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Vale Eric Robinson, Vale Phil Kelly & Vale Joe De Abreu

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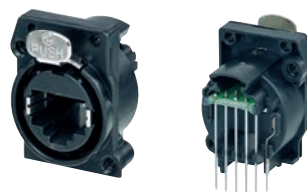


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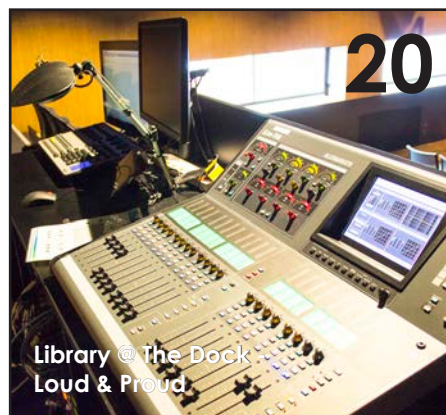
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• Cover Image: Robbie Williams - 'Let Me Entertain You' tour
Photographer: James Eppy



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2015 IS OVER!

25 YEARS OF PUBLISHING

This year we launched CX New Zealand which has gone better than we hoped. It is published every two months.

We had a big year planning four Roadshows for 2016 – starting with ENTECH in February.

In May we tour SECTECH (for the security tech industry, in partnership with Bridge Publishing) then ENTECH NZ in cold July. Finally we have our first ICTECH Roadshow in October which is pitched at the information, communication, audio visual world of integration and control.

We've cemented our first international YouTube show, Light Tonight, which has had almost a quarter of a million views – mostly in the USA. It gives us a vehicle to sell advertising overseas.

Our Hump show is building viewers every week – one segment recently had 25,000 views in just a few days at the CX Magazine Facebook page. We added a digital content editor, Jackson McSweeney, to our cohort.

I think we'll spend 2016 building on all this before we launch anything else, but who knows? It's now been OVER 25 years since the deadlines started, and your founder is determined to crank up another 25 – which adds up to 50. Whereupon he will be 83 and overdue to hop into the velour lined roadcase.

Just roll the thing down the hill, after launching it with a bottle of Krug swung on a chain by a drag queen. Play some loud music as it disappears. Make sure it's double the current Sydney Opera House noise limit, OK?

DETERIORATION

Not talking about me, but the slide in standards that we illuminate in News this issue. First off the rank is the ridiculous noise limits (apparently downgraded in September) for the Sydney Opera House Forecourt. Someone made a very bad commercial decision allowing that venue to be sold for concerts.

Surely some manager in that over staffed, over regulated, tax payer funded venue realized that a concert, ANY CONCERT, will produce greater than 60dB(a) at the nearest residence boundary WHEN THE CROWD CHEERS? Let alone when the actual music is playing!

Idiots. Madness. Refunds need to be offered.

Next up is the crazy world of Soundwave, where the old company rolled over owing many millions and the new company sails on. Australia's corporate regulator really needs to crack down on phoenix activity.

It is presently perfectly legal to walk away from a company leaving creditors, usually the Australian tax payer via the tax office, high and dry. There is nothing stopping that director from trading a similar business the very next day.

The winners are the insolvency vultures. In the case of Soundwave, Deloitte will charge at least 200 grand to bury the old company.

It seems the more regulated we become, the greater the abuses that sit between the regulations.

Happy end of year stuff!

- Julius



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Prepare for expansion

Staging Connections throw off the chains

Staging Connections changed forever in October when Freeman Company took over. Suddenly the crippling \$40 million debt was gone. Now the company has an additional \$90,000 a week that previously repaid debt and interest. That money could hire 50 top staff or fit out a cluster of venues each year.

Previously the management were preoccupied with the significant bureaucracy of being a listed company, making reports and attending board meetings while trying to navigate the firm. It is Australia's largest audio visual service supplier, with 70 in house venues and 684 staff.

After the \$62 million takeover, Staging Connections Group joins Freeman Company, which is a Dallas based family firm that has vast experience in the AV market.

CX spoke to Ken Sanders, President of Freeman Audio Visual, and Tony Chamberlain, CEO of Staging Connections Group in Sydney.

"We don't plan any changes initially, (we'll) take some time to get to know the market better", Ken said.

Asked whether the company name would change, he replied: "There's a lot of brand equity in the name Staging Connections, it's been (here) 30 years. We're going to learn more about it and determine if it's something we want to address."

The AV division of Freeman turns over US\$ 850 million; and the whole company US\$ 2.5 billion.

We asked how Staging Connections is sitting financially now. "We'll give the business whatever it needs to expand, it's self funding at this point. It's a healthy business and it'll continue to grow", Ken said.

"We're going to grow. Not consolidate. Hopefully add to the space that's here, employing more people."

What does it say to the competition, we asked?

"They should be nervous," Tony Chamberlain shot back. "Already in our relationship with Freemans we're picking up products that Freeman have in the market, and our people have run with. On the digital front it rounds out what we're doing. Now we don't have to take a second look at a venue (fit-out), we have the backing."

What of the efficiency differences between the USA Freeman business, and the Australian firm?

"We've had our operational people on the ground here and they've come back and said it's very similar. We don't look at hotels and shows and events differently. You need video engineers, you need LD's, L1's, all those things, we staff them about the same. There's no reductions in head counts. That's not what we're looking at."

"We acquire a couple of companies a year", Ken says. "The objective is not to be the largest, just the best - and to be diverse. We look at the opportunity to grow the business. All our acquisitions have proven to have been a good growth vehicle for us."

CX asked about the cost differences between the USA and Australia.

"We haven't seen big differences. Some of the social programs (here) are a little more expensive than in the States. We don't plan



FROM LEFT: KEN SANDERS, PRESIDENT OF FREEMAN AUDIO VISUAL, AND TONY CHAMBERLAIN, CEO OF STAGING CONNECTIONS GROUP

on making any changes along those lines. In general labor is probably more expensive here than the States. There's a more diverse freelance pool there, the economies of scale are different."

How much of the technical workforce in the USA are unionized?

"New York, Chicago and San Francisco are big primary union markets, Vegas is also big. There are days we'll see 2,000 union people on the payroll, not just on the AV side but also on the exhibition side."

What are the wage differences in union cities? "Too difficult to answer, but New York could be double. Freeman trains 40,000 union employees a year! Unions are a terrific resource, we partner with them."

Staging Connections are also leaders in training, operating the only workplace Registered Training Organisation in the Australian AV industry. Will Freeman maintain this large commitment?

"We haven't really looked at that", Ken says.

Tony added: "Not speaking for Ken, I don't see any reason not to continue. We want to grow into SE Asia. We could take the training into Asia. Freemans have so much training resources we could just drop in, online training."

Now the sale is complete, we wanted to know how arch competitor PSAV nearly won the bid, and why Freeman bid late?

"Actually we were early! We're a very measured company. There's no deal we have to do. We're fortunate to be our size and have no debt. The business can do what it wants to do. If we feel like a deal isn't shaping up the way we like, we have an internal discussion. In this case it was moving a little sideways on our side, and we re-engaged. They popped up, we were wanting to be engaged, in the end we moved it forwards."

Will Tony Chamberlain continue to lead the firm? "He's done a great job, we're going to continue. It's great to work with Tony and a great team of people."

The past fifteen years have been very turbulent at Staging Connections, with a disastrous 'growth through acquisition' phase that led to crazy prices being paid for firms. Such as the \$42.7 million buyout of Bytecraft which was eventually offloaded for between \$9 and 13 million.

"We watched it from afar", Ken says. "We knew it was going to happen."

Tributes for Eric Robinson

Jands boss celebrated

Eric Robinson was laid to rest in Port Douglas after his death aged 67 last month. Tributes came from all corners, and eulogies were read by promoter Michael Coppel and Jands partner Paul Mulholland.

Jimmy Barnes sung 'When the war is over', and a small gathering of family and entertainment industry friends compared stories about a guy who was larger than life.

Tributes at csmagblog range from sad to ebullient, typical was this, from lighting designer Patrick Woodroffe:

"What a sad thing it is to have lost Eric. His cynicism and rudeness – of which he was justifiably proud – was balanced with intelligence, humour and an authentic generosity that was the real basis of his character. I came to Sydney to light a show once and needed to have a



PHOTO BY BOB KING

system that would reflect the scrappy and jaded design of the stage set. "I need some really crap lighting, Eric" I said, "stuff that looks like it's falling to pieces and doesn't work properly." There was a long pause. "We can probably help you out with that" he replied deadpan. Salut Eric. We'll miss you."

Valedictory for Eric Robinson: Page 34

Soundwave Festival Restructured

Poor management led to losses

Returning in January with new dates, Soundwave Festival boss AJ Maddah hopes to repay millions to angry production suppliers, venues and bands. The recent collapse of the previous operating company saw 186 creditors unpaid with debts of \$25.8 million.

Soundwave was a profitable business for Maddah and his partner Joanna Ward, grossing \$62 million in 2013. They took the profits and invested in a loss making format called Harvest Festival which ran twice, and then a \$5 million stake in Big Day Out – which failed almost immediately.

They purchased Stage Systems, formerly known as Billy Hyde Stage Systems and then saw a downturn in rentals of backline equipment because rival promoters took their business elsewhere. Stage Systems is now to be sold for just \$600,000, a fraction of what they paid for it several years ago.

But the bad investments pale against bad business management revealed in administrator Deloitte's report to creditors. Deloitte identify debt to the Australian Tax Office for unpaid Pay As You Go, and Office of State Revenue charges totaling over \$6 million, caused by years of incorrect recording of artist fees as wages. These should be coded as contractor payments and do not normally attract PAYG or Payroll tax.

While Deloitte may be able to reverse some of those liabilities, they will first pursue some creditors for 'unfair preferential payments' made recently which amount to \$557,000. Ominously some of this was paid to suppliers



that made legal threats, and Deloitte can in turn take legal action to recover these funds despite the legitimate debt. This doubles the pain for those suppliers, part paid by Maddah and then sued by Deloitte.

Soundwave is now struggling to stage the 2016 festival, with burned suppliers likely to require pre payment for supply of services. The report shows a contributing factor in the failure of the 2015 festival was 'higher costs due to the (tighter) availability of rental supplies and inability to negotiate discounts previously received'. In other words, suppliers were charging more as they faced more risk.

Deposits for the 2016 festival have, in part, come from the box office, says Deloitte. They identify \$1.9 million in ticket sales prior to their appointment, of which '80% has been released to the Director (Maddah) for deposits'. It is unclear how box office funds held in trust can be released prior to an event. Ticketing company Eventopia have not replied to CX, nor have other ticketing companies approached for details of how they protect ticket funds prior to events.

Maddah proposes to contribute to a Deed of Company Arrangement using some proceeds from the 2016 Festival plus the sale of Stage Systems. At best creditors could receive 25 cents in the dollar. At worst they will get nothing if the firm is liquidated. Deloitte will earn at least \$200,000.

Opera House Forecourt Hobbled Noise regs make venue not fit for purpose

Social media has given voice to punters as venues battle oppressive noise regulations and turn down the sound. Typical of recent complaints was the Tame Impala concerts at the Sydney Opera House Forecourt.

Complaints flooded social media; one tweeter told the Opera House during the gig, “listen to the crowd! The music isn’t anywhere to be heard” to which the Opera House replied, “The sound has been turned up.”

But it wasn’t. Tame Impala sound engineer Adam Round told Roadskills “the Forecourt has very low noise restrictions”.

“You can’t go over the limit or they threatened to step in and take control of our show. If they let you go over it jeopardizes their ability to do any shows there. It’s a real shame as it’s such a beautiful spot. We tried every trick in the book and added extra front fill. Still would’ve only been louder if you were at the front. All of our subs were in cardioid but we ended up having to pretty much turn them off.”

Adam was given a noise limit of 89dB(a) peak (5dB more at the weekend), a level he believes is “an unacceptable level for rock and roll”.

As to the Opera House inferring that they would or had turned up sound levels; this was not the case.

“We applied roll offs from 100hz down on the system, channels and added a crushing amount of Waves L3 to remove peaks,” said Adam. “They simply will not let you go over. It’s a council decision caused by complaints from residents. As much as everyone tried to work with us, there’s nothing we can really do, so our second night will not be louder than the first. The limits are set in stone.”

Sydney Opera House did not respond to questions from CX about limits, fines, regulations and policy. Instead they said “As with any outdoor venue, sound levels for all Forecourt events are closely monitored by Sydney Opera House. We have a team of acoustic consultants on site working alongside our sound engineers to deliver the best possible audience experience.”



PHOTOGRAPHER: TROY CONSTABLE

However CX can reveal the Opera House Forecourt is not fit for purpose for live music according to its own rules. The venue handbook (dated September 2015) says that noise levels measured one metre from the adjacent Bennelong Apartments must not exceed 65dB(a) – the volume of a conversation. This rises to 70dB(a) on a Friday or Saturday. Worse, if the NSW Department of Planning and Infrastructure or the Opera House, “may be experiencing noise levels that exceed the mandatory noise limits”, then the limit is reduced to 60dB(a) or 65dB(a) on Friday or Saturday.

Adhering to these rules the sound of an audience cheering between songs will break this absurd limit.

“I basically mixed the whole gig on the pair of 108P (reference monitors) last night as it was hard to hear the PA at front of house” Adam said. “There’s a lot of PA down here but you could basically just use a couple of 15” and horns on sticks and you’d still be breaking their noise limits.”

CX received similar complaints about Florence and the Machine at the same venue the following week. An experienced sound engineer measured mid 80’s dB(a) with an (uncalibrated) phone 10m in FRONT of the mix position. Which is ridiculously quiet.

• See *Tame Impala* in Roadskills, page 62

AC/DC Honour Fallen Crew Road Crew Association Saluted

During their Australian tour AC/DC paused to pay tribute to fallen Australian road crew, signing a commemorative poster before their Brisbane gig. The Australian Road Crew Association (ARCA) produced the poster, listing all 113 known veteran crew from the 1970’s until the present that have died.

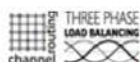
Sadly this was within days of the passing of senior production manager and JPJ Audio boss Eric Robinson, who is number 114.

ARCA have identified former road crew face far greater health challenges than average 50 or 60 year olds, with a staggering percentage dead early – many from suicide. A high instance of

cancer and health issues from alcohol and drug abuse feature. Approximately 40% of crew members working in the 1970’s have died so far.

ARCA has around 250 surviving members, and plans a reunion soon in Melbourne. It has cemented an arrangement with Support Act Limited where donations can be made to an ARCA account, tax free, for distribution to members in distress. Support Act has for many years performed this service for musicians. Now former road crew will have access to help for medical and emergencies.





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The Allen & Heath Chrome Editions of its Qu series compact digital mixers mark the launch of the Qu v1.8 Chrome firmware, which adds major new features including Automatic Mic Mixing, a Spectrogram and additional monitor mixes. Chrome Edition Qu-16, Qu-24 and Qu-32 mixers all feature the same high contrast metallic finish rotary controls and fader caps as the premium GLD Chrome series.

The new Automatic Microphone Mixer (AMM) helps the engineer to manage the levels of multiple mic inputs, ensuring that each speaker's contribution is heard, but with priority settings to establish an order of precedence. The new Spectrogram tool provides a fast, visual means of hunting down and dealing with problem frequencies, helping to eliminate feedback and tame difficult room acoustics. Qu v1.8

Chrome firmware also unlocks more monitor mixes by allowing Stereo Groups to be switched to Mix mode. This takes the maximum number of discrete monitor sends to nine on Qu-24 (four mono, five stereo) and 11 on Qu-32 and Qu-Pac (four mono, seven stereo).

Australian distributor: Technical Audio Group
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Allen & Heath Qu Series Chrome Edition





Chauvet STRIKE 4

The Chauvet STRIKE 4 uses four independently focusable 100W chip-on-board LEDs with high output and coverage, making it suitable for multiple applications. STRIKE 4 features 16-bit dimming control for incandescent-style fades, a series of automated strobe effects for use as an audience blinder, and individual manual pan control of each LED pod and adjustable PWM for use in film and studio locations. STRIKE 4 comes standard with basic and advanced control personalities for flexibility in programming, and an easy-to-read OLED display for quick onboard adjustments.

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Martin Atomic 3000 LED



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Library @THE DOCK

It's become a Melbourne pastime to be disparaging about Docklands, the newly redeveloped waterfront precinct that's home to vast gleaming towers and new business headquarters. Until now, it's been missing a heart. That's changed with the new library at Victoria Harbour, which is following the overseas trend of libraries becoming multifunction community meeting spaces with additional facilities like 3D printing and a recording studio.

Library at the Dock stands out for a lot of reasons, the first of which is its beautiful wooden exterior, sitting in stark relief against the steel and glass structures nearby. It is made from reclaimed hardwood and engineered cross-laminated timber, which was prefabricated in Europe before shipping to Melbourne, helping to get the building Australia's first 6 Star Green Star public building rating. The second of which is its seamless integration of complicated audio, video and interactive technology with the traditional library role of meeting place and repository of knowledge.

