x 4K60p inputs and 16 x 4K60p outputs, all operating at 4K60p 4:4:4 10-bit. Additionally, it featured two dedicated multi-viewers and the option to link up to four units. While information about the 5RU and 6RU options was only released at the booth and not online, it piqued my curiosity regarding whether these units would support 4:4:4 at 12-bit 60p.



Initially, I had high hopes for the Barco E3 as a potential solution for our clients. However, upon discovering that the E2 would still be available for two more years and considering the limitations of the E3 at launch (with its seven slots and no EX unit to expand capabilities), doubts arose regarding its viability for a 4K workflow. The dilemma was either sacrificing inputs or outputs, without a satisfactory compromise. The only configuration that could work for us at Harry the hirer was five input cards and two output cards, providing 20 inputs and eight outputs, which had to be shared among the Multi-Viewer, AUX, and canvas screens. However, Analogue Way's offering, specifically the Aquilon series, caught my attention. Being two years after the release of their initial product in the range, as well as offering a 4RU upgraded system with more inputs and outputs without the need for expansion, Analogue Way emerged as a serious contender. However, their success would depend on resolving software bugs and re-establishing a strong presence in the Australian market. The only other option was the Spyder X80, which had not been refreshed or given much attention, raising concerns when considering investment in that platform.

Only time will tell which system will emerge as the ultimate canvas switcher. We will conduct thorough testing in our shop to assess the performance of both systems.

**by Jory Enright, Video Technician, Harry the hirer Productions**



# MARTIN MAC AURA XIP



The new moving-head wash light arrives on the MAC Aura scene, adding a new powerful sibling to this already impressive Martin range.

The Martin MAC Aura range of premium moving-head wash lights are a mainstay of the Martin LED wash light family, and its most recent addition is the impressive new Aura XIP, marketed by Martin as “A premium moving head wash light with a radical aura filament effect, and full pixel control with video mapping capabilities onto the beam and the aura.”

At first glance this reads as an updated IP-rated version of the MAC Aura XB; arguably Martin’s best-selling LED wash light. But there’s more to this light than that. The Aura XIP is the first fixture in its class to be rated for outdoor use. Optical quality has also been a real point of emphasis by Martin during the fixture’s recent development, and features here include an even wash field with soft edge, close to zero stray light, and high-intensity mid-air beams with improved light engine control.

With dimensions of 338 x 380 x 226mm, the overall weight a touch under 9kg, and a frontal lens diameter of 196mm, the MAC Aura XIP could be classified as a small to mid-sized wash light. It has a maximum power consumption of 340W, which means you can theoretically get up to seven of these fixtures to a XXA circuit.

## The Light’s Construction

The MAC Aura XIP is made from a high impact, flame retardant thermoplastic, which gives the fixture an Ingress Protection Rating of IP54. With this has come a nearly 40 percent weight increase over the Aura XB. That said, we’re still talking about a light that’s under 10kg here that can be easily handled by just one person. To that end, the light even features two handles integrated tastefully into the design: one on the head, one on the base, for ease of handling and rigging.

The light fixture also provides an M12 thread hole and two omega attachment points, as well as mounting points on the front for accessories such as top hats and concentric rings, one of which is a SoftLens accessory that is included with the fixture that softens and slightly widens the light’s wash field.

It would seem that in 2024 the concept of an IP-rated moving light is within the remit of almost any lighting manufacturer. The next step from here is to make a fixture that’s less cumbersome and more stylish, which Martin have certainly achieved with the XIP.

## Optics, Colour & Brightness

The MAC Aura XIP is everything we’ve come to expect from a MAC Aura product over the years. It’s an LED wash light featuring RGBW colour mixing with an output that punches well above its weight at 6,000 lumens – not bad for a 9kg-odd, IP-rated light! The XIP produces a smooth, flat, even wash field with zero hotspots and little colour temperature variance over the field, making it a fantastic wash or front light for filming applications.

