



MONTHLY TECH NEWS
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Theatres
Melbourne vs Sydney

New Direction
Hills Boss Talks

Integrate 2014
AV on the move

GEARBOX REVIEWS:

- SGM G-Spot - IP rated
- Audix SCX25A Pro Cardioid Condenser
 - Roland VR-50HD
- JBL VTX V20 • Anolis ArcDot

CX NEWS:

- Hills boss on future • Open HD starts
- Jands boss talks smart • Wireless
- Big Top launch for Jands

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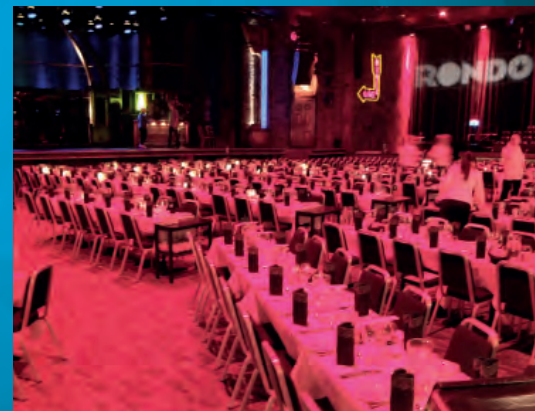


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CX EDITORIAL

6 You are smarter than we are, Bully behaviour is banned, Emotional blackmail, and our impending 25th Anniversary.

CX NEWS

8 Hills boss on future! Open HD starts
9 Jands boss Paul Mulholland talks smart, Wireless to go!
10 Big Top launch for Jands at Sydney's Luna Park

CX NEW GEAR

12 d&b, PreSonus, Jands, Robe, Sennheiser, Yamaha & more!

CX FEATURES

18 Theatres - Melbourne vs Sydney part one
28 Integrate 2014 - AV on the move
34 Hills - New Direction, interview with COO Brad Newton

CX GEARBOX

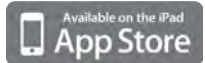
38 SGM G-Spot - IP rated
42 Audix SCX25A Pro Cardioid Condenser
44 Roland VR-50HD
46 JBL VTX V20
48 Anolis ArcDot

CX REGULARS

24 The Mill Report - with Andy Stewart
32 Listen Here - with Andy Stewart
50 RoadSkills - with Cat Strom
62 Brainy Types - with Jimmy Den-Ouden
66 Biz Talk - with Julius Grafton
68 What-If? - with Andrew Mathieson
70 aceta - with Frank Hinton
73 The Gowerville Hotel - with Duncan Fry



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 Newsstand Search - CX Magazine



Theatres - Melbourne vs Sydney part one



38 GEARBOX SGM G-Spot



RoadSkills - Queen + Adam Lambert, The Voice Australia, Gympie Muster 2014



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VERSATILITY WITH NO EXPIRATION DATE



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CX97 2014. ISSUE # 217 ONLINE EDITION

EDITORIAL BY JULIUS GRAFTON

YOU ARE SMARTER THAN WE ARE

CX has always operated with overriding principles in place. Reporting Paul Mulholland's (Jands CEO) comments to an industry gathering (News, Page 9) led to reflecting on what we believe in.

Here are the core beliefs behind this publication:

- Our readers are smarter than we are. Which means we can't talk down from above, nor underestimate you.
- We champion production excellence and high production values. Mediocre or second best just doesn't cut it with us.
- People are the backbone of any success. Never take credit in isolation - always respect the component players.
- The final plank is so ingrained in the CX psyche, it gets its own headline, below.

BULLY BEHAVIOUR IS BANNED

I think we, as an industry, have done well jettisoning idiotic people who use bullying, belittling and intimidation as a management tool. Over the 25 (almost) years of CX we've seen a solid downward trend in bad behaviour towards others.

While it will always be, there is no reason to accept it. Misuse of power is corruption at its most basic, and I think the population are aware of this. But it does happen, and a recent example follows.

EMOTIONAL BLACKMAIL

CX rarely ever 'pull' a story. But we did last month, after a stakeholder petitioned me continually over the course of a day and eventually pulled the suicide card. Being passionate and upset is one thing, but saying 'if this doesn't work out I may as well top myself' several times did have an effect.

I took into account the probable effect that a lifetime of cannabis abuse had on the guy, to offset the paranoid elements of his complaint about the story. Where he argued stridently that our publication of the matter would only be detrimental to the project, I could see only upside. Which was why the story was going to run.

However there are times you have to walk away, and faced with the repeated threat, however emotionally delivered, that he would 'top himself', I pulled it.

FINALLY

This is the 217'th magazine I've produced. That's a lot of deadlines as we head to our 25th anniversary next year. This page is written last, and these days delivered after considerable reminding, prodding, pleading and the occasional threat from our Creative Director Lee Murray. She must eventually be obeyed, so I comply.

The mag is fashioned by a team spread across the land, led by Steve James who wears the pressures and manages the realities of the back office.

I'm writing this from home (at an undisclosed location these days) in Sydney, while Lee is also at home, she lives on the Northern Beaches. The office at Chatswood is in between, and it's rare for all of us to be there at one time.

In a mo I'll upload this to Dropbox, and it will be pulled out of the cloud, laid into the magazine, and the October edition will then be rendered out for proofing over the weekend.

Enjoy reading!

- Julius

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NEWS

CX INDUSTRY NEWS



Hills Boss on Future Brad Newton talks

Behind the Hills restructure is a steady plan, according to the architect and engineer of change at the large company. Brad Newton, the Chief Operating Officer (COO) of Hills told CX that when he joined, Hills had 28 different businesses with a \$90 million loss and \$200 million of debt. Hills is now in profit with zero debt.

Brad Newton handled industry criticism head on in a wide ranging interview published in CX this month. "When I joined, SVL had probably three months of consecutive revenue decline. But in the last 12 months, SVL was our strongest performing business unit. Audio for us absolutely smashed it out of the park".

As for Crestron, "it's still Hills employees; it's still part of Hills. We're still the exclusive distributor for Crestron in Australia, but Crestron is focused on representing their own identity. Crestron obviously has Stuart Craig working



BRAD NEWTON AT INTEGRATE 2014

directly for Crestron. However, the other employees are all Hills employees. Hills still distributes Crestron exclusively in the Australian market."

On Audio Products Group: "Our view is we're going to keep APG completely separated, running under Ken Dwyer's direction. Business as usual."

**You can read the full interview with
Brad Newton from page 34**

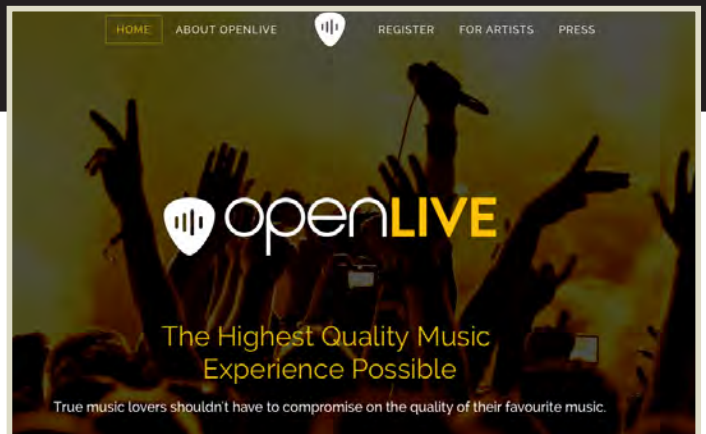


Open HD Starts Taking on Apple and U2

Melbourne based startup Open HD (or Open Live) will open an online store this month with a reported catalogue of at least 300 local bands, offering paid high definition audio downloads. The firm was created earlier this year by former CMI staff, who left the importer after securing significant investment funding.

While the exact business model is not clear (and Open HD refuse to talk to CX) it appears online merchandise and an online community will help attract revenue. Since launch Open HD have hired several additional staff, including production manager Ben Jobson who joined the company in the position of Artists Relations Manager; and former National Marketing Manager at Yamaha Music Australia, Dale Moore as Chief Executive Officer.

Enthusiastic Facebook posts show new location recording equipment acquired to record local bands and exhort the benefits of High Definition Audio (HDA- digital audio that is CD-quality and higher (> 44.1kHz 16bit)).



Open HD Pty Ltd is 75% owned by Andy McIntyre, Simon Tait and Richard Powell, with a group of investors holding the balance of shares. Open Live was registered in the middle of September.

While Open HD / Open Live race to market, Apple and U2 are rumoured to be doing the same thing. Late Apple co-founder Steve Jobs and musician Neil Young were working together on a project in 2012.