Pasquale Valpied, Partner and Consultant at Parity Technology Consulting, started discussions with the City of Melbourne about the proposed library in mid-2012. "We had months and months of stakeholder meetings, with both the users of the space and key people within the City of Melbourne," reported Pasquale. "The key objective of the library was to provide somewhere for community enrichment in



Parity Technology Consulting's
Pasquale Valpied

BY JASON ALLEN



LOUD AND PROUD

Docklands. Up until now, construction has focussed on apartments and commercial buildings, but nothing for the community. Library at the Dock was designed to create some cohesion for the diverse backgrounds of the people who live in Docklands."

Not your Grandad's Library

Right from the outset, it was clear that the City of Melbourne wanted to create something modern with a strong emphasis on using the latest AV technology. "They were referencing other libraries around the world that are shifting from being quiet places with lots of books, to being community centres with multipurpose facilities for all ages," Pasquale continued. "Technology was a key driver in the project to engage with different demographics. One of the key concepts was

interactivity; being able to walk in and interact with current and historical content for all ages. For example, there's a kids area with an interactive floor and interactive touchscreens mounted low on the wall. In the café, there are interactive screens embedded into the timber tabletop where you can sit down and read e-newspapers and e-magazines."

The layout of the library evolves over three levels. On approach, you can't help but notice the 15 square meter LED screen on the outside of the building. Upon entering on the ground floor, you're engaged by the café, reception, way-





Above: The performance space

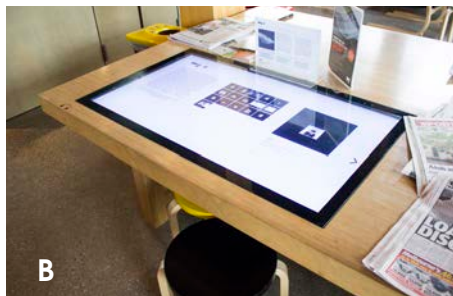
finding via digital signage and the bulk of the book collection, which makes you feel like you're in a traditional library. While the children's collection on the ground floor houses the interactive floor and touch screens, this isn't apparent until you've moved a long way into the space. Upon venturing to the second level, the purpose of the building starts to expand; there's an art gallery capable of running wall and floor projections, video conferencing facilities for the staff and free-standing interactive tables for engaging with digital content. The third level is the furthest removed from the traditional library, housing a recording studio, practice rooms, a performance space, and a maker's space for 3D printing and coding.

Live at The Library

Designing, installing and commissioning such a wide range of AV and interactive technology was shared over several organisations. Integrator Pro AV Solutions handled the bulk of the AV installation and commissioning. Melbourne specialist Interactivity provided both hardware and software for the interactive tables, screens and floor. Mitsubishi Electric provided the expertise to mount and commission the external LED screen. Just Digital Signage provided content and logistics for the digital signage system. Technical Audio Group provided support for digital audio networking and console configuration, and theatrical lighting specialist Lightmoves had design input into the lighting equipment and infrastructure they installed and commissioned in the performance space.

"The brief was that the performance space had to be extremely flexible," explained Pasquale. "It had to be capable of running everything from a band to a presentation or seminar, or activities on the floor like a yoga class, or non-traditional performances in-the-round. It was designed with an Acromat seating system that can collapse into itself at the back of the room, which presented us with challenges regarding cabling and flexibility. There wasn't the space for a bio box so we had to put the control desks on the back tier and allow for enough space." Lighting control is via a Martin





- A. Library at the art gallery
- B. Digital meets analogue in the café
- C. Children's section with interactive screens and floor
- D. Music listening pod

M2GO and external 22" touchscreen, running through LSC dimmers and to a rig consisting of Philips Selecon SDX profiles, Philips Showline SL Par 150s and Philips Selecon RAMA HP Fresnels.

From Stage to Studio

The performance space boasts some impressive audio credentials. An Allen & Heath iLive T-80 digital mixer connected to an iDR-32 mixing engine fitted with a Dante card means the audio from the iDR-16s in the recording studio and practice rooms can be sent over the building's network to the performance space, or vice-versa. The PA in the performance space is equally flexible; EAW JF29NTs are installed as left, centre and right, and reinforced with an SBK250 sub. For movie screenings, six EAW CR72Z cinema speakers provide surround, with two of each on the side and rear walls. Powersoft amps provide the grunt, while a Crestron HD-XSP surround audio processor handles processing for any configuration, taking a mix from the iLive, and switching to 7.1 mode at the touch of a screen. Room

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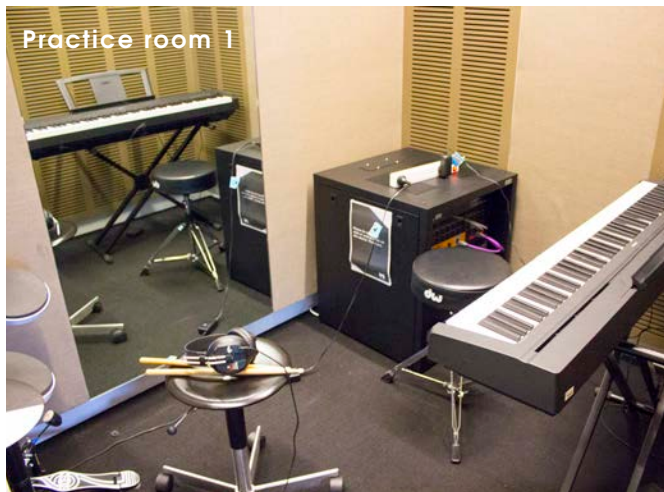
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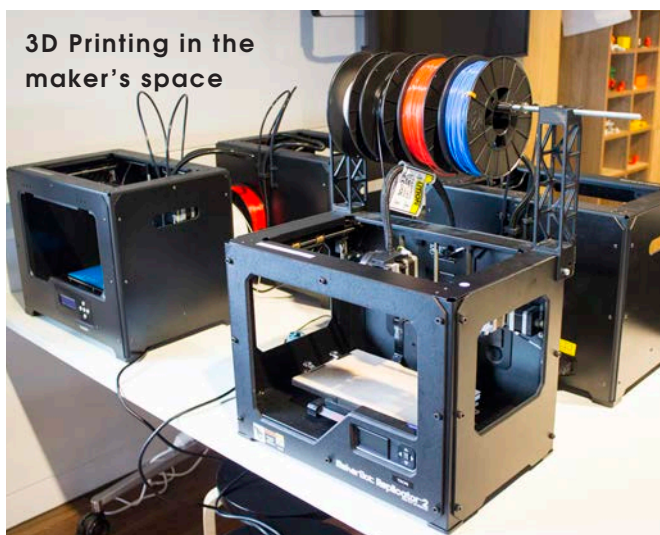
control can be done from a Crestron touchscreen in the lectern or from another Crestron panel at the control position.

The recording studio houses an Avid C24 control surface, reporting back to a Mac running ProTools 10. The iDR-16s and iDR-32 acts as remotely controlled preamps for the recording system, with signal patched directly to ProTools via Dante Virtual Soundcard. The space is stocked with the full complement of gear expected in any mid-level project studio; mics from Shure, Rode and Audix, BSS DIs, Fostex headphones, K&M mic stands and KRK monitors. Anyone in the community can book time in the studio, record via network patch from the electronic drums, keyboard or acoustic piano in the practice rooms or make a live multi-track recording of a gig in the performance space. For free. That's an amazing level of amenity for any community.

Future Proof

There's even more to the library than this short overview can cover; multiple small spaces with projection or display capability thanks to Projection Design, Sony or Panasonic, video and control distribution from both Extron and Crestron, and a nascent IPTV system courtesy of Haivision that's ready to port IPTV to any network output in the building. There's very little in the changes to come in the 21st century that this building is not already equipped for. Its most important goal, providing a space for people to come together, communicate and learn everything they need to succeed in a changing world, has been more than adequately achieved.

Pasquale is happy with the community's reaction to the facilities. "Every time I go in there it's heavily utilised," he related. "The City of Melbourne is very happy, too. Other councils are starting to reference Library at the Dock when seeking to fund or design new buildings. The City of Melbourne was trying to create a benchmark in Australia, and it seems they've done it."



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ACOUSTIC TREATMENTS

Often it's the lack of experimentation with room treatment that leaves many a home recording sounding thin, resonant and harsh. Left unchecked, untreated room reflections can severely impact upon the clarity and focus of direct signals into a microphone, though initially this may be hard to judge. It's often only when mix compression is applied to these recordings that the insidious nature of these corruptions is revealed.

If you don't do something to 'shut down' the main resonances of your tracking spaces when you record, you will always lose the battle against corrupting ambience. But don't let fear of the unknown or your general ignorance of complex acoustic theory paralyse you. More often than not there's an easy fix to improve the situation. Just don't use your eyes.

BY ANDY STEWART

Too many home recording enthusiasts have read too many glossy magazines showing off the fancy recording spaces of commercial studios. Every time you see these photos the studios look immaculate: the lighting just right, everything perfectly placed for the camera lens, not a lead or impromptu room treatment in sight.

But go to any recording session in these places and you'll quickly discover the opposite scene: stuff everywhere, instruments all over the place, chairs, stands and leads here, there and everywhere, and room treatments of every shape and size uglying up the space.

PLEASE, NO PHOTOGRAPHS!

Recording engineers do whatever it takes to make something sound good in the privacy of a commercial recording studio session and the same priorities should apply everywhere, particularly at home. Recording sound is not about what *looks* right, or fancy, or slick – though that's always the temptation. It's about getting something to sound right, or at the very least better than it was, and often that requires experimentation.

It's time more of us got off our behinds and did something about the room sounds we record in, no matter where these happen to be. Far too often I've seen – and most certainly heard – how complacent engineers and musicians can get when they record; always keen to talk about the mic they used, never the room they were in or what they did to it to make it sound good.

I've heard every excuse under the sun about why nothing was done to modify the behaviour of a bad sounding room, and frankly these have never held water.

No more excuses folks. It's time to experiment.

MODIFY NOT BEAUTIFY

Everywhere you record you should bring with you some materials that can be used to modify the spaces you're in. Stuff like pillows, doonas, a roll of Tontine, a bolt of fabric or even a small roll of carpet can work wonders in most 'hard' tracking environments where the acoustics might need 'softening'. Though this stuff might be a hassle to take with you, or look stupid on your equipment list, the fact is, looks are deceptive. You need to overcome the fear of things always being judged based on what looks 'wrong' or 'uncool' as fast as you can.

CHAOS THEORY FOR CHUMPS

In the absence of an acoustically designed space that costs six figures to build (and almost as much to hire), the next best thing is chaos... quite literally. The more chaotic a room is the better it will typically sound. Problem is, most people like things to be neat and clean, but these characteristics don't necessarily promote good sound.

The best thing about chaos is that it's cheap to setup and almost anything can contribute to the solution. If you're

andy stewart owns and operates the mill in the hills of south cippisland.
he's happy to respond to any pleas for recording or mixing help...
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recording room is sounding too ambient and resonant, start chucking stuff in there, and don't worry about where. Sound will find it. In the average room a sound wave hits about 90 surfaces a second!

By contrast, empty rooms are the worst. They're far wilder than the same spaces inhabited by people and their clutter. The obvious lesson to learn from this is that more 'stuff' helps a room exhibit less of its nasty acoustic anomalies: standing waves, flutter echoes and long decay times (particularly prevalent in rooms featuring hard, parallel surfaces) which, let's face it, is nearly all of them.

When people record in homes, all too often the recording spaces are cleared of the home furnishings (clutter) first so that there's room for the musicians and their instruments. Notwithstanding the fact that the musos obviously need to be able to stand in the room and play, this de-cluttering is a mistake. Couches, furnishings... frankly anything that adds chaos to the room will generally improve the ability of that room to resist its own tendencies to corrupt the sound sources you're trying to capture. Sure, recording in a room with all this stuff might look uncool or downright pedestrian, but follow that logic to its conclusion and you'll end up with a good-looking, crap-sounding recording.

SOME EASY TREATMENT OPTIONS

There are so many ways to treat a room in preparation for recording that it's hard to know where to start to give examples. Here are a few that can be thrown up quickly and used anywhere.

1: The Dead V. My favourite, and one that's used all the time in just about every session in the world, is what I'll call here a 'Dead V' (don't think I've ever given it a name before).

A 'Dead V' is great for recording almost any instrument that requires a more isolated, deadier sound than an unmodified room could hope to provide.

By placing two soft walls behind the singer/instrumentalist in an open V configuration so that any directional mic points straight at its centre, you not only deaden the room overall, you provide a far less reflective backdrop for the performer. Remember, by choosing a directional mic like a cardioid, and by pointing this straight at the singer whose back is to the V, you will capture far less room ambience and a far tighter sound.



The reason for this is simple: where the mic points to is where the corruptive ambience primarily comes from. Most people think deadening the back of the mic is the answer – a notion that's reinforced by the plethora of portable microphone baffles on the market – but this is not really the case. Small baffles directly behind a mic certainly help, but in the case of a cardioid pattern mic at least, they really only help isolate the mic from



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sounds arriving from the *rear* where the mic is already the least sensitive.

You can build a Dead V with either a few boom mic stands or lengths of fairly strong dowel.

To build the mic stand option, fully extended two boom

stands up and at 90-degrees (parallel to the floor). In this state they would be impossibly weak on their own, but at the centre of the V, set up a third stand to carry the weight of the extended arms. Gaffa tape them together or use the mic clip of the middle stand to hold the others up [as per photo]. Carefully throw a couple of doonas or heavy canvases over this frame arrangement and voila, a Dead V. If it's strong enough and high enough you might also consider throwing something up and over the top to create a roof, but this puts more stress on the structure than it can often handle. You don't want it coming down on the singer's head (...or maybe you do!).



2: Fly a flag. Similar in construction

is hanging a soft material over a single boom stand that's configured like a T-shape. Extend a boom stand to its full height and put the arm horizontal to the floor, with half and half of it either side of the pivot point. Now throw whatever soft fabric you have over it to reduce the ambient decay in the room. If the room has a flutter echo caused by parallel surfaces, this should help kill it off, particularly when you put up several. Put them against a wall if they're too precarious freestanding in the room.

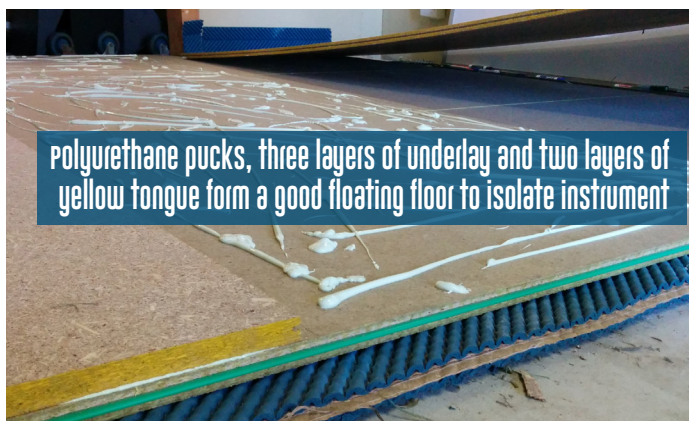
3: Acoustically treated artworks. If your lounge room is also your recording room there's a fair chance you may have some paintings on the walls. If so – and particularly if they're artworks on canvas – take them down and fill their inner voids with something like Tontine Acoustisorb 3. It will look like nothing has changed, except that now the paintings will contribute more to the sound absorption in the room. Remember, for tracking purposes, it's not so much where the hard, absorptive and diffuse surfaces are as what proportions they exist in inside the room. Assess the one you're recording in to determine if it's too dead or too live and act accordingly.

4: Door and window treatments. No-one can be realistically expected to modify the windows and doors of a rented house or 'location recording' space to any great degree, yet

by and large these are the weak points of a building where problematic sound gets in and out. Treating these with something is preferable to nothing... but what?

If you're only on site for the two days of a tracking session then 'temporary' is the operative word. Here again, heavy canvases or blankets, whilst they don't do much, definitely contribute something, both in terms of what comes in, what goes out, and more importantly, what the room sounds like. If you're handy, have access to materials and tools, and can get away with minor damage, you could always screw sheets of MDF to the insides of the window frames. (I did that to a rented house every week for about five years!)

A SLIGHTLY MORE INVOLVED OPTION



Temporary isolated floor. Though this is not necessarily the most portable concept in the world, it can be applied quickly and fairly easily in your home studio without altering any existing structures or it costing the earth.

Most home studios are sonically porous partly because sounds within it are coupled to the walls and floor, making the structure ring like a bell, and consequently transmit sound.

To improve the isolation of things like drums and guitar amps from your house structure, consider this simple technique. Buy a roll of polyurethane stripping that's say 10mm thick and an inch wide and cut it up into two or three-inch 'pucks'. Lay these out every 200mm or so like a checkerboard to form any size you like (for this example we'll make our floating floor 3.6m x 1.8m). Next, get some old carpet underlay and carefully roll it out over the pucks, trying your best not to disturb them too much. Get a second roll of underlay and roll this out perpendicularly across the first layer. Apply a third layer across the second layer in the same manner, forming a three-layered 'pastry' of underlay.