The beam features seven 60W RGBW LEDs, while the aura is made up of 12 4W RGBW LEDs. The fixture has a very respectable 8:1 zoom ratio, translating to a 6.3 – 50.4° zoom range, taking it from almost a pinspot all the way out to a wash, with minimal stray light spilling out the sides when at full zoom – an issue Martin has worked hard to achieve.

The Aura XIP can be run in calibrated and extended colour modes, with variable colour temperature from 1,000K all the way up to 12,850K. It also has a tungsten emulation option, which aims to emulate the colour and dimmer curve of a tungsten fixture, making it a good fit for both film and theatre.

## Applications & Features

On most IP-rated moving head fixtures you often hear mechanical noise. Once a moving light has gone through its typical start-up procedure and becomes operational, most mechanical noise typically comes from the cooling system and motorised movements such as pan, tilt and zoom. With the XIP, meanwhile, emphasis has been placed on keeping the moving wash as quiet as possible, and to that end the unit features its own ‘quiet mode’.

## MAC Aura XB vs MAC Aura XIP

	Aura XIP	MAC Aura XB
Weight	8.95kg	6.5kg
Dimensions	338 (W) x 380 (H) x 226 mm (D)	302mm (W) x 390mm (H) x 163mm (D)
Output	6,000 lumens	6,000 lumens
Power consumption	340W	400W



In 'quiet mode', the Aura XIP can put out just 25.2dB(A) of noise. Admittedly, this comes at the cost of some performance compromises, including speed of movement. However, if your priority under certain conditions is to minimise operational noise – on a TV set or theatre stage perhaps – you're probably not looking for lightning-fast pan and tilt movements anyway, particularly if it comes at the cost of mechanically generated noise.

The XIP can also be video mapped: both beam and aura, either separately or simultaneously. The ability to run video content through the light opens it up to a wide range of possibilities for lighting designers, making the fixture suitable for a vast array of applications such as TV, concerts and touring productions.

And when it needs to, the XIP can move fast, with a pan range of 540° and a tilt range of 220°, making it a great fit for nightclubs, festivals and concerts.

Lighting manufacturers love using metrics and ratios to market and promote their latest equipment, of course. An up-and-coming ratio we might need to place in our vernacular in the foreseeable future is the 'LWR' metric, also known as Lumen-to-Weight Ratio. As the name suggests, this metric describes how many lumens of light output per kilogram a lighting fixture produces (akin to a boxing division perhaps, or a car's performance). Effectively, it's an efficiency ratio – the higher the number the better. Although not listed on all lighting spec sheets (well, not yet anyway), this figure can be determined by dividing the lumen output of any given fixture by its weight, in kilograms. The LWR for the MAC Aura XIP is a punchy 670lm/kg.

## Control & Programming

The MAC Aura XIP can be run in six different DMX modes, including: Compact (20-channel), Basic (36-channel), Extended (57-channel) and Ludicrous (93-channel). It can also be run identically as a MAC Aura XB, with XB Standard (14-channel) as well as XB Extended (25-channel).

16-bit controllable parameters include: dimming, beam colour mixing, zoom, pan and tilt. There's also an option of four dimming curves as well as a variable green/magenta shift, which works impressively for lighting people on camera.

The control display panel on the light itself is battery powered too, so lights can be addressed and settings manually changed without the need for connected power.

The XIP can be controlled via five-pin DMX in and thru as well as Ethernet in and thru. Ethernet supports Art-Net, sACN and Martin P3, and comes fitted with Martin's own Ethernet Fail-Safe technology, which forwards data to the next unit in series even when a unit is powered down. RDM is available over DMX as well as Ethernet over Art-Net.

## The Verdict

One 'compromise' worth noting with the Aura XIP is its IP54 rating. Most other IP-rated lights we're seeing on the market nowadays generally have an IP rating of 65.

