



106 AUGUST 2015 \$5.99

Brisbane City Hall
Taming Reflective Acoustics

Remembering Cyclone Tracy
MAGNT Brings History to Life

Ulumbarra Theatre Rises
Sandhurst Gaol
900 Seat Stunner

Roadskills
Daniel Johns
Hermitude
F Lea Be

GEARBOX REVIEWS: Soundcraft Ui16 • Martin MAC Viper AirFX • Sennheiser evolution D1
• Robe miniPointe • AUDAC SMQ500
CX NEWS: Christchurch Recovery • Brisbane Casino Announced • Minimum Pay Updated
• Bose Launch F1 Range • CX Opens In NZ

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| American Idol | Crosby, Stills & Nash | Grand Ole Opry | Journey | Meatloaf | Ringo Starr | Stone Temple Pilots |
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| Avenged Sevenfold | Dave Matthews | Hall & Oates | Kasabian | Mot rhead | Rolling Stones | The Black Keys |
| Barbra Streisand | Deadmau5 | Herbie Hancock | Katy Perry | Mumford & Sons | Rush | The National |
| Barenaked Ladies | The Decemberists | Hoobastank | k.d. Lang | Muse | Ryan Adams | Three Doors Down |
| The Beach Boys | Def Leppard | House of Blues | Ke\$ha | Nathan East | Sam Roberts | Timbaland |
| Beastie Boys | Derek Trucks | Hunter Hayes | Keith Urban | the National | Sammy Hagar | Tom Waits |
| Beck | Destiny's Child | INXS | Kellie Pickler | Neil Young | Santana | Tommy Emmanuel |
| B la Fleck | Devin Townsend | Imagine Dragons | Kenny Chesney | Nelly Furtado | Sarah McLachlan | Tommy Lee |
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| Billy Idol | Dimmu Borgir | James Taylor | The Killers | Nine Inch Nails | Sevendust | Tony Levin |
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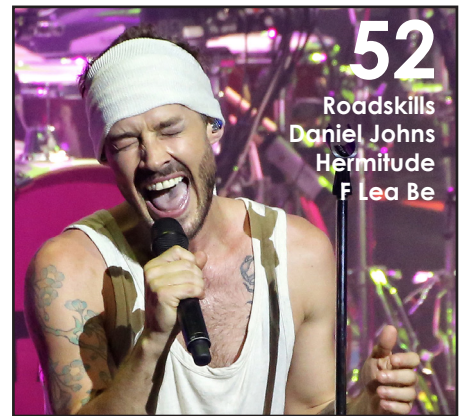
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Ulumbarra Theatre Rises



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CX106 2015. DIGITAL EDITION

GUEST EDITORIAL BY JIMMY DEN- OUDEN

System Tech Professionals

Over the past 8 years I've done a fair bit of work as an in-house system tech at several Sydney venues. As an in-house tech, I try to be as accommodating as possible. Usually I'll receive touring production specs a few days in advance of the show, which allows me to have a good read and be ready to answer any questions which may eventuate. Most of the places I work have pretty decent gear in-house, so aside from RF systems, the occasional bit of extra outboard, or a different console, most people just walk in and use our stuff.

It was interesting to me recently to be the guy who walked into the venue instead, since it gave me another perspective on things. Pleasingly four of the five venues provided systems and support ranging from pretty good through to excellent. In one case myself and the TM were given access to a venue some two hours before the in-house tech had been rostered to start work, but he turned up early for work and did a great job. I'd advanced a full spec for the show, and in four of five venues the systems they supplied either satisfied the spec outright, or they'd cleared the variations with me in advance.

Here's the interesting bit: if four of five people can get it convincingly right, how can one get it so wrong? I turned up to one venue to find insufficient multicore channels to patch the show, a PA system which didn't provide proper coverage to the majority of the audience, home made foldback wedges which just sounded plain wrong, and all of it served up by a tech with an adversarial attitude. I asked the local guy if he'd received the spec, and the response was yes but he hadn't bothered to read it. He just assumed the show would be the same as every other show passing through the doors and treated it accordingly.

So this editorial is to acknowledge the efforts of every brilliant, skilled, competent, sober, approachable, professional system tech out there. You are the people making our industry better on a daily basis, and I'm very glad you represent the majority. *So thanks very much.*

- Jimmy



FOOTNOTE

The layout overhaul mentioned last month is underway, but not yet arrived. We are workshopping the new style with our reader advisory group to make sure it works well for everyone. Stay tuned, it will be here soon!



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NEWS

CX INDUSTRY NEWS



Christchurch Recovery

30,000 builders swarm as Convention Centre inches closer

On that Tuesday lunchtime in 2011 when the quake struck, the control tower at Christchurch airport swung so violently, a controller has been off work on tranquilizers ever since.

When the dust, smoke and exiting bird flocks had cleared, much of the surrounding land including the airport was relatively intact. The major damage and the loss of life was in the city centre which, a geologist wrote in the late 1880's, was 'not fit to be built on'. The reclaimed swampland CBD saw a quarter of all four thousand buildings wrecked.

The rebuilding took a while, with empty spaces filled with innovative container and portable buildings for shopping and cafes. As rebuilding started, much of the portable structures were moved around. But it was a long and lean time between the quake, the demolitions, and the actual business of reconstruction.

2014 saw an influx and today 30,000 builders toil everywhere and the budget is creeping north of 40 billion dollars. Now Christchurch is poised for a major new Convention Centre, with Plenary Conventions NZ and the preferred Convention Centre operator Accor soon to lock in the project with an estimated NZ\$500 million cost.

The 1000 seat James Hay Theatre faces demolition, leaving the Isaac Theatre Royal as the only theatre in the city of 400,000. The theatre reopened late in 2014.

The Back of House and Stage House which were newly built in 2005, suffered only moderate damage and were repaired, but the 1908 auditorium and 1928 foyer spaces were not considered repairable in their original form, due to the dangerous nature of the original unreinforced masonry walls.

It was noteworthy that earthquake strengthening carried out in 2000 prevented complete collapse of the theatre and enabled the retrieval and salvage of key heritage items and stabilisation of the Edwardian facade prior to deconstruction.



All heritage fabric has been retained, restored and/or reinstated.

The Isaac Theatre Royal (ITR) has long been the premiere performing arts venue in Canterbury, a region which polls consistently show has the second highest number of attendees at performing arts in New Zealand.

Across Christchurch are a variety of audio, lighting and events suppliers and significantly all firms operating in 2011 are still trading today – despite the city lacking venues. With all five star hotels closed, and the loss of a theatre and the convention centre, life has continued.



Brisbane Casino Announced

New Lyric Theatre included

Echo Entertainment's new Brisbane casino complex will give entertainment a large boost when it opens in 2020. The current casino at the old Treasury Building will convert to retail.

The 'Sound Garden' performance stage area will cater to large crowds, with 'flood proof' features to avoid damage from the very occasional river flood.

A new 1500-1600 seat lyric theatre will be built at Southbank, which will be welcomed by producers.

At 'The Landing' is space for events such as large outdoor food, art and lighting festivals plus recreation activities, and a beach with direct river access and river ramp for kayaks and non-motorised craft.

The casino resort itself has international and local hotel brands including Rosewood and Dorset, together with Echo's VIP 6-star hotel - located in the signature 'Arc' building - and a Darling Hotel.

The Elevated 'Horizon Deck' provides views over Brisbane, with resort-style recreation, dining options and space for functions and events.

The casino design is by IRD architects Steelman Partners.



Minimum Pay Updated

LPA publicise award adjustments

The Live Performance Award 2010 has periodic adjustments, to stop crew on minimum wage from starving. From July an incremental adjustment came into effect, and this was publicised by Live Performance Australia.

Fortunately most full time crew are paid significantly more, our survey in March found. The survey is here: <https://www.surveymonkey.net/results/SM-X5QWMM57>

That survey of 250 industry professionals found the average low casual rate was \$29.07 per hour, average mid rate \$36.79 and best rate average \$59.97. Average full time package including super was \$80k.

Against that the newly revised award rate for casuals is a low \$21.61 (Level 1) through to \$32.53 for a technical manager who, under the award, would be lucky to earn 60 grand.

For more on award wages, search online or contact Live Performance Australia.



Bose Launch F1 Range

New system is unique

Bose launched the new F1 sound system at an industry event in Sydney last month. The F1 is designed for bands and music, comprising a sub box with 2 ten inch drivers, and an innovative top box with multi directional coverage.

At the launch Bose proved the dispersion patterns do in fact offer four vertical coverage options, with pink noise used to prove this to the audience. The pattern can be a line array J, a top curve up, bottom curve down, or flat. To offer this choice, Bose use an array of eight 2.5 " drivers, in front of a single 12".

The drivers on the Model 812 top box are in three panels, the top and bottom panel can be pulled in or out, and the system changes EQ automatically for each. The 812 has a uniform 100 degree horizontal coverage.

Both 812 and Sub have inbuilt amplifiers, and the launch demo band – a first rate session band - were mixed comfortably loud with apparent everything. The mix engineer reported the system had reserves. The industry people we spoke to at the launch were enthusiastic, despite the lack of alcohol at the lunch event.

Priced at around \$1,700 retail per component, Bose are confident the system street price will make it a winner. They have rolled out impressive marketing and point of sale material.

Word backstage is that Bose could roll out a smaller version of the 812, probably with two coverage options. A triple driver sub seems obvious as well, but less likely.



CX Opens In NZ

Celebrates 25 years

In late 1990 we published the first edition of Channels, the Jands magazine. Twenty five years later, we've seen the independent Connections magazine morph into CX – expand into web, digital and TV - and now CX New Zealand is born.

CX^{NZ} will carry relevant content from CX with local material specific to the culture and entertainment technology and ICT industry in NZ. The timing is right with the NZ economy booming and media tools changing. New writers are joining CX network to boost content.

CX NZ will support the ENTECH NZ Roadshow next July, a respectfully scaled version of ENTECH Roadshow Australia, which runs next February. The NZ event will feature around a dozen exhibitors across lighting, audio and staging and visit Auckland, Wellington and Christchurch.



Jam Packed

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The Audix DP7 Drum Pack is the standard for capturing the unique sound of your drums in studio and for live sound. The DP7 is jam packed with our popular D6 for kick drum, an i5 mic for snare, two D2s for rack toms, a D4 for the floor tom and two ADX51s for overhead miking. With a sleek, foam-lined aluminum case to keep the mics safe, the DP7 is truly everything a drummer needs in a single package.



DP7



Photo of Anthony Jones, Pink Martini

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The **GLP** impression X4 Bar uses high output RGBW LEDs that are packed tightly to give a full batten of light, with 20 LEDs used in the 40 inch long X4 Bar 20 and 10 LEDs used in the shorter 20 inch X4 Bar 10. High quality optics ensure a smooth, homogenised output across the batten through a broad pallet of pastel and saturated colours. This allows for subtle graduated fades, or for distinct colour breaks between LEDs. The X4 Bar 10 and X4 Bar 20 both feature a 7:1 zoom ranging from 7 to 50 degrees, giving effects from a narrow angle light curtain to a wide angle backlight or washlight.

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The XRLED 500 Spot utilises a 280W quad-chip LED source which delivers up to 1400 Lux at 10 metres. Featuring an additive colour mixing system, fixed and rotating gobo wheels, a 3-facet prism, iris, and 3:1 zoom, the XRLED 500 is designed for the professional production market. A linear dimming curve and adjustable colour temperature (2700K – 10000K) round out the feature set. Additionally, the unit has a maximum power consumption of just 350 Watts, freeing up additional power circuits at your next show.

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Martin
M-Touch

Martin M-Touch is a powerful yet simple control surface, an affordable console surface for both smaller applications and professional use. Fully compatible with all M-Series consoles and M-PC software, Martin M-Touch is a plug-and-play solution with a control surface like no other lighting console. 14 FSR faders allow control of playbacks and fixture parameters while 20 velocity-controlled pads allow for new types of effects. Additional programming buttons such as Record, Edit, Update, Load and Clear are accessible directly from the M-Touch control panel. Martin M-Touch comes with one DMX 512 Universe for direct control of any compatible DMX device.

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Allen & Heath dLive

Allen & Heath has launched dLive, a digital mixing system with flexible architecture, FPGA processing, and a comprehensive array of expansion, control and networking options. dLive has a distributed system design with separate MixRack and Surface. The dLive processing brain is housed in the MixRack, available in three sizes – the DM32, DM48 and DM64, and there are three accompanying control surfaces. All MixRacks and Surfaces are mix 'n match compatible, with common configuration, setup and show files.

The 96k/96bit XCVI Core provides capacity for 128 inputs with full processing and 16 dedicated stereo FX returns, offering 160 inputs to mix, plus a fully configurable 64 mix bus architecture, with full processing on all 64 mix channels. dLive incorporates the DEEP processing portfolio of embedded plugins, including Graphic EQs, Compressors, Multiband Compressors and Dynamic EQs, alongside its 16 slot FX racks, featuring Allen & Heath's range of FX emulations. Prices will range from around \$22,500 USD for a small dLive venue solution to approximately \$35,000 USD for a large touring system.



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Delivering 30,000 lumens and 3DLP technology delivering full 4K at 120Hz, the **Christie** Mirage 304K is an omnidirectional projector designed for 3D applications and advanced visualisation for industries including automotive, location-based entertainment, government, military, oil and gas, and biotechnology. Featuring the powerful Christie TruLife Electronics platform, Christie Mirage 304K supports a video-processing pipeline of up to 1.2 Gigapixels. Input options include DisplayPort, HDMI and HD-SDI, and built-in Christie Twist for curved screens and blended array visualisation applications.

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Extron SpeedMount Ceiling Speaker System

The CS 123T SpeedMount Ceiling Speaker System is a patented low profile, plenum rated two-piece speaker system. It provides an extremely wide 165° conical dispersion for flexibility in speaker spacing. The system is designed for applications where high intelligibility and maximum coverage is desired in paging applications and low ceiling installations. The system consists of the CS 120P plenum rated enclosure and a CS 3T full-range speaker cartridge. The enclosure installs quickly into 600 mm x 600 mm suspended ceilings. The speaker cartridge features a 3" (7.6 cm) full-range driver, and can be used in 70/100 volt or 8 ohm operation. The CS 123T is available as a complete assembly, or the CS 120P and CS 3T can be purchased separately to accommodate division-of-labour installations.



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Tannoy
AMS Series

Tannoy has launched a new range of surface mount architectural loudspeakers incorporating Dual Concentric technology. The new AMS series loudspeakers have been engineered to produce a sonic characteristic that is matched with the company's CMS 3.0 ceiling loudspeaker. Comprising a range of seven models ranging in three form factors from 5" to 8", the AMS series are available with custom colours on special order, have an IP65 rating, and have UUMW ICT driver versions available for mission critical voice alarm system applications.



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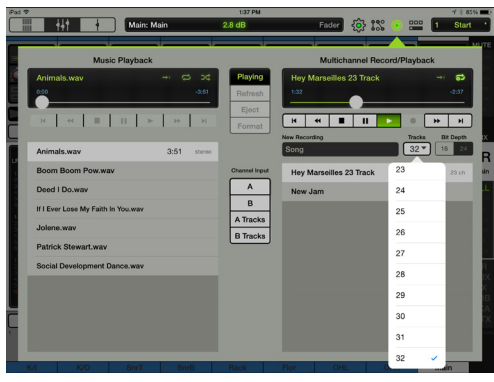
Yamaha
MRX7-D

Yamaha's new open architecture DSP unit, the MRX7-D, is equipped with eight mic/line in, eight analogue outputs, two stereo RCA inputs, 64ch of Dante I/O and 16 channels of YDIF I/O, Yamaha's proprietary 16ch audio and word clock over CAT5 format. For conference applications, the MRX7-D deploys a newly designed Acoustic Echo Canceller and will be capable of being controlled from the Executive Elite products from Revolabs. Other features include an automatic mixer designed by Dan Dugan Sound Design and Yamaha's patented technology for sound masking, 'Speech Privacy', which utilises the sound created from human voices to camouflage conversational content.



Australian Distributor: Yamaha Music Australia
au.yamaha.com or (03) 9693 5111

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Mackie Master Fader V3.2, which adds new features to the DL32R and performance and workflow enhancements for the DL1608 and DL806, is now available for free download from the Apple App Store. With Master Fader V3.2, the DL32R now allows a full 32 channels of both recording and playback via USB hard drive, giving users the ability

to wirelessly control 32-channel recordings and virtual sound checks. Also added is a new mic pre view, allowing access to all input gain controls, phantom power and metering for all 32 mic pres in a single view. VCA enhancements include a semi-transparent fader cap added when a channel is assigned to a VCA, visualising level changes caused by VCAs on the input channel itself. Additionally, if a VCA is muted or soloed, assigned channels will now show that they are being remotely muted or soloed.



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AKG
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www.jands.com.au or (02) 9582 0909



The DMM14 U is a 12 analogue in, six analogue out, digital automatic microphone mixer. Also available in UL and ULD models, which add Ethernet control and Dante capability, respectively, two channels of digital input and output are included via USB, with four in and 22 out added via Dante. Up to ten units can be cascaded, creating a system with 140 channels. Due to high signal-to-noise ratio, the DMM14 U also keeps room noise and feedback sensitivity from multiple open microphones to a minimum. DSP functions include filters, compressor, limiter, ducking and routing.