Now get some yellow-tongue flooring and lay it gently onto the underlay so that it simply floats on top. For this floor we'll join two pieces of standard 3.6m x 900mm together to form our 3.6m x 1.8m deck. Now place a second layer of yellow-tongue perpendicular across the first, putting something like Fuller Firesound sealant or Green Glue between the layers (see photo) like a messy Pro Hart or Jackson Pollock painting. Pull the two layers tightly together with 40mm screws and there you have it: a floating floor for the drums or amps.

Not everything you do is to improve the sound of a recording is about predictive mathematics and standard protocols. If you've got problems with the sound in your recording spaces, get off your chair, get out there and do something about it. Whatever you do is bound to be better than making excuses.

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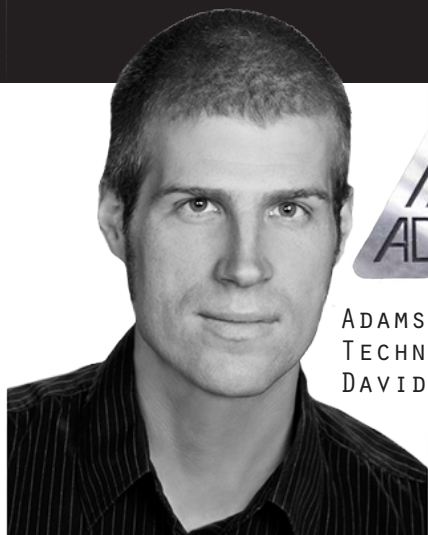
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Adamson S10-S119



ADAMSON'S APAC
TECHNICAL DIRECTOR,
DAVID DOHRMANN

Officially launched at ProLight+Sound 2015, Adamson System Engineering's new sub-compact line array system, the S-Series, has finally made it to Australia. Proud distributor CMI was keen to show it off, and invited audio bods from around the nation to their Brooklyn, Victoria headquarters to hear it. David Dohrmann, Adamson's Technical Director for Asia-Pacific, was on hand to talk tech, answer questions and play some tracks. Jason Allen was there to listen....

It was a fine and unusually hot Wednesday on October 14 when sound techs, consultants and integrators from across the live, corporate, venue and worship sectors converged on CMI. With organisations as large as Norwest, Hillsong Church and Rutledge AV represented, this was an audience with big gigs and even bigger expectations. Neither CMI nor Adamson disappointed, with flawless hospitality, informative content and great product.

While the star of the day was undoubtedly the 12 element hang of S 10 awaiting us outside, the day started with a presentation from David Dohrmann talking through Adamson's philosophy, design process and products. Always innovative, Adamson sets great store in its key technologies, such as its Kevlar speaker cones. Adamson believes the stiffness of Kevlar translates to more accurate and timely response, increasing mid-range clarity. Listening tests certainly bear this out; Adamson are famous for mid-range vocal presence and justifiably so. This tonal characteristic carries across all of their products, from concert-sized line source to install-friendly point source.

Critical Listening

Before getting outside and scaring the neighbours, we were treated to a listening session including the smaller Metrix line source system, set up with four elements with 8" drivers and two dual 15" subs per side, and the point source Point Series 15, 12, and 8 models, in combination with a Point 115 and A218 subwoofers. One of the most striking things about the session was the almost identical tonal characteristics across models and even between point and line source.

Adamson's voicing is bang-on, with only the Point 15 standing out a little with slightly more bottom end.

In addition to sounding crisp, clear and honest, all models are capable of frightening volume, but are so free of distortion that you don't realise how loud they actually are. It's a strange sensation; your body is telling you how much air is hitting you, but your ears aren't used to that kind of SPL not being full of square waves. The big star of the session was the small, humble Point 8. At just 45cm tall and 25cm wide, the single 8" ND8-LM Kevlar Neodymium Driver and 1" Exit HF driver put out enough level for a small band. Going down to a realistic 65Hz, this little 8 more than held its own next to its larger siblings and the Metrix, though it was driving at its limit, while the Metrix still had a lot of headroom left.

Feedback (the good kind)

Scott Mullane of Aisle 6 Productions and Peter Morris of Adelaide Sound Hire shared their thoughts on the speaker demo with me. "I think Adamson's focus on a clean midrange is apparent," observed Scott. "It's really clean and clear, and the 8s are very impressive." Peter agreed; "I loved the 8s, they were my favourite. I was particularly impressed how natural everything sounded with just David's voice." Scott also agreed that the demo was most likely much louder than we thought it was. "We associate the point at which speakers start to intermodulate and harmonically distort with loudness," he offered. "When the signal is clean, we can tolerate a lot more SPL than we normally think we can."

"That 8 is pretty impressive!" added Greer Compston of New Zealand Adamson distributor Direct Imports. "Everyone wants smaller loudspeakers in more compact packages, and Adamson have done a great job. We sell other brands, but having Adamson allows us to have something a bit different. It's a passive option



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GREER COMPSTON AND MIKE HUGHES OF NZ'S DIRECT IMPORTS

LIFESTYLE SYSTEM'S MICHAEL CUTHBERTSON AND HILLSONG CHURCH'S RICKI COOK

FROM LEFT: JON CAISLEY OF PHASE ONE AUDIO, CRIS SIRC OF AVL PRODUCTIONS, GRAEME WHITEHOUSE OF NORWEST/NW GROUP & CMI'S MARK WAYTE

when most competitors are active." Greer has had a lot of success in the worship market with Adamson, and has installed their products into six churches so far. "It's come on the back of Hillsong using the product in Australia," Greer explained. "Though since our first installation, the next five have all gone to different denominations that are quite different in their worship styles. It's because it's a really compelling offer and just sounds so good."

On The Gig

Production juggernaut Norwest have long been fans of Adamson, with their inventory including 100 Y-Axis cabinets, 24 T21 subwoofers, a Spektrix PA and a Metrix rig. "The Y-Axis system is capable of anything," illustrated Graeme Whitehouse, General Manager of the NW Group. "It finds its home in our market at festivals, particularly electronic dance music. It's a good rig for dance music because of the low end in the air straight out of the Y-18s, rather than having to rely on ground subs to provide that low mid."

Norwest find the smaller rigs handy for high-end functions for corporate clients. "The Metrix is a great little PA to do multiple hangs through those long heritage-type buildings in Sydney like Australian Technology Park," Graeme continued. "It's a great ballroom PA to distribute, and you can still put the corporate after-dinner party band through it."

The Main Event

Heading out into the sunshine with a full stomach and open ear, it was time to crank up 12 elements of S10 and six A218 subs, all driven from just one E-Rack, which houses three lab.gruppen PLM Series amps, a Cisco switch for Dante connectivity and Adamson power and signal distribution. First impressions of the S10 is that it moves an incredible amount of air for the physical space it takes up. While

starting out with light acoustic and acapella material, the clarity and precision we heard in the smaller models was evident. When cranked up and fed hard rock and metal, the S10s held their composure while forcing most of us back about 30 metres. What looks like a small system could actually power an outdoor stage at a festival, and be more than adequate as mains in big venue.

Adamsons' task now is to get their brand on touring riders. While no sane engineer would ever turn up their nose at Adamson, they don't appear as often as their main German and French competitors. This is partly due to their success in Europe and in installations, neither of which generate as many riders as the big US-based touring acts. There's really no reason at all why this should be the case, and to my humble ear, I think the Adamson is just as good as both its main competitors and slightly better than one of them.

BELOW: THE ADAMSON E-RACK POWERING THE S 10 DEMO

LEFT: NOT JUST ABOUT ADAMSON; CMI BRANDS MACKIE, MC² AND XTA HELP RUN THE SHOW





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JPJ Audio chief Eric Robinson died on November 11 from complications with cancer. He had just turned 67 and had retired to Port Douglas.

Eric was the best known pioneer of Australian live production, having taken control of Jands in 1970 from its founders. Eric and the Mulholland brothers Paul and David drove Jands hard, quickly taking the lead as the premium supplier of live audio and lighting for concerts and events.

Jands were there at the start of many technologies; the advent of horn loaded two, three and four way PA systems; and the first multicores allowing a mix position in the audience instead of side of stage.

Eric forged alliances with international firms like Clair Brothers, and networked touring acts to fast establish a reputation for professional delivery of audio and lighting systems.

The 1970's were difficult times with very high import tariffs forcing the cost of imported equipment sky high. Bands played in venues with hostile staff in a climate of confrontation. Rock and pop music was regarded as 'anti authority', a real generation gap existed. This climate made building a business like Jands hard work.

Eric stared down competition with ruthless determination. Cashmore Sound, Artist Concert Tours, Sound on Stage, Concert Lighting Systems, Troy Balance Corporation, WRM and Arena Technical Services all competed against Eric but only Eric prevailed in the concert arena. Jands reached market dominance quickly, and expanded year on year into the 1980's.

Because of the high tariffs and sales tax it was necessary to build as much as possible locally. Jands provided their own mixing consoles, crossovers, amplifiers, dimmer racks, speaker cabinets, road cases, par cans and lighting hardware. They designed their own composite speaker system, the Concord.

Eric won the Vari*Lite agency which gave Jands an unassailable position through the 1980's as a one stop supplier. He would negotiate hard, play hard, and sometimes take chances. But he always managed to deliver on time, and maintained professional production standards.

Jands acquired the agency business for JBL, and grew into two separate firms - Jands Electronics handling the manufacturing and wholesale distribution, Jands Concert Productions handling hire and concert work.

In the late 1980's Eric sold Jands Concert Productions to Samuelsons PLC in the UK, and took up a position as head of production there. After 18 months the frustrations of trying to get a public company to understand the philosophy



of running a personalized service company became too much and Eric returned to Australia to run the Australian operation for Samuelsons.

In 1990 Eric and his partners at Jands repurchased the concert production company from Samuelsons - for just half what they had been paid. The equipment was repainted and the firm rebranded as Jands Production Services. Eric saw off several more competitors, and resumed doing what he did best - making deals and running a production firm.

Eric saw the potential of theatre, and Jands made solid inroads into that market which today forms a respectable part of their audio rental business. He sold the lighting side of the company to Bytecrafft, and became the first rental firm in the region to adopt line array technology in 2000.

This year Eric was honored with the Sue Nattrass Award at the 2015 Helpmann Awards for his longstanding commitment to the live performance industry.

He considered the company's in-house training scheme to be one of his greatest achievements. The scheme has been running for over 25 years and his staff are recognised globally for their technical prowess and professionalism.

He had a reputation for technical excellence, reliability, safety, business acumen, and his endeavour for perfection. Eric was endearingly successful, and had an extremely close partnership with Paul Mulholland where they played to their strengths, often with a 'good cop, bad cop' routine that was devastatingly effective.

Eric is survived by wife Patti, daughter Tara and younger brothers Edward and Peter.



Starting as a musician in the UK, he found his feet as a technician at a backline hire company. Moving to Sydney in 1984 from London was an intermediate step with his wife Sue, en route to San Francisco. The arrival of two daughters and twin sons led the family to put roots down in Australia.

Phil spent many years running operations at Intercity Hire, the precursor to Intercity Staging which became Gearhouse Group. When that firm collapsed he worked for Silas Creel at Impact AV. He was the go-to guy for audio and big corporate gigs. He toured overseas.

When he returned from tours he would hide presents for his kids round the house, and play a game called 'hot and cold', where they hunted the house for the goodies.

Phil was hands on, enormously practical, and just brilliant at the dark arts of audio visual technical. A long line of colleagues paid tribute to his quiet, confident mentoring.

Five years ago Phil fell to bowel cancer and had surgery. Then followed more treatment, and surgeries and a journey that included getting dry from alcohol. His daughters, and his rehab clinic counsellor were frank about his treatment, that saw him beat alcohol three and half years before he died.

Older daughter Laura said she is not a little girl any more, but she is still Phil's little girl. Second daughter Martha said that he taught her "to be the best version of me that I can be."

"My dad was the best. My dad was my hero", Laura said. Laura learned the craft of stage management from Phil and practices this today at her church.

Josh Kelly, twin to Rory, said that his dad taught him "to be a selfless human".

The celebration of Phil's life, at Hillsong chapel in Sydney's North-West was vibrant. It was a full house.

It's a story that ends with peace.

Philip "Horace" Kelly passed away on 23rd October, 2015 aged 64. He didn't actually have a middle name as he said his parents couldn't afford one, so he invented Horace. This gives you an idea of the quiet humor the guy possessed. The Sydney based audio visual technician had a career behind the scenes and died quietly from cancer.



Vale Joe (Jose) De Abreu - Austage founder

Joe came to Australia in 1963 from Madeira, Portugal and from the beginning had to win his fights in the schoolyard as an immigrant to survive. He did this and also protected those not as resilient as himself.

This was the type of person he was. Strong minded and determined, yet kind and considerate of others.

Joe left school at 15 years to help his family. He was an intelligent man and won apprenticeship of the year when he completed his studies as a qualified electrician in 1971. He worked on some very large projects and was managing crews of men when he was 22 years old.

He refitted the Capitol Theatre and there met Harry M. Miller. Harry realised that this was no ordinary man and employed him to help stage the ground breaking musical Jesus Christ Superstar. To have a qualified electrician in theatre was not common back then and JCSS was a complex technical show.

Joe went on to do Rocky Horror for Harry and also tour Superstar through NZ and Australia.

Joe had an ability to handle emergencies calmly and efficiently and learnt quickly. He went on to do lighting design for the Nimrod and Elizabethan Theatre Trust, John Frost Productions and too many productions to name. He also often did the lighting design for the many productions that performed at the Seymour Centre whilst he was resident Head Electrician and then technical manager during the 1970's and 80's.

Joe moved into Corporate Events and worked at Audience Motivation in the late 80's as technical director and production manager. Joe was innovative and loved a challenge and could find a way around any technical problem put to him. He worked on the design and installation at the world Expos in both Brisbane and Spain for the Australian pavilion with great success.

Joe had met his wife at the original JCSS and they had travelled and worked together for many years, having 3 sons during that time. In 1994, seeing this as an opportunity for their growing sons, Joe and his wife Colleen combined with Bruce McIntyre and his wife Mali, to start Austage Sydney.

They were dedicated and worked hard for little or no wage and the company grew and became renowned for always having well maintained gear and high standards of presentation.

Eventually Bruce moved on in 2001 to be a fruit grower in Queensland and Joe grew the business into a well respected and sought after services



company to the Corporate Presentation Industry. He brought his sons Jayson and Shaun into the industry and mentored them to his high standards. He expanded the company to Perth and Melbourne and thanks to his generosity and hard work there are many in the industry who thank him for their career start in life.

Joe loved to help people above all else and has provided many charities with low cost or no cost gear to aid their cause. In 2012 Joe was inducted into the Hall of Fame of the The Golden Stave in recognition of his longstanding support.

Joe was a clever and kind man with strong family values and enduring bonds of friendship. He was a worker first, helping to set up a show regardless of his title, because to him "the show must go on" was a strong mantra. It was important to him that all aspects of his company's work ethics and approach to presentation were of the highest quality.

Joe never failed to help anyone in need, be it an employee, a friend, a colleague or a stranger. The sense of loss in the industry at his passing is immense. He will be sorely missed by his wife Colleen, sons Jayson, Shaun and Daniel but his legacy will live on through his sons and his loyal employees. Joe wanted people to donate for Asbestos research, as it was exposure to this toxic product that cut his life short.

The link is here:

<https://give.everydayhero.com/au/joe-de-abreu>



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JULIUS RECENTLY FOUND HIMSELF IN THE OFFICE ON A FRIDAY AFTERNOON PACKING A CASE OF MICS FOR ME. THE GIG WAS SOUND REINFORCEMENT (OUTDOORS) FOR AN ORCHESTRA, AND I'D BEEN ASKED TO SUPPLY SOME MICS. ALL GOOD, BUT A FEW OF MY CHOICES LEFT JULIUS WONDERING JUST WHAT I WAS THINKING...

which mic? And Why

SO HERE'S THE LIST

INPUT	SOURCE	MIC
1	Violin 1A	DPA 4099V
2	Violin 1B	DPA 4099V
3	Violin 2A	DPA 4099V
4	Violin 2B	DPA 4099V
5	Viola A	DPA 4099V
6	Viola B	DPA 4099V
7	Cello A	DPA 4099C
8	Cello B	DPA 4099C
9	Double Bass	DPA 4099B
10	Keyboard	Radial JDI
11	Flute	Sennheiser e914
12	Oboe	Sennheiser e914
13	Clarinet	Sennheiser e914
14	Bassoon	Sennheiser e914
15	Percussion	Mann M11
16	Horn A	AT2020 or Sennheiser MD421
17	Horn B	AT2020 or Sennheiser MD421
18	Trumpet A	Beyer M69
19	Trumpet B	Beyer M69
20	Trombone A	Audix D4
21	Trombone B	Audix D4
22	Singer 1	Schoeps CMC6/MK4
23	Singer 2	Schoeps CMC6/MK4
24	Singer 3	Schoeps CMC6/MK4

BY JIMMY DEN-ODEN

And Here's The Explanation:

The string instruments were all treated the same - DPA 4099 mics on appropriate mounts. The aim here was to capture more of the instrument and less background noise. Putting a mic on every individual instrument makes the changeover a little slower, but the results are worth it. Low end response on the 4099s is neutral at about 20cm from the source, so if an instrument is a little thin you can bend them in a bit closer to compensate.