The question to be asked here would be: what IP rating is suitable for a lighting fixture? For instance, an IP67 rating sounds great on the surface, but this would inevitably come at an increased cost in both weight and expense, as well as be more time consuming to handle and set up, while offering less performance compared to, say, an IP20 fixture.

In more relevant lighting fixture terms, is there genuinely that much difference between an IP65 and IP54 rating? And in practical terms, how many applications can you think of where an IP65-rated fixture would cut it but an IP54-rated equivalent would not? Applications around a permanent or semi-permanent outdoor installation perhaps, or during a torrential downpour? One way or another, IP-rated lights are becoming more commonplace and I suspect we may see manufacturers toy around with these ratings to see what's the most marketable.

With the MAC Aura XIP, Martin has taken one of its best-selling lights (the Aura XB), updated its features and its LEDs, and increased the IP rating, while at the same time restricting it to a similar footprint. It's a safe play by Martin, who frankly didn't need to do anything drastic to an already popular wash light.

Infinite pan and tilt features on the Aura XIP would have been nice to see perhaps.



Meanwhile, it will be interesting to see if Martin decides to scale up and create a larger MAC Aura of similar size to a Quantum Wash.

With the XIP now in play, it looks as though the Aura family will be amongst the leaders in small- to mid-sized LED wash lights for the foreseeable future.

## MAC Aura XIP - Specs

6,000 lumens RGBW light output

High narrow intensity: 360,000 cd

Pixelated Beam: 7 x 60W RGBW LEDs

Filament Aura: 12 x 4W RGBW LEDs

### Optics

6.3° – 50.4° zoom

SoftLens Accessory included

### Colour Palette

Calibrated and Extended Colour Modes

Calibrated CTC control: 1,000 – 12,850K

Green Magenta Shift (Tint) Control

Tungsten Emulation Option

Virtual Colour Wheel

### Dynamic Effects

More than 200 built-in FX Macros with control of foreground and background colour, speed and direction

P3 video mapping of fixture Beam pixels and/or Aura filaments

P3 Mix allowing crossfade between video and DMX looks

High-speed pan, tilt and zoom

### Physical

Weight 8.95kg

Dimensions: 338 x 380 x 226mm



Sorry to all the nice Karens out there



# PEOPLE

## The Good, the Bad and the Ugly

**You are a person. I am a person too. We people are equal parts fun, interesting, intriguing and frustrating. We succeed. We fail. As all people do. How we respond to these events defines what kind of a person we are. Our true colours are shown when we interact with other people.**

The best people enjoy their success with humility. The best people acknowledge their failures and learn from them. These folk are generally wise.

Bad people gloat about their successes, yet keep repeating their mistakes, regardless of the cost to them or others.

The worst of the worst rub their successes in your face. They won, you lost. And they like to keep reminding you too. These selfish fools deny their failures or construct fantastical alternate worlds around them. Here's looking at you, scary orange manbaby and serial loser - please don't ruin the world for the sake of your fragile ego.

Two weeks ago, my partner and I met at the neighbourhood Rec Hall to feed 60 or so locals with pizza for dinner. For many years, this has happened weekly all through summer in our

town. We most certainly didn't do it alone, with another six bodies required to prep, cook and clean. Then two more to staff the bar. All 10 of us volunteered, and not for either the first or last time. Because we are all good people who go out of their way to help others, without expecting anything in return.

The previous week, a punter walked into the kitchen, saw furiously busy cooks yet still had the temerity to complain that they couldn't get the exact style of pizza they were after. We patiently explained that we only had access to the ingredients in front of us and several more custom pizzas in the cue before we could even look at it.

Well, Princess Karen huffed off to whinge to her friends. It took me a very deep breath to go over and calmly outline that this whole event is volunteer run, and we do the best with what we have got. If she, or anyone else, wants a different type of service, they are more than welcome to put their hands up to help out. They haven't yet returned, but I'm figuring that is more their loss than anything.