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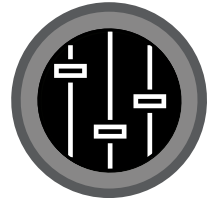
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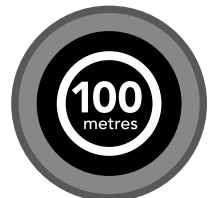
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BENDIGO LEADS WITH 900 SEAT STUNNER

BY JULIUS GRAFTON



CAPITAL VENUES
MANAGER: DAVID LLOYD



BRAND NEW REGIONAL THEATRES ARE THIN ON THE GROUND ACROSS AUSTRALIA, AND BENDIGO HAS SET A NEW BENCHMARK WITH THEIRS. THE CITY, LOCATED ABOUT 2 HOURS OUT OF MELBOURNE IN CENTRAL VICTORIA IS GROWING. THE CURRENT POPULATION OF 110,000 WILL SWELL BY 50% IN THE NEXT FEW DECADES.

CAPITAL VENUES TECHNICAL OPERATIONS MANAGER: DAVID CAMPBELL

THE NEW ULMBARRA THEATRE IS BUILT AROUND THE OLD SANDHURST GAOL, ON THE GROUNDS OF BENDIGO SENIOR SECONDARY COLLEGE. Y2 ARCHITECTS RETAINED PARTS OF THE OLD GAOL WHICH OPENED IN 1863.

The main entry is through a two story central gaol wing, with cell doors each side. This leads to a spacious foyer with a café off to the right. The foyer space is designed to allow crowds to gather and flow effectively.

The city gained this new theatre because the Bendigo Senior Secondary College needed an auditorium for its students. The City of Greater Bendigo's Capital Venues unit, led by David Lloyd, came together with the college to attract funding in partnership with the Department of Education and the regional growth fund.

Theatre planner Richard Stuart and Chicago theatre designers Schuler Shook worked on the design. Technical elements were contracted by the builders.

Capital Venues Technical Operations manager David Campbell took CX on a tour of the complex.

STUNNING FORM

With 953 seats, this is a proper theatre with a fly tower and a full sized stage. The foyer flows to the auditorium entries, passing the dance and drama studio on the way. The studio is the property of the college.

Use of the theatre space is centrally managed, with the college booking and sharing with Capital Venues.

Entering the dress circle reveals the space, fresh timber and patterned features breaking up the expanses. A proper acoustic is evident. Seats and space are generous, house lighting is just right.

Lightmoves supplied the technical infrastructure which includes Jands dimmers.

Through the proscenium the large 24m x 12m stage has 18m fly battens with generous wing space. It is the largest regional theatre stage in Australia.

A d&b audiotechnik V series line array sits unobtrusively each side, with subs mounted high above the centre. There are front fill speakers in the stage and the orchestra pit elevator, for whichever mode is in use. A Yamaha CL5 console enables the mixing.

There is a built in audio porch for FOH mix, so no seats need to be removed. The control room behind that is predominantly for lighting but you can do what you like from there.

Up high is a pair of 2k super trouper followspots.



Photo Credit DARREN ROBERTS

LIGHTMOVES TOOK ON THE WORK CONTAINED WITHIN 3 AV CONSULTANTS AND 1 ELECTRICAL CONSULTANTS DOCUMENTATION. THERE WERE A NUMBER OF COORDINATION REQUIREMENTS WHERE LIGHTMOVES BROUGHT TOGETHER EACH CONSULTANTS BRIEF TO OFFER A RESULT THAT IS A SINGLE SEAMLESS INTEGRATED SOLUTION.

This included infrastructure for Audio, Stage Lighting, Vision, Data, Comms and Paging.

As part of the base build, there were:

- 50kms of cable
- Penetrations through cell walls
- 300 AV panels
- 2500 connectors
- 324 channels of Jands HPC dimmers hard wired to spot bars and patch points around the venue
- 16 zones of paging FOH, BOH and external with local inputs into 7 zones

Philips Dynalight Lighting Control throughout the building including BOH blue light and workers.

Lightmoves supplied the package of ETC profiles, fresnels and Selecon LUI Cys.

Photo Credit ANTHONY WEBSTER

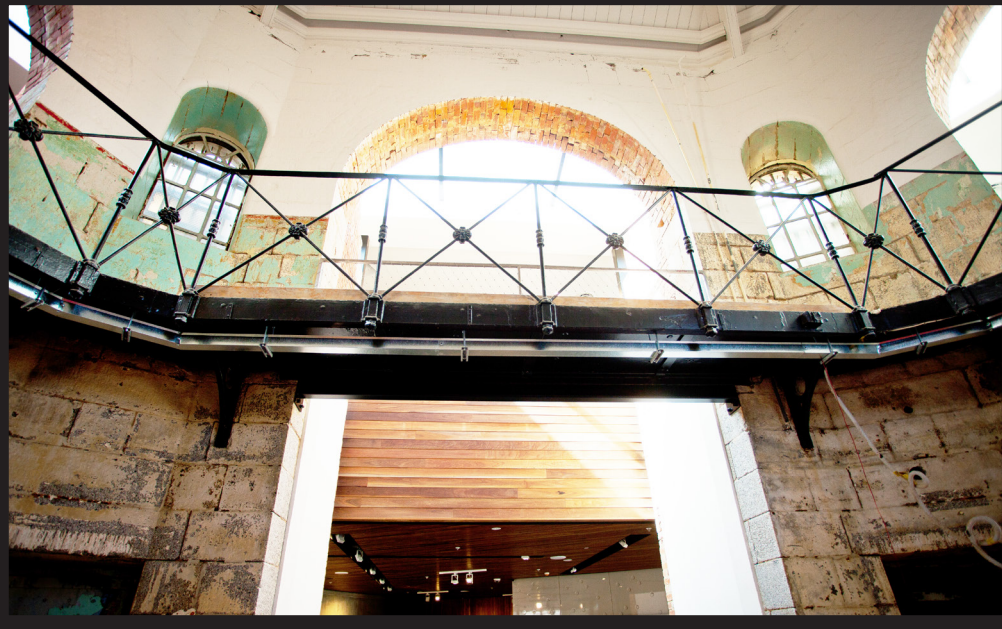


Photo Credit ANTHONY WEBSTER



Photo Credit MARTY WILLIAMS

THE OLD GAOL
1863



Photo Credit DARREN ROBERTS



Photo Credit DARREN ROBERTS

ON STAGE

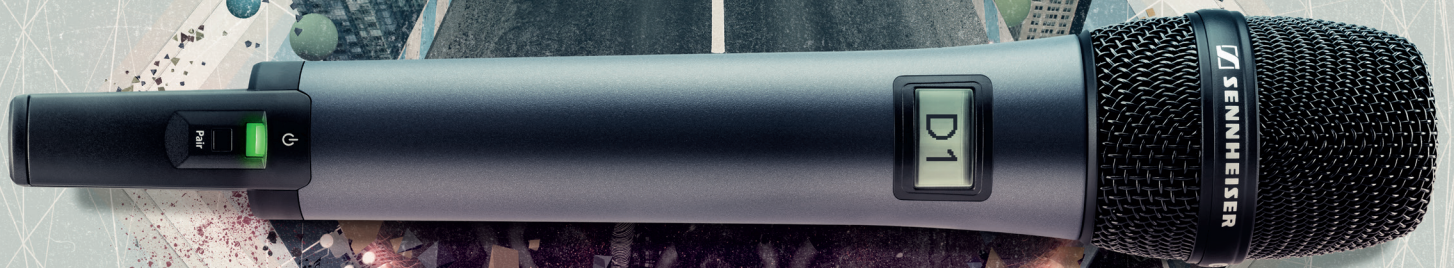
With the orchestra pit in use, seating wagons roll out into their storage. While the pit is lowered, a Span Guard system protects from falls. It is interlocked with the lift, so that the elevator can't operate without it in place.

Installation Theatrical Engineering (ITE) supplied the orchestra lift and the flying system, which is a traditional rope counterweight system. It has 36 fly lines installed, with space for up to 52.

"Richard Stuart was responsible for a clear flying zone just forward of the proscenium", David told CX. "We can drop something in independent of the house curtain. It becomes an exciting opportunity that most venues don't have."

The plug and play equipment like lanterns and console were outside the building budget. A PRG 476 console does lighting control, and the lanterns are conventional.

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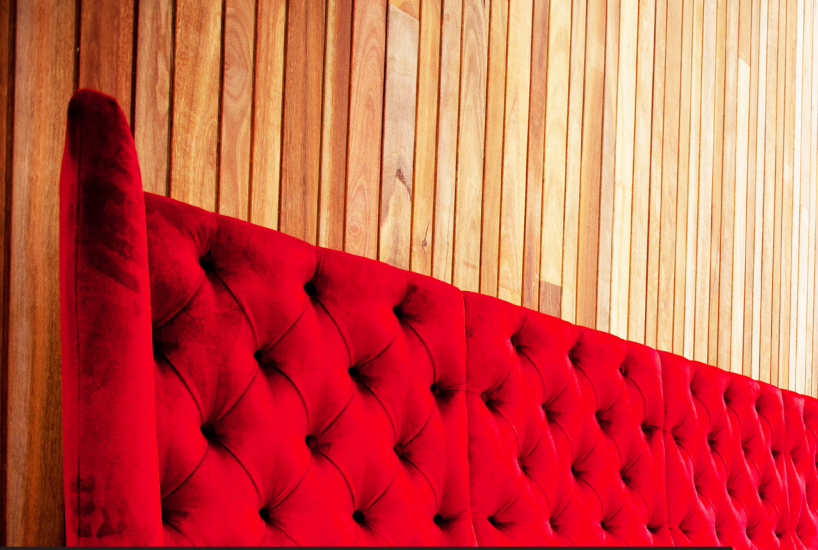
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Photo Credit MARTY WILLIAMS



"We selected conventional, as it was a capital cost issue at the end of the day. We have basic kit to start, pushing the money into infrastructure with abundant power and good rigging support, in good positions. We couldn't necessarily afford all the extra bits and pieces at first", David explained.

ETC Source 4's and Selecon Cyc and groundrows do the lighting.

An electrically deployable video screen is dead hung and used every time the school are in. "I didn't want to occupy a fly line so it is on chain blocks and we can remove it when we need to", said David.

A long throw Epson data projector is in the follow spot room, for a school assembly they can simply wheel out the lectern, and hit a Crestron button. The screen deploys, video fires up, a mic turns on, and the lectern special goes on.



Photo Credit MARTY WILLIAMS

NAS SUPPLIED THE FOLLOWING AUDIO EQUIPMENT:

- Vi Series (The V series install equivalent)
- 8 x Vi8
- 4 x Vi12
- 6 x Vi-SUB
- 2 x Yi10P
- 8 x 8S
- 16 x 4S
- 3 x D80 amps
- 2 x D6 amps

The supply and install was completed by Power AV in Bendigo led by Grant Villiers and his team.

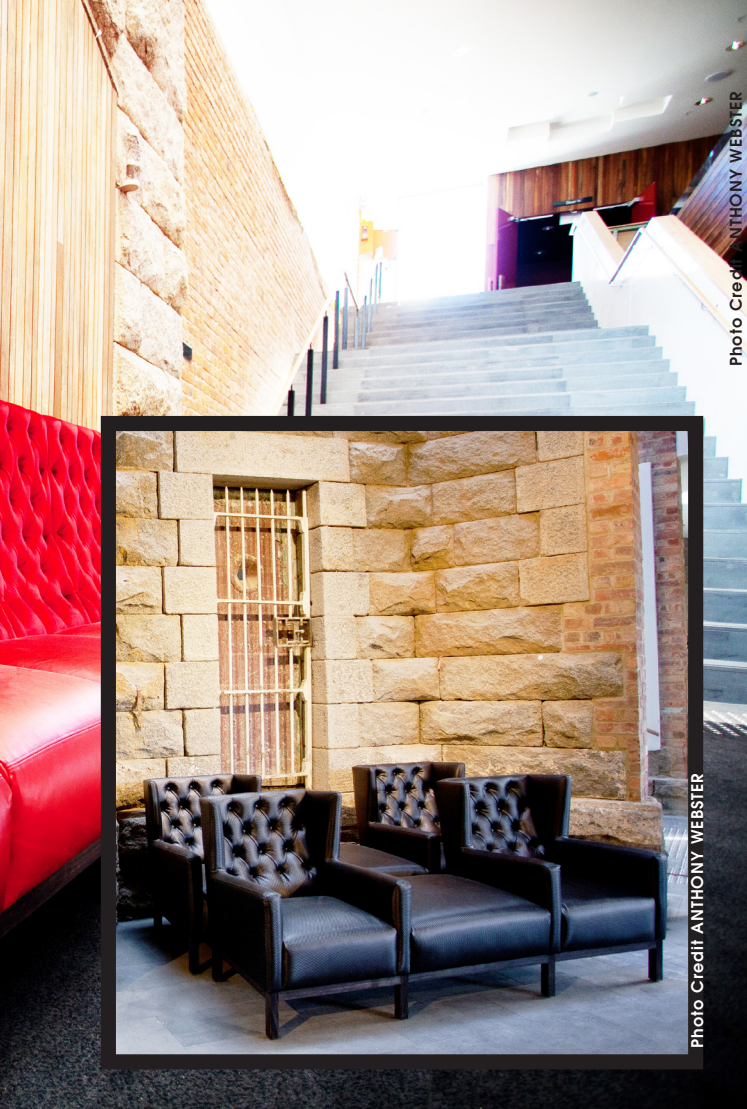
The system design was done by Scott Willsallen from Auditoria. Dave Jacques from NAS performed final commissioning on the system once install was completed.



Photo Credit MARTY WILLIAMS



Photo Credit MARTY WILLIAMS



BACKSTAGE

Backstage is well planned, with dressing rooms, green room, principal rooms and a wardrobe room. This has a pair of commercial washers, dryers, and a steamer.

"The spatial relationship of everything is good, with a wide backstage corridor", David explained. The stage door area has the extra challenge of being across a student access corridor, which is the divide between the college area and the theatre. Student access is an issue, so all technical rooms are locked.

There is good storage space at stage level, and under stage is clear for tech storage and a caterer store. The stage floor can be pulled up to allow traps for major productions, you could flip out the joists to allow downstage or centre stage traps to be created.

There are two production offices for touring crew, plus a tech office, and a piano store.

There are bonus features. "Bendigo's support and approach towards arts and culture is quite phenomenal", says David, "Now we can attract program that is touring main cities, with a venue this size."

Best of all, those senior college students have access to a professional theatre on campus. "We are a community service delivery agent, its part of our obligation to allow training opportunities", David says.

With this, we bid farewell. A growing regional city with a vision, where the arts and community are well served and its students have access to the best on campus theatre we've seen.

Well done Bendigo!

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THE MILL REPORT



OR HOW TO KILL AN ALBUM PROJECT, ONE OVERDUB AT A TIME

There's a disease gripping the world of singer songwriters that's gone undiagnosed for ages now. It's brought on by a combination of things: the natural desire to be the best, a determination to sound amazing, insufficient funds and a lack of free time to finish a project without distraction.

I call it 'B-side Blues' or 'killing off an album project one overdub at a time'.

BY ANDY STEWART

THE LONG & THE SHORT OF IT

Here at The Mill I've been working with a great number of singer songwriters lately, most of them absolutely amazing. Talent, it seems, is everywhere!

But amongst these, the ones with real jobs and bills to pay – pretty much all of them – share a common problem. They're having trouble finishing projects – albums mainly – both with respect to being able to sign off on the recordings and finding the time to mix it all.

The main issue is nearly always related to knowing when to stop.

Like I've said 100 times before in articles and during panel discussions, knowing how to land a project is vital to the quality of the outcome. Put another way, if you don't finish something while it's still relatively fresh, there's a high risk it will sour before you get a chance to finish and release it. And the longer something takes, the higher the risk.

Being a record producer I'm acutely aware of this particular malady. I do everything I can to make sure everyone feels comfortable throughout the long haul of an album project, but more and more I'm becoming aware that getting too cosy can have an unexpected downside.

When relationships get too familiar, as they often unavoidably do during an album's development, the process can start to drag its feet and eventually stall, as healthy musical experimentation gives way to gratuitous tracking and general time wasting.

Andy Stewart owns and operates the mill studio in south Gippsland, Victoria; a world class production, mixing and mastering facility. He's happy to respond to any pleas for technical help... contact him at: andy@themillstudio.com.au or visit www.themillstudio.com.au

Like a footy fan on a Friday night with beer and a beanbag, albums can slump into a coma before you know it, particularly when a project has no specific deadline or record company pressure, and the artist can't devote all their waking hours to it.

Striking the right balance with regard to all of this is a real art, but in truth, it's almost impossible to manage. Like milk, once a recording 'goes off' there's nothing anyone can do to salvage it and it's destined for the sink. Sometimes this happens over months, sometimes overnight.