A Radial JDI handled keyboard duties. The JDI has a SUM button which allows you to plug a stereo source into it without causing weird impedance problems, and since the PA was mono there was nothing to be gained by running a second input (other than reliability, and really if the JDI works at the start of the gig it will still be working at the end). I went for a passive DI because keyboards tend to have pretty high output levels to start with, so there's no need to complicate things with active electronics.



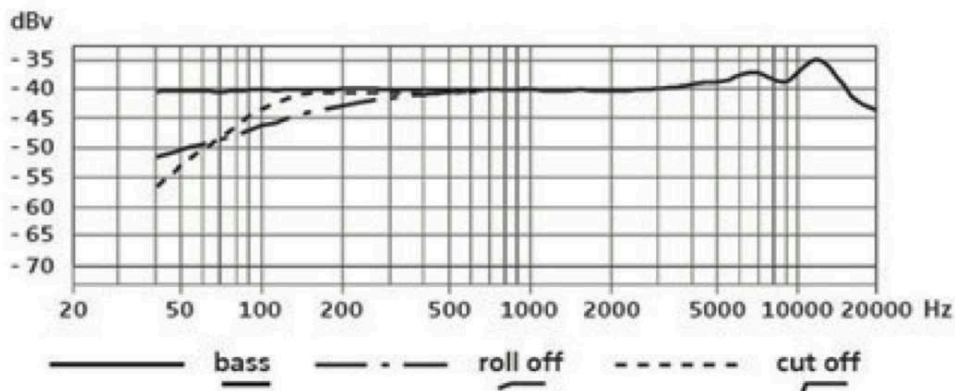
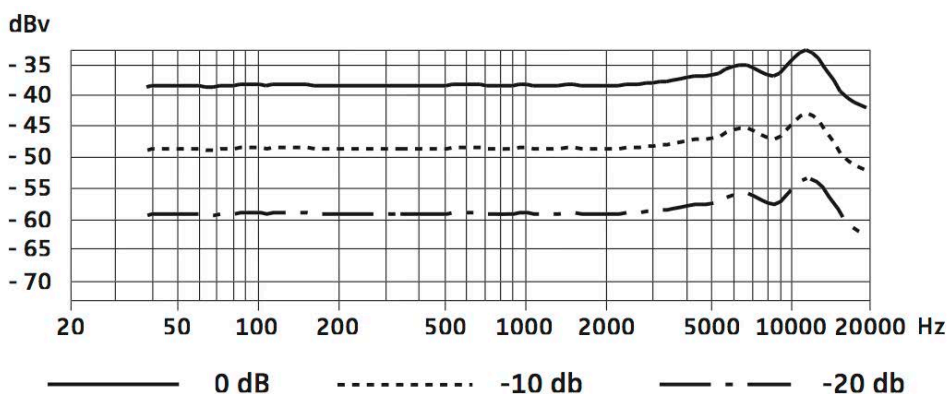
Sennheiser e914 condensers were used for flute, oboe, clarinet and bassoon. The e914 has a cardioid pattern with pretty good rear-axis rejection. There's also a little rise in the upper frequency region – around 6k which I quite like on “breathy” instruments. It sort of adds a little life to them.

The Mann M11 is a small diaphragm condenser mic, and one of the most under-rated things ever. With a cardioid pattern it's quite a good option if you need a wide pickup area. In this case there was a reasonably involved percussion setup and only scope for one mic to cover it all. The low end rise means you can put a bit of distance between the mic and the source too, so it doesn't get in the way of the player.

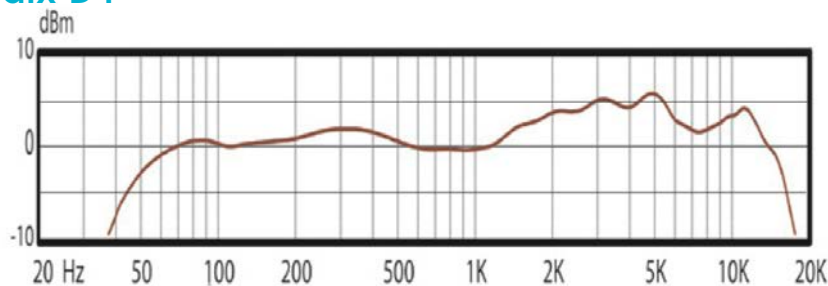
I'd actually planned to use Audio Technica AT2020s on the horns, but I didn't have any suitable windsocks. Also, I wasn't sure what kind of horns would turn up so instead I chose to use a pair of MD421s which I reckon are a bit more generic and user friendly. My 421s are all pretty old – a combination of U5s and even a U4, but functionally they're not too different from the series II which is still produced. The roll-off on the 421 is a useful little tool, and because they're physically quite big they give the player something to focus on (no kidding, I knew a drummer who liked the Rode NT4 as an overhead for the same reason, it gave him something to look at!). The weird shovel-like appearance of the MD421 can be confusing to some folk – many people incorrectly assume it's a side-address mic.

Beyerdynamic M69TG mics were used for trumpets. They have a pronounced but still gentle roll-off from 200Hz down, and really a trumpet doesn't do a lot in that region anyway. The roll-off see the mic 4dB down at 100Hz, so it tempers low end without actually losing any fundamentals. It's also a great vocal mic, but best on a stand as it exhibits a bit of handling noise.

e914 Frequency Response



Audix D4



Audix D4 plus trombone seems like a weird combination, but if you think about it the D4 is commonly found lurking out on instruments like floor toms. If you go down to the fundamental, trombones actually inhabit a pretty similar region of the frequency spectrum to a floor tom. The D4 has a hypercardioid pattern, and with the trombones right next to the trumpets

I wanted to achieve a bit of isolation between the two.

Lastly the Schoeps MK4 for the singers. The show featured Opera singers, and for this style of singer I find it works better not to close mic them. The MK4 is a hypercardioid mic, and it's good on a vocal from about 12-18" away. In this case, that's about how far away the vocalists naturally position themselves from the mic, so it's a good match.

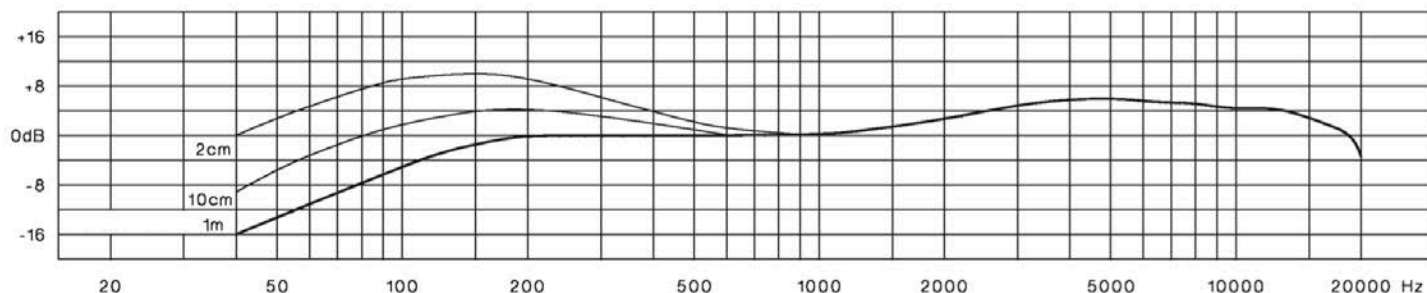
Beyerdynamic M69TG

Frequency response curve

±2.5 dB

0 dB = 2.9 mV/Pa

M 69



LISTEN HERE

BY ANDY STEWART

DIY Mixing ...well almost

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



The trend towards DIY mixing, followed by *'a bit of polishing'* from an audio engineer, is growing rapidly. But what are the benefits and pitfalls of this approach? Is this two-stage process really worth it? Does *'doing it yourself'* really save you time and money or only cause grief, as you try to *'fix'* the mixes with a professional *after* the malaise has set in?

Maybe you'll save some cash doing it this way, but some might say this approach shows a fundamental misunderstanding of what mixing is all about...

See this a lot: a band has an album to mix that they may or may not have recorded themselves, and after some contemplation, one of the members decides to mix it on their own.

Fair enough. If you know what you want your album to sound like and you think you can achieve that without any outside involvement, then by all means, go for it.

But what if your mixing skills aren't quite up to the challenge? What happens when, after weeks of wrangling the DAW session trying to land the mixes, you hit a wall, unable to find solutions to your problems?

That's when most people call in a professional to (hopefully) fix their mixes – after they themselves have run out of answers.

But in some respects this is false economy. After reaching a mix impasse, often creating messy session files along the way, it's not necessarily simple or time-efficient to expect (often for a pittance) someone to come in and resolve your mixes for you. Often it's more time consuming and costly to decipher an average mix file than simply starting again from scratch.

But when you've put in all that hard work you generally don't want to hear that it would be better to just scrap it all and start again, do you? Therein lies the problem.

These hybridised two-stage mixes are often beset with technical and emotional dilemmas as you try to preserve and protect the work you've done, even though it presumably hasn't produced great results. So why do it? What motivates someone to get involved in mixing *most of* their own work?

'NO-ONE UNDERSTANDS MY MUSIC BETTER THAN ME'

There are lots of reasons why people choose to mix their own music. Some just like the challenge. Others do it because they anticipate that it's far easier to mix the work themselves than elucidate their vision to someone else. Then there's the semi-professional or professional engineering brigade who possess more than enough skill to work on their own stuff...

But the vast majority of people who opt for the DIY approach are musicians with a computer who simply can't afford to spend thousands of dollars getting someone else to do it for them – all fair enough and perfectly reasonable scenarios of course.

So if you're heading down this path, expecting to do 'most' of the mixing yourself, perhaps only getting a professional involved to tinker around the edges with tone and levels before 'signing off' on the mixes, here are a few things to consider.

Lost in translation: Don't expect things to translate easily if you're transferring a complex mix session file into another computer. Most engineers like to use their own computer, but very few will always have every single plug-in that you might have used in your sessions. Things like soft-synths and MIDI instruments may also be rendered mute (or even causes crashes) in another computer.

If you're expecting to get straight to work on 'finalising' your mixes with someone else on their 'foreign' computer, where possible, convert all your MIDI instruments into audio tracks by bouncing them out, remembering to make sure the original tracks are inactive (or absent altogether) from the clearly labelled fresh session file you create specifically for the task at hand. Alternatively, make sure you have a discussion with the engineer well in advance of the session about what they may or may not have onboard their system.

To stem or not to stem: This is possibly the trickiest question to answer in relation to the hybridised mix process. To the unfamiliar, a 'stem' is simply a single or group of processed (or unprocessed) channels that represent some aspect of the mix as it currently stands.

A stem mix session file might consist of stereo audio channels of say all the guitars (processed), the main vocal (dry), its effects in stereo (maybe), drums in stereo (and maybe kick and snare on their own), bass on its own, keyboards in stereo (maybe), percussion in stereo and so on...

If that all sounds pretty messy and vague already, you'd be right.

In short, stems are a total can of worms with the main dilemma always centring around questions like: "What should I group together as a stereo stem, what should I leave separate, what should I edit or leave for the engineer to edit, which channels should I leave plug-ins on, which MIDI instruments should I print out?" and so on.

It's all about anticipating what ought to be 'locked out' of the final mixing session, and which ingredients should remain 'up for grabs'.

Some would argue that stems are the way to go because they remove all the issues pertaining to plug-in and soft-instrument translation, and take out all the so-called secondary roles of editing and file cleanup that might otherwise bog down the session or tempt the engineer with

too much scope for change. That way, things presumably move faster and more concisely, cost less, and prevent the possibility of a remix.

Presenting the mix engineer with an '*almost finished*' stem mix file means they can tweak but not really reinvent things.

Problem is, deciding what's locked off and up for grabs about the ingredients of a mix is fraught at best, particularly when the person making these decisions is typically the same person who couldn't land the mix in the first place. As a result, often more time is wasted trying to get around the limitations of the stems than would otherwise have been spent manipulating the original multitrack mix file.

This goes to the heart of the matter. Stem mixing is a compromise most of the time. Personally, I would argue that it's a largely ineffective, hamstrung process. But if it's an unavoidable reality for you, remember this: less control means less effective change. If you want the engineer to have more control, offer them a more open session where things like fades are long (or even raw), most instruments aren't grouped and things aren't printed with their effects, especially the vocal. If you love your mix, convinced that it's excellent but just needs a few levels checked, by all means offer the engineer less scope for change.

Working for peanuts: Then there's the issue of payment...

If money – or indeed a lack of funds – is the main driving force behind doing the bulk of the work yourself, don't let the mixes get to the stage where you're desperate for professional help, but then go cap-in-hand to a mix engineer with virtually no budget. Remember, it's not the engineer's fault that you have mix problems and very little funding with which to resolve them. Music is an emotional experience and sometimes this can cloud your judgement about what's fair and reasonable with respect to employing others on your project.

Some but not others: The other issue to consider is whether or not to involve an engineer in some, but not all, the music on your album. This can have the desired effect of making the *mix process* cost less but perhaps not the album overall. By this I mean, inconsistency and multiple-environment mixing can have the knock-on effect of adding more time and therefore cost to the mastering process. It can also create undesirable inconsistency across the tracks, where some songs on the album sound finished while others seem relatively underdone.

In many respects you're better off giving all the songs to a mix engineer, even if that person only spends a small amount of time on the less critical tracks. Working on all the tracks, rather than just some, improves everyone's ability to make clear judgements.

And finally... if you think you're immune from making the wrong judgement call about whether to take a 'full' or 'stem' mix session file to an engineer, think again.

The best thing you can do to prevent this potentially grievous error is communicate thoroughly with the engineer about what you anticipate the problems to be, and solve them before you walk through their door.

Good luck.

Allen & Heath dLive

Lessons learnt

BY JIMMY DEN-ODEN



Allen & Heath has come a long way in the digital console market since the release of their first effort, the iLive.

I was initially skeptical about iLive because I thought it was over-priced and clunky – indeed the first generation console didn't find widespread market acceptance here in Australia. But since then the company has revised the software several times and released new hardware options, and I've also done a lot of gigs on the platform. I've warmed to it over time and now I rather like it. Allen & Heath has also released a range of smaller format consoles such as the Qu series, which have been warmly received across the industry, and rightly so.

dLive is a nice summation of the lessons the company has already learnt about building digital desks, coupled with new design and features. Added to this it's a hugely capable platform with a relatively small footprint. Like iLive, the dLive system is based upon a mix rack with control via a remote surface. Since the mixing takes place in the rack, it makes sense to start the review there.



Under the hood

Physically the DM rack looks quite a lot like its predecessors, if a little more expandable. Three choices of rack are available, the obvious difference being the number of analogue IO ports – 32x16, 48x24, or 64x32. Every rack features three 128 channel audio expansion card slots (called "ports"), as well as dual redundant hot-swappable power supply slots. Dual GigaACE ports provide redundant connectivity to the console, and four DX ports work in dual redundant pairs. An ME port allows connection to personal monitoring systems, and the rack also has WordClock in and out ports as well as dual Ethernet connections.

As far as I can tell from the specs, mix engine capability within the racks is identical, supporting 128 input channels and 64 mix outputs all with full processing. Of course with a maximum of 64 inputs included on the biggest rack, you might need some more IO to get to 128 inputs. Enter the DX32 expander – up to two of these can be connected to the mix rack (and another to the console) via the DX ports.



The DX32 is a four slot modular IO box, with card options including 8 analog input, 8 analog output, and stereo AES3 equivalents of both. Redundant power supply is optional.

I measured latency from analog input to analog output at 0.7mS, which is basically negligible. The console runs natively at 96kHz. The system is pretty fast in general – I experimented with changing the bus structuring to see how long the recovery took – I was back up and running in about 10 seconds. I disconnected the mix rack from the surface and when plugged in again it re-acquired sync inside a second or two.

On the surface of things

Just like the mix rack, the dLive surface is available in three different sizes. The S3000 has a single touch screen and 20 faders. The S5000 and S7000 surfaces have two screens. The touch screens are multi-touch and gesture capable, so for instance you can zoom in and out of the patch window by making a pinching motion with a finger and thumb.

The left screen shows channel information while the right screen shows more generalized functions such as metering,

patching, and console setup. I would love to be able to swap the screens, simply because I tend to look at the channel functions more frequently and the right side screen sits more comfortably in my eyeline. Adjacent each screen is a series of rotary encoders – the ones on the left adjust gain, and filter parameters. The six encoders at the right of each screen can be flipped between three function sets, each of these customized with send levels, or dynamics parameters.