Jands Boss: You Can't Be Sold

Mulholland says Australia is smart

Jands CEO Paul Mulholland told a group of Australian Production Industry veterans at a launch function last month that they were among the world's most astute and professional and distributors like Jands could not sell them anything that was not right for their application. "The two-for-one deals that are used so effectively by the sales department selling to the retail sector will not secure the sale in the production market so rather than try hard sales approach we need to more show the product and let the customer decide."

It was a very honest address.

'Three years ago we couldn't give Shure ear monitors away', he said, but as Shure started delivering the current generation of leading edge product sales grew quickly. 'A similar story applies to JBL who head hunted an engineer from L-Acoustics and are now delivering best in class line array products.'

'Clear-Comm had similar problems until new owners took control of product development and quality control and started rolling out some great new products.'

'I took on Soundcraft in 1985 and it was tough however with new generation products with the Studer heritage culminating in the Vi3000 market acceptance has been great.'

Later he told CX that some of the overseas manufacturers he represents



PAUL MULHOLLAND

are starting to take notice of product evaluation and ideas from Australia, reasoning if it works here, it will work in other discerning markets elsewhere. His speech was to reference that Australian distributors suffer or gain from having the right products at the right time, and he feels Jands are currently seeing the best from it's assorted stable of manufacturers.



Telstra Goes Early

Wireless Trials Impact Audio

Widespread alarm followed CX reporting that Telstra were testing 4G transmissions over the 700 MHz frequency range in Sydney and other major city locations in September - ahead of the January 1 Digital Dividend takeover. The Telco reacted strongly to our reporting this, pointing out they ran an advert in CX advising of trials. The small and wordy advert advises a web page 'will be updated as we commence trials in new areas', and specifically: 'there will be no impact on existing users'.

But CX can report at least one impact on an existing user, at a community church in the Dandenong Ranges (Victoria) who have been experiencing the results of the telco's 700MHz tests every Sunday for months.

At 8am when the band is rehearsing everything is working fine but at 10am or soon thereafter 'all the 700MHz frequencies go nuts with full strength signals obliterating any previously usable radio mics', reports an insider. The church changed to post changeover frequencies to fix the problem.

They contacted the telco contractors who said that running tests on Sundays 'least affects the areas horticultural industries using RF field data reporting controllers (WDAC), because they're not monitored on the weekends'.



ULA an Australian Distributor of Antari Fog Machines

Cuono Biviano, Managing Director of ULA Group, comments: "It is with great pleasure and anticipation to officially welcome the Antari brand and to be working closer with Sophia and the Antari team. For 20 years Antari has been present in our ULA product range as an OEM partner but now we will be

offering Antari fog generators and fluids in their own right. The Antari range is very extensive and the products are manufactured to a high standard and represent great value and performance. Myself and all of my team look forward to the exciting opportunities ahead".

Antari has always been dedicated to manufacturing and providing high quality and reliable fog machines, from the beginning, dating back to 1984.

CORRECTION: LAST MONTH'S REVIEW OF THE SOUNDRAFT Vi3000 DIGITAL AUDIO CONSOLE CARRIED THE WRONG PRICE. THE CORRECT LIST (OR RRP) PRICE IS \$48,995.00 INC GST.
WE APOLOGIZE FOR THE ERROR.

CLARIFICATION: AFTER CX NETWORK REPORTED THAT THE SPORTSCASTER CONFERENCE AND EXPO WAS NOT TO BE STAGED AT THE MELBOURNE CONVENTION AND EXHIBITION CENTRE, IT WAS ANNOUNCED IT WOULD IN FACT RUN AT ETIHAD STADIUM ON OCTOBER 7 AND 8.

BIG TOP LAUNCH FOR JANDS

JANDS recently held a VIP evening to announce two major new products, JBL VTX20 and Vari*Lite VL4000. The launch took place at the Big Top at Sydney's Luna Park, and was a great success. Big names of both lighting and audio were in attendance to check out the new gear, as well as a swag of other products also on show.

The evening began with an introduction by Paul Mulholland, who thanked attendees for their time, and commitment to the Australian production industry. He also paid kudos to the Technical Resource Group, acknowledging it is the best it's ever been. This was followed with product demonstrations of both the VTX20 and VL4000, competently hosted by Jeff Mackenzie and Eddie Welsh of Jands TRG.

Finally the crowd was entertained by a DJ before being ushered out to the adjacent wharf for a harbour cruise. **CX congratulates Jands on a well planned and executed evening.**



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EDITED BY JASON ALLEN

Robe Bright Multi Function Luminaire

Previewed secretly at ENTECH Connect and released globally by web on September 2, the Robe BMFL is an enormous, powerful, bright MF light. The BMFL features a custom made Osram HTI 1500W-1700W/60/P28 lamp putting out 36.000 lm. The output lens has a diameter of 160mm and zoom ranges from 5° – 50°. Rotating glass gobos, dual graphic wheel with two animation discs and an effect wheel with two rotating, indexable prisms provide textures and effects for days.

A completely new electronic stability system ensures your beams don't miss their mark when the fixture is moving due to being hung with multiple moving heads on the same truss. The BMFL can be controlled and addressed via ROBE Navigation System 2 (RNS2), USITT DMX-512, RDM, ArtNet, MA Net, MA Net2 and Wireless CRMX technology from Lumen Radio (on request).

The BMFL is currently on a World Demo Tour, including here in Australia. Contact ULA Group for details:

Australian Distributor: ULA Group
www.ulagroup.com or 1300 852 476



Stage CL Version 1.3

Jands have updated its popular, affordable 'made for LED' lighting controller, the Stage CL, to software version 1.3. Stage CL V1.3 provides for 2 fixture pages. This means you can now patch up to 24 fixtures (or groups of fixtures) and use the 'Page' button to switch the 12 Fixture Channel faders between the 'Black' page (channels 1-12) and the 'White' page (channels 13-24). V1.3 also lets you use the dials on each channel to control Zoom, Strobe and other features now becoming common on LED pars and wash lights.

Additional features include the ability to control two extra features by holding the shift key and adjusting the Hue and Saturation dials. Fixtures that combine warm and cool white LEDs are now included in the Stage CL Fixture Library. V1.3 can also output DMX using Streaming ACN or ArtNet, and now includes options to set the broadcast subnet and universe.

Australian Distributor: Jands
www.jands.com.au or (02) 9582 0909



Sennheiser MK 8

The true condenser, double-diaphragm MK 8 features five selectable polar patterns (omni-directional, wide cardioid, cardioid, super-cardioid, figure-of-eight) and is fitted with a low cut/roll-off filter and pad switch. The MK 8 has one-inch diaphragms precisely spattered with 24-carat gold. Its capsule is elastically mounted to reduce noise. A three-position switchable filter allows the user to either eliminate any remaining low-frequency noise below 60 Hz (-18 dB/octave, low-cut position) or introduce a softer roll-off effect from 100 Hz down to compensate for the proximity effect in close miking (-6 dB/octave, roll-off position).

The MK 8 is also fitted with a switchable pad (off, -10 dB, -20 dB). A signal level reduction of -10 dB in the capsule protects the mic against excessively loud audio sources, while an additional -10 dB reduction in the mic's electronics avoids an overload of the connected mic pre-amp and subsequent recording equipment.



Australian distributor: Sennheiser Australia
en-au.sennheiser.com
or (02) 9910 6700

Kramer VIA Collage

The Kramer VIA Collage wireless collaboration device has been designed for the education, hospitality and corporate markets. It enables up to 256 users to connect wirelessly, collaborate easily and work simultaneously from any mix of devices. PCs, Macbooks, iOS, Android, tablets and phones. Meeting attendees can easily create and edit a common document using their individual devices and at any time, anyone connected to the VIA Collage can contribute to the document. The Interactive whiteboard function on the VIA Collage allows multiple users to annotate, edit or highlight the current document or even a frame of video via their touch enabled devices.

Any document created during a meeting, stored on the VIA Collage or residing on the device of anyone connected to the system can be instantly saved to the devices of all meeting participants. 1080p HD video material is played back smoothly at 60 frames per second. The unit also has a HDMI input to allow the integration of an external video source. The VIA Collage allows up to 6 presenter screens to be displayed on a single display device, and up to 12 can be shown simultaneously when two display devices are connected to the HDMI and Display Port outputs. The unit also supports third party video conferencing applications such as Skype, Go To Meeting, Lync and WebEx allowing for remote participation.



Australian Distributor: Kramer Australia
www.krameraustralia.com.au or (07) 3806 4290

Tascam DP-32SD

TASCAM's DP-32SD Digital Portastudio records an unmatched 32 tracks to solid-state media. Up to eight tracks can be recorded at a time through its combination XLR and 1/4" combo jacks. Input processing like compression and limiting are available during recording, as well as guitar amp simulation and multi-effects for use with the instrument-level input. A colour LCD and channel strip knobs make mixing fast and creative. With its great sound, powerful features and easy operation, the DP-32SD is TASCAM's biggest Portastudio yet.