All that can really be done to avoid the risks of a project going sour before it's released is to make every effort to finish projects off without delay.

Everyone involved should be made well aware, at an album's outset, of the dangers and risks associated with an album taking too long to finish. Then, once the gun goes off and the race begins, pace yourself by all means, but keep one eye on the finish line at all times.

RECORD WITHIN YOUR MEANS

Consider, while you're working on an album, these five things:

1 That the number of songs you record fundamentally determines the length and cost of the project.

This may seem like an obvious fact, but it's one that far too many artists and producers ignore in the hope that the scale of their undertaking might somehow seem less daunting. Misreading (or misrepresenting) the 'scope of works' of an album can leave you marooned halfway, and with little to show for your efforts.

Understanding the scale of the undertaking at the *beginning* of the project, and limiting yourself to a maximum number of songs, is great for the album's overall health. Six additional B-sides, meanwhile, can endanger the whole project.

2 Don't flog the songs to death.

This applies to tracking as well as mixing. Don't, whatever you do, think tracks have the fortitude to be worked and reworked, overdubbed onto endlessly and remixed 10 different ways without you potentially becoming sick of them.

Keeping things fresh is all about moving through the project relatively quickly. Needless to say, adding 70 extra channels of overdubs or mixing one song for two weeks (or on and off for months) mostly has the opposite effect. Then, without warning, the protagonists involved might wake up one day and suddenly be 'over it'. When that happens things rarely recover.

So, if you still think that tambourine is half-a-dB too loud or the bongos could come up a tiny bit, but otherwise the mix sounds incredible, sign off on it and move on!

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3 Blown budgets sour projects like the summer sun.

Particularly when an artist is self-funded, going over budget (assuming you even penned one at the start of proceedings!) can be the source of major frustration and anxiety. It builds pressure on the project and causes many to falter in the home straight.

It's the job of the producer to keep an eye on budget, and if necessary, reel the artist in if their propensity for endless overdubs has taken hold. Adding stuff isn't always a bad thing of course – it can make a record great. But a good producer can hear when a song needs wrapping up, and that's when it's time to move on. Continuing to work on overdubs beyond that point only adds to budget pressures and the 'age' of the track.

4 New songs push old songs aside.

This is not a bad thing, per se, but from the point of view of remaining focussed on the work at hand, it certainly can be. New songs will naturally feel more alive and interesting than older ones because they're fresh, and too many of them can make the work that's already been done start to feel old and dated.

Particularly when you consider that for an album to be successful an artist needs to be able to promote it, make film clips for it, play it live etc, new songs can be a very negative influence on the work being done. Obviously no one wants to limit songs being written, or would argue for them to be resisted if they're there. It's simply another reason why you can't work on the same group of songs for too long.

5 Circumstances change, people move on, bands break up... so strike while the iron's hot.

Everyone's been through this last one: "Yeah, we love the album and the mixes are awesome, but Jeff's mum is sick and it looks like he's gonna have to move back home to look after her. We're gonna get another bass player, but if we don't we may have to just call it a day."

When this sort of circumstance strikes a production, more often than not the album dies a sudden death. Even if it comes out there's generally less force behind it with one band member missing and the others questioning the future of the group.

Time marches on and circumstances always change sooner or later. If you think your project is immune to this sort of scenario, think again.



TOOLBOX
REVIEW

TOOLBOX REVIEW AEA N8 BI-DIRECTIONAL RIBBON MICROPHONE

The latest microphone to come knocking on my door down here at The Mill has been AEA's new N8 phantom powered, bi-directional ribbon; a mid-sized side-address mic that sounds superb on a wide variety of sources.

From the moment it arrived here it's been hard at work recording everything from loud drums and percussion to screeching vocals and trumpet.

It's been fantastic in front of a Fender guitar amp/Stratocaster combo that was generally sounding bright and more than a little harsh to the ear. Through the N8 via a Neve 1073 preamp the electric guitar sounded fantastic – like all good ribbons the N8 is great at hearing past the shrill harshness and revealing the true essence of the sound.

On a harsh male voice the results were the same: superb 'deafness' to the sounds I *didn't* want to capture, revealing the beauty of what lay beneath with detail and balance. This is where ribbons are best deployed: in situations where a condenser would tend to exacerbate the bright elements of the source. (The previous week I'd recorded the same singer with a Lewitt LCT 640 and the results were unflattering... the AEA N8 sounded smooth as silk by contrast, proving that a mic is only ever as good as your capacity to match it to the sound source.)

The N8 is a well-constructed, relatively lightweight microphone that's easily placed in awkward positions and at odd angles that other ribbons can at times be too cumbersome to situate themselves in. Its satin black finish is understated but classy, looking almost like an extension of the microphone stand. The N8 also comes with a simple but effective shock absorbing mic clip that holds the mic firmly in place.

Built in Pasadena, California, the hand crafted N8 can cope with an impressive 141dB of sound pressure, and offers deep nulls (up to 90dB) at 90° and 270° (the plane of rejection), making it brilliant at minimising spill from other instruments when these are placed in either of the mic's null positions.

A word of caution here, however: though it's an active ribbon with great specs, the N8 is still a relatively fragile tool, as are all ribbons. Care must always be taken to avoid placing the mic in front of wind gusts, which can come from a much wider range of sound sources than you might think. Voices, guitar amps, kick drums (particularly ones with ported skins), brass and wind instruments are all capable of doing this mic an injury. So when in doubt, tilt the mic off-axis and/or use a pop shield. To test if the mic is in danger of copping a blast of air, place the back of your hand in the position where you want the mic to go, and determine if there are any gusts that instinctively feel too strong for the mic.

The other thing to be mindful of is that ribbons are essentially magnets, so they're great at picking up tiny iron particles (sometimes called 'tramp iron') off the ground, off bench tops etc. These can eventually damage the element so always keep ribbon mics stored in their cases when not in use, and never place them on desks or on the floor.

AEA has been an impressive ribbon manufacturer for years now and the N8 is a classy addition to the company's impressive range. I'd get two if I could afford them, but these mics don't come cheap. They're not crazy money, sure, but there are lots of ribbons around now that can do a very good job at relatively low cost. But one N8 for your collection that can play the role of 'mellow mainstay' vocal mic? Brilliant.

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Brisbane City Hall

Taming Reflective Acoustics with L-Acoustics



Bill Karaitiana



BY JASON ALLEN

The 2,500 seat auditorium of the heritage listed Brisbane City Hall harbours almost every acoustic nightmare imaginable for the aspirant PA designer – it's circular, it's almost all

hard surfaces, it has an abysmally long reverb time, and, to top it all off, it has a brass dome. So what to do when a public tender called for a new PA? Jason Allen found out...



Damian Juhasz

Brisbane City Hall has stood imposingly over King George Square since 1930. In Italian Renaissance style, it's grand and opulent, with an auditorium to match. However, its architects sadly never foresaw the electroacoustic issues that would be caused by basing the auditorium's shape on The Pantheon in Rome. "It's extremely difficult," said Damian Juhasz, Audio Systems Engineer at Hills. "It's circular, it's reflective. It's a beautiful room, but it's an acoustic nightmare. I mean, it's a circular room with a crescent balcony and a dome! There has been some acoustic treatment done – there are panels of absorbent material on the walls. But there's an interesting effect; the doors are reflective so when they're closed, they focus acoustic energy in radial lines back into the centre of the room!"

Distributed Solution

Unsurprisingly, the Hall had long been looking for a solution to their acoustical conundrum. A new proposal was put forward by consultancy DesignStage, which went out to public tender. "It was a prescriptive tender," explained Damian. "It was a 'design and construct' proposition, but at the same time looking for a PA system that satisfied a strict set of requirements; left-right, front fill, under-stage subwoofers and a distributed under-gallery fill. The successful bidder would need to design a system that satisfied those criteria as well as providing optimal performance in the space."

Realising that responding to the tender would require a lot more than a gear list, a team came together to respond. Gold Coast production company and integrator con-sol, who had worked in the venue as

Brisbane City Hall Auditorium



an external provider, were already across the tender and had worked previously with DesignStage. "We did the site inspection with venue management." Said con-sol's Managing Director Bill Karaitiana. "We realised they weren't after a sound system, they were looking for a solution to a fairly big problem. To say that auditorium is reverberant is an understatement; it's incredibly reflective. That's how it was approached from the start – it needed a solution."

The French Touch

Damian and Hills worked with con-sol on a response, which they both knew would be a perfect fit for legendary French manufacturer L-Acoustics. "We worked closely with the application engineers at L-Acoustics," Damian elaborated. "L-Acoustics won't

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simply supply a bunch of boxes to a venue; all of their systems are designed as systems. Their tender responses have to satisfy both the requirements and their own internal quality standards." The response piqued the venue's interest, and L-Acoustics were invited to a shootout against two other leading brands.

Normally, a shootout of three PAs in an auditorium would involve a single mono hang of each at centre stage. Not so for Brisbane City Hall, who insisted on having as many elements in place as possible. "We put in full left-right hangs, subwoofers under the stage and even the under-balconies," recalled Damian. "The under-balconies were tricky because of the curved balcony section. There's six either side on a crescent-shape balcony split into two runs and time aligned. For the demo we did half the balcony." con-sol were on hand to get the gear in and set-up. "We provided Brisbane City Hall with everything the tender required with the exception of the stage monitors," clarified Bill Karaitiana. "L-Acoustics application engineer Germain Simon flew out for the shootout, and attended in conjunction with Damian. We were all asked to leave the room during the shootout, and leave one representative behind. We nominated Germain." After a thorough evaluation of all three contenders, L-Acoustics came out the winner.

————— Gear Up —————

The final system design is a left-right system of two flown full-range, variable curvature line arrays, with each side running 10 elements of KARA and two SB18 subwoofers. "There was a 450kg weight restriction on the main arrays," Damian interjected. "But they also wanted flown subs if the weight allowed for it. We were lucky and just snuck in." The flown subs are augmented by four SB18 subwoofers ground stacked under the front of the stage.

The front fill is made up of six 8XT loudspeakers, each sporting an 8" coaxial transducer and 1.5" compression driver, that can be struck when not needed. The under balcony fill system consists of 12 5XT compact coaxial enclosures, supplemented by an in-fill system of two 8XTi coaxial enclosures. On stage, six 8XT run as a monitor system. The whole installation is powered by 12 LA4X amplifier/controllers, which provide the signal routing and DSP for the system, in addition to four channels at 1000W per unit.



From the balcony



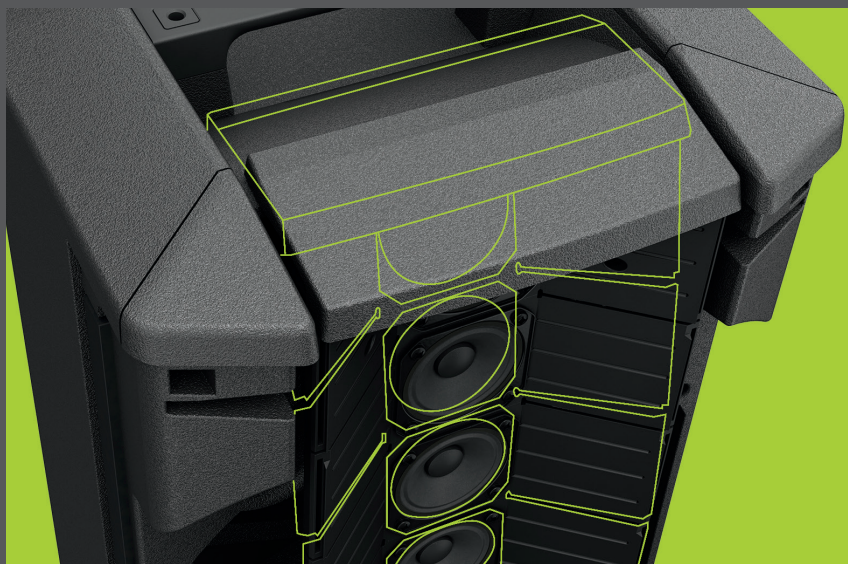
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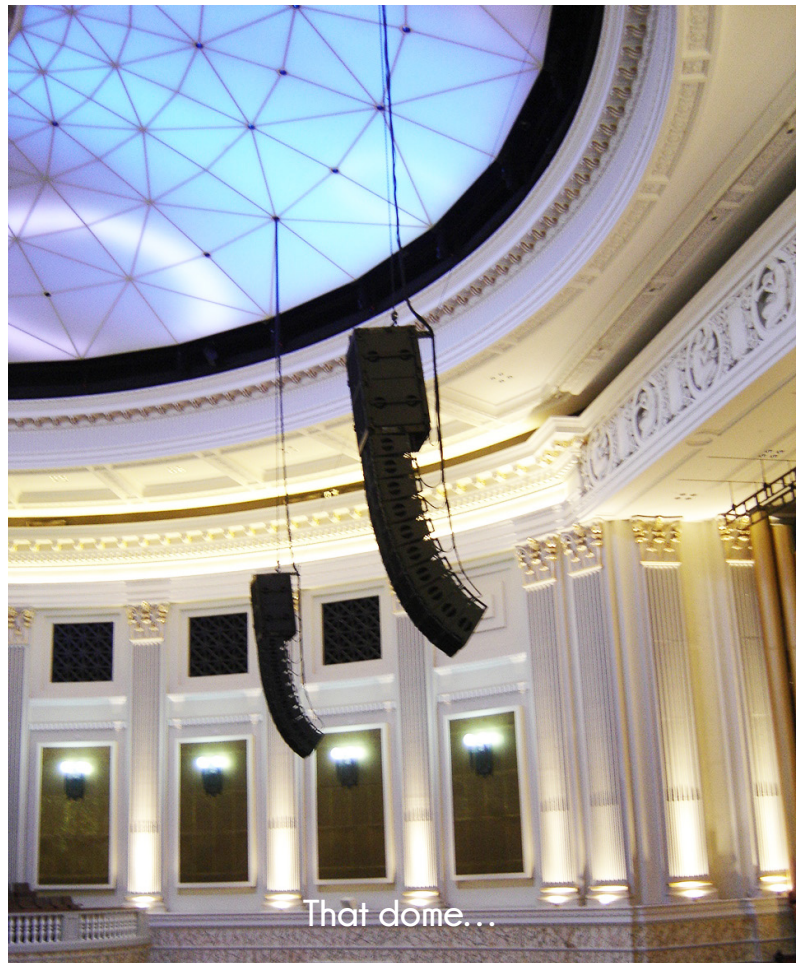
The performance and design of the PA was mapped out both in L-Acoustics' own Soundvision modelling software as well as EASE. As KARA is physically steered, measurements had to be precise. "The DSP is used for line array optimisation," Damian illustrated. "The angle of the array and inter-element angles within the array are what optimise coverage in the audience area. The auditorium has more than 2 ½ seconds of reverb time, so we needed to focus the acoustic energy onto the audience as much as possible. The project required modelling in the initial phase, which L-Acoustics provided. Every system installed is vetted by both L-Acoustics and Hills."

Working in a heritage building always has challenges. "Cabling issues were the biggest problem presented by the heritage overlay," observed Bill. "We didn't have the luxury of straight runs. Some of them are over 100 metres. The left-right cable run is routed through a ventilation shaft that was re-fireproofed afterwards." The EWIS also had to interface with the PA. "There's no local capability to do that on the amplifiers," Damian noted, "so we installed a Crestron RMC3 controller that works in parallel with the L-Acoustics system. It monitors the contact closure from the EWIS for an alarm state. If activated, it will trigger a system-wide mute of the performance system."

The Voice of Authority

The Hall's new PA capabilities mean the venue will now attract a wider variety of events and hirers. "The auditorium's always been limited, but the scope's wider now," mused Bill. "They can do everything from speech to elaborate concerts." Confirmation of the enormous improvement in performance came not long after the project's completion. "We got a phone call after the first mayoral speech on the system," Bill related. "Apparently, the mayor got up and said 'Will everyone please take your seats?', and they did. The regular venue tech told me he was shocked; 'Normally we have to ask three or four times' he said. The mayor came off the stage and said that's the first time that's ever happened."

"It was a challenging space and we're very happy with the result," beamed Damian Juhasz. "The coverage is excellent, and the performance has been verified independently by the consultant." Bill Karaitiana concurred; "We've had a long involvement with L-Acoustics over 10 years. The support they and Hills provide is exceptional. L-Acoustics have a direct involvement in everything they do. They provide not only a sound system, but an experience."



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BY ANDY STEWART

IT'S LIKE STARING AT THE SUN

All too often it's the top-end that people reach for on consoles and in mix windows when a sound lacks clarity in a mix. It's their go-to solution – a knee jerk reaction to a problem that's often best solved by vastly different means.

Andy Stewart owns and operates The Mill in the hills of South Gippsland. He's happy to respond to any pleas for recording or mixing help... contact him at: andy@themillstudio.com.au

When this unthinking, reactive approach to mixing is deployed too often, the common outcome is a mix that's blindingly bright.