Bad people only help themselves. "What's in it for me?" they cry. If they want deep dish, stuffed crust, 'just like Domino's', they can jump in the car and drive the one hour each way to the nearest franchise. I can guarantee that their disc of death won't even be remotely warm by the time they get it home. Whether their heart ever warms is up to them.

That same night, another new punter

witnessed the above exchange. She was mortified that someone could be so selfish and rude, then offered immediately to help. Sleeves rolled up, dough and flour flying, Lisa wasn't much chop at rolling pizza bases, but the banter made up for any lack of expertise. That's a good people attitude. She is very welcome to return and probably will.

I have surrounded myself with good people. There is an element of luck but much is by design. Life is too short to waste time on pandering to fools. Everyone gets a few chances to establish where they fit on the selflessness scale. The ugly ones don't take long to show their lack of worth, the bad ones get slowly sifted out and I then make an effort to encourage relationships with the good ones.

These good eggs care for more than just themselves. They have the inner strength to realise that their ego is no more important than anyone else's. They know there is great joy in giving freely.

Greedy people, selfish people, narcissists, and takers in general are often unhappy underneath. I've dealt professionally with a lot of high-net-worth individuals, and a great many were miserable, angry or worse. They might have all the outgoing trappings of success, but their daily existence seemed bleak and tortured. What kind of a life is that? Who cares how many Ferraris you have when you have no true friends, your family disrespects you and you fear that the whole world is after your toy chest?



Our weekly pizza nights take a fair collective effort to organise and stage. None of us are remunerated in any financial sense. In fact, it takes us all away from income producing opportunities. That is not the point. The real reason we all give to this venture is to see our community getting together, bonding over a shared experience, knowing that we are not alone, all while crossing demographic or political boundaries that would otherwise keep us apart. It gets hermits like me out the gate. It builds great bonds. It is an excellent way for newcomers or through travellers to meet a few locals.

When everyone got locked down, we had a much easier experience here in the country. I don't even have a shop within 10kms, so travel restrictions were arbitrary. I could go for daily 1-2 hour walks and not see a single soul. And it was easy to bunker down in a place designed for just that - our pantry is extensive and always well stocked. We have space and time for veggie production. Eggs and meat are easily bartered for. But my biggest personal loss was the weekly pizza and beer gathering, which was cancelled for two seasons. Maybe that sounds trite in the context of much harsher restrictions and losses elsewhere, but I hadn't realised how much I valued it until it wasn't there.

Slowly, I got to plotting and planning. The committee responsible for the bar and its license had been somewhat dysfunctional for a long time. Most of the members were jaded

and worn down after a long battle with the council over poorly implemented renovations to the venue (which they own). These building upgrades were sorely needed but locked us out of the venue for a second summer. With the Shire even more unstable (having Councillors recently replaced by an administrator and 65% annual staff turnover), I was surprised when, out of the blue, they passed a motion to dissolve the Hall management committee and elect a new one.

Cool. Time to press go. I've built enough trust and respect in the region to have a good crack at this. Duly elected as chair of the new committee, the hard work has now only just begun. We've got a good collection of skills, attitudes and age groups in this bunch and we are all keen to see things progress by fixing some of the logjams that have held the venue back.

Bound as we are by the bureaucratic inefficiencies of interactions with any civic body, this will require some degree of diplomacy - both within the group and in dealings with the Shire. My people skills will be tested, but I haven't come in blind. I am very aware that this is a key part of the role. As are patience and persistence.

Will I succeed or fail in this venture? Unless a major tragedy hits, I am going full on for success. Setbacks are inevitable, but these junctures can be learning moments. The biggest win will be if other people succeed through this too. After all, that's where I get my greatest reward. The ultimate arbiter of success will be seeing how many good people shine, individually and collectively. Plus, we get to share some great tucker and laughs over a glass of fine local beer or wine.