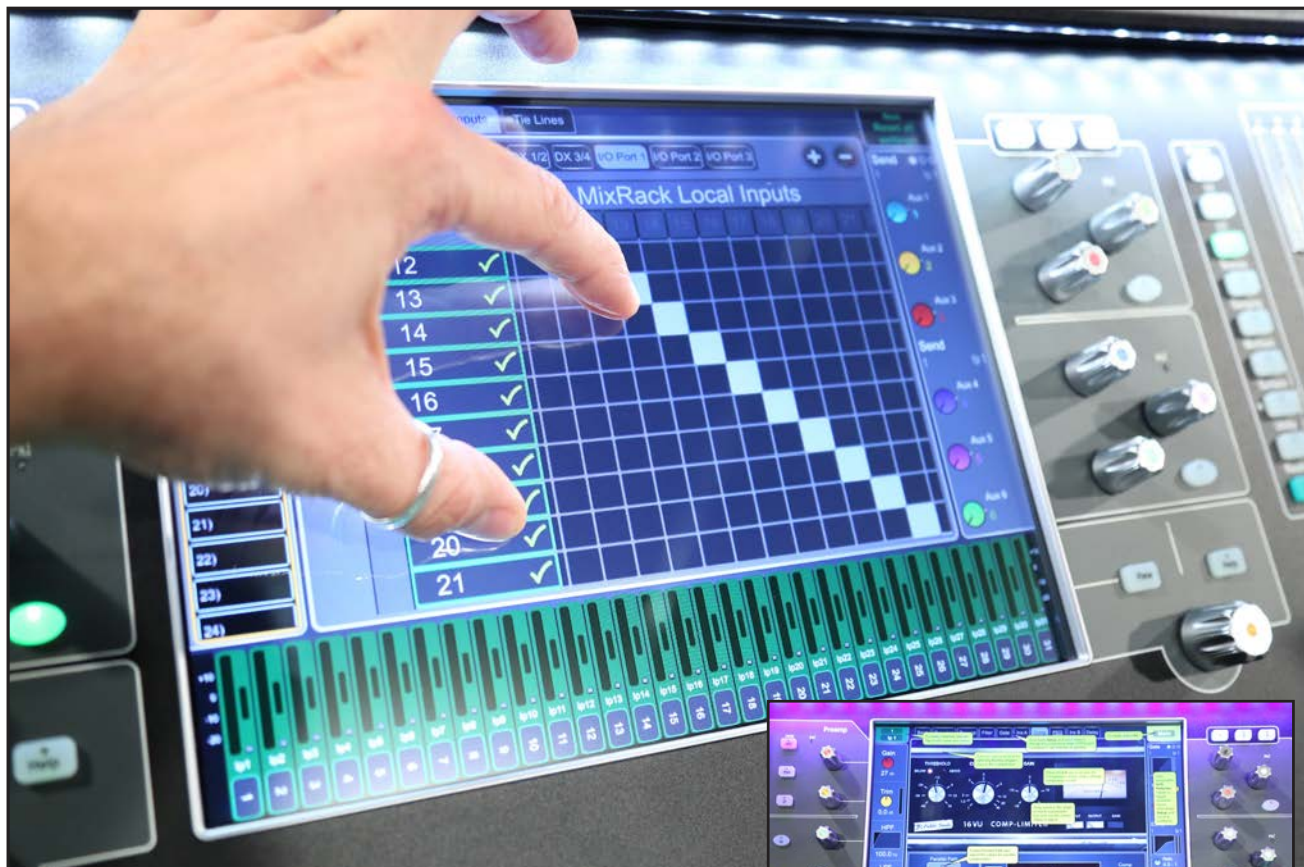
In fact several parts of the console are customisable, not the least of these being 26 user function keys running the almost entire length of the right end of the surface. Screen displays can be customized too, with custom meter sets easy to build. The channel EQ display can be shown in the same format as the iLive does it, or as EQ curves overlaid on a grid. You can grab a point on the EQ and drag it up and down to side to side.

Channel dynamics are decent, with a couple of library presets bearing a striking resemblance to some real-world processors you'll know very well indeed. These can be used without chewing up any of the 16 effect

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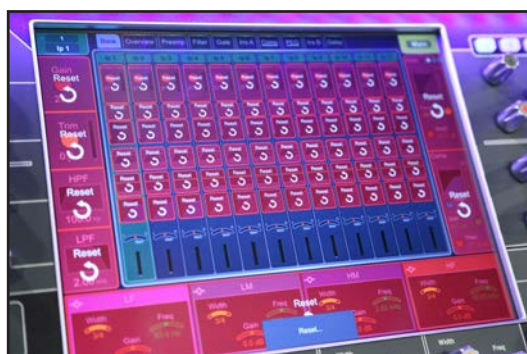
slots. I like the on-board effects selection available on the dLive. Admittedly you'll probably head for a reverb more frequently than the infra bass effect, but it's nice to know it's there if you want one.

The encoders above each fader can be assigned to perform a range of functions including gain, pan and HPF, plus three user assignable functions. In addition to this, they can now be used as send levels too, so you can simultaneously be mixing to the main but on the faders and an auxiliary on the encoders.

A "listen" feature allows you to solo an individual section of a channel – whether it be a gate, compressor, or EQ. Hold the "listen" button and the screen lights up yellow with all the different things you can choose. A reset button allows you to instantly restore channel parameters to their default values in much the same way. A help function brings up bright yellow dialogs all over the screen explaining the function of each section. Fader banks can be selectively linked too – previously on the iLive fader linking was an all or nothing deal. It's just one of many little but thoughtful interface refinements which make the console nicer to interact with.

The industrial design of the dLive surface is great. It's a good looking console, and not near as busy as something like this could have become if it went wrong. I really like the customisable illumination of the surface, screens, LEDs, and top edge light strip which can be faded between white and blue. Fader layer changes are snappy, and the rotary encoders have an extremely "natural" feel to them. Lifting the surface is a two person task, but this is due mainly to bulk not weight, so it's not a taxing job.

Even if the dLive was an utter pig of a thing to drive, you'd still have to admit it provides a lot of mix bus for not much money. But it's not a pig, it's a really good console to operate on. It's the best of everything from A&H so far. I like how it feels, and moreover I like what it represents.



BRAND: ALLEN & HEATH MODEL: DLIVE
RRP: DM48 RACK AND \$5000 SURFACE
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Clay Paky Mythos

Compact hybrid fixture

BY JIMMY DEN-ODEN



It's no secret I have a lot of time for Clay Paky. I love how well the company does optics, and the Mythos is perhaps one of their neatest achievements yet.

It's a compact fixture with a 1,500 hour, 470W discharge lamp. Luminous flux is stated at 23,000lm, native colour temperature is 7800K, and the front lens is 160mm wide.

Mythos is happy to operate in any orientation you can think of, and the absence of holes on the base of the fixture mean that while it's not IP rated, it's among that class of fixture which is more likely to tolerate a bit of rain until you can get up to the truss and bag it. Pan and tilt ranges are 540 and 244 degrees respectively, and I suspect the tilt range has been thus limited to prevent you from pointing the fixture at its own base.

Mythos is marketed as a hybrid, the idea of this being that it can work as a profile, wash or beam light. To do this successfully a unit needs to be able to pull sharp focus on projected gobos, have a good zoom range, and be capable of kick-arse beam work too.

Beam effects within the fixture begin with a pair of gobo wheels – the first is an 18 position (plus open) fixed metal gobo wheel, while the second wheel provides seven 25.9mm rotating dichroic gobos. Because of the way the focal lengths work, the rotating wheel is not available when the fixture is in beam mode. Add





to this an animation wheel and dual prisms, and you've got a good range of beam features for both aerial and projected effect work. Different wheels allow for sharp focus at different zoom ranges – the fixed wheel is good for 4 to 31 degrees, while the rotating wheel allows 6.7 to 50 degrees. Mythos has a focus tracking system, which means when you zoom in and out the fixture will adjust focus in real time to compensate for the changing focal lengths. Three colour wheels allow for graduated CMY mixing, and there also are 14 fixed colours spread across these same wheels. Two CTO and one CTB filter are included, so there is some scope to colour match to tungsten sources. A variable frost filter allows the user to subtly soften beam edges or even diffuse the whole beam. Position, gobo indexing and focus functions are controlled with 16 bit resolution. Mythos is from the same family as Supersharpy, and the two fixtures have more in common than just

physical appearance – the main feature being beam functionality. Mythos can be switched into beam mode to produce a 2.5 degree beam. This can be further narrowed using one of the six beam reducers on the fixed gobo wheel. Obviously care is required when operating in beam mode, as the output is concentrated at a point outside the fixture body. A safety feature allows Mythos to automatically blackout if DMX is lost, and another prevents beam mode engaging during lamp strike.

Of course the challenge with concentrating so much output into a narrow beam will always be dimming the output in a nice tidy manner, especially at low intensity. While Mythos struggles a little to produce extremely low output in beam mode, I don't think this really matters since it's an unrealistic application. Dimming is more likely to be used with the fixture on spot or wash duties, and for these applications it's certainly more than acceptable.

The menu allows for three complete user configurations to be stored and quickly recalled to help reduce setup time, and there's also a "quiet mode" option. Not that Mythos makes a lot of noise – we reviewed it on video and whereas some fixture cooling fans are distractingly loud, this one was far from it. It doesn't move as fast as something like a Sharpy, but it has other strengths. An internal battery allows the menu to be used without applying power to the unit.

It's little wonder Mythos has rapidly found such popularity in production houses. If I was going to equip a lighting hire department with only one type of fixture and I didn't care about needing to re-lamp periodically, this would have to be one of the strongest contenders for the job. One type of fixture, one type of spare lamp, one console profile... It's an appealing prospect!

Whether it was beam, wash or spot tasks, Mythos was good at everything I asked it to do. It fits the bill as a versatile hybrid lighting fixture, and does so with extreme competence. I like it a lot.



BRAND: CLAY PAKY

MODEL: MYTHOS

RRP: \$15,799.00 INC GST

PRODUCT INFO: WWW.CLAYPAKY.IT

DISTRIBUTOR: WWW.SHOWTECH.COM.AU



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FBT J series powered speakers

Really fantastic plastic

BY JIMMY DEN-UDEN



While there are about a bajillion 15 and horn boxes on the market, the smaller end of town is distinctly less crowded.

I was recently given reason to take stock of the products available in this category. FBT certainly aren't the only player in the sub-compact self-powered plastic box market (yes, I just invented the term), but they are one of the more prominent ones.

Some 25 years ago FBT released a self-powered plastic box called the Jolly, and it was a wonderful little thing. Compact and decent sounding, they were very reliable too. If truth be told FBT probably built the Jolly a bit too well (if it's possible to do such a thing), since many of them are still out there, making their owners money. The current J series is a very different beast, with all new amps, drivers, and even power supplies.

The J series encompasses boxes from 15" right down to the sub-compact 5" model. I look at a lot of bigger speakers, so the small stuff is what had me most interested in the range. But why? What are the applications for such a speaker? More plentiful than you might imagine. Small corporate events, delays, interactive AV systems, exhibitions & art installations, distributed sound systems, shout-boxes, lip-fills, and

even compact foldback wedges all call for small but effective speaker systems.

FBT builds their speakers (and their drivers) from scratch in Italy, and they offer a nice sensible range of accessories to go with them. In something of a first for a CX speaker review, I'm not even going to address the specs. The thing about speakers is that they're all subject to the laws of physics. Don't believe anyone who offers you new physics, there's only so much air you can move with a 5" or 8" driver. This means ANY speaker this size will have some inherent limitations in both SPL and frequency response. In this case it's enough to say the J5A and J8A each make the most of the opportunities afforded them by this reality. I measured sustained SPL at 1m using pink noise as a source. The J8A achieved 108.8dBASmax when the protect LED illuminated, while the J5A achieved 102.4dBASmax before audible limiting took effect.

So they're plenty loud for their size, but more importantly they sound good. Again, because of physics you'll never achieve high level low frequency response from any enclosure this size. If this were possible we wouldn't need subwoofers. At low operating levels both speakers provide a well balanced response with reasonable low frequency extension, while higher output levels are better reserved for vocal range frequencies and up. The J8A includes a "boost" button which applies gain in the LF and HF regions. Both speakers include a mic/line level input select button, jack connection, input level potentiometer, XLR input and loop outs, and high pass filter button.



The high pass filter is clever, since it allows you to devote more of the amplifier headroom to the frequencies the speaker can efficiently reproduce – hence making it louder at those frequencies. A really great feature for speech use! Another nice feature is the included 3m IEC cable – I've never known the included IEC cable for a speaker to be long enough to reach the ground before seeing this.

Because installing a standard size top-hat would require making the speaker bigger, the J8A uses a reduced diameter top-hat which requires an optional adapter to use with a conventional speaker stand. The J5A weighs a little over 3kg, and an optional thread adapter allows it to be mounted on a mic stand. Not only is this more space efficient, but it's a lot less visually imposing than a conventional speaker stand. Single and dual carry bags are available for the J8A and J5A respectively, as are vertical wall-mount and horizontal U brackets.

I really like both these speakers, and in some ways find them more appealing than larger products. They're extremely solid performers for their size, not to mention great value too. The feature set is useful without being excessive, they sound good, and I can think of a heap of practical deployment options. FBT has another winner on its hands.



BRAND: FBT
MODEL: J SERIES
RRP: J5A - \$525.00 INC GST.
J8A \$829.00 INC GST
PRODUCT INFO: WWW.FBT.IT
DISTRIBUTOR: WWW.AUDIOBRANDS.COM.AU

Litecraft
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THE LATEST GEAR



Pageant X3



LED Move 350



Mega Strobe 5000 RGB



LED Multipar 7FC



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Stage Blinder P2

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ClearCom FreeSpeak II

Real freedom of speech

BY JIMMY DEN-ODEN



ClearCom would have to be regarded as one of the main big players in the comms industry, and with a comprehensive array of product spanning wired and wireless point-to-point and partyline systems, it's little wonder.



The FreeSpeak platform has been around for long enough that it was time for an update, hence FreeSpeak II. The system is made up of a base station, one or more active antenna transceivers, beltacks, and optional antenna splitters.

The series II base station is basically the same as the original series I base, so with a little firmware update existing users of the platform can quickly be on the way to updating. The base station features dual partyline connectivity, plus PGM in and stage announce outputs, as well as four 4-wire ports and GPO connectivity. The front panel has a blue dot matrix display with adjacent rotary encoder / button for basic configuration. Optional connection to a ClearCom Matrix system, allows more advanced beltack functionality – basically each beltack works like a comms panel in the matrix system.

Three versions of the base are available – we tested the mid-range “FreeSpeak II” base which supports up to 20 packs concurrently. Antenna splitters allow up to 5 antennae to be hooked into a single port on the base

station – even remotely. Existing antenna splitters can also be used on the new platform after a simple modification (performed by the distributor).

FreeSpeak II operates at 1.9 or 2.4GHz, or even a combination of both bands if you want. The choice depends on which antennae and beltacks you use. The base station supplies power and handles audio functions into and out of each transceiver, while the transceiver itself looks after all RF functions. 2.4GHz transceivers support up to four beltacks each, while the 1.9GHz versions up to five packs each. The base station has two antenna ports, but using splitters you can connect up to 10 antennae, allowing up to 50 packs to be used in one concurrent chunk of RF (at least in Australia – other countries have different limitations).

The FreeSpeak II antenna transceivers are IP65 rated, with rubber bungs to seal unused ports, and they can be wall mounted or simply attached to a microphone stand. While power is normally supplied via the base station, the transceivers can be locally powered too allowing for very long cable runs between the antenna and the base – up to 1000 metres! If multiple antennas are required in a remote location, a splitter can be remotely installed too.



BRAND: CLEARCOM
 MODEL: FREESPEAK II
 RRP: FREESPEAK II BASE \$23,815.00
 FREESPEAK II BELTPACK - \$4,135.00
 FREESPEAK II TRANSCEIVER \$3,875.00
 ALL PRICES INCLUDE GST.
 PRODUCT INFO: WWW.CLEARCOM.COM
 DISTRIBUTOR: WWW.JANDS.COM.AU

The transceivers aren't the only part of the system which is IP rated – so are the new beltpacks – also IP65. If the FreeSpeak I beltpacks felt a bit plastic and toy-like, the FreeSpeak II packs are anything but. They're nice solid metal constructions, with OLED displays and good tactile rubber keys. The on-board menu includes various customisation options, and there's even a "site survey" mode, which allows you to see signal strength and quality. While in site survey mode, all connected packs work together as a single party-line with no configuration or base station required – just an antenna and power supply!

Under ordinary operating conditions, each pack has four programmable keys plus a reply key (also programmable). Via the configuration software, each of these can be configured with various functions including talk, listen, and force listen. Keys can relate to wireless partylines, other packs, or ports on the base station. The on-board menu can be password protected and locked out completely if necessary, and a switchable white LED in the base serves as a technician's light.