Ironically, nothing is clear or detailed about a blindingly bright mix. It's like staring at the sun. When the top-end of a mix contains too much information from too many sources, the average listener can't cope and their physical reaction is to turn away. Obviously this isn't a desirable outcome.

Thin, harsh and distorted tone is not something most of us are striving towards, yet every day engineers the world over fall into this same trap, even when the danger seems obvious to them. Starting out with sounds that are nicely balanced, full of rich tone and depth, by the time they've worked their so-called 'magic' things have grown harsh and distorted.

How does this happen? What causes a mix engineer to wander so far off track without realising there's a problem?

As much as I'd love for the answer to be a simple one, it isn't.

BALANCING TONE & EGO

There are myriad reasons why mix engineers lose their way with respect to tone during a session. Poor engineering skills rank highest among them. Misleading control room acoustics and technical problems with studio equipment are other factors that can also wreak havoc with mix tone.

Then there's the simple lack of any A/B comparison by the engineer or artist with other music releases. When used regularly, commercial music releases act like bowling alley bumpers, keeping your mix tone on track instead of allowing it to roll into the gutter.

Time allocation – or lack thereof – is another tone killer. No-one can realistically be expected to build a complex, detailed mix from a large recording file in three hours and have it compare favourably with a commercial hit that was mixed through a large analogue console at a commercial studio for 10 days.

For an outcome to be reached that everyone is happy with, time must be devoted to exploring, developing and refining a mix's tone.

Artists can also set a mix session off course with frequent ill-conceived requests and opinions. Off-the-cuff remarks about an instrument's tone can be dangerous if they're not well considered by the artist, or well interpreted by the engineer. Then again, sometimes the problem can be as simple as where the client is sitting in the control room. Up the back on the couch can often be the worst possible position from which to judge a song's tone.

Irrespective of the cause, overly bright mixes generally sound cheap when finally compared to other songs in the real world. If you find yourself up this garden path, don't despair. The cure is often quite straightforward.

THE BRIGHTEST MUST GO

One of the simplest ways to get a mix back on track when it has gone off the tonal rails is to analyse two of its most basic aspects: the 'key ingredient' – the musical element around which the entire mix is constructed (often the vocal) – and the 'mix scorchers': those elements most severely affecting the overall brightness of the mix.

Once you've identified these two components, temporarily mute the 'mix scorchers'. It might be one instrument; it might be 20. Either way, mute them for now so that you can both assess the tonal integrity of the key ingredient, and give your ears a rest. If this ingredient is the vocal, now ask yourself questions about its tone:

"Is it too glassy, or are there only occasional words that tip the top-end scales?"

"Is the dynamic range okay, or would the vocal be made more intelligible if the compression were more intense?"

"Is it overly sibilant now that the super bright elements of the mix are missing?"

"Is there enough low-end in the voice – around 60 – 150Hz – to balance the high-end elements?"

Once you've analysed the vocal with fresh ears in the absence of the scorchers, make any tonal changes you see fit so that you're happy with the sound. Now add the

offensively bright instruments back in one element at a time, on each occasion asking yourself these sorts of questions:

Is this instrument at the right volume relative to the vocal?

Are other aspects about this sound – the compression ratio, panning position and effects etc – correct?

Can I reduce the top-end of this sound and, more crucially, is this sound's fundamental tone dominating, or have I EQ'd mostly extraneous top-end into it in a desperate bid to make it compete?

More often than not, things like electric guitars will have far too much top-end (above say 7kHz) and not enough midrange (say 1 – 2kHz) as they jostle for position in the mix. Perhaps they only need to be turned up 1dB instead, or perhaps they simply lack compression, rather than requiring hyper tops.

The trick is to consider each instrument's fundamental frequency and allow that tone to dominate each of the individual sounds in the mix, rather than expecting everything to compete for the same hyper-bright tonal space.

If a particular sound still feels difficult to spot in the mix once you've taken some of the highs out of it – it's probably *less* visible than it was before by now – try turning it up... don't just reach for the top-end boost again!

Repeat this technique as you reinstate each of the previously hyped up elements and you may just find that your once shrill, nasty mix has dissolved away. It may not be perfect yet, but at least you'll be on a path to resolving the tonal imbalance, rather than sailing further off course.

FATIGUE

Despite anyone's level of professionalism or experience, we all get tired at some point during a mix. Being able to recognise when you're fried and need a break is as important an engineering skill as knowing how to work a compressor.

If you're mixing a song – with or without clients present – it's vitally important that you take a break, even if it's for

only 10 minutes (though half an hour is better) when you sense that you're losing your way in a mix.

Nothing is more revealing about a mix than a fresh perspective. A cliché though it may be, a fact it nonetheless is. I typically achieve more in 10 minutes at 9am at the start of a session than I often can in two hours late at night. Put another way, though I might be doing good work at 2am, I have a clearer understanding of how the mix sounds macroscopically when I listen to it after a decent break and with the screen off, without fiddling with knobs and plug-ins.

One of the key aspects of this notion of the 'fresh perspective' is that, quite apart from the physical recalibration a break for dinner or a good night's sleep affords you, time away from a mix releases you from the millions of tiny decisions that have accumulated in your head over the period you've spent at the helm. A 'fresh perspective' is thus a new start, where the song can be heard as a whole again; all the fine detail mostly set aside in your head.

Having a decent break is a powerful tool... don't waste its potential or feel compelled to work 'til you run out of fuel.

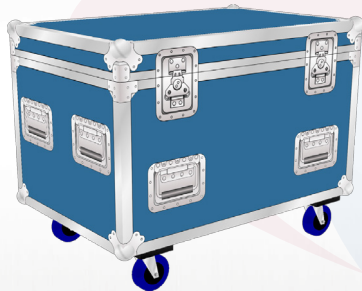
NOT SO BRIGHT

Another side of mixing that can lead to overly bright results is the expectation by an engineer that everything, no matter how well recorded, arranged or performed, must be meddled with. If you approach every mix under the assumption that your 'fingerprint' or 'signature' – call it what you will – must be on every sound, you'll often screw things up.

Not everything needs more tops, more compression and more reverb. Sometimes the best thing for a sound is for it to be left the hell alone. 'Signatures' are for toy cricket bats, not every mix. Without doubt some of the most annoying mix outcomes are the ones where the engineer felt determined to look cool, or smart, or both. Mostly this only makes you look foolish.

When you're at the console, stay humble, serve the mix, not your ego, and the next time you find yourself staring at the sun, turn away and do a tonal stocktake. Your mix will always thank you for it.

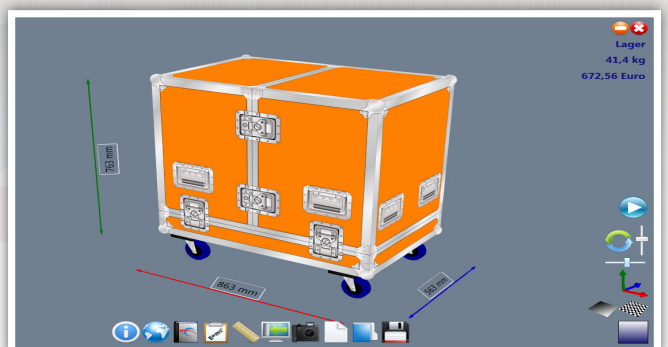
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MAGNT

updates Cyclone Tracy exhibit with new tech

BY JASON ALLEN

Christmas Eve, 1974, is a date etched in the national Australian consciousness. When Cyclone Tracy hit Darwin, it destroyed 80 percent of its buildings, took the lives of 66 people and sparked the largest civil evacuation in the country's history. The Museum and Art Gallery of the Northern Territory is tasked with keeping the stories of Tracy alive, and, on the 40th anniversary of the deadly storm, updated the Tracy exhibition using new technology to communicate the devastation and its consequences.

"The current exhibition was developed in 1994 as a community project," explained Caddie Brain, Digital and Communications Manager at MAGNT. "It's a special, commemorative place. People were traumatised by Tracy and it had a huge impact on their lives. With the 40 year anniversary, through a grant from the NT government, we had the opportunity to redo parts of the exhibition and tell the story in a different way. We wanted to add some interactivity into the space. The most important thing to us was make the evacuation lists and the list of the dead, which were manually typed and handwritten, accessible. They've only existed as pdfs for some time and they weren't searchable. For a lot of people it's the only formal record of what they went through during Tracy and after."

Creative Content

The project made its way to integrator Rutledge AV through their NT Operations Manager Daniel Woodward. "MAGNT had a huge amount of content," recalled Daniel. "They had strong ideas about what they wanted to do with it, but weren't sure of the exact technical possibilities and how it could happen. Together, we worked out a technical solution through a series of meetings. We forged a roadmap and made a template for the project. MAGNT were really excited; the technology we

rs Gone



Caddie Brain

Isaac Dolling

Daniel Woodward

Kamila Marcinczak

introduced to them was an eye-opener and they were thrilled that they could do exactly what they wanted."

This put Rutledge AV in the position of not only integrator, but content creator and curator. Kamila Marcinczak, Marketing Manager at Rutledge, has recently expanded her role to include duties as Creative Director on hybrid projects such as the Tracy exhibition. "Our initial pitch was a storyboard showing how we envisaged the displays to work," explained Kamila. "We had to look at what was relevant, what would look good, and come up with something visually appealing that would fit with the colour schemes already used in the exhibition and the MAGNT's brand guidelines. MAGNT then came back with some changes, and from then on, it was a smooth sailing, consultative approach."

Touch and Feel

To add interactivity and intimacy to the exhibition, Rutledge AV and MAGNT chose to install a 55" Toshiba screen with an IR touch overlay set as a table, and a 47" Toshiba screen with IR touch overlay mounted on the wall. The wall screen was to display the searchable evacuation and death lists, which have proved to be the most popular part of the exhibition, as well as photo essays and stories from the aftermath. The touchable table displays an interactive 'path of the cyclone' animation and an intricate 'then and now' photo series in which visitors can compare 'before and after' images

of the city compiled from photos taken in the weeks after Tracy with images captured on the same sites in 2014.

"The interactive table 'path of the cyclone' animation was made from Polaroid stills that the Bureau of Meteorology took of its radar," continued Daniel, "those images showed the radius and cloud formation of the cyclone, to which we added colour representing wind speed and intensity, then overlaid the path over Darwin. Kamila designed a display that, as you slide a chronological scale, the intensity and path over Darwin changes. For the 'then and now' images, a local photographer took hi-res photos at the exact sites matching period photos. He spent a long time getting the alignment right; he hooked his camera output to his laptop, brought up the 'then' image and moved around until the angles were correct. The transitions are spot-on."

Perceptive Users

All multimedia content runs in Flash via two local PCs connected to the screens via USB. Set to auto-boot up, and with features like pop-up keyboards disabled, the displays have been designed to run maintenance-free. Back at Rutledge's Melbourne office, Software Engineer and Developer Isaac Dolling was in charge of bringing the vision to life in Flash. "The biggest challenge was making the evacuation and death

lists searchable,” offered Isaac. “We solved it with xml parsing. We employed a third party to put all 700 pages into xml format that then referenced names back to page numbers in the pdfs. I chose Flash for the project because of the way it handles animation, and because the exhibition is a stand-alone system that doesn’t have to interact with anything else. We could have gone down the HTML5 path, but that would have been adding extra complexity for no real benefit.”

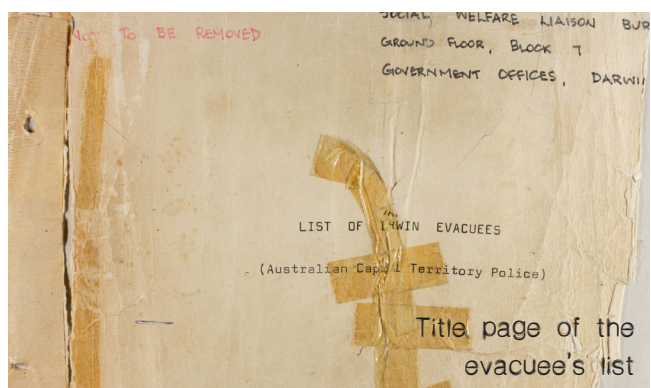
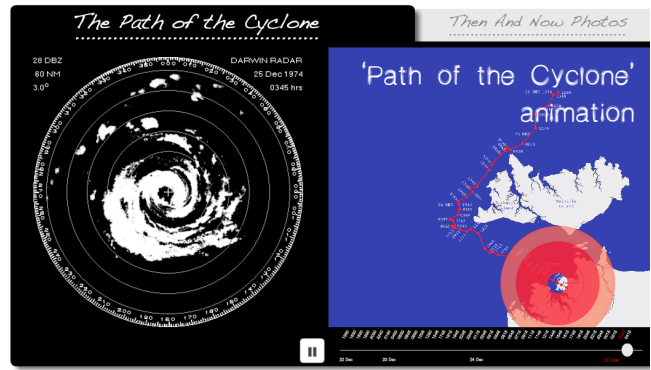
In addition to technical decisions, Isaac rates user experience as the hidden design challenges when creating a content experience. “Determining how the user would use it, as opposed to how we perceived it, changed a lot of things,” he elaborated. “Guiding users was the challenge. A lot of people got lost navigating the table system, and we didn’t envision that. We then revised the interface and added pop-ups that prompted them when a section finished and gave them something to click on. You often don’t realise a user interface isn’t intuitive until you take a step back and look at it through the eyes of the end user, and not someone who knows how the system works.”

Intimacy of Touch

Caddie Brain agrees, and recommends extensive user testing for any interface. “It’s really important that you spend time in your environment watching how users interact, and observe the behaviour of different demographics,” she continued. “You want to capture all aspects of user behaviour so it’s accessible and everyone has the best experience they can. For example, we did a lot to keep the navigation simple and consistent throughout. Then there were specific things, like with the path of the cyclone. There’s a play button, but we noticed people were clicking the map itself, so we made both start it. It seems good to create multiple entry points because everyone uses technology in a different way.”

While Caddie is excited by new technological possibilities, she cautions against being distracted from the goal of enhancing communication. “Putting technology in for technology’s sake doesn’t work; it has to serve the storytelling and enhance the audience’s involvement,” she stated. “Touchscreens take away the coldness that technology can present. They’re tactile; instead of being a passive viewer, you’re curating your own story. It creates time and space for the viewer. It’s been beautiful to watch as the technology has a great intimacy to it. The museum is now full of families searching these lists for their names and those of their friends, talking about their journey. It’s re-sparked those conversations. We’re in a really exciting time for museums. This technology provides us with such amazing ways to tell these stories.”

Kamila Marcinczak is enthusiastic about the new string to Rutledge AV’s bow. “We first started looking at content creation as part of our digital signage installations,” she said. “Previously, we were putting in the hardware but our clients had to go somewhere else for content. We’ve now created a new stream and can offer a full service. It’s about being proactive and showing clients what we can do. The feedback from clients and audiences has been great.”





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Soundcraft Ui16

What's in a name?



BY JIMMY DEN-0UDEN

The odd thing about the Ui is that while Soundcraft is an English company, the Ui was actually conceived in Melbourne, Australia by SM Pro Audio. The firm was acquired by Soundcraft earlier this year, and now the Ui12 and Ui16 have landed on shelves. The Ui series has a feature set which make it a good choice for small musical acts (duos, trios and such). While it sits in a realistic price bracket to garner strong appeal in this market, it would work equally well in corporate AV.

Ui12 and Ui16 both look largely the same, the key difference being the number of connectors on the box. I call it a box, because even though I know it's a mixer it bears a much closer resemblance to a stage box than a console. Like the thing everybody's doing now, Soundcraft has released a mixer with no faders, but it's a bit different from many others out there.

For starters, WiFi is built into the box. You can plug in power and audio, then connect wirelessly to the unit and start using it immediately. Unlike other systems, the Ui interface will run on virtually any device with a browser, so your control choices are limited only to whatever you can lay your hands on. There are no app updates to download nor any other annoying incompatibility problems.

As much as the interface works well, frankly the idea of relying solely on any 2.4GHz device working

reliably for the duration of a gig scares the pants off me. Perhaps anticipating such WiFi reluctance as mine, the designers were smart enough to include an RJ45 Ethernet connection, so you can run a cable direct from the Ui into a laptop and leave another instance of the interface running there. If the WiFi fails, just walk to the laptop, continue mixing, and keep your pants on. If for some reason you prefer to use your own WiFi gear, you can disable the on-board Ui WiFi and do this.

The user interface itself is pretty intuitive. The common stuff like faders are the first thing you see when you launch it, and the process for getting into details like channel EQ is obvious. Even though there aren't a lot of channels involved, Soundcraft has managed to include a couple of ways to get to certain





features (such as aux sends), which speeds up operation a bit. If you save the "address" of the interface as a favourite on your iPad home screen, the interface operates in full screen next time you run it.

Multiple users can connect simultaneously to the Ui via WiFi, with definable access levels for which auxiliaries each user can access. Specifying which aux output and channels relate to the user (the "me" channels) enable a "more me / more band" slider – this pushes the user's channels up and the band channels down simultaneously, and vice versa. It sounds a bit goofy to professional users, but enthusiastic amateurs will find it helpful. Similarly the 'simple EQ mode', which reduces the four-band parametric on each channel to a three-band fixed frequency and bandwidth EQ.