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

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

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

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

Supporting the mental health of Australian entertainment industry workers

## SNIPPETS FROM THE ARCHIVES OF A BYGONE ERA



# THE TMG TAPES

## *Ted Mulry Gang On The Road Again*

It doesn't take much probing to discover how monumental Ted Mulry's rise to fame was in the early 1970s. His hit single, 'Falling in Love Again', was followed by a successful album of the same name, which featured several songs he'd written, including an earlier charting single, 'Julia', and the haunting ballad, 'Memories'. He made several television appearances and was a nominee for TV Week's 'Best Talent of 1971', and 'Best Australian Songwriter' at the 1971 King of Pop Awards, where he was a guest performer. Mulry also wrote for other artists, including John Farnham and Sherbet.

Sadly, Ted Mulry passed away in 2001. He is remembered for his successful solo career and also as the lead singer and bass player for the Ted Mulry Gang (TMG), one of Australia's most beloved bands, whose popularity spanned three decades.

I caught up with TMG's guitarist, Les Hall, at his home in the NSW town of Maitland, where we chatted about the band's direction during those early years and how Mulry's passing led him to a 16-year hiatus from performing; it was a period in which he didn't even pick up a guitar. It wasn't until 2016 when TMG's drummer, Herman Kovac, rang Hall with an idea to put the band back together.

"I've got people wanting to book the band," said Kovac.

"I said, 'Herm, I haven't touched the guitar for sixteen years,' and at that stage I only had the last two guitars I'd been using, and that was it; I'd gotten rid of everything," said Hall. However,

he decided to 'give it a go' when he learned that Kovac had recruited Mulry's brother, Steve, as the lead vocalist.

The current TMG lineup is Steve Mulry on vocals, Les Hall on guitar, Mark Tinson on guitar, Tony Mitchell (ex-Sherbet) on bass, and original drummer Herman Kovac. The band has a new single written by Les Hall, called 'La La', which will be on the new album, 'It Is What It Is...Rock On'. Hall and Kovac have produced the new album at Kovac's Ramrod recording studio.

The new lineup comes 44 years after a 1972 concert at Sydney's iconic Tivoli venue, which became the staging ground for a merger that would become an Australian music industry success story. Ted Mulry's performance at that 1972 Tivoli concert was backed by Sydney band Elmtree, and on the same card was Newcastle band Velvet Underground, whose guitarist, Les Hall, says it was their drummer, Herman Kovac, who thought Mulry looked

lonely standing in a corner by himself. "So we invited him back to the house at Mona Vale for tea," says Hall. That get-together would ultimately spawn the Ted Mulry Gang (TMG), whose name came about after a 2SM radio announcer told listeners they could catch 'Ted and the gang' at a Brookvale Oval concert at Manly.

"We looked at each other and thought, 'Oh, the gang, Ted Mulry Gang'; and that's where the name came from," said Hall.

I still have vivid memories of seeing TMG in 1974 at the Chances R Bar, Surfer's Paradise. This was before guitarist Gary Dixon joined the band. The lineup featured Mulry on bass and lead vocals, Les Hall on guitar, and Herman Kovac on drums. I remember being surprised at what a tight rock 'n' roll outfit they were, as I had only heard Ted Mulry's ballads.

At the time, I was taking guitar lessons from an Eric Clapton aficionado who was painstakingly



TMG Guitarist Les Hall Brookvale Oval 1972



Les Hall, Hall of Fame

trying to teach me Clapton's bending and vibrato techniques. And here was Les Hall effortlessly employing that technique on an Ampeg Dan Armstrong transparent guitar. I became so fixated on Hall's guitar playing that my Swiss girlfriend at the time turned to me and said in a heavy French accent, "If you keep staring at him, he will zink you're in love wiz him."