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www.cmi.com.au or (03) 9315 2244

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PreSonus
StudioLive RM-series Rack-Mount Digital Mixers

The new StudioLive RM16AI and RM32AI 32x16x3 rack-mount Active Integration digital mixers are based on the StudioLive AI-series engine and controlled with UC Surface software for Mac, Windows, and iOS. PreSonus' new UC Surface control software was specifically designed to be an interface for live mixing but also serves well in a studio environment. The remote control software runs on Mac and Windows computers, as well as iPad, so you only need to learn one piece of software regardless of platform. UC Surface also supports iPad and Windows 8 touchscreens.

The 3U rack-mount RM16AI provides 16 locking XLR inputs with recallable XMAX Class A preamps, 8 XLR line outs, and 3 main outs (left, right, and mono/centre); 32 internal channels and 25 buses; a 52x34 FireWire 800 recording interface; 96 kHz operation; and extensive signal processing. The 4U rack-mount RM32AI offers 32 inputs with recallable XMAX preamps and 16 line outputs but otherwise has the same features as the 16-input version. Both mixers offer individual +48V phantom power on all inputs; a +48V Meters button displays phantom-power assignment on the input meter grid.

The RM16AI has an RRP of \$2,099.00 and the RM32AI \$2,999.00.

Australian Distributor: National Audio Systems
www.nationalaudio.com.au or (03) 8756 2600

STUDIO LIVE
 RM16AI



STUDIO LIVE
 RM32AI
 32x16x3



Australian Distributor: Hospitality & Event Solutions
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Extron SMP 351 and eLink 100



The Extron SMP 351 is an H.264 streaming media processor for capturing and distributing live AV sources and presentations. Featuring up to five inputs, the SMP 351 creates high-impact content by combining two high resolution signals, a background image, and metadata into dynamic layouts. The SMP 351 can stream and record simultaneously and can stream concurrently at two different resolutions and bit rates. The SMP 351 creates MP4 media files that can be saved to the internal solid state drive, a USB thumb drive, or a network storage directory. The SMP 351 can be controlled using serial RS-232, Ethernet, and four digital I/O ports.

The eLink 100 is a wireless extender that sends HDMI video and multi-channel audio signals up to 30 metres. It is HDCP compliant, and supports computer video with resolutions to 1920x1080, including HDTV 1080p/60. Latency of less than one millisecond ensures high quality wireless operation with real-time performance. Use of the 5 GHz spectrum allows signals to pass easily through walls and other obstacles. To ensure connection stability in environments with multipath signals, the extender uses a robust multi-input and multi-output - MIMO communication technology with AES-128 encryption and actively monitors the RF spectrum for selection of the ideal transmission channels. Since these technologies do not require line-of-sight, the eLink 100 T transmitter and eLink 100 R receiver may be concealed or mounted in separate areas to maintain the aesthetics of the space.



Australian Distributor: RGB Integration
www.rgbintegration.com or (08) 8351 2188

Yamaha MA2030 and PA2030

Yamaha are now shipping their MA2030 mixer/amplifier and PA2030 power amplifier. Both models support low-impedance (30W x 2ch, 3Ω/4Ω selectable) as well as high impedance (60W x 1ch, 70V/100V selectable) speaker systems, with an interface that has been designed for easy everyday use. Setup is quick and easy, requiring no computers or complex procedures, and no special skill or experience is needed for day-to-day operation.



MA2030 MIXER/AMPLIFIER



PA2030 POWER AMPLIFIER

The MA2030 includes three stereo line inputs and two microphone inputs with input mixing capability, plus a range of DSP functions (ducker, feedback suppressor, and automatic leveler) that facilitate BGM and microphone use in a wide range of applications.

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

The PA2030, with two types of stereo line inputs, can be used alone or in combination with the MA2030 to drive a larger number of speakers while allowing the establishment of extra service zones with volume zoning if required.

The currently available DCPIV4S wall-mount control panel can be connected to the MA2030 for convenient remote output volume and microphone on/off switching control. There's also an optional, dedicated RKH1 rack mount kit that allows convenient rack mounting of the MA2030 and/or PA2030.

d&b audiotechnik Y-Series

The new Y-Series loudspeakers from d&b audiotechnik provide flexible and configurable solutions for any small to medium sized sound reinforcement requirement. While the Y7P and Y10P loudspeakers cover point source duties, with the B6-SUB providing extended frequency response, two line source loudspeakers and a matched cardioid subwoofer, the Y8, Y12 and Y-SUB tackle line array tasks.

The Y7P and Y10P loudspeakers share the same dipolar 8" driver arrangement centred on a 1.4" compression driver fitted to a rotatable CD horn, facilitating deployment horizontally or vertically. An advanced port design delivers extended LF performance down to 59 Hz. The B6-SUB complements the Y7P and Y10P, with a single 18" driver built into a bass-reflex design, extending the frequency response down to 37 Hz.

The Y8 and Y12 loudspeakers are compact, configurable and easily recognisable as the latest members of the d&b line array family. Utilising the same rigging design as their bigger brothers from the J and V-Series, the Y8 and Y12 also share the same 80° and 120° horizontal dispersion characteristics. This driver configuration enables the Y8 and Y12 to offer a horizontal dispersion pattern controlled down to 500 Hz. An extensive range of transport solutions and loudspeaker accessories facilitates ease of setup and mobility.

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MELBOURNE VS SYDNEY

Theatres

Can the Harbour City stack up to Gotham?

This is part one of a tale of two cities' theatres. In one corner, Melbourne – flat, cold, not particularly exciting to look at but celebrated as the capital of our nation's culture. In the other corner, Sydney – bold, international, beautiful and both bigger and richer than its southern rival. But, readers, who has the edge in performing arts venues? Melbourne Jason Allen profiles the Melbourne CBD's main theatres in this issue, with Sydney's rejoinder next month. Let the battle commence!



The Malthouse in Southbank was originally a brewery, hence the name. Generously donated by Carlton and United in 1986, it's now home to the new, the local and the experimental. Divided into three theatres, the Merlyn (seating for 512), Beckett (seating for 198) and Tower (seating for 99), the Malthouse nurtures and develops new works, supports indigenous artists and provides a home for works on the cutting edge.

The Merlyn has a healthy stock of ETC Source Four Profiles and Selecon Fresnels and Profiles, with 10 lighting bars, three fly bars and a range of floor positions. An ETC Ion 3072 is in-house. An LS9-32 digital mixer fitted with Dante runs a particularly nice L-Acoustics PA. The Beckett is big on ETC and Selecon Fresnels, with additional options from CCT. An ETC Ion 1024 provides control. An Allen & Heath ZED420 runs a smaller L-Acoustics 2.1 system. The Tower is kitted out with a range of CCT and Selecon lighting fixtures, hangable from 10 bars with control from an ETC Element. Audio is basic with an Allen & Heath MixWiz and four JBL Control 28s, plus 15" sub.

BY JASON ALLEN

Just on five years old, the newest addition to the Melbourne theatre scene is the Melbourne Theatre Company's Southbank Theatre. Built along with the Melbourne Recital Centre next door, Southbank has two auditoriums, the 559 seat Sumner Theatre and the 150 seat Lawler Theatre. The MTC now presents the bulk of its season here, but still puts on bigger shows down the road at The Arts Centre. It's also hired out for arts festivals and touring theatre productions.

The Sumner runs an ETC EOS 4000 desk to control a huge range of ETC and Selecon fixtures over 460 dimmers. There's also a Robert Juliet spot and Martin and ETC movers. Audio has the luxury of a choice between a DiGiCo SD8 or two Yamaha DM1000s, running a Meyer Sound FOH system. There's a sensible stock of microphones from Shure, Sennheiser, Crown and Neumann to boot. The Lawler runs a more modest ETC Ion 1000 with 96 dimmers, with a solid stock of Source 4s, Selecon Rama and Acclaim and Strand Patt 223s. Audio choose between an Allen & Heath MixWiz or a well-loved Yamaha Q3D. PA is three Meyer Sound UPJs.



SOUTHBANK THEATRE & MELBOURNE RECITAL CENTRE

The joke goes that Australia has a great opera house – but the outside's in Sydney and the inside is in Melbourne. Honestly, it's not too much to look at from the outside. Without the spire it would just be a three story brown circle. But inside, it's glorious. Home to the 2085 seat State Theatre, 884 seat Playhouse and 376 seat Fairfax Studio, the state-funded and well-attended Arts Centre hosts The Australian Ballet, Opera Australia, MTC and touring productions from around the world and within Australia. There's even a modified aircraft carrier hydraulic lift that can drop a B-Double from stage door at level 5 down to the dock that rolls flat into all three theatres on level 2. The 2464 seat Hamer Hall next door isn't technically a theatre, but after its recent refurbishment, it's now arguably the best concert venue in Australia.