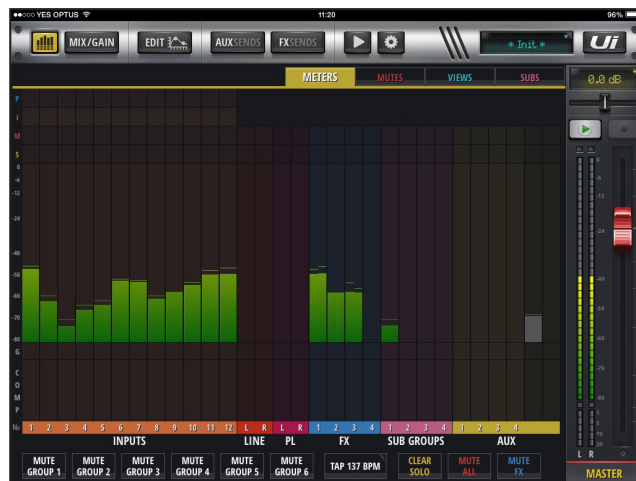
It's worth noting the responsiveness of the interface is excellent. With several users operating faders simultaneously everything tracks as it should and with no discernable lag. Soundcraft has done really well with this.

The USB port can be used to playback and record audio, and because the stereo input can be split and turned into dual mono you could conceivably run a show with samples or tracks on one channel and click on the other. Remote control over the USB transport is available via the app too, so it would actually be a pretty cool way to run the show. I dumped a bunch of different file types onto a USB stick and the Ui played them all without baulking.

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Four internal Lexicon effect engines provide reverb, delay, chorus and room effects to which any of the channels can be routed. Additionally to this, the first two channels also include DigiTech amp simulation with a range of presets. The effects all sound believable, and overall the console, such as it is, sounds good too. I was about to pack the Ui in a case and take it to Melbourne, when I realised there was a problem. My input list required 15 channels.


Soundcraft has followed the trend of naming the Ui models based on the number of retail channels each one has, not the number of preamps. The Ui16 has 12 preamps – the other four channels are a pair of stereo RCA inputs (which you can split and make two monos), as well as the USB playback channels. A console from a different manufacturer named “1604” which had only 4 pre-amps springs to mind as a far worse offender. Reality is that Soundcraft is only doing what they need to in order to remain competitive in a market where most brands sell ‘retail channels’.

I really like this Ui, even if it doesn't have enough channels for my specific application. It works really well, it sounds good and it seems really reliable. It's extremely compact, and in my mind the fact you can establish a cabled connection for the control mechanism puts it way ahead of many other similar products.



BRAND: SOUNDCRAFT MODEL: UI16
 RRP: \$999.00 INC GST
 PRODUCT INFO: WWW.SOUNDCRAFT.COM
 DISTRIBUTOR: WWW.JANDS.COM.AU

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Martin MAC Viper AirFX

Something in the air



BY JIMMY DEN-0UDEN

The product video on the Martin website claims AirFX provides “versatile efficiency”, and after spending some time with the unit I can certainly substantiate this. It’s definitely not the ‘one trick pony’ the name could lead you to believe it might be, with solid performance on both aerial effect and wash light duties.

AirFX is a moving head with a 1000W discharge lamp. In Australia at 240V it draws almost dead on 5A, so you can power two per circuit. Power input is PowerCon with no loop through – presumably to avoid the temptation of excessive daisy chaining. Menu is a straightforward backlit LCD affair with a navigation encoder which you press for enter. An unlabeled escape key and rocker style power switch complete the on-board controls.

You can rig the AirFX in any orientation you want using the twin Omega clamp brackets – the fixture doesn’t care how it sits. Control is 20 or 28 DMX channels, the difference between the two modes being 16 bit control for dimmer, zoom and focus. The fixture can be fitted with an optional ‘Quadray’ module, which activates additional control channels beyond the 28 normally used in extended mode.

The Viper AirFX has all the features you’d expect from a modern moving head – CMY colour mixing, CTO from 6000 (native) to 3200K as well as a fixed colour wheel with seven positions (plus open). Pan range is 540 degrees, tilt range 268, and zoom range is 11 to 59 degrees. There’s an iris function and a wash effect which can fade or snap in and out. Two gobo wheels are available, one of which is rotatable and indexable (the aerial effects wheel). There’s no prism, but there is a selection of variable and random strobe and pulse effects built right in.

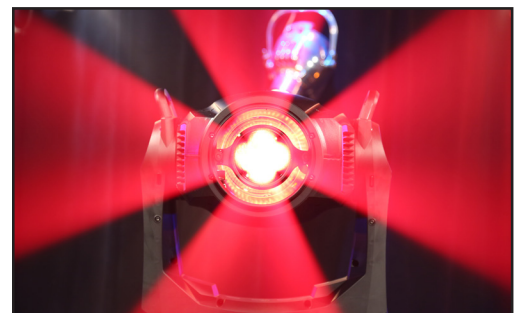
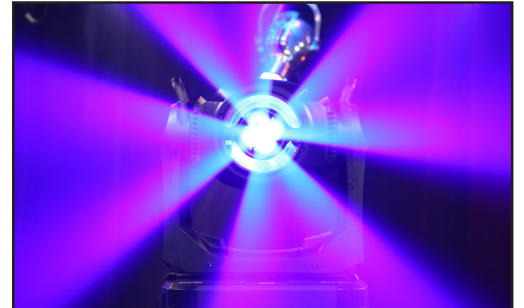
Something you might not know about without reading the book or stumbling on the menu option is the zoom and focus linking function. You can set this up at three different ranges so that focus tracks with zoom movement – a nice programming timesaver! Another timesaver is the shortcut menu – just hold the escape key to quickly access this menu which includes lamp on/off, fixture reset, and display flip functions. The full menu gives control over the fixture personality, including things like dimming curve selection (with a choice of four options).

At around 35kg, the AirFX isn’t exactly lightweight. At this kind of weight and price point you’d expect some

pretty boss performance from the unit, and AirFX absolutely delivers it. Running the unit up in open white the 34,500 Lumens output spec is certainly believable – undoubtedly the 160mm front lens helps. Some blue colour fringing is noticeable in the unfocussed beam when you project it onto a surface, but considering the fixture is more about mid-air effects it's certainly within acceptable limits.



BRAND: MARTIN
MODEL: MAC VIPER AIRFX
RRP: \$17,499.00 INC GST
PRODUCT INFO: WWW.MARTIN.COM
DISTRIBUTOR: WWW.SHOWTECH.COM.AU



The gobo wheels are great – a nice selection of image choices and when used together you can achieve a wide variety of different looks. Colours are solid and convincing. The fixture is significantly quieter than I expected for something with this kind of output – certainly not dead silent, but equally nowhere near as loud as it could be.

In a time when everything is smaller and more efficient, a big fixture such as the AirFX really needs to offer good performance as well as versatility to justify its place in the world. With solid beam choices, a good wash effect, great colour and plenty of output, the AirFX offers both these attributes. Martin has done some great online support for the AirFX, including Vectorworks CAD symbols, and even a user maintenance schedule. In a time when non-LED fixtures need to offer more to compete, the MAC Viper AirFX seems to me very much the complete package.



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Sennheiser evolution D1

Digital wireless with more

BY JIMMY DEN-UDEN



D1 is the next evolution of wireless systems from Sennheiser. It's a 24 bit 48kHz digital platform operating in the globally license-free 2.4GHz band. The marketing info tells me D1 is "designed for people who make music as a part of their lives, not for people who make a living making music". I reckon they're playing it down a bit – D1 is really good. I'd happily swap to it from some of the wireless systems I've been handed for use on professional shows over the years.

The system has >135dB dynamic range and is available with a handheld or beltpack transmitter. The handheld offers a choice of 835 or 845 capsules, while the beltpack allows for lapel or headset mics, or even an instrument lead connection. I rather like the design of the transmitters. The handheld is much nicer looking than the early evolution wireless series kit, and battery replacement procedure is far easier thanks to a removable caddy.

The beltpack transmitter looks like a design hybrid of the 2000 and evolution series – in short it looks great. My only grievance with the transmitters is that the display on the handheld is deeply recessed and not backlit, which makes it hard to read. As it turns out though this doesn't really matter, since you don't really need to look at it. The only controls on the transmitters are power and pair buttons, plus a mute switch.

The brains of the operation is the D1 receiver, which features dual SMA antenna connections (remember it's 2.4GHz, so the antennae look like the ones on your wireless access point), XLR and jack output, Ethernet port, and a lovely OLED display with accompanying navigation encoder and escape key, plus pair and power buttons.

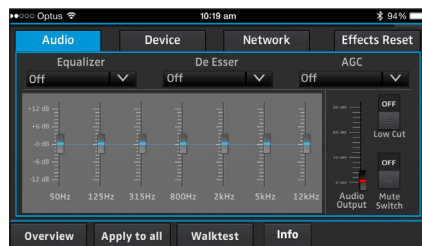
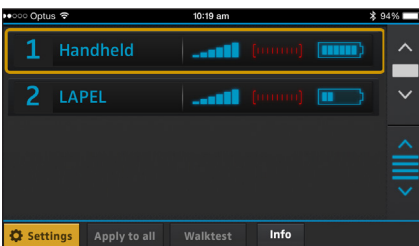
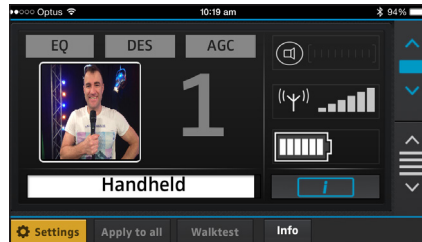
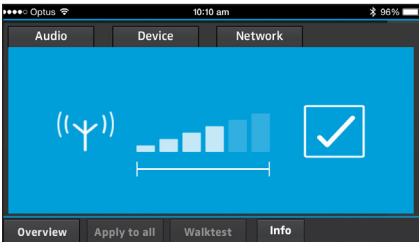
Straight out of the box, D1 kits are paired and ready to use. Literally all you need to do to get started is plug them in and switch them on – as much as this plays in favour of the 'enthusiast' user, professional users will equally appreciate the time savings. Those same users will also appreciate the optional rack mount.

Being as how nearly every WiFi device around uses 2.4GHz, this part of the spectrum can get appreciably crowded at times. D1 keeps track of what's going on in the spectrum, and has a redundant channel ready to switch to in case of interference. Better yet, when multiple D1 systems are used in the same vicinity they wirelessly co-ordinate frequencies with each other. Up to 15 systems can be used concurrently.

The D1 receiver has some nice 'value add' features – a de-esser, seven band EQ (with presets), and an AGC option. The transmitter mute switch can be disabled from the receiver's menu, and the audio output level can be boosted and even switched from mic to line level.

Latency on the D1 system is a very mere 3.9mS, and operating time on a pair of AA batteries is specified as 6





hours. The optional rechargeable battery pack extends runtime to nearly double this at 11 hours, and it can even be charged via USB. The receiver constantly analyses the received signal strength as well as background noise, and adapts the transmission power as required (up to 100mW). This has the dual benefit of maximizing range as well as increasing battery life at shorter distances.

Connecting the Ethernet port to a wireless router allows you to access the D1 receivers via an iOS app. The app has an overview screen which displays all connected receivers, and from here each receiver can be individually accessed. The app allows adjustment of audio and system functions, and you can even access the "walk test" function – this allows you to see the received RF signal strength on your iPhone as you walk around with the mic. The only thing I couldn't do from the app was rename the units – we had beta software so this function may yet appear.

As if the functionality of the D1 kit wasn't already enough, you also get a nice carry case thrown in – from memory this is a first for the evolution wireless range and a nice bonus. I like D1 – it's a well-considered and very capable product.



BRAND: SENNHEISER MODEL: EVOLUTION D1
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Robe miniPointe

More than expected



BY JIMMY DEN-ODEN

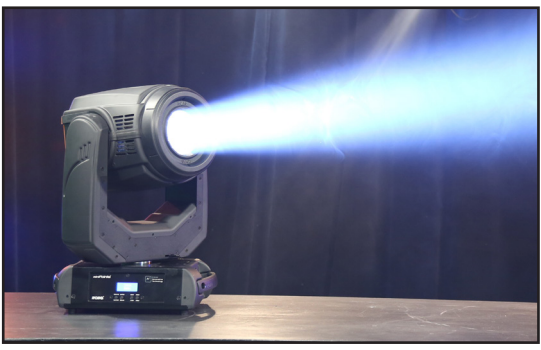
I wasn't too sure what I'd think of the miniPointe when it arrived. I wasn't sold on the idea of a 140W discharge lamp fixture. Putting it bluntly, I didn't quite get the point of it – that was until I switched it on.

miniPointe is a moving head fixture which has been "Designed for small venues" according to Robe. By "small" I think they mean venues in the 1000-2000 capacity region, since I reckon that's about the right size room in which to use this fixture.

The unit has a native three degree beam angle, which is quite narrow. You can further reduce this to zero degrees using the beam reducer – that's a fancy term for 'gobo with one small round hole in it'. There are in fact 10 gobos and three sizes of beam reducer, all stamped into a single aluminium wheel. While this means you can't change the individual gobos, it does bring a reduction in weight.

Further weight savings are found in the colour system which is a simple 13 position plus white dichroic wheel. No CMY, no second wheel, it's all pretty basic. There's a mechanical shutter which also offers strobe functionality with a variety of pulse open and closed selections, and a variable frost filter.

Perhaps the cutest aspect of the miniPointe is the dual linear prism mechanism. Each of the prisms can be independently rotated in the same or opposing directions, allowing for the beam to dynamically shift from one plane into the perpendicular opposite one. It's hard to describe, but it looks cool and, in a time when we've seen nearly every effect out there, it's a little bit different, which is refreshing.

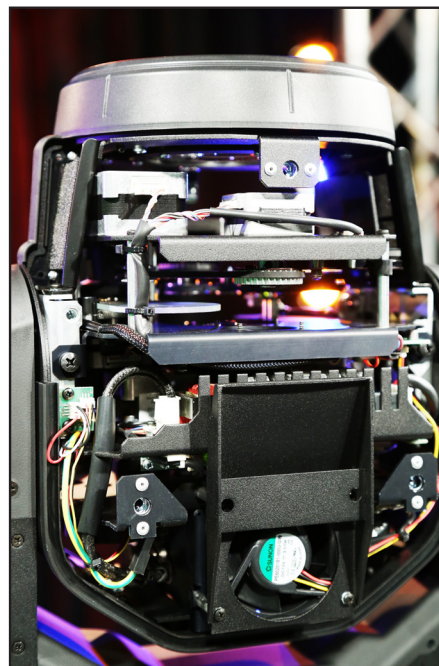


I like value, and consequently I was pleased to read that the Osram Sirius HRI lamp has a 6000 hour life. That's very good since it saves some serious dollars. Also on the dollar savings are the fact it's only a 140W lamp – the complete fixture consumes less power than a Par56, so it's cheap to run. There's no ArtNet included, although Robe does offer an optional wireless CRMX module and RDM is supported. The on-board menu is a basic two line backlit LCD affair with four buttons. It's not quite as elegant or interactive as RNS2, but it is functional enough.

Control over the unit includes 16 bit options for position, colour wheel, focus and dimming, with eight bit control over other parameters. DMX requirements range from 17 to 27 channels. Movement is a predictable 540/270 degree pan and tilt range, and miniPointe can pass through both of these with alarming speed. The whole fixture only weighs 11.8kg, so it's not surprising the head moves very fast.

Light output spec for the fixture is 400,000 lx @ 5m, which is pretty bright. I reckon 5m is about the minimum useable distance at which you can focus the gobos, so it's a good measurement point. With a three degree beam though, you'll certainly be able to project a lot further than this if your venue allows. Even with the frost engaged the beam is still pretty narrow, so I'd say miniPointe is definitely more about effect than functional lighting. I liked the results of using the frost and both prisms simultaneously – it yielded a sort of nebulous pulsing beam which looks really cool.

I had a really good time reviewing the miniPointe, and I was surprised by how much I liked it. In many ways it's very basic, but with this simplicity is a level of purity. You don't get bogged down in tweaking a million parameters, which means you can just get on with lighting the show.



BRAND: ROBE
 MODEL: MINIPOINTE
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AUDAC SMQ500

Quad channel power amp



BY JIMMY DEN-0UDEN

AUDAC makes a range of power amplifiers under the Wave Dynamics name, including both the SMA dual channel models and SMQ quad channel units. Each of these ranges is available in three different power output levels – 350, 500 or 750W into 4 ohms. The basic feature set is common across all models, so really the differences to understand are just channel count and output power. AUDAC names the amps in relation to their drive capacity per channel into a 4 ohm load.

For the purposes of this review we got hold of an SMQ500 unit, capable of 500W per channel into 4

ohms, or 300W per channel into an 8 ohm load. Looking at the amp as it comes out of the box the immediate conclusion you'd draw is that it's designed for installation, and I think that would be fair. While you can input signal via XLR and output to speakers on NL4 connectors, you can also achieve both these tasks using the included euroblock (or 'phoenix') plugs.