Beltpacks can be run from AA batteries for around six hours, however the rechargeable Li-Ion battery is a better option with 18 hour run time. Packs can be charged via included USB chargers, or with an optional five bay "drop-in" charger. There's also a "listen again" function, which allows you to replay the most recent 15 seconds of audio received by tapping the menu key, which is great for when you weren't paying attention the first time. You're unlikely to miss a call since the packs include visual, audible and even vibrate call alert feature (just like your mobile has).

Registration of the packs is quite simple – the base station is put into "over the air" registration mode either via on-board menu or attached PC software. You can even activate the feature from the menu of an already registered beltpack, which is handy if you're in the field. Once packs are registered on the system, the PC setup software is used to name packs and define how each of their programmable keys will act when pressed.

The software connects to the base station via Ethernet and simply requires you to enter the base IP address to connect. The configuration of the system is essentially something which is done off-line then uploaded into the base station. Once this is done, beltpack configurations are deployed wirelessly to each pack. Beltpack firmware updates can also be performed over the air. While the configuration process is done off-line, the system does feature real-time monitoring of the status of antennas and all beltpacks, including battery status. This is a boon for the diligent comms tech who wants to avoid flat battery problems before they occur. It's easy to find the pack in question too, since you can see which antenna it's currently connected to.

All up FreeSpeak II makes a lot of sense. At up to 450m, range on the system is already solid and flexible deployment options allow further increases. It's scalable, and with audio bandwidth from 200Hz to 7.5kHz it even sounds good.

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Hear the truth



Elation Cuepix Blinder WW4

LED Blinder

BY JIMMY DEN-UDEN



The humble audience blinder has been a mainstay of concert production since forever. Commonly found on front trusses, rear trusses, and scattered around stages, the tungsten blinder has certainly found a place in the world. But it's not without some problems...

A standard Molefay Duet uses a pair of 650W 120V Par 36 DWE lamps. These lamps have a very quick rise time, which is a great visual effect but takes a toll in the form of reducing the lifespan of the bubble. Lamp life is a mere 100 hours continuous use, but because the fixtures are constantly flashing on and off typical lamp life is usually much shorter. The lamps run in series too, so if you lose one bubble its partner in crime also stops working. Once they're hot, the filaments become more fragile and more prone to failure if knocked. If you're actually getting 100 hours out of your blinders you should be cheering.

Two DWE lamps total 1300W, which is just enough to make inefficient use of a standard 10A dimmer channel. Two pairs of lamps would be the next step up, but at 2600W would pop a breaker (or melt a lead, or start a fire). So to run a four pot blinder you need two dimmer channels.

Talking of melting things, that's the other problem with a traditional tungsten blinder. They put out a lot of heat. I suspect many a drummer out there would still have a healthy head of hair had they not spent so many years toiling away beneath racks of blinders. Or maybe not, but in any case they do generate a lot of heat.



Elation have come up with a solution to all these problems with their Cuepix Blinder WW4. From the front it looks a lot like a normal blinder – four lenses, light sources behind. From 10m below you wouldn't pick it for anything special. Looking on the back panel, some differences start to become apparent. It has DMX connectors, and PowerCon connectors, and an LCD menu system.

Behind each lens on the Cuepix WW4 sits a 100W warm white COB LED, with an average life span of 100,000 hours. You'll never need to change a bubble in this fixture. Ever. Physically the fixture feels solid, with nice sturdy yoke locking clamps and a very serious safety wire attachment point. The menu system is fairly straightforward and allows for some standalone operation modes, as well as DMX control using between 1 and 9 channels.

LED dims in a very linear manner, and while this "digital" kind of look can be a cool effect, it doesn't look anything like a tungsten dimming curve. Elation has included a selection of five different dimming curves, each with different rise and fall times. The quickest is the 'stage' curve, at 780mS / 1100mS (up/down), while the 'theatre' curve is roughly half this speed (1580/1940mS). Linear dimming is possible too using the "standard" mode, and importantly the dimming curve can be changed via DMX – this allows you to achieve multiple



looks from one fixture. The higher channel count modes allow individual intensity control over each COB LED module, as well as macro and strobe functions.

Beam angle on the WW4 is 62 degrees, however for practical purposes the field angle of 100 degrees is probably a better indicator of what to expect of the unit. All up the Cuepix Blinder WW4 is a clever little fixture, and could well be destined to make stages safer and more comfortable for performers. At 427W maximum power consumption, it's also a bit kinder to the environment.



BRAND: ELATION
MODEL: CUEPIX BLINDER WW4
RRP: 1559.95 USD
PRODUCT INFO:
WWW.ELATIONLIGHTING.COM



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ROAD SKILLS



Editorial by Cat Strom

*Robbie Williams Photography:
Troy Constable & James Eppy
The RUBENS & Tame Impala
Photography: Troy Constable*



lighting director
Jonathan Rouse

it's been barely twelve months since that cheeky little popstar robbie williams last toured the country with his swing both ways show. This year he's returned with his **Let Me Entertain You** tour, featuring a crowd pleasing parade of hits which combined with his charismatic, funny and mischievous stage presence, not to mention a consistently good voice, left the crowd consistently wanting more.

systems engineer
Josh Lloyd

**ROBBIE
WILLIAMS**

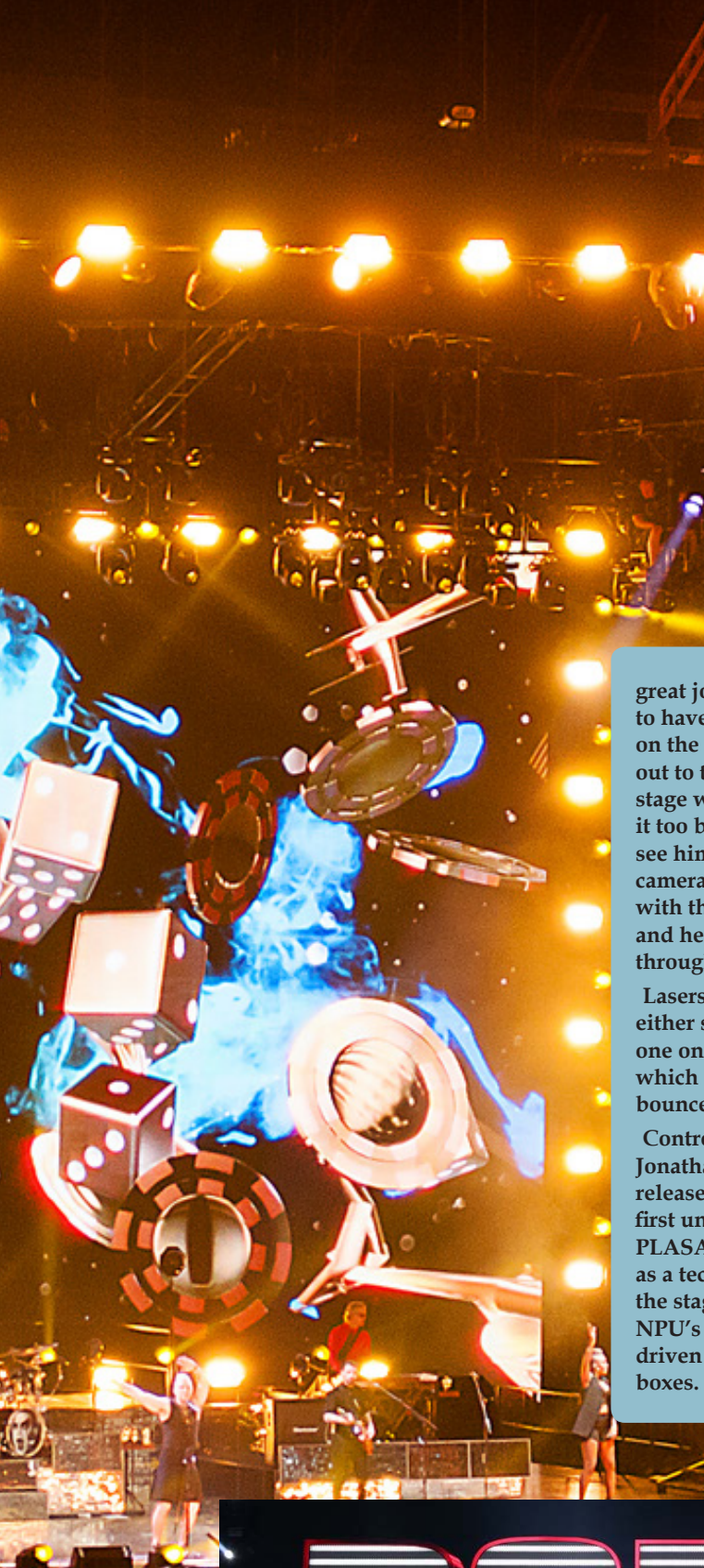
With only a couple of months between tours the staging has been recycled, minus the Austrian blind and ship staging elements, and whilst the basics were retained, creative director Willie Williams still managed to deliver a fresh look. Set Design was by Ric Lipson, lighting design by Mark Cunliffe and video direction by Jon Shrimpton.

"Obviously it costs hundreds of thousands of pounds to build the stage itself so we've reused it with the same risers, passerelle and catwalk around the stage," commented lighting director for the tour Jonathan Rouse. "We've kept some of the lighting fixtures, plus the large semicircular downstage truss and the horseshoe-shaped mother grid. Whereas last year we had three concentric chandeliers on Kinesys, this time we have fifteen pods of Clay Paky Mythos which are on Kinesys. It's similar but also very different."

A total of sixty Clay Paky Mythos were in the rig with Jonathan describing them as a good workhorse favouring their animation wheels, gobos and texturing whilst interplaying with the video. Sharpy Washes were added for band keylighting and side washes. Martin MAC Quantum Washes provided audience lighting as there were no molefays or designated blinders in the rig.

Sixty-one Clay Paky Stormy strobes framed the main screen and also resided on the front truss from where they could also be used for audience lighting.

"It's great to have the impact of a strobe but in a saturated colour," added Jonathan. "All through our European leg we toured follow spots: two truss spots, two side spots in the bleachers and three FOH spots and they're all on Rob throughout the show. It's very important that he is lit for the cameras especially as the Imag is integrated into the video content. All of the video content has space for the Imag shots and it really looks beautiful. Jon Shrimpton does a



great job of cutting the cameras. It's great to have all of the audience focused solely on the stage rather than eyes being pulled out to the side all the time. It's all about the stage which is very powerful. Rob loves it too because he can just look back and see himself on the screen to check which camera he is playing to. Rob's relationship with the camera is a big part of the show and he'll look at the camera the whole way through some songs."

Lasers were mounted on vertical trusses either side of the main screen, as well as one on each pod and a few on the floor which shot onto mirror faced risers to bounce back over the audience.

Control was an MA2, a platform that Jonathan has been using since pre-release having demonstrated the first units on the market for MA at PLASA. An MA2 light was used as a tech desk for focusing from the stage. Added to that were MA NPU's although the whole rig is driven over ArtNet and Luminex boxes.





"That enables us to be fully flexible when we do festival shows or shows where we don't have the full production," said Jonathan. "We'll have one rack that we take with us at dimmer end which has a stack load of ArtNet boxes and DMX8's and things like that. That way we can be fully flexible with whatever is thrown at us."

"The MA's have been rock solid, as always, and enable us to easily change the show regularly. We're just about to do the final couple of shows of the tour and the set list has only just settled down!"

The opening of the show was time coded which allowed Jonathan time to brief the follow spot operators, making sure all is good and the rest of the show is manual.

"It gives a nice, live feel which is what Rob wants although it still has to be slick and polished," remarked Jonathan. "One of the things Willie Williams was quite passionate about during rehearsals was to have no black between songs. He wanted a journey between consecutive

songs so we'll preserve the look of the first song visually and then it will segue into the next."

Apart from the JPJ Audio supplied speakers and the TDC supplied video screen, all of the gear came out of the UK. There are three different versions of the show with Australia getting the A-version. The B-version has six fingers of truss

over the stage, fanned out but still with a screen surround, plus a single thrust catwalk lit by MAC Auras. The C-version, which is the festival show, has straight trusses across stage, a bit of a thrust and screen surround. This was co-designed with Oli Metcalfe, Muse's lighting designer, as they were playing the same festivals through Europe.



Audio gear was shipped in from Britannia Row with JPJ Audio supplying the speakers and amps and is basically very similar to the last tour.

"We're touring two DiGiCo SD7 consoles for FOH and monitors, sharing racks to keep the footprint of the control package down," commented Josh Lloyd, systems engineer.

"We have refined the PA from last year when we had an L'Acoustics Kara cabinets as downfill for the main K1 hangs, replacing them with K2 cabinets. It's very similar to last year as it worked really well. The biggest change is that we have a rock'n'roll band this year as opposed to a swing big band, so the backline we're carrying is different as are the inputs. There are still about 140 channels with all the talk mics, comms and that kind of thing."

In Sydney's Allphones Arena the main PA hangs had fourteen K1 per side with four K2 underneath, side hangs were fourteen K1 too but with six Kara elements and rear hang was twelve K2 cabinets. Twelve K1 Subs were flown behind the main hang and twenty-one SB28 subs built under the stage into the set. A handful of Arcs and 108's were used as fill cabinets around the stage. In Allphones three hangs of six V-Dosc cabinets were added as delays to cover the top level of the arena.

Simon Hodge was mixing the show using a lot of snapshots, this year he had timecoded much of the show especially for busy segues in the show with multiple snapshots or people performing live off stage.

"Time code helps for when it's really busy so Simon can concentrate on dealing with Rob's vocal so it's quite programming intensive that way," added Josh. "The biggest challenge is that Rob's out front of the PA for a lot of the show and he can go from singing quite gently say for My Way to shouting for Let Me Entertain You so it's quite a lot to deal with the vocal in terms of dynamic range. Most of it Simon deals with onboard with the only outboard gear being a Bricasti Reverb, a Waves MaxxBass over the band and a tc electronics multiband limiter over Rob's vocal and everything else is inside the SD7. It works well because it means the footprint is quite small and that's helpful as we have been flying the gear between many of the gigs."

Robbie had a Sennheiser tour kit which primarily includes SKM5200 MkII handheld microphones with 5235-J Capsules and SR2050 Dual Channel In-Ear Transmitters.

"Robbie spends a lot of time in front of the PA system and the 5235 Capsule has a modified low/mid presence in the upper mic which is very good at rejecting noise flow when he is in front," remarked Josh. "He also monitors his own voice and after testing lots of capsules, we found that the 5235 has far less bleed in the ear. The engineers prefer the sound and his mic technique works a lot better with this."



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THE RUBENS

On the current national tour by The Rubens, Clinton Stagoll is a man of many hats: FOH engineer, monitor engineer, production manager and tour manager. It wouldn't be a big surprise to see him selling merchandising. Not only is it a busy tour for him, it's also a long tour for Australia - twenty-two gigs over eight weeks. The tour is in support of the band's new record *Hoops*, and the reviews have been excellent.

In-house PA systems are used on the tour but there is also an audio tour package comprising of a DiGiCo SD11 mix console and Shure PSM1000 Personal Monitor Systems, all owned by Clinton. This tour is the first time the band has used in-ear monitors.

"On the majority of the tour I'm using the DiGiCo SD11 to control FOH audio as well as the in-ear monitors from out front and that's a pretty tall order," Clinton remarked. "For the larger theatre shows, we take my rig onto monitors and bring in a monitor guy whilst I'll use the house console. It's cost effective for the smaller shows and the DiGiCo SD11 is a pretty powerful tool. The Shure PSM1000 is extremely good, the audio quality fantastic and the boys have been loving it."

At The Enmore in Sydney, Clinton went old school and used a Midas Heritage 3000 enjoying the opportunity to do so.

"It's a very rock'n'roll console which suits The Rubens," he added. "When mixing the band I usually put a bit of reverb and slap delay on Sam's vocals, and that's about it. Mixing The Rubens is more about an epic rock sound with huge drums and wide guitars. A lot of work goes into the guitars and ensuring they sound enormous. Fortunately for me, Sam is a strong singer with a beautiful, well rounded voice that is rich in low mid so it's not much of a struggle for me to get his voice clear in the mix."

The Enmore gig was extremely well received with the band proving they have grown and evolved, taking ownership of the stage.