Technically, The Arts Centre has everything that opens and shuts. Lighting control is PRG across all three theatres, with a giant range of fixtures from ETC, Selecon,



The ARTS CENTRE

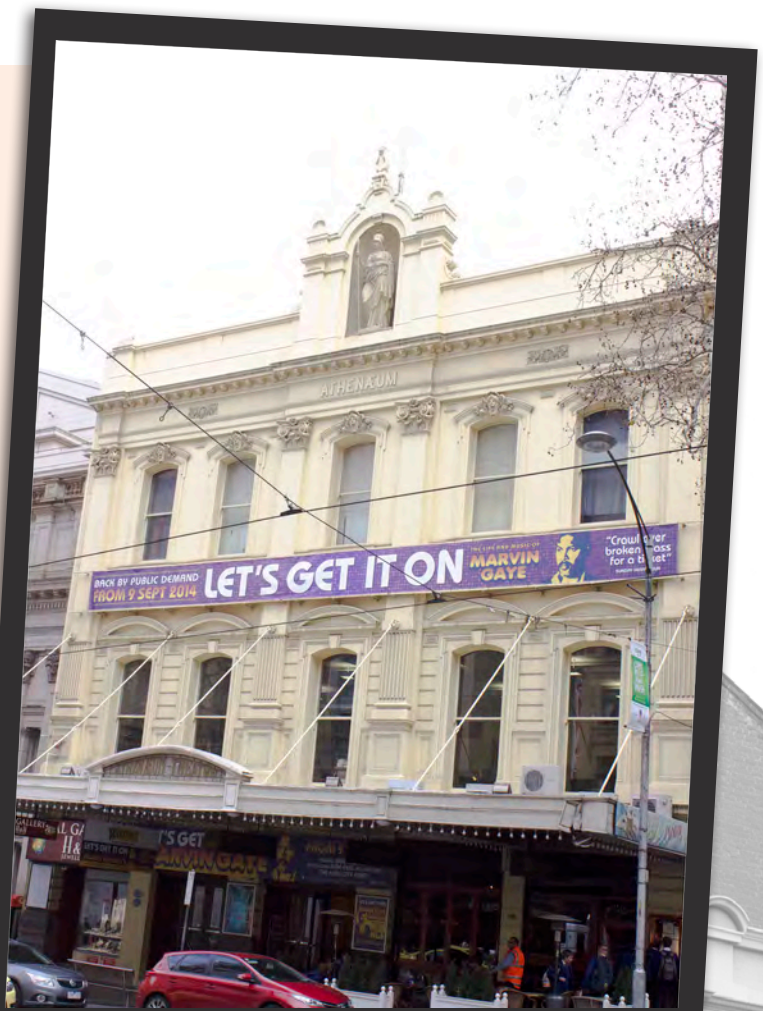


& HAMER HALL

Strand and more. The State also comes with four Xebex followspots. Audio control is DiGiCo in each venue, from the SD11 in the Fairfax up to the DI in the State. PA is Tannoy in the Fairfax and Meyer Sound in the Playhouse and State. Microphones are pretty much anything you could want from Shure, Sennheiser, AKG, Crown, Neumann and others.

The Athenaeum is a beautiful, quirky and completely lovable institution that's actually my favourite Melbourne venue. The Athenaeum is split into two performance spaces, Athenaeum One and Two. One is a beautiful stalls/circle/balcony proscenium theatre that seats 1,000. Two is a black box space that is the home of the Last Laugh Comedy Club every Saturday night, but is also used heavily during the Melbourne Comedy Festival. The Ath hosts drama as well as music and comedy. I've seen acts as diverse as Gotye, The Australian Shakespeare Company and English comedian/philosopher Daniel Kitson there.

The Athenaeum is also home to a private, subscription-only library. I was a member for two years, and stepping in there off the busy streets is like going back in time to the 19th century. There's also an excellent French restaurant on the ground floor. Technically speaking, the in-house lighting rig of Athenaeum One is a few old PAR cans and Fresnels controlled from an analogue desk - productions bring in their own. The in-house audio was recently upgraded with Coda Audio FOH, Nexo foldback and a DiGiCo SD9.



The ATHENAEUM



HER MAJESTY'S

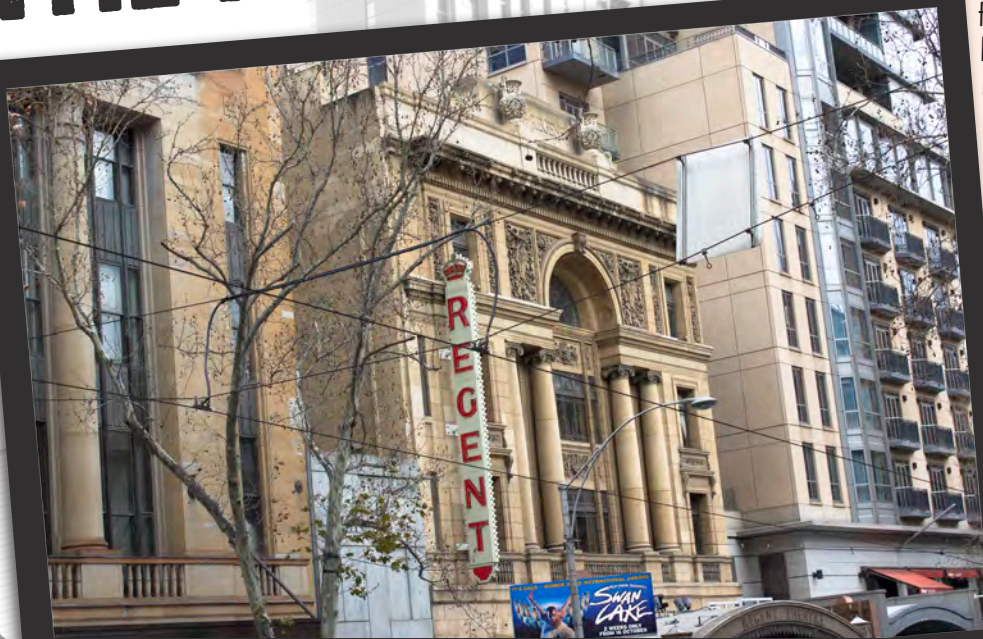
At 1,700 seats, Her Majesty's is one of the big, workhorse commercial theatres that Melbourne is famous for. Productions from the West End and Broadway come into Her Maj and stay for a year or more. It's currently hosting the latest production of Les Miserables. After a long and storied life, it's now owned by Mike Walsh, of 1970s TV fame. It has 85 fly lines with a rigging capacity of 50 tonnes.

Despite being a basically bare-walls hire proposition, Her Majesty's has a house lighting rig consisting of CCT and Strand fixtures plus 52 generic PARs, controlled from a Jands Event Plus. There's no house audio. External audio companies often seen in Her Majesty's include System Sound, JPJ and Norwest.

THE MARRINER GROUP

The Marriner Group own and operate four of Melbourne's best venues. Headed by David Marriner, the empire consists of the 2,162 seat Regent, 1,488 seat Princess, 997 seat Comedy and 1,320 seat Forum. The two flagship theatres, The Regent and The Princess are heritage listed and incredibly beautiful. The Regent dates to 1929 and was originally a cinema. The venerable Princess, opposite Parliament itself, dates all the way back to 1854. Both run the big musicals - The Lion King, Wicked, Jersey Boys and Hairpsray have all been through in recent years. The Princess even has a ghost - Federici - who died of a heart attack just after coming off stage in a production of the opera Faust in 1888. There's a seat with

no number reserved for him in the circle which is left empty for every show.