This is a boon for installers, since these connectors can be easily field terminated with only a screwdriver and a pair of cutters. Further to the toolage and time savings, the euroblocks also save the cost of connectors. Also on the back panel is a cooling fan and an IEC power





connector. Presumably the fan only runs when the internal temperature requires it to do so – we were testing in the middle of the coldest day Sydney has seen in 5 years so our fan didn't show any signs of starting up.

The front panel is home to a 2.5" LCD screen which shows the individual channel levels and allows menu navigation via the adjacent rotary encoder. A USB port adjacent to the screen allows amplifier configurations to be saved and uploaded to multiple amplifiers, greatly speeding up the process of setting up multiple amps. The USB key can also be used as a physical key to unlock the amplifier. Two levels of user access can be made accessible either via four digit pin code, or by physical key.

Once locked, none of the amplifier parameters may be adjusted from the front panel. This is a good thing for installations, since there's more than enough processing inside to confuse novice users. The SMQ range supports selectable input routing, three types of low/high pass filters, 7 band EQ, delay, bass boost, antiphase (we couldn't find this documented, but think it's phase reverse), as well as output limiting. All these features are available on a per channel basis, so you could run feasibly most speaker systems from SMQ amps with no additional external DSP.

In a nice example of forward thinking, AUDAC has included an expansion slot in the SMQ for future connectivity, and has just announced a Dante card to fit this. For integration with 3rd party control systems, an RS-232 port on the back panel allows external control over functions such as input routing and channel levels. Being a class D device, the final benefit is perhaps that of weight – the SMQ500 we reviewed weighs just 8.35kg. Each channel pair can also be independently bridged to run 100W into 8 ohms, making the SMQ500 an obvious choice to run stereo speaker systems with a mono high power subwoofer.



BRAND: AUDAC
 MODEL: SMQ500
 RRP: \$2022.00 INC GST
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**AUGUST
2015**

ROAD SKILLS



Editorial by Cat Strom

Photography: Daniel Johns - Daniel Boud, Prudence Upton

• Hermitude - Mikki Gomez

• Flea Be - Chowie

DAN JOHNS

A HIGHLIGHT OF 2015'S VIVID LIVE SERIES OF CONCERTS, WAS THE PERFORMANCE OF FORMER SILVERCHAIR LEAD SINGER AND GUITARIST DANIEL JOHNS AT THE SYDNEY OPERA HOUSE'S CONCERT HALL. AFTER FIVE YEARS AWAY FROM THE STAGE, DANIEL JOHNS LAUNCHED HIS RECENT FEATURE ALBUM *TALK* AT THE FIRST OF TWO SOLD-OUT SHOWS.

Lighting designer Hugh Taranto used the Vivid rig that was installed into Concert Hall for all of the Vivid Live shows, however he was able to bring in a fairly comprehensive floor lighting package as well as screens. The Vivid rig, designed by Mark Hammer, comprised of Martin MAC Viper Performances, MACIII's, MAC700 Spots, MAC101's and Clay Paky Sharpy Washes.

MICHAEL INS



Lighting designer
HUGH TARANTO



Prior to the gig, Hugh spent time with the band in their rehearsal studio and armed with a MA console with MA 3D set up and the Catalyst media server, he was able to create a previsualization. At the same time animator Glenn Wilson was creating the visual content so, along with the band too, the creative team worked closely together in preparation.

"This programming time was essential," says Hugh. "There was little time to set up due to the busy Vivid schedule and we bumped in on the morning of our first show. Daniel wanted a rich show in terms of visual content to the extent whereby Daniel and his seven-piece backing band all wore white outfits so that they could be projection surfaces."

The show was an evolution from start to finish rather than a collection of individual song looks. It began with projection on a downstage black scrim that masked the band. Within the content projected onto the scrim was a small window that opened up to reveal Daniel singing Aerial Love. The scrim stayed down for most of the second song, dropping from a kabuki as the songs built to a finale.

Following this, the curved LED screens positioned around the band's risers were revealed for three songs before a wall of thirty-six pixel-mapped ShowPro LED Hex16 Strips came to life.

"A while later, the five rear projection screens behind the band came into play," described Hugh. "As the show was a one-off, we were able to design it to the room. That meant we could put the screens up in the choir stalls and the two outer most screens were very much built into the side seating areas. It wouldn't be a show you could just roll into a theatre and set up."

Towards the end of the set, the show really peaked with the Concert Hall's inbuilt LED houselights incorporated into the lighting. These were pixel-mapped so content ran through the Hex Strips, screens and then also the house lights through the room. The 355 custom-made LED lights were installed recently to fit with the building's heritage fixtures, and provide spectacular displays both on and off the stage.

"It was a very immersive and probably unexpected experience for the audience," said Hugh. "Catalyst ran custom projections through the five rear projection screens, the curved LED in front of band and also the pixel mapped content through the Hex Strips and LED house lights. The two Catalysts were sometimes running timecode but mostly running through the MA console."

Crucial to the design were twelve Clay Paky B-EYES dotted around the stage floor. Late in the show all video was turned off and the B-EYES were used as beam effects filling the whole stage, a dynamic look after quite a lot of video usage.



"They really carried the song which is hard when you've had high impact visual content running for the rest of the set," said Hugh. "To step back and just have the B-EYEs in use was really good.

"I really like the Hex Strips too. Each strip has 16 cells of six colours – red, green, blue, white, amber and UV and therefore each strip is 96 channels. We had thirty-six running over five DMX universes and were able to pixel-map them with the RGB enabling us to run video content through the floor LED screens and also the roof, the Hex Strips formed a connection between them. The Hex Strips were pixel-mapped via Catalyst but merged through the lighting console so we were able to use them to accent beats and run effects from the console if we wanted. Having the white cell in them was pretty extreme and bright! It's the first time that I've used them and they were really quite a dynamic effect, I was very happy with them."

Also in the rig were a couple of Martin 365 Hazers and twelve ETC Pearl LED uplights. The show was run through a full size MA console with a NPU.

Chameleon Touring Systems provided the additional lighting whilst the screens and projection equipment came from Technical Direction Company. The Opera House Technical teams managed the setup and smooth operation of the gear.

This was FOH mix engineer Lachlan Carrick's first time working for Daniel Johns. He is the current FOH engineer for Gotye, joining in for the last two world tours, while other live mixing credits include The Cat Empire, Lior, The Necks and Katie Noonan.

Lachlan used the SOH's in-house d&b audiotechnik J-series stereo line array and fill system adding some d&b infra subs from JPJ Audio.

"The system felt great to mix on, and the extended sub-bass was just the ticket for Daniel's music," commented Lachlan. "Big, reverberant halls always make me feel a bit stressed in the lead-up to a show like this. But in the end, with full houses, it sounded great. I would have preferred the reverb to be a few dB quieter, but it is what it is."

Lachlan used an Avid Profile favouring its' plug-ins live, and according to him, no other console integrates them better.

"Automation is a breeze and I've used it so much, it feels more like an instrument to me," he added. "For this gig I kept it all in the box with lots of Waves plugins such as the C6 Multiband Compressor, Renaissance Vox, SSL Stereo Bus Compressor, L3-LL Multimaximizer limiter, Renaissance Reverb, and H-Delay. Plus I use the SPL Transient Designer quite a bit on drums.

"There are no special requirements for Daniel's voice, I just wanted to make it big, juicy and engaging. He really is a fantastic singer, and making sure the audience gets to appreciate that is a huge priority."

Lachlan admits that mixing for the two Vivid Live shows was a bit of a rollercoaster as they were essentially a one-off event, adding a touch of adrenaline to the nights. He commented that Daniel can be an unpredictable force – albeit in a great way – so he always had to ride the vocal.

Lachlan brought along a bunch of Earthworks mics for drums, which he started using with Gotye. There were DP30/C goosenecks for snare top and toms, with SR40's for overheads and hats. For Daniel's vocal, Lachlan chose the DPA d:facto II, and it proved to be a great mic for the job.

"I found it to be very honest and super-clear, while taking EQ very well," remarked Lachlan. "Also, I had no feedback problems, despite high gain and the fact that Daniel loves nothing more than lying down next to the front fill to sing to the front row."

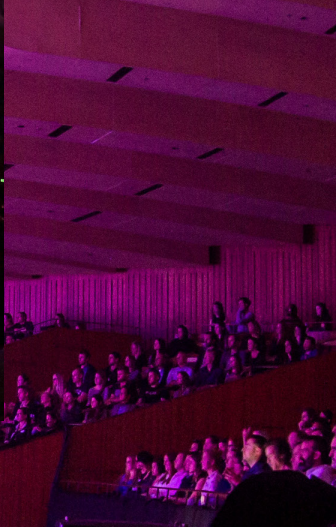
Rod Matheson mixed monitors on a DiGiCo SD7 console and Lachlan describes his work as just awesome.

"He's at the very top of the game, and it really makes a difference to how the show works," said Lachlan. "All the musicians are loving the sound in their ears, playing great, and out front you can feel that."

"It was a very ambitious gig with high stakes, but the entire production team was up to the task, and along with Daniel and the band, managed to deliver two super high-grade shows."



Lachlan Carrick
in earlier days taming
an analog desk



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HERMITUDE

2015 has already been a big year for the blue mountains boys who are the electronic duo hermitude. They signed a worldwide deal with nettwerk records, played their first headline tour of the us, taking in south by southwest festival and going on to festivals such as governor's ball and lollapalooza.

In support of their new album *Dark Night Sweet Light*, Hermitude has just completed a sold out national tour, afterwards triumphantly announcing that they will play Sydney's Hordern Pavilion and Melbourne's Festival Hall in November.

Nicholas Beachen of Colorblind Production Lighting is the band's lighting designer and for this tour he had to be very flexible with gear as the venues varied greatly. Whilst most were nightclub performances, Sydney fans were treated to a 'proper stage show' at the Enmore Theatre.

The band had recently finished participating in the Groovin the Moo tour and Nicholas had planned to use the same light show for the album tour.

"I had a stage design with a floor rig incorporating Ayrton MagicPanels and a show plotted with media content pixel mapped to the MagicPanels," he explained. "Unfortunately at the Sydney show we couldn't hire MagicPanels so I had to design a completely new rig just for that one show. On top of that they decided to film the show so I had to allow for that too."

The Enmore stage was dominated by two risers housing the duo's extensive gear, such as turntables and MIDI gear, as well as the guys themselves. Nicholas' stage design incorporated two more risers upstage of the main risers forming wings onto which lights were placed.

"These risers can easily be pushed into place which was useful on the Groovin the Moo festival run as I could set them up backstage then push them on during change over," said Nicholas. "At the Enmore gig I had Clay Paky Mythos and Stormys as well as Martin MAC101s on the risers. Overhead I had eight Sharpys, six Stormys and eight MAC101s with another two Mythos on the front truss for profiles."

Although Nicholas states that he can easily replace any light in his design, he was fortunate enough to get Fusion Entertainment's new Clay Paky gear that had literally just been unpacked from their boxes.

"When I knew I had to replace the MagicPanels, I looked for a light that could create nice beam looks yet was not a beam fixture - rather a profile that could deliver sweeping beam looks," he added. "I had never used the Mythos before and I didn't have a lot of time to program, but there was a lot you could do with them. I'm quite a fan of LED strobes and I found the Stormys to be pretty cool. I know a lot of people don't like LED strobes, whether they're Stormys or SGM models, as they don't believe they're bright enough but I find them plenty bright enough. I also like to use them as a 'wash flash' where they don't strobe. The Stormys had great colours especially the reds and purples."

For control, Nicholas used Hog 4PC with a Nano Hog 4 wing describing the Hog 4 as his main platform these days.

"I've been using a Nano Hog 4 wing on every show I've been doing recently," he remarked. "I've been doing a lot of shows in nightclubs recently and taking one small case with a wing in it plus my laptop has proved to be very handy. You have a full, professional control system that is totally portable."

Nicholas' lighting design for Hermitude leans towards more static positions with movement and intensity saved for effects. He matches colours to the custom designed video content which he also runs through the MagicPanels, when he has them.

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20 questions with F Lea BE

F Lea BE (aka Steve Molloy) runs the lighting department at Johnston Audio Services. He also works with various acts around Melbourne that include Electric Mary, Palace of the King, The Doors Show and The Angels.

What are the three best things about your job?

I get to meet and work with some amazing people in the industry both crew, musicians and promoters. I get to run around the country (some time overseas) with my mates and have a bit of fun while working. I have made some friends in this industry that will be there in my life till the very last day.

And the three worst things?

Probably a hard question to answer although sometimes the hours are pretty long with a lot of hurry up and wait time. You miss

out on a lot of important family moments. Unless you have the right person in your life, it's quite hard to keep a relationship on track.

What do you never leave home without when working?

I am a little bit old school but I always have a gel file as there are always a few par cans floating around at a gig (ha ha). And if on a tour, I never go away without my drawer case as it holds the coffee machine in the bottom draw as well as lollies in the third draw (crew sugar). Oh and all my tools.





What was the worst nightmare you encountered on the road?

Back when I started in the industry I was on tour as a lighting assistant (learning my job) and was asked to fill in for the LD for a while. We did a show in Nth QLD and after setting up the show, getting it all focused and did sound check, I had a power surge go through the dimmer system which took out 65% of the lighting rig. Probably the most expressive night I have ever had on the road.

What has been the strangest request from an artist?

I did a show for Mos Def at the Espy

in Melbourne a few years back and after gelling up, focusing and programming the rig, Mos came in for sound check and his manger came up to me and said Mos wants you to make all the lights RED, then turn them on and leave them on. So I asked what do you want me to do during the show and he said have a few drinks and enjoy the show. Easy \$\$!


Who was hell to work with (probably best not to actually mention name but elude to it)?

I don't have anyone to tell a story about. I haven't really found anyone hell to work with as its part

of the job to try and accommodate the artist and crew that you're working with to the best of your ability. There are always going to be some changes asked for from time to time by people so you need to adapt and try to overcome.

What is the most stupid request you've had from a member of the public, artist or promoter?

We have all had some pretty dumb requests. As the lighting tech I have been asked to turn the volume down. Working with a KISS concept band (in full make-up) I was asked to get them to play some Chisel songs. But my favourite one was by



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GLP
Impression X4



a support act LD back in the 80s. He asked my LD for 12 black gels in certain lights and my LD came to me and said 'we need to do this' (with a smile as big as Luna Park) so we agreed to do it. Off we went out the back of the pub and cut up some beer cases into 12 gel size pieces and put them in the 12 lamps he requested. I don't think that we have ever laughed so hard!

In your opinion, what's the best show you've worked on and why?

Wow that's a tough question.

After some careful thought there are two that come to mind. The first would be touring with Mother Goose back when I started out. The reason is that the band and crew were like a big family unit. We toured a lot back then and were living in each others space so much. But we all seemed to get on with each other even in tough situations. The other is Icehouse. The show is as good now as it was back then. The attention to detail in all aspects of the show is important as well as the way we all interact with each other. There is respect for everyone involved from loaders to the management and that's hard to find these days.

Who do you admire in the industry and why?

I have admiration for quite a few people in the industry, too many to name and too many not to name. I guess if pushed for an answer I would have to say Alan (Midnight) Eno. Midnight took me out on my first national tour of Australia and taught me the ropes. I learned a great deal from him as far as lighting goes. Colour choice was a big thing back then as we didn't have the luxury of moving lights with the ability of changing the colours during the show so it was very important to get it right as well as getting the focus perfect. He taught me that you are only limited by your imagination (and budget). There is always some thing you can do with a lighting rig if you think about what you're trying to achieve.

Which venue is your favourite and why?

I guess I love the Espy in Melb. I have done shows there my whole career. It has always been a great venue to work in, from the staff to the crowds, it has always been an amazing gig for me personally.

Which recent piece of production gear do you view as a game-changer?

There has been so many pieces of gear come out over the years since I first started doing this and each one has changed the way we do things for the better. From DMX, moving lights and LED's. But I do still love the look and feel of the Par can and ray light, there is just something about the old toys that the new light can't match.

What is the most outrageous thing you have ever done on tour?

Hahaha well !! In the mid 90's I did a few tours with The Drifters around Australia and on one particular tour in country Victoria I decided to have a little fun so I went down to the local op shop and bought an old 60's type PINK dress. So we went and set the gig up, got it all ready to go, did the support and ventured back stage in the break. We were in the band room having a chat and a beer, and Billy Washington (the singer) said OK we need to get ready for the show (their costumes) and I said 'oh yeah, me too' and they all looked at me puzzled. So off I went to the bathroom to put on the dress and returned to the band room where everyone just broke into laughter that I am sure you could hear in the auditorium! Billy said there is no way that you will do the show in that!!! To that I said 'have a great show' and walked out to the lighting desk in the middle of the room in my pink dress, GI Joe boots and shaved head to do the show. While walking to FOH the crowd (the grey haired set) was in shock to say the least ...

What was the worst weather event you've encountered at an outdoors gig?