50 years after that TMG performance at the Chances R Bar, I still had a plethora of unanswered questions. I was especially intrigued as to how Mulry, a successful solo artist whose métier was love ballads, gelled so seamlessly into a songwriting partnership with Les Hall to write songs for what Hall loosely describes as 'Aussie pub rock'.

"Ted wanted to move away from the ballads and get into rock stuff," said Hall, who remembered the 1974 Chances R bar performances.

"We did a couple of gigs in the area, but especially Chances R; that was a place where

we seemed to go well. The reason I had the Ampeg was because Ted and I were right into The Rolling Stones. And, at one stage, Keith Richards used an Ampeg. Ted just happened to come across one in Sydney. When our bass player left, Ted started to play bass, and he had no further use for the Ampeg, so I bought it from him for \$550," said Hall.

Mulry was committed to TMG's rock music style, and that commitment paid off in 1975 when the band had a number one hit with the Mulry/Hall composition, 'Jump in My Car', which nudged ABBA's single, 'Mamma Mia', from the top spot on the charts and stayed at number one for six weeks. TMG went on to record a succession of charting songs, including 'My Little Girl', 'Darktown Strutters Ball', 'Heart of Stone', 'Lazy Eyes', 'Jamaica Rum', and an array of gold and platinum albums.

I asked Hall about Mulry's relaxed demeanour on stage, which, I thought, gave him a great stage presence.

"That relaxed demeanour was the result of three or four vodkas. Ted and I both suffered from stage fright. The anxiety, I think, is the fear of the unknown, because you don't know what's going to happen when you go out there. It could be a myriad of things. It could be the amp not working or the lead crackling. It could be anything from breaking a string to being out of tune or the audience just not being into it, but once you got going, it was fine," said Hall.

TMG toured with Sherbet in those heady days when fan hysteria had reached such a height that performers faced the real threat of being injured; thus, strict security measures became commonplace.

"We're talking about the 'Countdown' period. No matter where you went, whether it was Bourke, Broken Hill, or anywhere, they had seen us on TV. They put you on a pedestal. It was kind of a hangover from Beatlemania, and it got to the point in Melbourne, in particular, where we could not use taxis or hire cars. The last couple of gigs there, we had an armoured car because they would bang so hard on the

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Herman Kovac's Ramrod Studio



vehicles that it damaged them. Sherbet went through hell compared to us," said Hall.

While TMG enjoyed their enduring popularity, Hall says, "That's the good tip of the iceberg, then there's the unfortunate bottom of the iceberg, which is much bigger and much more daunting. We had to do a store thing (promotion) in Adelaide where they were expecting fifty people, and hundreds turned up, and it got dangerous. As we were leaving, Garry (Dixon) had a chain around his neck, and one of the girls pulled it so hard that it left a really bad gash around his neck. There was no security there; they tried to get the police in, but it was too late. They finally got us out into a car and got us away."

In 1986, after 14 years on the road, in the recording studio, performing on television, and in videos, TMG decided to take a break.

"Ted decided to go to the States and start writing over there. I thought at the time it was the end of TMG. But it didn't work out, and he

ended up coming back. We did some jingles together, and then we thought we might as well get the band back together."

Les Hall holds Ted Mulry in high esteem, as a musician and performer, as a songwriter and songwriting partner, and as a friend and mentor.

"Ted was a chameleon. I've met so many people in my life who've known Ted, and when I hear their description of him, I think, I don't know who that was, but that's not Ted. He was spontaneous, he was very sharp, and he was an intelligent fellow. His lifestyle was that of an 18-year-old, regardless of how old he was at the time," said Hall.

The TMG revival lasted until 2001, when Ted Mulry's illness took hold.

"I saw him two weeks before he passed away, and I remember when I was leaving, he was standing waving goodbye to me. I was in the car, and I just went to pieces. I knew I'd never

see him alive again. When Ted passed away, I thought to myself, I can't do this again. It would not be the same without him. I miss him terribly to this day," said Hall.



Ted Mulry



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