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THE MARRINER GROUP

The Comedy hosts shorter runs of touring dramas, comedies and musicals. It's a workhorse venue that will see the Rocky Horror Show one month, Menopause: The Musical the next and follow it with a production of Waiting For Godot from London's Theatre Royal. It's opposite Her Majesty's, and engages in playful rivalry. When Her Maj was hosting the long-running Andrew Lloyd Webber musical about felines and The Comedy had Rocky Horror, its marquee proudly displayed the slogan 'More Pussy than Cats'

The Forum isn't quite a theatre in the traditional sense. Originally a cinema, the 1500 standing capacity (downstairs) mainly hosts touring rock'n'roll, but can and sometimes does seat 800. The upstairs



The PRINCESS

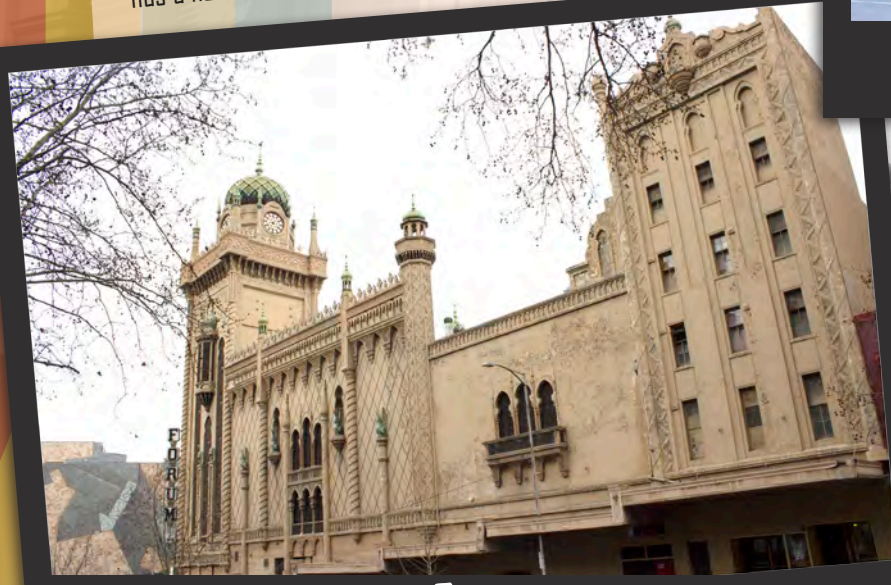
auditorium seats 520 and is used heavily for stand-up during the Comedy Festival, as well as a breakout for film festivals. I included it here because, well, look at it! It's amazing! Its mad gothic presence at the corner of Flinders and Russell is one of the reasons Melbourne can stand in for Gotham.

As all of the Marriner theatres function as bare-wall facilities, there's not really any gear to speak of. There is a lighting rig that is usually stored in the Forum made of PARs and Silhouettes controlled from a Jands Event that is moved around for corporate work and launches, with a small PA of powered Meyers and a Yamaha Q1V96V2 to go with it. For the long runs, audio is brought in by the likes of System Sound, JPJ and Norwest. Lighting companies PRG and Chameleon generally get the gig on the musicals, and players like Phaseshift, Res X and Clearlight get a lot of the touring work. JPJ has a house PA in the Forum which varies from Nexo to dBb.



The COMEDY

So there you go, Sydney. That's why Cameron Mackintosh stages world premieres of new productions like the video wall version of Les Miserables here. I know you have that breathtaking harbour with the world-heritage listed architectural masterpiece sitting astride it that still makes me gasp with astonishment after almost 10 years of seeing it pretty much once a month, but APART FROM THAT, what else have you got?



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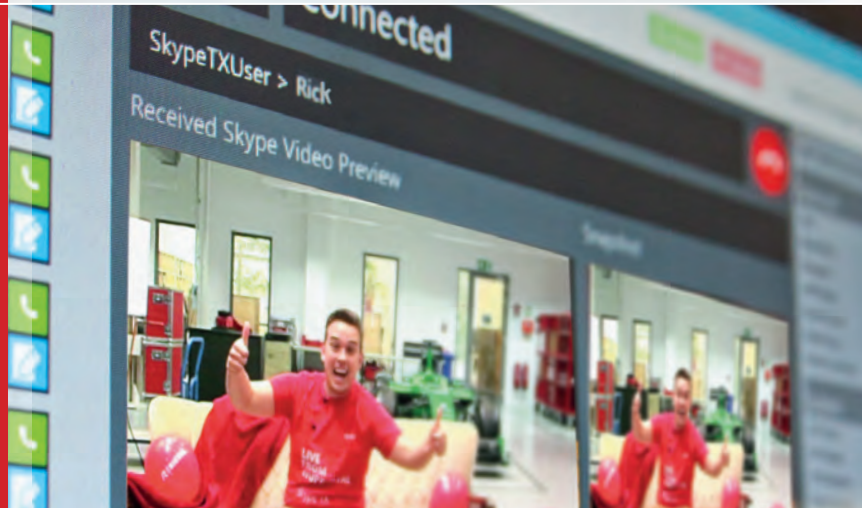
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RIEDEL'S NEXT STEP

THE MILL REPORT

STUFF FOR DAYS... WEEKS EVEN

I've been trying some new monitors here at The Mill in the last few weeks. Actually, I'm always listening to new monitors to be honest - it's a bit of a running joke amongst many of my regular clients and visitors to the studio:

"Geez Andy, do you think you have enough speakers in the room?" To which I always answer: "Um, no. " Looking around the room right now I can count seven pairs - a modest array quite frankly - with two more pairs on the floor behind the console. But who's counting?

I'm also trying out some new microphones, guitars, basses and analogue compressors right now. . . none of which I really need, but of course, we all know that 'need' is a subjective term open to interpretation. It's the story of my life really, one that many readers of CX no doubt identify with. The acquisition of audio gear is endless; an addiction perhaps. . . or is it just simply a selfless determination to improve one's ability to produce sound? The distinction between these two concepts gets a little 'blurry' around here sometimes.

NOAH'S ARK ONLY HAD TWO? HA!

There are several reasons for the current flurry of activity in here. Firstly, it's a known scientific fact (isn't it?) that you can never have too many vocal mics - something to do with matching them to voices, or so I've been told, and there are a lot of voices around. Or maybe it's something to do with gravitational pull: try as you might there's always a new mic falling into your lap. Isaac Newton experienced it, although his was an apple I think. Either way, who am I to question science?

Secondly, I'm not a big fan of mics I can't trust, and I tend to lose faith in them at the drop of a hat. If I have an issue with a mic during a session, whether it's a headroom problem, a noise issue or a lacklustre performance I'll often 'drawer it' and not take it out again for quite some time... not a very economical way to work I'll admit, but mics that don't cut the mustard are no friends of mine.

And this has happened a few times lately. So Gunter (Wagner: the best Neumann repairman on earth, who just so happens to live in Sydney), if you're reading this, please can I have my U67 back soon?



BY ANDY STEWART

I've also been charged recently with the somewhat unenviable task of selling an old friend's guitar and bass collection, which I'm not overly keen on doing to be honest. His widow doesn't really want to have anything to do with them right now, so I have to get them sold... before I grow too attached to them or get lost in a sea of roadcases. I've already fallen in love with a 1963 Gretsch Tennessean, a '72 Tele, and two Fender basses: a Jazz and a Precision... and just when my finances were starting to recover from a recent trip to the US.

I'm also trialling some fancy new 500-series analogue compressors for several idiotic reasons that only my Tarot Card reader and the teapot can understand: one by Retro Instruments (the Doublewide – which I have two of here in the rack), the AwTAC Channel Compressor and a Lindell 7X. All of them sound pretty bloody good actually, the Doublewide especially... I think I'll need to write a hit single to pay for them all. Oh, but hang on, there's my problem right there. My sub-conscious has already started the ball rolling on funding their acquisition before my conscious mind has even thought about it! That's why I have so much stuff in the studio. My sub-conscious is reckless with money!

WALL-TO-WALL

You can hardly walk in here at the moment, there's so much stuff kicking around. Between the several Gretschs, Fenders, Hofners, guitar cases, amps, speakers and boxes lying around the place, you need your wits about you just to cross the floor!

But of all the new stuff in the room, there's one thing I'm really impressed by this week; actually it's a pair of things –some Lipinski 707 speakers.

These aren't new speakers by any means, just new to me, but as midfield mastering/mixing monitors, and in combination with a Qusted sub, they're certainly sounding impressive in here.

I'm actually looking after them for a friend of mine who's overseas for the rest of the year... and I've been loathe to set them up because A: I don't own them, B: if I liked them I couldn't really afford to buy a pair of my own, and C: another set of expensive speakers in the studio may just do my head in. A/B comparisons are all well and good – a healthy, important feature of any decent studio – but A/B/C/D/E/F/G comparisons are quite another. There are enough speakers in here right now to throw any vacillating engineer into a tailspin of indecision.

As it is, I'm already surprisingly relaxed around the Lipinskis. They're vivid sounding speakers, with fantastic



Lipinski 707 speaker

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separation and a truly remarkable soundstage. Initially they sounded atrocious in combination with an amp I lazily connected them to for the sake of convenience, but once they were being driven by their prescribed Bryston 4B, they sprang to life like a startled deer. They went from being possibly the worst sounding speakers I'd ever heard, to some of the best.

It was an amazing transformation really; one that reaffirmed the critical importance of matching passive speakers to the correct amplifier.