Probably the worst was at Denni Ute Muster a few years back. We were up there with Icehouse and Suzi Quatro and it poured rain the whole weekend (except when Icehouse went on stage). A few years later, we were there doing the gig and after setting up and staying back all night to focus in the dark, I went and crashed out. Unfortunately there were 100km winds that went through later that night. The front truss on the main stage was moving about a meter in the wind and the side fills blew over. My rig had a lot of pars in it but I only lost two gels.

What would your ideal rig contain?

Probably as you have guessed by now I love my Pars. So it would have 40 Pars (a mix of MFL's and NSP's), Martin MAC700's, Clay Paky Sharpys, Robè Robin 600 washes, some Robe BMFL's and Pointe's, Ayrton MagicPanels plus a bunch of Duets and 4 liters. I am easily pleased and don't need much to make me happy.

Which band would you most like to work for and why?

Too hard to answer this question. There are many and many different reasons to do so. I have had a pretty blessed career up to this point. I have worked with some pretty amazing bands and crews over the years and have no regrets.

Do you have a favourite mantra to get you through the day?

I try to go to work with an open mind most of the time. So I guess that is my mantra! Plus always do the very best job that you can do.

What do you think of the Australian live music industry at the moment?

I think that the industry is getting it wrong as far as band go. There are so many great acts out there that don't get a go or recognition in this country. A lot need to go overseas to get a break. For some of them it is cheaper to do an overseas tour than it is to tour here. There are only half as many venues around the country as what there was years back. I think it needs to get back to basics, get pubs and clubs back on side and make it worth their time and money to put acts back in their rooms and punters back at their bars.

If you could invent anything to do with lighting, what would it be?

Mmmmm, I might be working on something right now nothing major but worthwhile!

What did you really want to be when you grew up?

I always thought I would become a chef when I was younger. But the music industry chose me and I have no regrets for it doing so.



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CHRISTINA MOON

THE BEST OF THE BEST

BY TONI VENDITTI

Christina Moon is a busy, busy girl who knows how to throw super fun tour parties. But let's not get the wrong idea here; Christina is also one of the best monitor engineers working in America today. Over the past 15 years she has built a solid reputation in her field, not only by having a great ear and technical ability, she also possesses excellent customer service skills which include patience, great trouble shooting skills and due to her focus on the task at hand, an excellent attention to detail. Is this because she is a woman? No. This is because she is good at her job.

I asked Christina if she had ever experienced any prejudice on the job because she was a woman. She told me that she had but for the most part people are pretty cool. Every now and then she would meet a man that would rather be with other guys but she tries to ignore it saying that it's not worth acknowledging; she has lost her cool in the past but doesn't recommend it. The best way to get through it is to just go out there and be amazing and you will earn respect from being good at your job and being nice to be around.

Born in Seattle she has grown up with music in her veins. It would be difficult not to be influenced by one of the most vibrant music scenes spawning a long list of Rock legends

Christina still lives in Seattle and is fun loving and outgoing with people who are part of her inner circle but there are also days when she prefers to just stick to her own corner. She is working on a balance between home and the road as usually there is only time to run errands and catch up with close friends and family. For her, a touring schedule makes having a relationship difficult, although she has seen people make it work and hopes someday to do the same. When asked about having children, Christina says that she has never been interested in having children, so she is glad that this will not be something she will have to worry about.

Having said that she feels lucky to have the career she has as she has always wanted to see and experience as much of the world as possible. Christina advises that you just have to decide what is best for you and if you can live with that.

Christina spent her teen years getting to as many shows as she could. It was while watching the sound guy mix at a Mudhoney show that she first started thinking that this could be the career for her. While she loved music, it had never occurred to her that this could be a career choice but took the opportunity to speak with the sound guy and ask him what she had to do to be him. He told her about a music program at a community college in Seattle and that interning and working in clubs was a great way to get your foot in the door, so Christina set off doing all of those things displaying the drive and focus she has become know for.

Fast forward to today and Christina has enjoyed a stellar career as a monitor engineer. Some of the acts she has worked for include the Yeah Yeah Yeahs, LCD Sound System, Cat Power, AFI and having just finished a tour with Interpol, Christina is now back with her regular band, Death Cab For Cutie. She is really focused when working displaying



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Jul 31	UoW Unibar	Wollongong, NSW	*Tickets available
Aug 01	Sydney Opera House	Sydney NSW	SOLD OUT
Aug 02	Enmore Theatre	Sydney, NSW	*Tickets available
Aug 04	HQ Complex	Adelaide SA	*Tickets available
Aug 06	Metro City	Perth, WA	*Tickets available

**Tickets available - at time of print*



her great attention to detail to ensure everything is going to be exactly what the band expects every day. Christina works really hard with the aim of producing the best mixes she can for each and every show.

When asked what she loves about her job Christina says it makes her happy when she sees the musicians relax and enjoy their show and loves being a part of the solution for someone. When meeting with new clients Christina's approach is to make herself available and ready to help when needed, while giving the person space so as not to overwhelm them. The travel and friends are a great bonus. If there were any changes to be made to her job it would have to be to the budget saying it would be nice to not worry about budgets and to have whatever she wanted, whenever she needed.

While touring Christina will use 8th Day Sound whenever she can as she likes the way all of their gear goes together. It's fast and neat, and being a little OCD she likes that she will have the same gear and setup around the world. Her worst gig ever was at the Latitude Festival in 2008. She wasn't carrying gear in those days and everything that could go wrong, went wrong. The patch was wrong, the desk wasn't working properly and she had one of those days where she felt the mixes were atrocious. She thought that was the day she was going to be fired but the band was very understanding.

On tour for most of the year Christina doesn't leave home without certain tools. The Avid Profile gives her the most control while managing changes during a show and with artists that prefer IEM's, Christina uses Ultimate Ears and will throw the Big Ben World Clock on the console to tighten everything up. Some acts only use wedges and generally volume is an important consideration. For these bands, Christina favours D&B - M2 Wedges. These have proven to be the go-to when she is working with acts that have a singer who morphs from a quiet demure singer to swallowing the mic with her face in the wedges! Christina says that with the M2's, she gets the volume she needs and the double 12's have the edge to push through the stage volume and be heard.

A typical day on tour for Christina starts out by looking for catering as the first need on the list for that day is coffee and breakfast, then she will head up to stage and check out what real estate is available for her and load in. Lunch is next and then the line check where Christina and the tech will address any issues on stage before sound check with the band. Sound check is Christina's time to make sure everyone is comfortable and happy on stage. After dinner she might take a nap or watch a movie. To get into the "zone" before a show Christina will watch an episode of something funny then grab a set list and a Red Bull (just in case). She'll setup snapshots in the Profile and think about the cues she CAN'T forget. After a great show, she'll usually drink some beer and head to the next city, or perhaps have a day off!

Christina is grateful for and keeps in touch with the people she has met through jobs or internships who have guided her or taught her something new.

Final words of advice from Christina: At the end of the day, most people want the best person for the job. For some that means who can technically do the best job, for others it's about a vibe that a person can bring and others want both. So if you're better than most of the people around you, you will get hired. She has been hired for being a girl, and that's the vibe the tour is going for and has seen that it's the same for men.

Work really hard and know your stuff. Aim for amazing at each and every show – you will get hired.

Look after your money. You are your only retirement plan, so you have to take care of yourself.

TECH QUIZ TIME!

AUGUST EDITION

1 What was the Grateful Dead original PA system known as?

- a. The beast
- b. The wall of noise
- c. The beast of sound
- d. The wall of sound



2 Two identical dynamic microphones. One sounds much quieter than the next. Why?

- a. One leg of balanced line broken
- b. Phantom power voltage issue
- c. Phase issue between two microphones
- d. Quiet mic differential broken

3 No sound comes out the speaker. Why?

- a. Limiter set too high
- b. Amplifier setting wrong
- c. Impedance mismatch
- d. Amplifier lacks mains

4 Wow and flutter is defined as:

- a. Sensation when approached by drunk super model in bar
- b. Variation in tape speed
- c. Variation in voltage at amplifier rails
- d. B-rated pop group from Finland in 1987

5 This Cannon connector is called:



- a. EP4
- b. XL4
- c. XP 4
- d. AP 4

6 A Vari*Life VL 2500 wash fixture has which lamp?

- a. 2,500 watt
- b. 2,000 watt
- c. 1,000 watt
- d. 700 watt

7 The designer asked for surprise pink. Which Lee number is it?

- a. 180
- b. 058
- c. 137
- d. 194

8 Which mixer control do you set first?

- a. Input gain
- b. EQ to flat
- c. Channel fader
- d. Auxiliary send

9 A balanced line is used:

- a. From instrument to stage amplifier
- b. From click track to drummer headphone
- c. From stage source to mixer input

d. From dmx splitter to moving light

10 Shure Brothers HQ is in:

- a. Chicago
- b. New York
- c. Shureville
- d. Los Angeles

11 SGM manufacture is based in:

- a. Thailand
- b. Denmark
- c. China
- d. Italy

12 Stax are best known as:

- a. A brand of styli
- b. An American plastic cable packer
- c. A variety of cracker on a cheeseboard
- d. Expensive electrostatic earpieces

ANSWERS - PAGE 72

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BIZ TALK

with Julius Grafton



Tax Man Grabbeth They can just take the money from your account!

Bill* cornered me at a product launch in Sydney. 'You need to know about the new tax office grab', he said. Bill is a sole trader who came home after a gig to find his long term girlfriend Linda engaged in some horizontal folk dancing with her friend Cassandra.

He moved out the next day. Momentarily stunned by revelation of that whole scene, I was then appraised of the tax issue.

Bill didn't change his address with the tax office, and forgot to do his BAS three months later. The next BAS was approaching and he suddenly had the zero moment at the ATM. That sinking feeling when, after charging you \$2 to access the thing, it rejects you for 'insufficient funds'.

Bugger that, he thought, as his client deposits should leave a balance of around \$8,500. Logging on at home, he was shocked to see a garnishee amount of \$7,950 to the tax office! The assessment notice and demand letters had been sent. To Linda's place.

Garnishee notices are the tool for the tax office to demand the taxpayer (or indeed any person or business that holds money for the taxpayer, including their employers, financial institutions, real estate agents and solicitors) make immediate payments to the ATO. Note the loose term, 'any person that holds money for the taxpayer'. That could include Linda.

Aside from my very real empathy regarding his former girl, I could only suggest Bill pay more attention to his (tax) affairs. Old address issues also come home to roost if you don't tell ASIC you have moved, and you have a company. The annual fee notice goes unpaid, and the penalties stack up. But that's another story.

This case highlights the power the tax office has, and according to the independent overseer, the Inspector General of Taxation (IGT), the office is sometimes using its powers unfairly.

THE ADVICE GIVEN HERE IS GENERAL IN NATURE. YOU ALWAYS NEED TO SEEK PROFESSIONAL ADVICE BEFORE MAKING COMMERCIAL DECISIONS.

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Since May the IGT has had the power to intervene on your behalf, previously this role was handled by the Ombudsman. IGT can get involved when you have a beef, and ease the pain.

One of their revelations is that the ATO will often jump on any refund due to you, and apply it against your outstanding tax balance elsewhere – for example, if you have a BAS refund, they will use it against your assessment notice. But IGT say that the tax office can and should 'ask you' first, and you can object to them seizing your refund!

The tax office disagreed with a recommendation from the IGT to make taxpayers aware of their right to request that the ATO not offset tax credits against debts at the start of discussions with the agency.

IGT says junior tax officers can grab up to 50 grand from your bank account, without referring your case up the command chain. This is in a climate where the tax office has had its numbers reduced fairly significantly. The rule of thumb is that when an organization, especially a government department, prunes people, the best people tend to go first since they can get another job.

But on the other hand, CX has found the tax office to be easy in our dealings with them, but then again, we are not overdue or non compliant.

We recommend reading up on the Inspector General of Taxation website if you have problems, and keeping calm. One other precautionary measure is to hold a second bank account, declare all transactions within it, but don't use it to pay the tax office. Then they don't have the details, and they can't garnishee it. Because they don't have record of it.

* Bill is a real guy but we changed his name on request.

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aceta

Australian Commercial & Entertainment Technologies Association

Regardless of the industry, few imperatives transcend the necessity to access the relevant skills to sustain a successful organisation. Relative to the innate requirements of a specific sector, the quality and diversity of the available skill pool, will define the potential of both an organisation and its industry. Of importance to our sector, is an expectation the skill pool is well populated with aspirants who possess an aptitude to develop required skills and the passion to drive a rewarding career, where artistic and technical understandings merge to optimise potential. During ACETA's formative period, many identified skills shortage as an issue that would undermine the health of our sector if left unattended. Whilst there is no authoritative information available to identify the magnitude of the issue, we need to acknowledge the challenging employment related experiences of our members. We also need to heed adverse related trends and respond pro-actively, to ensure our industry is well serviced with requisite skills, and suitable candidates can seamlessly access employment opportunity within the industry. Due to the fundamental importance of this industry lifeblood, and regardless of magnitude, only an upside will be experienced by instituting initiatives to identify skills and a methodology to access them efficiently.

The Entertainment Technology Industry Skills Shortage Realities, Perceptions, and the ACETA Response

The entertainment technology sector employs various methods of filling vacant positions, and like many specialist industries, recycling of personnel is common and seen as a safe bet. Whilst there is an upside there is also a downside and this practise, whilst comfortable in the short term, is hardly sustainable in perpetuity. This mindset needs intersection to facilitate the experience of new talent options, ensuring optimum industry health and sustainability. Research indicates few companies conduct in-house programs to produce employment candidates. A number of organisations have used employment agencies with varying success, paying agency fees up to \$5,000 for a junior to middle manager. Some have used on-line methods with modest outcomes. Industry HR departments were researched and the feedback from operational heads was not overly complimentary, most advising a significant degree of separation between them and their HR department, often resulting in the presentation of inappropriate candidates. Thousands of individuals are enrolled in colleges and universities throughout Australia studying entertainment technology and the student population continues to grow. A presumption that the numerous campuses may be an ideal source to fill employment positions; is not necessarily the case. A superficial obstacle is logistical, with students unaware of available positions and employers unaware of potential candidates and their skill set. However the common underlying barrier expressed is to do with practical skills and aptitude. Many potential employers view graduating entertainment technology students as possessing knowledge exemplified in their diplomas and degrees, but often lacking a practical capability. One industry veteran spoke of a degree student unable to roll up a microphone cable, and there are many variations told time and again on this theme. A reality; the entertainment technology industry is focussed on aptitude and passion, not diplomas or degrees.

Let's recap and set the scene for reform. Based on industry wide input, our sector is confronting a skills shortage challenge, the magnitude of which cannot realistically be quantified. In terms of employability criteria, constant reference is made to the importance of aptitude, which is defined in the Oxford Dictionary as 'fitness; natural propensity or talent (for); ability to acquire a particular skill', therefore we have quite possibly arrived at a solution; the development and institution of the ACETA Industry Aptitude Test, and the following key parameters could underpin the program.

A number of aptitude tests featuring 'multiple choice' questions (to facilitate ease and consistency of assessment) would be developed addressing the needs and expectations of the various sectors. Tests would focus on aptitude (not knowledge) and the skills industry employers are looking for in a new employee.

BY FRANK HINTON

Candidates would sit the test, supervised in a secure environment with no access to resource material or devices; in this forum a candidate's innate understanding of the subject matter can most effectively be assessed. The preservation of program integrity is mandatory by ensuring tests are never made public, sold to, or passed around potential aspirants. Candidates would pay a fee to sit the test to cover program administration costs. With permission, their test results and resume would be securely entered on an industry data base, accessible only to ACETA members and associate members seeking to fill employment positions. This initiative would deliver the ACETA membership valuable benefits including a) significant cost saving b) employment risk reduction and enhanced workforce stability c) ready access to a qualifying diverse pool of skill, and d) elevation of organisational status (ACETA membership accreditation). For the candidate, and contingent on their test outcome, they will have the ultimate benefit of direct access to bona fide employers (accredited ACETA members) and enhanced employment opportunity (diversity). There is no downside for the potential employer or employee. Question; who can sit the test? Answer; anybody who aspires to work in the entertainment technology industry. Due to the specialised skills and experience required to develop, implement and manage all aspects, including the integrity of such a game-changing initiative, ACETA would most likely need to sub-contract all or various program elements, hence the necessary cost recovery test fee structure. Thinking out loud, there are a number of opportunities to augment the ACETA Industry Aptitude Test that could deliver further benefit to both employers and potential employees. Training courses could be established and presented by an ACETA approved sub-contract educator(s), the content of which would be based around the needs of entertainment technology employers. Attendees would pay for such a course that could be portable and conducted over, say 5 days, with an outcome that any student passing the course would also meet the ACETA aptitude requirement. In a way the ACETA Industry Aptitude Test proposal realises the establishment of a form of industry employment agency, therefore it could be extended to address all employment aspects from entry level positions, to middle and senior management positions.

No doubt we have presented some lofty idea's herein and yes, the hackneyed phrase about crawling before walking springs to mind, however it doesn't hurt to aspire then moderate, and the very recent words of a major acquirer of entertainment technology are still ringing in my ears, "there is no entity with more credibility than the industry itself, as personified by its peak body - ACETA".