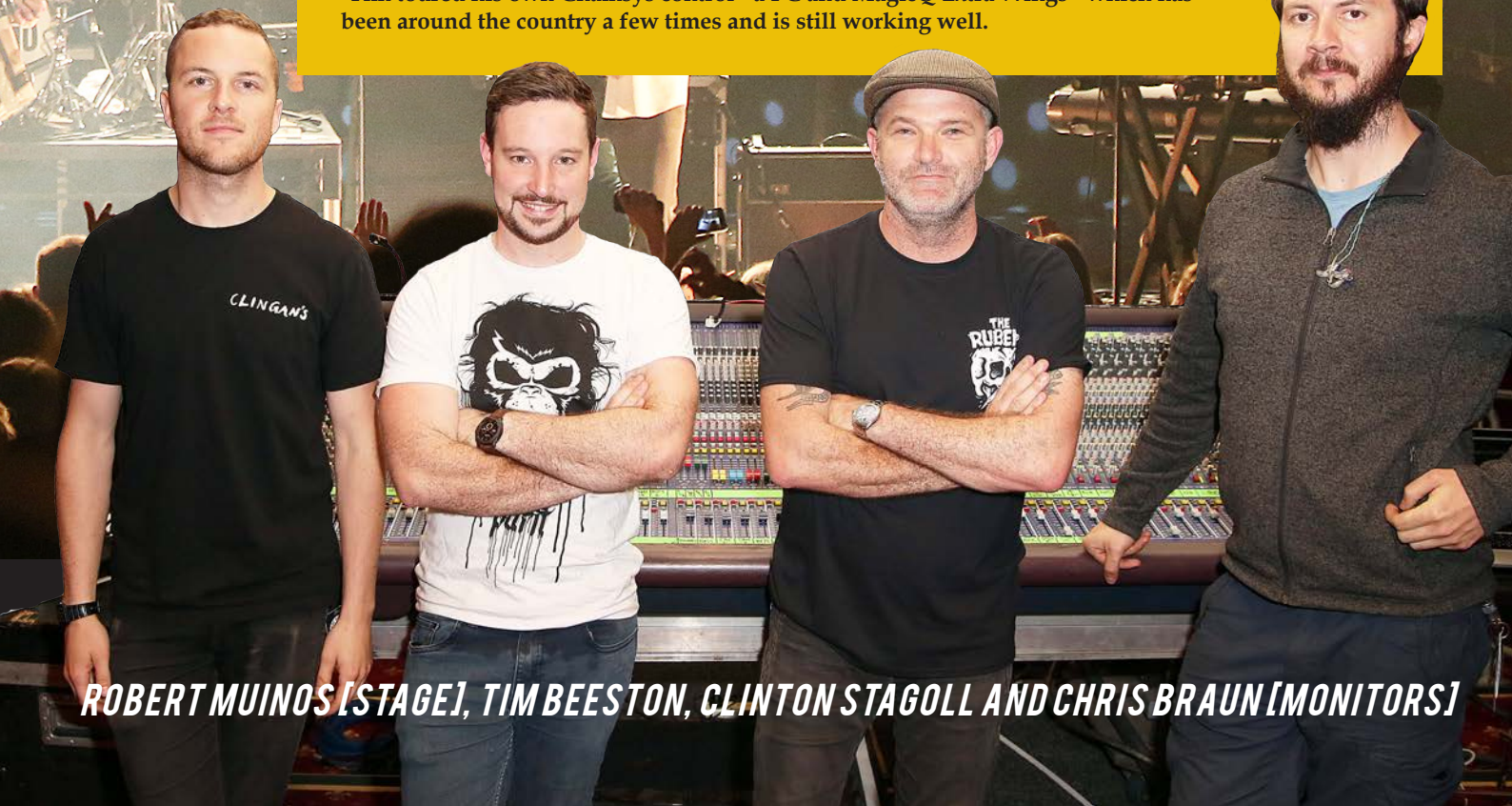
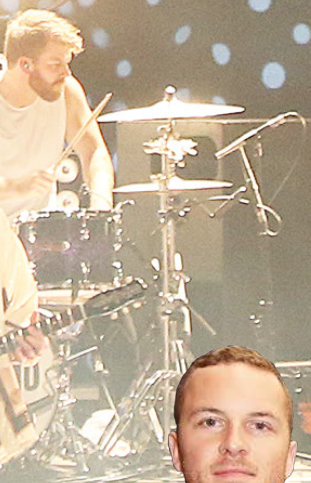
Lighting for the tour was by Tim Beeston of Flash Bang Productions who opted for an open white, tungsten light show with Pat 2014 (or Skypans), Jarags and Studio Due CS4's all on the floor. The flown rig held Robe BMFLs, or in the case of Sydney Martin MAC Vipers.

Tim also placed TMB Solaris Flares on the floor as ground foot lights, describing them as amazing.

"The whole show is either white or a shade of amber which looks really good," commented Tim.

"It makes it tricky for me but delivers a consistent point. It's a big rock record so I wanted a big explosive rock look."

Tim toured his own Chamsys control - a PC and MagicQ Extra Wings - which has been around the country a few times and is still working well.



ROBERT MUINOS [STAGE], TIM BEESTON, CLINTON STAGOLL AND CHRIS BRAUN [MONITORS]



TAME IMPALA

WHEN ARIA AWARD-WINNING PSYCHEDELIC ROCK TITANS TAME IMPALA ANNOUNCED THAT THEY WOULD PLAY THE SYDNEY OPERA HOUSE FORECOURT, THE TICKETS SOLD OUT IN RECORD SPEED QUICKLY PROMPTING A SECOND NIGHT.

The Opera House website proudly stated “Now hailed as an ingenious voice in a new era of globe-hopping Australian music, Tame Impala will unleash their adventurous sonic suites in the springtime beauty of the Opera House's harbour-side forecourt.”

Unfortunately, the first show erupted in controversy with a number of fans slamming the sound quality of the performance, with many suggesting the volume was so low that they could have personal conversations mid-show.

The following day The Opera House released a statement saying, “We will be undertaking thorough testing of sound levels around all areas of the venue during tonight's sound check and for all future Forecourt performances.”

According to the website Music Feeds, an Opera House spokesperson assured that the volume issues were

recognised early in the first night's set at the Opera House Forecourt and fixed accordingly.

“Early in last night's performance of Tame Impala we identified an issue with low sound levels; this was quickly addressed with the band, and levels were increased by the fourth song.”

The spokesperson also noted that venue operators will conduct further testing on the venue's sound levels before the remaining gigs.

“We will be undertaking thorough testing of sound levels around all areas of the venue during tonight's sound check and for all future Forecourt performances.”

This seems a bit at odds to what the band's sound engineer Adam Round told Roadskills when the Elephant In The Room was addressed.

**SOUND ENGINEER
ADAM ROUND**



"The Forecourt has very low noise restrictions" he commented. "You can't go over the limit or they threatened to step in and take control of our show. If they let you go over it jeopardises their ability to do any shows there. It's a real shame as it's such a beautiful spot. We tried every trick in the book and added extra front fill. Still would've only been louder if you were at the front. All of our subs were in cardioid but we ended up having to pretty much turn them off."

Adam was given a noise limit of 89dBA peak (5dB more at the weekend), a level he believes is "an unacceptable level for rock and roll".

As to the Opera House inferring that they would or had turned up sound levels; this was not the case.

"We applied roll offs from 100hz down on the system channels and added a crushing amount of Waves L3 to remove peaks," said Adam. "They simply will not let you go over. It's a council decision caused by complaints from residents. As much as everyone tried to work with us, there's nothing we can really do, so our second night will not be louder than the first. The limits are set in stone."

The interview with Adam was conducted on the afternoon before the second show when the wind had picked up and was blowing towards the apartments, meaning the second show could be quieter than the first!

"It's not going to be good and people immediately start blaming me," he lamented. "I definitely want it much louder and it's not on the engineer. Sound levels are constantly monitored throughout the venue and around the harbour. They soon let you know when I'm breaking it. In fact it was constantly in the red - 5 to 10dB louder than it's supposed to

be. I was getting told off every two seconds. If it hadn't been in the red, you wouldn't have heard anything at all.

"The band played really well last night but due to the noise restrictions, the audio was a bit lack lustre. Unfortunately there was nothing we could do, we tried every trick in the book."

The PA system was the 'awesome' L'Acoustics K1 with additional Kara and SB28 subs, Kudo delays and at front of house some 108Ps as reference monitors for working on snapshots.

"I basically mixed the whole gig on the pair of 108P last night as it was hard to hear the PA at front of house!" he said. "There's a lot of PA down here but you could basically just use a couple of 15" and horns on sticks and you'd still be breaking their noise limits."

Adam clearly enjoys mixing Tame Impala, describing it as really fun and challenging but he gets to play with a lot of fun effects as well as sounds that are a little left field.

"It's a big challenge to replicate their records live," he admitted. "I have a couple of DiGiCo SD11i consoles linked together and tons of Waves plugins. We do a lot of processing to nail the sounds from the records."

Plugins include the Scheps 73 EQ, J37 Tape Saturation, C6 Multiband Compressor, L3 Ultramaximizer, SSL E-Channel, CLA-76 Compressor Limiter, TG12345 Channel Strip, Vocal Rider and Metaflanger over the entire mix.

The band are on Sennheiser G3 IEM's although they still have some wedges. Monitors are mixed by Rafael Lazzaro who recently took the big step of moving from a Yamaha PM5D console to a DiGiCo SD10 and Adam commented that even



the band hear a significant difference in the quality of the console.

"The wedges aren't super loud, they just provide a bit of vibe onstage if they need it or they can pull ears out if they want," he remarked. "There's not a lot of stage sound with a lot of the guitar work DI-ed – which is great especially when we're trying to do what we refer to as the wet drum mix. We use lots of distortion and compression to replicate the drum sound of the record."

Adam said there were quite a few funky happenings in microphone land mainly in the way they look.

"They were originally using Sennheiser 421s and 441s on their vocals which stems from before my time. As much as they are awesome mics I was having to EQ them way too much to make them work and would limit how loud we could go in club shows. It was a lot about how they looked rather than how they sounded. I've converted us to the Telefunken M80, they really work for the guys vocals and because they are quite bright you get a lot of definition in the vocals in all the falsetto parts."



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Audio Engineer

Gil Eva
Craig

Independent
Team Player

New Zealand's Gil Eva Craig is one of the few women working in sound in the land of the Long White Cloud. She started her career recording demos for bands before a need for extra cash lead her down the road to the local to mix a few live bands. As time went by she found herself doing more and more live sound and actually enjoying it more than studio work which had become tedious, and she began to dislike the editing and vocal tuning that's now an expected part of being a studio engineer.

Gil is an independent audio engineer originally from rural Waitkato, moving to Wellington over 20 years ago. She also works in the family business, Western Audio Engineering who are the leading d&b audiotechnik rental partner in New Zealand.

Her studio fascination started when Gil was a teenager, she would make recordings using her brother's Walkman and a

boom box, recording onto one machine, then playing along to the recording and recording this onto the second machine. Gil describes the results of the early start of her recording career as mostly un-intelligible satanic hiss.

As soon as she could, she bought a 4 track cassette recorder and then graduated to a ½ inch 8 track reel to reel owned by the band she was in at the time. She managed to find a long-term loan of a 1 inch 8 track. The re-appearance of the old ½ inch tape machine was when Gil made the decision to start recording demos for bands. Her studio was growing so she graduated to adats and a borrowed 16 track 2 inch, then moved onto a 24 track hard disc recorder and pro tools. Gil gradually did more and more recording till it was the only thing she was doing, and it was the same with live sound which eventually took over from the studio work.

Being a musician herself, she was always concerned with producing good tone, rather than being able to play fast and flashy – thinking what's the point playing like that if it sounds rubbish? Gil plays brass, and spent many years playing in brass bands. She studied classical guitar and bass guitar and is currently playing in a duo with Charlotte Yates, a recording artist based in Wellington, New Zealand.

As an independent engineer Gil is currently FOH and technical manager for the Wellington International Ukulele Orchestra, and is the monitor engineer for the Pink Floyd Experience. Being captivated by airports and aircraft means the travel is an added bonus.

At Western Audio she will jump in wherever she is needed, doing the stage patch for festivals, monitor engineer and/or FOH and any other bits and pieces as required. Recent shows Gil has worked on include FOH for Bic Runga & Tiny Ruins at the Wellington Opera House and monitors for Dave Dobbyn at an outdoor show at Parliament.

BY TONI VENDITTI

She likes her job saying that every day is different, but also the same as in setting up the same gear with a few certain variables, like different venues and systems, depending on the tour. Being in live sound is a perfect blend of routine and novelty. Gil likes being part of a team, but also likes a certain amount of independence saying that both these factors completely suit her nature. She also really enjoys hearing how sound behaves in different acoustic spaces, and is especially interested in how monitor rigs react on different stages.

While Gil doesn't have a mentor she does have a great network of people she can ask questions of, and run ideas past. To earn respect in your field Gil says you should be thorough in your technical preparation and pre-production and be kind and supportive of your artists, and ensure you maintain a drama free zone at all times!

Gil says she has a thing; well it's a mild obsession really, with reverbs. She currently tours with a Bricasti M7 and a tc electronics M2000. She says the Bricasti is a fantastic sounding device and she loves it because it's so lush! The M2000 is a practical choice - it has 2 engines and is light and 1U in rack size and sounds pretty decent. When touring with the Ukulele Orchestra overseas she will also take an XTA SIDD which is usually run in line with the main LR out of the console, this is to give some system EQ in the venues where she is not able to get at the system processors. The SIDD has a bunch of other processing in it, so it can also act as two channels of emergency compression if needed. The Bricasti, M2000 and SIDD fit neatly into a single case and just sneak in for airline weight. Her favorite consoles are the Midas PRO Series. Gil says they sound great. If she could always have the console she wanted, she would have a Midas Pro6 for both FOH and monitors.

On a typical Pink Floyd Experience tour day Gil arrives at the venue at 9.30am, armed with a hopefully decent coffee, ready to direct where the monitor stuff will go once off the truck. Then she'll lay out the console area, amp racks, sets up wireless, aerials etc., while the loaders are getting monitors out of their cases and putting up mic stands. Once the wireless and monitors are all good she'll mic up, tune monitors and hopefully eat at some stage. After sound check and a break Gil will re-battery, do the last checks and then they're on. An important step Gil will take before backing up at the end of the show is to review what she has done when tuning monitors etc. and undo any changes that are specific to the venue and stage. Gil makes sure to do this every night so she doesn't end up with 'show creep'.

Gil's advice to younger girls about money and looking after their future is to do business and accounting at school. She has always set her own studio rates and has always charged the same fee for live sound as her contemporaries.

Gil enjoys touring and live sound saying it's still fun and it's highly unlikely she will ever do much studio work again, with the exception of working on her

own projects, and the work she is doing with Charlotte Yates. When she is tracking her parts she learns everything then makes sure she nails them to avoid editing if at all possible, as she says editing your own rubbish playing is far worse than editing other people's rough performances! Gil says Charlotte is a terrific singer, and that when she mixed her current album (which she also played on and co-produced) she used auto tune once - in one spot on part of a word.

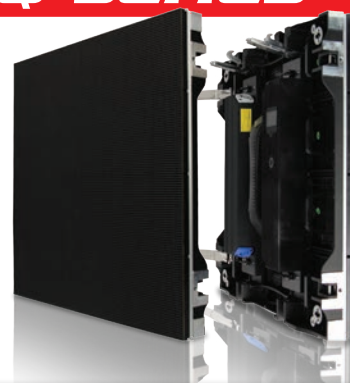
If Gil hadn't been musical, she'd have been a geologist. Gil was an avid rock collector who drove her mother mad with boxes of rocks everywhere, or she may have worked in the aviation or airport industry in some capacity. A talented photographic artist, Gil has exhibited in several group shows and has her first solo show in Wellington mid next year.



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BIZ TALK

with Julius Grafton

Biggest (Legal) Scam in Town Sharp Sales Dudes Clean Up

\$42 MILLION IN TRAINING LOANS WAS PAID BY THE FEDERAL GOVERNMENT TO UNIQUE INTERNATIONAL COLLEGE (SYDNEY) BUT ONLY 2.4% OF STUDENTS ACTUALLY GRADUATED. THIS IS ONE OF MANY REGISTERED TRAINING ORGANISATIONS (RTO'S) ENJOYING THE FRUITS OF VOCATIONAL EDUCATION AND TRAINING (VET) FEE HELP. COLLEGE OWNER AMARJHIT KHELA TOOK \$11 MILLION IN PROFIT FROM THE COLLEGE LAST YEAR.

He isn't the only college owner reaping the benefits of Fee Help. Jin "Jim" Yang's Cornerstone Investments took \$46 million in Fee Help last year, and only produced 5 graduates from 4,000 students. It owns several colleges, mostly specialising in 'online' courses.

This madness cost the tax payer \$1.4 billion last year. How on earth did it happen?

Early in 2008 the GFC was in full flight and the federal Government was pump priming the economy with the home insulation scheme. Another stimulus was also cooked up – the Productivity Places Program (PPP) for VET college students.

This promised 711,000 training places over five years for existing workers and job seekers. My registered training organization Julius Events College was offered government funding for the first time.

The offer was for 21 places in the Diploma of Technical Production, Theatre and Events, for existing workers. For each enrolment we would get \$9,000 over the duration of the course, \$1,500 of it up front.

What was an existing worker, we enquired? Anyone who has worked one hour or more in the past week, we were told. All they had to do was supply particulars to us – the college – and we would enter them into the system and the money would appear the next day!

There was no audit or testing that we ever saw.

Soon we had another 40 places to fill. The courses were run by the rules, face to face classes at night. The dropout rate was atrocious, which created class size problems down the track.

Over 2008 and 2009 we ran as many of these as we could,

and had our renewal audit which accredited us for another five years. I shut the college in 2010.