MIDFIELDS, NOT MIDDLE OF THE ROAD

I've been testing several sets of speakers lately in an attempt to find a pair that can act as true midfields in the studio, but nearly everything I've tried thus far has eventually fallen short of the mark. The Mill is a big mixing room, and midfields are hard to accommodate in here, mainly because there's a giant Neve console and some outboard racks in the way, making the position of the Lipinskis in the room one of compromise. But so far they're doing an amazing job. I'm impressed. Whether this is still the case by the next issue of CX mag, only time will tell.

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

TOOLBOX review

RETRO DOUBLEWIDE 500 SERIES VALVE COMPRESSOR MODULE



If there's a single word to describe the Retro Doublewide 500 Series module its 'silky'... as in, **smooth as**.

Price: \$1,453
 Mixmasters: (08) 8278 8506 or
 www.mixmasters.com.au

I've got a pair in the rack here at the moment, and my lordy, they are incredibly smooth. They have such a beautiful ability to control audio program, particularly on slower settings, that I just want to put them across every mix I do right now...

But I should back up a bit.

The Doublewide is a mono tube compressor crammed into a two-space module for the 500-series rack format. Designed from the ground up by Phil Moore, the founder of (and demonstrable valve genius at) Retro Instruments, the Doublewide is a heftily hand built (in California) push-pull vari-mu design, similar in design principle to - though not the same as - the legendary Gates Sta-Level. It features variable input and output levels working around a fixed threshold, variable attack and release controls, two selectable time constants - 'single' and 'double' (more on that in a sec) - and a genuine hard-bypass switch.

Internally the compressor is a fully floating transformer balanced unit that accommodates line level signals. It uses NOS 6BJ6 tubes, Cinemag transformers, gold-plated edge connectors, an amazing looking US-made Simpson gain reduction meter and hand wiring throughout. It's old school in miniature. Impossibly cute... sexy even, if you're given to describing audio gear that features art deco compression meters as 'sexy'. Frankly, I think the Doublewide looks amazing... almost as good as it sounds.

Some great little extra features include an adjustment trim control on the side of the module to calibrate the zero position on the meter, and a 'standby' mode for the module so that it can be off even when everything else in a 500-series rack is on... a nice touch that helps preserve the precious tubes - you don't want them sitting around ageing if they don't need to be.

But it's the sound of the Doublewide that really impresses: luxurious, powerful, impossibly well-balanced, clear and dense. It's certainly not Ben Johnson in its reaction time, even though the 'double' time constant setting is more nimble in its response to program than 'single' mode. But compression speed is not what you buy a Doublewide for in the first place. The slower 'single' mode rocks gently back and forth on instruments and vocals in a beautifully relaxed and steady manner, making for full, rich vocals, thick and solid bass and smooth as double-thickened cream stereo mixes.

A couple of these in a 500-series rack, to be deployed on just about anything you care to throw at them... sounds like a great idea to me. They're a fantastic antidote to the harsh, spikey, prickly tendencies of 21st century digital recordings and mixes. They add genuine aural beauty to the basic need for dynamic control; providing far more than mere gain reduction. There's a certain magic they contribute to mixes that I've been liking a lot.

These are amazing sounding, compact, go-anywhere unmistakably 'tube' compressors. Their spectacular clarity and richness makes them well worth the audition. I doubt you'll be disappointed.

dBTechnologies

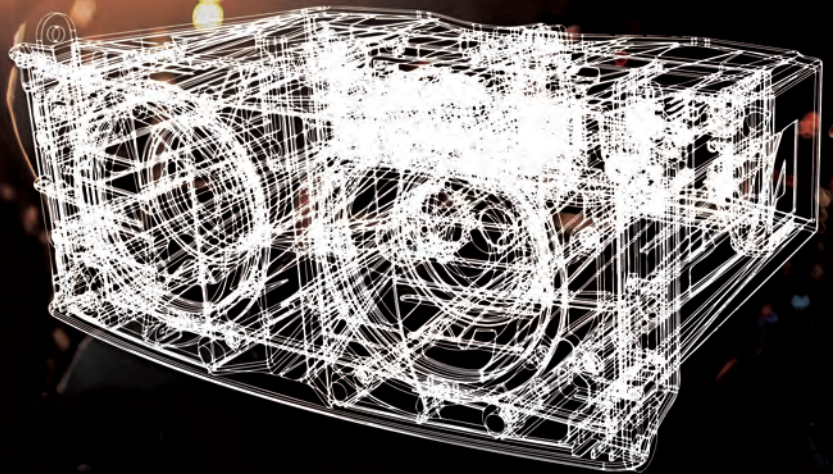
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INTEGRATE 2014

Australia's premiere AV show goes walkabout

Following the demolition of the Sydney Convention and Entertainment Centre, Integrate has just run at its third location, Sydney's Olympic Park. Before the show even opened, it was announced that it will relocate in 2015 to Melbourne's Convention and Exhibition Centre. But that wasn't the only interesting thing that was announced before doors on Tuesday 26 August...



On Monday 25 August, as exhibitors were still setting up their stands, many on organiser Diversified Communications Australia's mailing list received a press release informing them that the "first day of Integrate welcomed more than 1500 visitors from 28 countries" and that they shouldn't miss another day. The snafu was blamed on the external PR company handling Integrate's marketing, and that the figures quoted were 'placeholders' that were to be updated after the correct data was available. The misstep still left many exhibitors, who are already inherently distrustful of attendance figures quoted by tradeshows, feeling as though their worst expectations had been confirmed.

However, the show must go on, and it certainly did. The first two days were crackingly busy, with a great quality of visitor. The \$25 charge to get in if you hadn't pre-registered didn't seem to stop anyone, given that it appeared to us that you could 'pre-register' on your own device as you got there. On the floor, exhibitors were talking, deals were being done and integrators and consultants alike were finding new ways to solve old problems. CX spent two days at the show, and was constantly finding new toys and techniques to talk about. The Dome at Olympic Park is a handsome and accommodating venue, and it's a shame it isn't used for events like this more often.

On The Floor

Production Audio Video Technology dominated the Dome, with a two story stand near the entrance complete with wildly overspecced EAW Anya adaptive line array, live band and bar with three craft beers on tap. The PAVT crew took the opportunity to announce their new distributorship of Belgian brand Luminex's range of networked audio products. The GigaCore series of ruggedized Ethernet switches feature AVB compatibility, Neutrik Ethercon connectors, gigabit bandwidth and a simple interface for creating redundancy and VLANs. "We believe the Luminex network switches will fit in nicely with our Pro Audio arm" said PAVT's Marketing Manager Michael O Connor. "They'll complement our Symetrix and Dante offerings for large enterprise rollouts."

Industry stalwarts Jands took up residence next to PAVT, and among ETC's range of architectural controls and lighting, were showing off the free software upgrade to one of their mightiest little lighting products – the Stage CL. Created in response to owners wanting to use their Stage CL on bigger shows, Version 1.3 has effectively

doubled the console's control capability. Two fixture pages means you can now patch up to 24 fixtures (or groups of fixtures) and use the 'Page' button to switch between them. You can also now use the dials on each channel to control Zoom, Strobe and other features that are becoming common on LED fixtures. They've also incorporated a new assignable control, which gives you access to two user-definable extra features by holding the shift key and adjusting the Hue and Saturation dials.

Notable Players

The rapidly expanding Audio Brands Australia, headed up by Don McConnell with Sales Engineer Jeff Shoesmith, were showing off the latest addition to their stable – Rane's Contracting range. Rane make a solid range of utility products for installation, including the well-thought out HAL DSP platform, control panels and remote I/O. Around the corner at Altronics, Redback's new Phase 5 power amplifiers made their debut. The range boasts colour LCD status readout, optional USB/SD card MP3 player module with IR remote control and the ability to name input sources on screen via USB keyboard. Technical Audio Group impressed with a stand completely devoted to QSC's Q-Sys processing and control systems. Q-Sys spans a range of core DSP units, remote I/O, paging and control solutions. TAG's Q-Sys System Sales Specialist Ewan McDonald had programmed a beautiful series of iPad graphic interfaces that eloquently demonstrated just how easy to use Q-Sys is, making complex tasks like multi-zone paging and room combination a breeze.

Riedel Australia's General Manager Cameron O'Neill stood proudly next to the new 2-RU large-scale MediorNet MetroN core router, which provides a massive 640-GB real-time signal-routing capacity via 64 10 Gigabyte ports. Over at Audio Products Group, business continued as normal after the Hills takeover. With two of the strongest integration brands in the market, APG showed off how Lab.Gruppen's new D Series amps connect and integrate directly with BiAmp's Tesira platform, with control and networking via AVB. ULA Group, known for major entertainment lighting brands like Robe, were in integration mode, with their VuePix LED Billboard series on display. Their stand featured an impressively thin 10mm pixel pitch outdoor display, though an option is available to go down to 4mm.