This initiative has not been scheduled yet for activation, but will soon be discussed by the ACETA board of management. We invite comment so we can ascertain a priority and industry sentiment. In the event that this or a similar type of program is established we all need to understand that a) the number of employment opportunities are not known, and b) the aggregate number of individuals employed in entertainment technology are also not known, however the industry is small and niche by nature.

ACETA is your industry body, working to protect and further the interest of everyone who works in our profession. We have a new website at www.aceta.org.au, can be found on Facebook at www.facebook.com/AusCETA or info@aceta.org.au

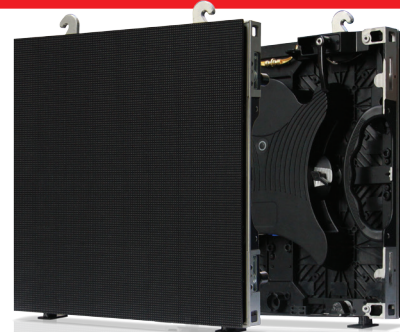


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- d. 194
- b. EQ to flat
- c. From stage source to mixer input
- a. Chicago
- b. Denmark
- d. Expensive electrostatic earpieces

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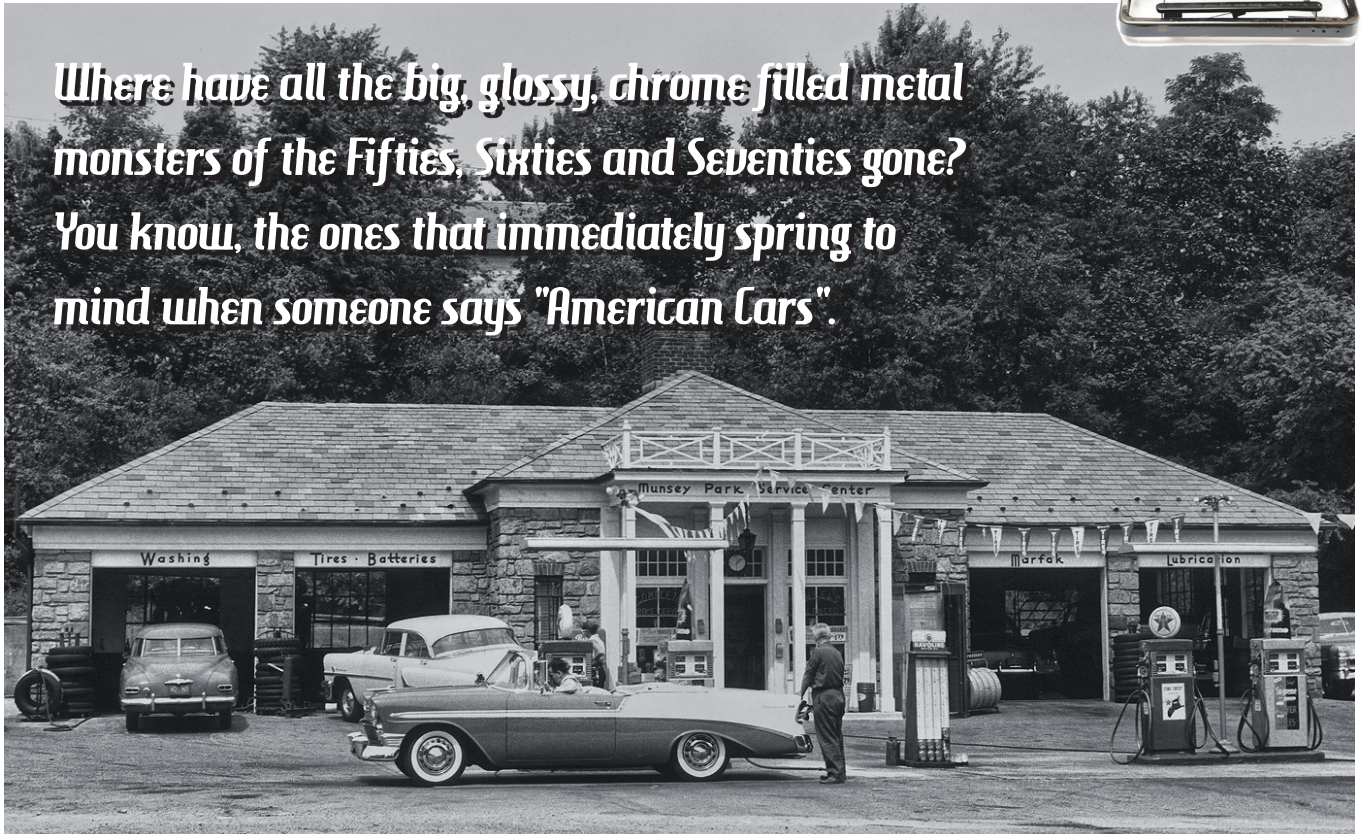
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GENERAL SERVICES	CRISIS SUPPORT	ENTERTAINMENT ASSIST	HEALTH SERVICES	LEGAL & FINANCIAL	RELATIONSHIPS
<p>Australian Health Directory W: www.healthdirectory.com.au</p> <p>JIGSAW Community Services Database Online database of geographical community services W: www.crisissupport.org.au/jigsaw</p> <p>National Aged Care Info Line ☎ (8.30am-5pm Mon-Fri excl. National public holidays) T: 1800 500 853 W: www.health.gov.au</p> <p>Salvo Care Line ☎ T: 1300 36 36 22 (24/7) W: www.salvos.org.au</p> <p>Seniors Portal W: www.seniors.gov.au</p> <p>Entertainment Assist provides crisis support, preventative assistance & education programs for Australian entertainers & back stage people. Tax deductible donations to Entertainment Assist allow us to continue providing critical services to entertainment industry people. Discover ways you can donate to Entertainment Assist by visiting: www.entertainmentassist.org.au</p>	<p>Emergency * Police Fire and Ambulance T: 000 (24/7)</p> <p>Kids Helpline * T: 1800 55 1800 (24/7) W: www.kidshelp.com.au</p> <p>Lifeline * T: 13 11 14 (24/7) W: www.lifeline.org.au</p> <p>MensLine Australia * T: 1300 78 99 78 (24/7) W: www.mensline.org.au</p> <p>Salvo Crisis Line * T: 1300 36 36 22 (24/7)</p> <p>Suicide Call Back Service * T: 1300 659 467 (24/7) W: www.suicidecalbackservice.org.au</p> <p>ENTERTAINMENT ASSIST www.entertainmentassist.org.au</p>	<p>ENTERTAINMENT ASSIST NATIONAL SUPPORT SERVICES DIRECTORY</p> <p>Before times get tough, talk to someone or ask for help</p>	<p>Headspace National ☎ W: www.headspace.org.au</p> <p>Reach Out ☎ W: www.reachout.com.au</p> <p>Beyond Blue ☎ The National Depression Initiative W: www.beyondblue.org.au</p> <p>Carers Australia ☎ Carer Advisory & Counselling Service T: 1800 242 636 (8.30am-4.30pm) W: www.careeronline.org.au</p> <p>Counselling Online ☎☎ Alcohol & Drug related concerns T: 1800 888 236 (24/7) W: www.counsellingonline.org.au</p> <p>Life Circle Australia ☎ People diagnosed with serious illness & their carers T: 1300 364 673 (24/7)</p> <p>Sane Helpline ☎ T: 1800 18 SANE (7263) (8am-5pm Mon-Fri) W: www.sane.org</p>	<p>National Children's & Youth Law Centre ☎ W: www.lawstuff.org.au/lawstuff</p> <p>Centrelink ☎ (8am-5pm) Employment Services T: 13 2850 Youth & Student Services T: 13 24 90 W: www.centrelink.gov.au</p> <p>Centrelink ☎ (8am-5pm) Disability, Sickness & Carers T: 13 2717 Employment Services T: 13 2850 Family Assistance Office T: 13 6150 (8am-9pm) Seniors T: 13 2300 W: www.centrelink.gov.au</p> <p>National Gambling Helpline ☎☎ T: 1800 858 858 (24/7) W: www.gamblinghelponline.org.au</p> <p>National Legal Aid ☎ W: www.nla.aust.net.au</p> <p>LEGEND ☎ Crisis Support & Suicide Prevention ☎ Telephone Counselling ☎ Information & Referral service ☎ Online Counselling ☎ Face to Face Counselling</p>	<p>Kids Helpline * T: 1800 55 1800 (24/7) W: www.kidshelp.com.au</p> <p>The Line ☎ T: 1800 200 526 (24/7) W: www.theline.gov.au</p> <p>1800 RESPECT ☎ Sexual assault, domestic & family violence T: 1800 RESPECT (1800 737 732) (24/7) W: www.1800respect.org.au</p> <p>Al-Anon Family Groups Aust ☎ Hope & help for families & friends of alcoholics T: 1300 252 666 (8am-5pm) W: www.al-anon.alteon.org/australia</p> <p>Alcoholics Anonymous ☎ W: www.aa.org.au</p> <p>Relationships Australia ☎☎ T: 1300 364 277 (8am-5pm) W: www.relationships.com.au</p> <p>Family Relationships Advice Line ☎ T: 1800 050 321 8am-8pm Mon-Fri, 10am-4pm Sat except Public Holidays W: www.familyrelationships.gov.au</p>



Wrecking in the USA A Traveller's Tale

Where have all the big, glossy, chrome filled metal monsters of the Fifties, Sixties and Seventies gone? You know, the ones that immediately spring to mind when someone says "American Cars".



Southern California - to many people it means Disneyland and Universal Studios; to others it means freeways and traffic jams. Twenty seven million people with cars, and they all seem to be in front of you! Long limousines with tinted windows, convertibles of all shapes and sizes, streamlined cigar shaped motor homes, if it's got four wheels then the chances are you'll see it drive by.

However, if you take a closer look, you'll see that the bulk of all these cars are new or less than ten years old, and a large amount of them are Japanese or Korean. Where have all the big, glossy, chrome filled metal monsters of the Fifties, Sixties and Seventies gone? You know, the ones that immediately spring to mind when someone says "American Cars".

Well, a lot of them escaped to Las Vegas, away from California's ever tightening anti pollution laws. But, sadly, most of them didn't make it. So, where did they go? To find out the answer, and to see something truly mind boggling, I like to take a trip out to some of the car wreckers when I can. There the serious car addict can satisfy their lust by wandering around looking at literally acres of Detroit steel.

Oldsmobile, Plymouth, Chevrolet, Lincoln, Mercury, Dodge, Cadillac, they're all there. Rusting old clunkers nestle side by side with cars whose only fault is being unfashionably thirsty.

A giant billboard with a grinning raccoon in overalls called Zorro beckons you off the freeway to the industrial wasteland of Santa Fe Springs, where you will find 'Ecology Auto Recyclers'. This place is so large that on weekends they run a shuttle service from the car park to inside the wrecking yard. Once inside, you will find at least ten acres of cars, neatly laid out in rows as far as you can see. No tools on you? You can buy or rent a Bucket o' Tools from the many vendors outside in the car park. Don't want to get greasy? No worries, mate - there are freelance part jobbers in the car park who'll go and get any part you want - for a price!

Just where do all these cars come from? Some are brought in by the owners when they no longer run or repeatedly fail the Smog Test, some are wrecked in accidents, but most come from auctions held by the various police departments around the Los Angeles and Orange County area.

They say that if a car breaks down on the freeway it is only an average of fifteen minutes before it gets 'rear ended' - an expression describing the typical freeway parking accident. During peak hours, many freeways use all lanes, including the emergency ones, so there is literally nowhere to go if you should break down. First rule is to get out of the car and as far off the road surface as you possibly can. The Highway Patrol cars are equipped with enormous rubber bumper overrides to push broken down cars to the next exit and off the freeway to safety.

The fact that they don't always get there in time is shown by the average of 30 to 40 cars a day that arrive at Ecology! Multiply that by the thirty years they have been in business, and their 3 other locations around Southern California, and you get some idea of the size of the U.S. car market.

Cars stay in the yard from a week to a month, then the engine is taken out and the body shell is crushed. Whatever is left on the body is crushed with it. A Mustang enthusiast pulling a part off a car next to me was stunned to see a '67 hardtop on its way to the crusher with an immaculate rear bumper and tail lights, items that the Mustang specialists sell for large chunks of money.

There is also a separate section for imported cars, as well. Quirky, notoriously unreliable British sports cars sit rusting in the sun, next to Alfa Romeos, early Audis, Mercedes, Volkswagens, Fiats and other possible classics that stopped working one too many times and just weren't worth the cost of repairing. If you've got a car like this, then chances are you'll be able to find all those missing hard to find pieces that you've been looking for here.

To the Australian car enthusiast, these places are a gold mine. Cars that would be lovingly restored back home are just thrown away. A small ding in the side? Junk it. Blowing a bit of smoke? Junk it. Upholstery starting to crack? Junk it. Ashtrays full? Jun...No, it's not that bad! However the 'tyranny of distance' phenomenon has never been more apparent. If you are a car enthusiast you find yourself thinking, "just how much could I carry as hand luggage?"

However, before you get too excited, don't expect to find a yard full of 1959 Cadillacs, Hemi Roadrunners, or 1965 Mustang convertibles. These cars have been

classics right from the start, and serious collectors have snapped them up a long time ago. But there are still interesting nuggets to be gleaned from a good hunt around. Just be careful taking too many pictures - the staff are notoriously suspicious!

When I was last there, a 66 Thunderbird, one of three to choose from, still had all the panels, badges and interior trim, and probably just needed an engine overhaul. A 67 Mustang hardtop, in a bad shade of turquoise, had a crumpled front guard but was otherwise nearly complete. Plenty of late 60's and 70's Cadillac Coupe de Villes, too. The ones no-one wants, unfortunately!

Ecology doesn't sell complete cars. If you see your dream car there it will cost you the total sum of its parts, which can get expensive. However, another wrecking chain called 'Pick Your Part' does sell the complete car if you want it. Just remember that shipping it back in a container will cost you approximately \$3500, plus duties, plus converting to Right Hand Drive if it's less than 30 years old, plus many other charges that just seem to be made up on the spot, as far as I could tell when I brought my Roadrunner Superbird into the country!

To those who ache after a 70's muscle car, there is one word of warning - hurry! 'Clunker' bills are already law in many states enabling the oil companies, electricity generating utilities and other heavy industries to avoid cleaning up old polluting factories and claim EPA credits for every 70's and earlier car that they destroy. Should these become law everywhere, then these modern day classics will disappear faster than a rat up a drainpipe, never to be seen again.

So when you've had enough of Disneyland, Knotts Berry Farm, Universal Studios and Hollywood Boulevard, drop the wife and kids off at the mall, confiscate their credit cards, and take a trip out to one of these wrecking yards. There are plenty of them in the Yellow Pages. At \$1 entrance fee you'll never find better entertainment value, and who knows, you might just find the car of your dreams! Even if you don't, it's an enjoyable way to spend a few hours in the warm California sun, reliving the good old days when petrol was 20 cents a gallon, and a real man's car had an eight litre V8 and a body 20 foot long!



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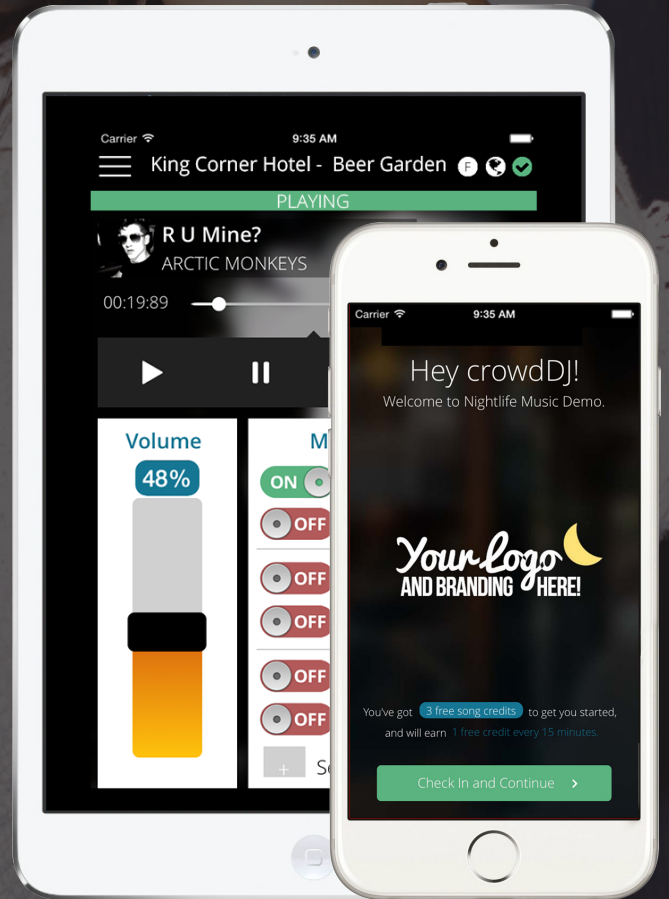


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