Unlike the guys who have rorted the system, I was not prepared to do so. I could see that the scale of the VET Fee Help scheme would make it a monster to audit, leaving it open to abuse.

Even I wasn't prepared for what would happen next. Course prices quadrupled in many cases. New colleges opened up, as it was easier to qualify for VET Fee Help as a new startup than it was as an established college!

We were poised to join VET Fee Help had we remained open, but I only saw trouble ahead and didn't want any of it.

At the same time the Rudd Government dreamed up VET Fee Help it also pushed to disband the state training regulators. Our bête noire, VETAB was dismantled and its work given to a national regulator, ASQA. In one move the local knowledge each state regulator had was gone out the door. The new regulator clearly has not been able to actually regulate very much since.

Meanwhile the sharpest of all the sales dudes flocked to sell VET courses on Fee Help, in some cases actually bribing students to sign enrolments. In many cases they were given a 'free' iPad or laptop. The students either didn't know or didn't care that they were clocking up a debt to the Government. A debt that they didn't need to repay from their weekly tax until they started to earn over \$54,000 a year.

Some sales agents have boasted of earning \$10,000 a week in commission selling courses, often to illiterate, homeless, non English speakers or disadvantaged people in remote communities.

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People are making decisions and representing your business interests and industry to government on your behalf without your input! New regulations are coming early next year and it will affect pretty much everybody in the industry and some will be legally and financially exposed. You need to know this... read on.

These days governments aren't really interested in listening to problems from individuals, companies or small groups. They don't want to talk to people; they want to "engage with peak bodies regarding matters of industry consensus". So if you wake up one morning and find you can't use any of your wireless frequencies, or find you can't hang a truss without another "special certificate", or get audited on a compliance issue you've never even heard of, they don't care. Ignorance is not an excuse, the onus is on you.

ACETA is your industry body, working to protect and further the interest of everyone who works in our profession.

Web site: www.aceta.org.au

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Frank Hinton
President ACETA

When the government comes knocking....

A healthy peak body is good for business

Enter the peak body (generally known as an industry association). The mission of an effective industry group is to advance and defend the common interests of its members. Education and support are also in the mix. If your industry doesn't have one, to the government your industry is invisible.

The government recognised Peak Body for professional entertainment technology and products is ACETA. We are a "not for profit – mutual benefit" volunteer association who do all the boring stuff you don't have time for, like read all the legislation, engage with the network of government regulatory bodies and navigate it on behalf of the members. Also the more interesting, like research markets and tech trends, and provide a members information and education resource. Some of those educational resources can save you a world of pain. Not to mention time.

Help is one click away

Our latest member "plugin" is a series of educational webinars covering everything from RCM compliance (legally enforceable in just a few short months), to developing business in the new media landscape and even subjects like "simple web based aptitude testing for prospective employees". All these resources and more are free to ACETA members.

Coming up is RCM – You need to know about this

The whole landscape in Australia regarding safety standards, electro-magnetic emissions and electronic product efficiency is about to undergo a complete overhaul. All the existing standards will be replaced by a new compliance regime called RCM.

This new compliance standard will replace the old C tick and other compliances in March 2016. Three existing compliance marks (C-Tick, A-Tick and MEPS) are being consolidated into a single compliance mark – the RCM. If you are selling anything electronic, to be legally compliant you will need to have an RCM mark on the back of your product; and if you imported it, you will need to be registered and have the correct paperwork in place. The legal risk for an importer is the same as if they manufactured the product. This even applies to you if you don't on sell the product and just use it yourself.

Under these new regulations "Sell" is defined as: Sell by wholesale, retail or auction. (EBay, Gumtree, storefront or any other means). Supply is trade, commerce or under an arrangement. (Production or Event) **Dry Hire** Agree, attempt, offer, cause or permit to be sold and display for sale.

So if you import it, it's your responsibility to have paperwork proving compliance;



You will be seeing more of this as of March 2016

But it gets a little more complex..... It is not uniform around Australia!

A new **Electrical Equipment Safety System** (EESS Queensland) is also in the mix by some State and Territory electrical equipment safety regulators. The EESS is administered through ERAC (The federal body). The RCM will be the only compliance mark for devices within the scope of the EESS. The transition arrangements for the EESS may vary to those of the ACMA.

All these acronyms doing your head in?

We still haven't mentioned the role of National Uniform Electrical Licensing Advisory Council (NUELAC) or explained the Minimum Energy Performance Standards (MEPS) and labelling Program Australia. These all contribute to make up parts of the new RCM legislation and if you don't have this in place by March 2016, you won't be in a good place when they come calling. (It won't happen overnight but it will happen).

The happy ending – ACETA can come to the rescue

So here's where your peak body comes in. ACETA is running a series of four online webinars to help its members through this process by engaging one of Australia's most accomplished engineering conformation laboratories to help get members through this process, or at least let them know where they stand.

There is a bit to this, which is why it will take 4 sessions. The first session is free to everyone, including non-members. Sessions 2 to 4 remain free for members and \$210 for non-members. Why not join ACETA membership and enjoy all the other benefits of membership right now, including these "must attend" sessions?

Miss the boat and you're up the creek.

For more information about what ACETA is doing, how to become a member and to register for the webinars please go to www.aceta.org.au



Frank Andrewartha
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Are you concerned about your mate's mental health?

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

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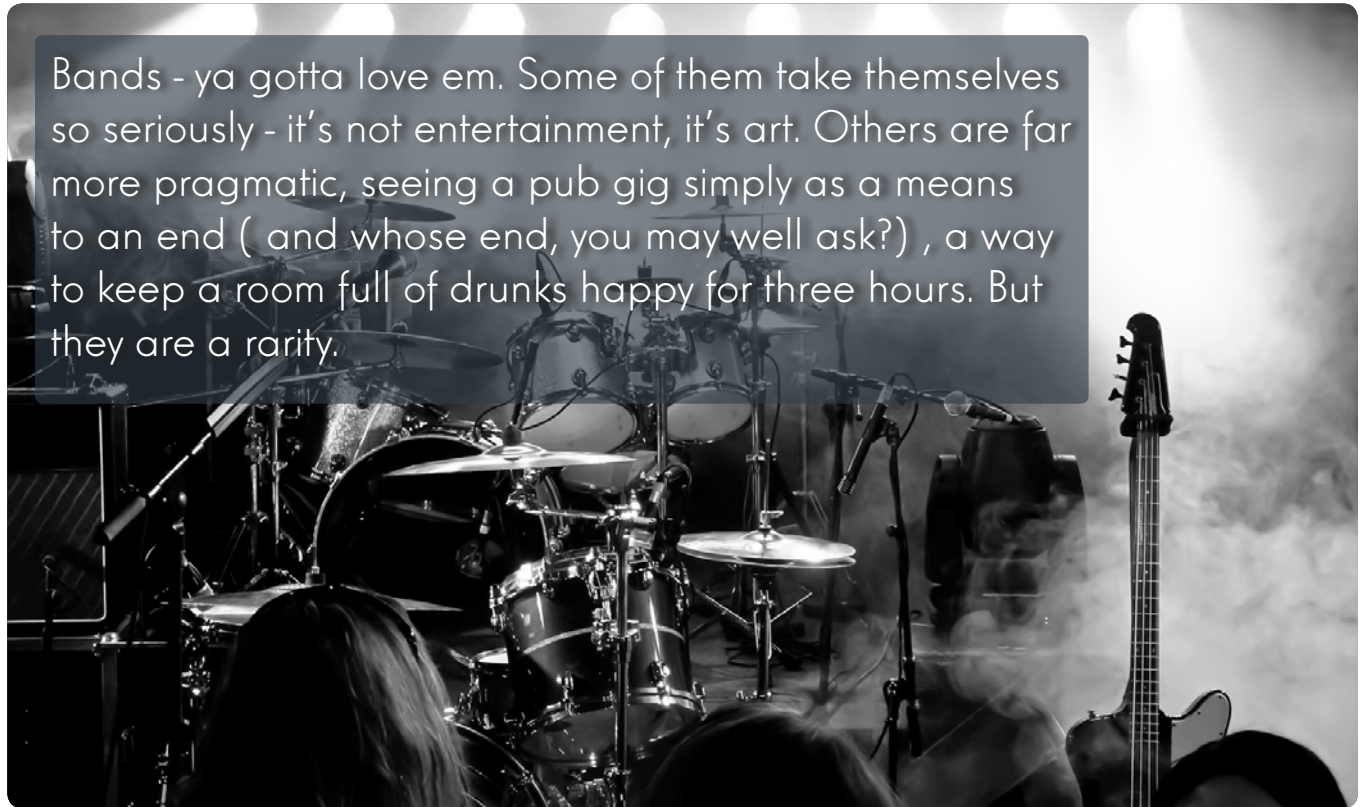
¹Passion, Pride, Pitfalls Dec 2014



The Solo

Fun times on the road

Bands - ya gotta love em. Some of them take themselves so seriously - it's not entertainment, it's art. Others are far more pragmatic, seeing a pub gig simply as a means to an end (and whose end, you may well ask?) , a way to keep a room full of drunks happy for three hours. But they are a rarity.



So, it's often the job of the crew to bring the band back to earth, for a reality check. And at the same time, a good old fashioned dose of what is technically known as taking the piss! Yes, I know, it's a tough job but someone's got to do it!

It was yet another gig in Shepparton for Jim and I. Surprisingly the band and crew all had hotel rooms, this being one of the rare times we weren't expected to drive back to Melbourne after the gig. So, after a nourishing meal of fish and chips, and an exciting game of avoid the locals, we were sitting in John, the lead guitarist's room, nattering away while he tuned and strummed his guitar. Since we didn't have to drive anywhere we had put away a few drinks with dinner and now we were quite relaxed and ready for some fun.

The guitarist wasn't the most creative or inventive player I had ever heard, and playing in this particular band wasn't really straining his creativity, so on most gigs he just cruised through on auto-pilot.

Jim had always fancied himself as a guitarist, and so in a lull in the conversation he turned to the guitarist.

"John," he asked, "Do you think you could show me how to play The Solo?"

"Sure mate, no problems," said John, who had not quite fully divined the grammatical exactness of Jim's question. "Which solo? Which song?"

"You know," chortled Jim "THE solo...you know, the one you play in every song!"

John leapt to his feet, mightily offended.

"No, Jim, no, what are you talking about - they're all different. How can you say that?" And he started to rant about how no-one understood him, he had the hardest job in the band, they didn't appreciate him, all the work he did, how his girlfriend was cheating on him.

Then he calmed down, looking worried and said;

"Do you really think they sound all the same?"

Well, of course they did, but we grinned and said "Nah - just kidding".

I mean, it's good to have some fun at the band's expense, but you have to know when to stop or you'll do yourself out of a job!

Jim managed to organise a mini-tour with a Blues Brothers Revival Band. First gig was to be in Mildura!

Mildura is a long way from Melbourne; a day's driving - 500 odd k of not really very much until you get there. And then, of course, it's the same distance back!

The last time I was there the whole system was setup waiting for the band to arrive when the pub manager wandered in.

"Is there a Duncan here? Phone call for you mate."

The rasping tones of Johnny, lead singer for the Jerries, greeted me.

"Jeez Dunk, the car's broken down in Woop Woop. We won't be able to get there for another couple of hours. Can you let the pub manager know?"

"He won't like it," I said "There's a big crowd here already and they're getting nicely hosed. There'll be trouble if something doesn't happen soon."

"Yeah, well, do the best you can mate" and with a click he was gone.

Do the best I can? What sort of an answer was that!

I went over to Wally, who was doing stage and lights, and filled him in on the situation.

"So what are we going to do for a couple of hours to keep this lot happy?" I asked. "There's no support band, and they'll be pretty sick of my '20 Top Partystoppers' tape by then."

"I know what to do," he exclaimed "...we'll play as the support band. You can play guitar, I'll play bass, and we'll get some boxhead to play drums. What do you think? Great idea, eh?"

"Yeah but what songs will we play?" I worried. "The crowd's not going to like it much if we stuff it right up."

"What does that matter?" he argued. "Look, it's Saturday night, we're in the country, and the audience is getting nicely pissed. What can go wrong?" and with that he disappeared into the crowd to find some 'boxhead' to play drums.

I sincerely hoped he would be successful - a two man trio is a little bit too minimalist for me.

Luckily a couple of minutes later Wally emerged from the crowd with a soul mate he introduced as Phil, who seemed to be half in the bag but assured us he could play drums.

Ten minutes later we were on stage playing! Phil the drummer had a VB carton on his head with a couple of eyeholes punched out, and was introduced by Wally as "...and on drums, Mr Boxhead".

We played an eclectic collection of songs, wisely sticking to the time honoured rules of nothing too complicated, nothing too new, and nothing with more than three chords!

This consisted of every Chuck Berry, Rolling Stones 12 bar that I could think of, plus Summertime Blues and others in a similar vein.

Wally was in his element, jumping and waving the bass around and occasionally even hitting the right notes, but

after an hour Mr Boxhead was starting to audibly wilt and his timing, never good to start with, was becoming more erratic as we ground on.

As we neared the end of B-B-B-Bad To The Bone, I saw a couple of familiar faces in the crowd. The band had arrived!

I pointed them out to Wally.

"Thank you very much everybody," he said, "We're the Road Crew and we'll see you again soon". He gave Mr Boxhead a couple of precious tinnies from his Esky, slapped him on the back and pushed him back into the crowd.

After the night finished, Johnny came up to me.

"Hey, thanks for helping us out like that, Dunk." he rasped.

He paused for a moment, and then continued.

"Do you reckon you could do it again tomorrow night?!"

So when Jim told me about the Mildura gig, I didn't feel like doing all that driving, but I suggested to him - "Why don't you and Chris (another of my trusty helpers) go and do the gig yourselves?"

Chris had a heavy vehicle driving licence, so off they went in my big old F series Toyota truck, and amazingly it got there without any trouble.

On their way back, though, the truck's exhaust pipe fell off. Not just the muffler or the tail pipe, but the complete system.

Chris dashed back to pick it up, yelled, "Holy tish - it's hot!" and promptly burnt the palms of his hands. Putting their gloves on, the two of them let it cool down a bit, stuck it in the back of the truck, and drove all the way back to Melbourne without any exhaust pipe or muffler. It must have been pretty noisy, with the exhaust blaring straight out of the cast iron headers on the engine, but the boys just put their headphones on and turned the stereo up loud!

Early next morning, while Chris was still asleep, Jim rang me to tell me about the exhaust, and said that they and the truck were at his place. He also said that the band had another gig that night in Cowes, on Phillip Island, so they would go straight there when they woke up. I told him to go back to sleep and I'd grab some tools and come over to fix it.

I had a spare set of keys to the truck, so the next day I drove over to Jim's place and spent the whole morning fixing the exhaust, bolting it on properly with new clamps and supports, while Chris and Jim slept. When it was all done I took the truck around the block to check it out, parked it back outside Jim's place and went home.

Midday they woke up, got dressed and headed off to the next gig. Chris got in the truck, turned the key, the engine wheezed into life and settled down to a steady rumble.

He turned to Jim - "Wow," he said, "It's come good by itself!"

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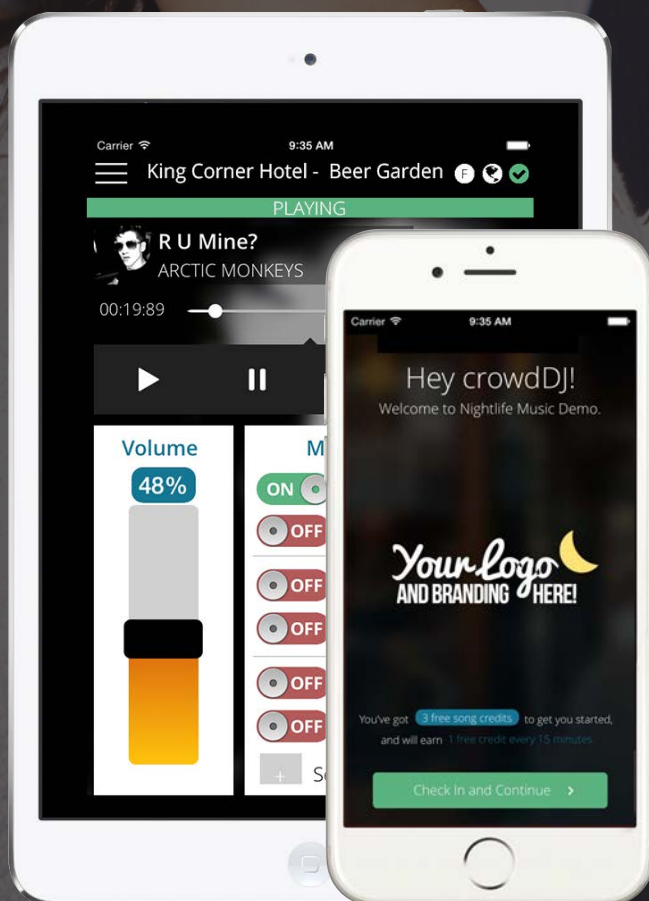
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