Get In A Huddle

The big buzz in corporate integration at the moment is the huddle room. A huddle room is a small, non-traditional meeting space designed for multiple workers to collaborate on projects. Technologically, they're like a stripped-down boardroom, with the goal that everyone

BY JASON ALLEN



can bring in their own devices, wirelessly connect, and all share and edit each other's work seamlessly. As anyone in AV knows, this is difficult to actually achieve. Epson's solution, its MeetingMate range of interactive, finger touch projectors, were on display in their second-generation EB-1420Wi and EB-1430Wi models. With MeetingMate installed, users don't need a PC or any specific software. Up to six participants can connect to a system and touch, draw, select and interact with fingers on the screen using all the gestures we're used to on our phones and tablets. Opening and closing files, scrolling, moving and expanding objects, and annotation are all possible with touch control, but you can also use an interactive pen if that's more your style.

CX covered a lot of the new products and updates in this field at the InfoComm tradeshow in Las Vegas back in June. All of the major contenders for the installer's

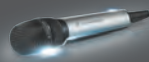
dollar were present at Integrate; Christie's Brio, AMX's Enzo and Crestron's AirMedia. It's comforting to know that if your budget doesn't extend to travelling to the USA or Europe to keep up with AV tech, Australia's distributors and branch offices are looking after us. AMX and Crestron's show floor presence were on a par with InfoComm, at least in relative staffing levels if not one-to-one square metres. You also get the benefit of talking real deals on local pricing, leveraging your relationships and getting details on real stock levels and availability.

Making A Display Of Yourself

According to InfoComm's 2013 Global AV Market Definition and Strategy Study, displays are the largest single category of equipment sold in to the AV space, at a whopping 23% of the total market. Every kind of screen, projector and panel were, well, on display, on the floor. Continuing InfoComm's 4K theme, pretty much

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every LED screen, or modular LED system, is now 4K. Dragon Image's whopping eight metre ultra-high-res 4K LED screen dazzled. It was actually made up of multiple modules measuring 200 (W) x 150 (H) x 80mm (D). Major commercial player Samsung demonstrated two-story tall modular screen systems built with major retail and digital signage in mind. Multiple Chinese OEMs, including Sony Tech and three LED product manufacturers based out of Shenzhen, are offering modular LED panel systems of every pitch, size and rigging system imaginable.

What really caught our attention though, was Sony's ludicrously short-throw 4K projector, the VPL-GTZ1. Officially, it's a "4K Ultra-Short Throw Laser Light Source Projector", delivering the two major projector buzzwords of the year, '4K' and 'Laser'. The VPL-GTZ1 can throw high-resolution images up to four metres diagonal and zoom down to 1.7 metres, at 228mm and 0mm distance from the screen respectively, onto any white plane surface. You can floor-stand it, ceiling-mount it or use it for rear projection. The laser phosphor light source delivers a colour brightness of 2000 lumens expected to last 20,000 hours. You can even edge-blend with other units. While Sony eye the large-scale corporate and design markets, we can see this being incredibly handy across live corporate presentations and installations into all sorts of tricky spots that need a large image but can't handle a screen or panel.

Booth Babes? Really? Still?

We are amazed and disappointed to still see 'booth babes' being employed to attract attention on the stands. At least three exhibitors were involved. To be clear, we don't just mean putting attractive staff on the stand to act as the face of the company, we mean placing attractive (usually female) ring-ins on the stand in provocative, revealing clothing that looks more at home in a strip club. We noticed one distributor opting for a skin-tight, thigh-high leather BDSM look on two staff on day one, before noticing the disdainful reactions and scaling back to 'too tight, too revealing business attire' on day two. The worst offender, however, was the company who handed a tiny black cocktail dress to the lucky women on their stand that was emblazoned with one of their brand's one-word slogan - 'Easy'.

I mean, where do you start? Does your product have so little to offer that you have to use the lure of being able to speak briefly to an attractive person to get someone onto your stand? Don't you think even the most slovenly, misogynistic sociopath knows exactly why you're doing it and feels judged accordingly? You are not selling little black dresses, hot pants, leather boots or the exercise routines and diets that these models use. You are selling AV equipment. You look like out-of-touch ocker idiots when you use this tactic, and they're the only takers you're going to get. You're insulting your customers, your brand and the industry as a whole. Keep it up – it's a pretty good way to guarantee you'll be out of business in a few years as the last of the pre-feminist dinosaurs retire from the industry, shuffling off to nursing homes to flick through their collection of antique issues of Australasian Post.



Visitors to Integrate were greeted at the door by a bright yellow, heavily decaed 1979 Holden VB Commodore. It had just returned from the 2014 Variety Bash, where it had been piloted by none other than Michael Lasa of Soundcorp and Michael and Sandy Rutledge of Rutledge AV.

Raising funds for Variety – the Children's Charity which supports children who are sick, disadvantaged or have special needs - the crew departed Melbourne on Thursday 13th August. They headed into the King Valley wine and food region of Wangaratta, then onwards into New South Wales by way of Corryong and Snowy River country. The Bashes then assembled in Sydney before heading inland towards Armidale and up through Tenterfield. The last leg wound through Kingaroy before finishing in Noosa on Saturday August 23rd.

"In the end we raised a total of \$50,000" said Mike Lasa, "and received the Ruby Award for our fundraising efforts from Variety." Contributors to the total from the AV industry included AMX, Sennheiser, Amber Technology, Yamaha Music Australia, PAVT, Panasonic, Technical Audio Group, Sharp, Epson and Jands.

- A.** Michael Kaloudis of Altronics with David Verrall of HNC. **B.** Phil Simmons and Michael Shaw of Amber Technology with Digital Projections' HIGHLite Laser 12K. **C.** Ben Clarke and Matthew Vance of PAVT with the Luminex GigaCore 12. **D.** LOUD Technologies' Rohan Smith. **E.** Hillsong Church's Steve Le Roux. **F.** RGB Integration's Marc Booth. **G.** Shane Bailey and Brain Vayler of National Audio Systems. **H.** Audio Products Group's Richard Builder. **I.** Cameron O'Neill with Riedel's MetroN. **J.** David Jones and Jacques Van Deventer of Lightware. **K.** Toshiba's François Spina. **L.** CX's own Julius Grafton, Norwest's Graeme Whitehouse and PAVT's David Di Muzio. **M.** AMX's Maciej Nadstazik.

**SEEN @
INTEGRATE 2014**



The P·5

PROBABLY THE BRIGHTEST LED WASH LIGHT



The P-5 does not look much, but don't let the size fool you.

This compact and light weight fixture packs a big array of features that will suit any need. With an extremely high luminous output, the LED modules have an efficacy of 58lm/W and flicker free operation suitable for any application. This IP65 rated fixture will out shine its competitors both inside and outside with its stunning light output of more than 20,000 lumens.

At only 8.9 kg the P-5 can be mounted on any surface without worrying about use of special surface anchors. The 44 pcs of high power RGBW 10W LEDs will produce a large variety of saturated colors, along with a very bright white light which provides a full palette of pastel colors and the most powerful and pure white light.



Thorsten Sattler,
MD of SGM Deutschland:

"The instant success of the P-5 in Germany was based on the fact that the product is so powerful and also that the rental companies experience huge savings on tours, because they can easily fit five P-5 units in a box of the size of one comparable product".

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

LISTEN HERE

Too much control room reverb, too much in the mix?

One thing I've noticed lately, particularly from a mastering engineer's perspective, is how much reverb is being applied to mixes by some of my regular clients, and how this quantity often relates directly back to the 'liveness' of their mix rooms.

You see, when a control room is too reverberant, or contains insidious echoes and early reflections that corrupt your ability to hear the speakers clearly, the amount of artificial reverb you apply to a mix becomes hard to judge.

Now I don't want to get too caught up here in a conversation about RT60 measurements or Haas zone acoustic theory, there's just not enough space. But I would like to touch on a couple of issues to help illustrate why overly resonant control rooms can often confuse and deceive you in the mix position, and what can be done to resolve it.

HOW LONG IS MY TAIL?

In essence, when a control room is too 'live' – namely, that the room itself is acting as a quasi reverb chamber – it can affect your ability to judge the amount of effects you should apply to a mix.

In a control room suffering from this type of problem, any mix that might sound balanced, subtly reverberant and three-dimensional at the time, will later sound either overbearing, strangely resonant, or oddly enough, dry and flat.

When your mix reverbs unwittingly combine with the room itself, so that the ambience you're hearing is one part room reflections, one part artificial space, you're in for a rude shock when you and your new mix leave the studio. Out in the real world, either your mix will sound too dry because half the ambience stayed behind in the room where you mixed it, or too wet because you couldn't really hear the effects in the

already-reverberant space, which insidiously forced you to push them too far so you could.

THE GOLDBLOCKS PRINCIPLE

The solution is to strike a balance in your control room so that it's neither oppressively 'dead' sounding, nor 'live' and reverberant. But how to judge what's 'too dead' or 'too live' is where things can get tricky.

Judging your control room's response time across the audible frequency spectrum can be a can of worms, particularly if you're deriving this technical information via an uncalibrated analysis tool or with the aid of software you don't fully understand. Combine these issues with your own subjective listening preferences and you could be setting yourself up for an expensive and time-consuming experiment gone wrong.

My advice, if you're serious about your mixing – particularly if you're deriving your income from it – would be to consult a professional acoustician if you feel your mixes are failing to translate into the world (and make no mistake, translation is everything). Provided they're reputable, an acoustician can be a great asset, and can resolve your control room problems relatively simply in many cases.

Unfortunately, this is the point where most people depart this conversation. I know from experience that most engineers and studio owners would prefer to visit the dentist for root canal treatment than get involved with an acoustician, and some for good reason. Many self-proclaimed acousticians out there are little more than a guy with some cheap software and used-car-salesmen-in-laws that have made a mess of many a home and commercial studio.

But not all acousticians are shonky. Some are experienced, and well credentialed. If you're interested, I've knocked together a (sure to be incomplete) list that will give you a few local names to start the ball rolling.

BUT MEANWHILE...

If you, frankly, have no intention of getting an acoustician involved in analysing your room, the simplest advice I can give you is to make sure your control room is reproducing the reverbs in your mixes with clarity and definition, rather than masking them with its own.

BY ANDY STEWART

There are several things that contribute to this. The first and most obvious of these is the sheer lack of materials that help absorb or diffuse sound energy in your room. If all your control room's surfaces are 'hard' – i.e.; made of timber, concrete, glass etc – then the chances of your room being able to expose subtle reverbs through the monitoring is almost nil. In this situation you *must* get some absorption up: preferably broadband absorption that will reduce the reverb time of your space evenly. But certainly some is better than none at all.

TRUTH DECAY

As a general rule, a room's decay signature should be even across all frequencies, although, in reality, most rooms tend to have a slightly longer decay time in the bottom end.

Some big control rooms have the benefit of their walls being outside what's called the 'Haas zone', meaning that the room reflections that reach your ear at the mix position are delayed enough that your brain can distinguish them from what's emanating directly from the speakers. This size of room allows for walls to either be treated with diffusion or absorption, depending on how 'dead' you ultimately want the room to seem.

Smaller rooms, however, tend to be dominated by early reflections more so than genuine reverberance, and many of these reflections are *inside* the Haas zone. What this means is that your brain interprets what's coming from the speakers and the reflective room boundaries as 'one' sound. Needless to say, this can be a major problem, since most of these early reflections tend to corrupt the sound image and tonal balance. If your room is small, the key – again, if you're not willing to consult an acoustician – is to make sure you apply some broadband absorbers anywhere an early reflection seems obvious.

The simplest way to determine where these reflections are coming from is to sit at the mix position, and with the help of an assistant holding a small mirror, get them to wander around the room and place marks on the walls, floor and ceiling wherever you can see the speakers in the mirror's reflection. This is where absorptive materials need to be applied. If there are brick or glass walls at these points around the room, something must be done to impede their ability to reflect sound. Think of your room like a snooker table: you want the table's cushions to be soft at these critical reflection points so that the ball doesn't ricochet off them at high speed and continue to career around the room unimpeded.

The other thing to keep in mind is that sound has no sense of up and down; no regard for gravity. Roof, ceiling and walls are all the same as far as it's concerned, so remember that there are potential reflection points above and below you, not just around the walls.

NOT TOO DEAD, OR ALIVE

Of course, the ultimate example of a room that absorbs sound reflections is an anechoic chamber, but the reason why no mixing environments are built like this is because they're quite disorienting to be in, and even if you could cope with their oppressive lack of natural ambience, you'd end up monitoring far too loud and send yourself deaf in quick time. Anechoic chambers are for measuring and testing, not mixing.

The trick is to strike a happy medium between what's essentially an echo chamber – hard reflective surfaces,

long RT60 times (say 2.0 seconds) and inarticulate sonic detail – and an anechoic chamber that absorbs everything, has an RT60 measurement of effectively zero and reflects nothing back into the room.

The 'middle ground' typically involves some room treatment that includes diffusive wall and ceiling elements, some absorption at critical early-reflection points, perhaps some carpet on the majority of the floor, and soft furnishings. You want enough ambience in the control room that it still feels comfortable – both physically and sonically – for long periods of time. But, to some degree or other, the control room should also be representative of a real-world listening environment – most people listen in spaces that are fairly reverberant, some hideously so, so if your mix room is oppressively dead you'll tend to make all your mixes too wet for the outside world, as you instinctively fight in vain to illicit a response from the room itself. A totally dead room will make you monitor too loud, and pile on reverb to compensate.

One other very simple way to judge whether your room is too live or too dead is to compare your mixes in headphones as well. Headphones are a whole different animal with their own issues, but one thing they're good at is highlighting when your reverbs have taken over the song. Headphones are an important mixing tool, not least of which is because more so than ever before, people are listening to your mixes through headphones of all shapes and sizes.

When you're listening in the control room and the reverb in your mix seems subtle, but in headphones the mix is awash with it, you know the room has a problem worth investigating.

PS:

One final thing: I would urge anyone who considers themselves an audio professional to seek professional help if their room has problems. Alternatively, if you're interested, there's a good program called Room EQ Wizard (REW) that's free and can help you self-diagnose problems in your space. Good luck!

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Behind the scenes Hills have been restructuring and now what was once Hills SVL (previously Audio Telex Communications) is but a memory. With changes at Crestron and the acquisition of Audio Products Group, we thought it was time to speak to the architect and engineer of change at the large company. Julius Grafton spoke to Brad Newton, the Chief Operating Officer (COO) of Hills Limited, at Integrate in Sydney.

BY JULIUS GRAFTON

New Directi

CX: So what are the challenges?

Brad Newton: We've got a few things that we're focused on this year. To give you some background, I joined 18 months ago. When I joined, we had 28 different businesses that we were holding, and we were basically reporting a \$90 million loss. And our debt was climbing at about \$200 million. Now we've just released our financial results and we've turned that from \$90 million loss to \$27 million profit.

CX: Yeah, I read that.

Brad Newton: The other part of the story which is not necessarily stated that clearly is that we've taken that \$200 million debt issue that we had and we've now got zero debt. In fact, I think we had about \$10 million worth of cash and about \$200 to \$250 million worth of capacity to go and do something else in the market. From a turnaround perspective, it's a massive restructuring within the business to get us to that outcome.

Twenty-eight different businesses that we were holding now down to a much more simplified structure, a much more simplified organisation. So the business that I'm focused on is the different value-added distributors. We've got DAS, Pacific Communications, SVL, OPS, our antenna business; we've got Intek in New Zealand and so forth. They all specialise in a building technology area whether it's CCTV, access control or intrusion, whether it's AV.

What we're currently working on is bringing all those businesses together into a One Hills largest value-added distributor of building technologies in Australia and New Zealand. So that's part of the challenge that we're still working our way through, bringing those businesses together and getting the troops aligned with every hand on the pump at the same time, pumping in the same direction. We're getting closer and closer by the day, but we've still got work to do.

CX: So with \$200 million loss when you came in, was SVL proportionally in loss, or was it profitable as a unit?

Brad Newton: When I joined, SVL had probably three months of consecutive revenue decline. But in the last 12 months, SVL was probably our strongest performing business unit. Audio for us absolutely smashed it out of the park.

CX: It's a big business.

Brad Newton: Smashed it out of the park. It's a great business; exactly right. So we're looking at Crestron (which) grew 80% year on year for us; the fastest growing region in the world for Crestron. Our SVL business was the largest contributor to our growth. So yes, SVL as a business achieved an extraordinary result for us the last 12 months.

CX: Yeah, but Crestron's gone now in the sense that you're handling logistics only?

Brad Newton: No, absolutely not.

CX: It was pretty unclear what the shift meant.

Brad Newton: No. Look, it's still Hills employees; it's still part of Hills. We're still the exclusive distributor for Crestron in Australia, but Crestron is focused on representing their own identity. Crestron obviously has Stuart Craig working directly for Crestron. However, the other employees are all Hills employees. Hills still distributes Crestron exclusively in the Australian market.

CX: I see. I didn't understand that properly.

Brad Newton: Right. We are also the exclusive distributor for Panasonic in Australia. So we have a service centre that services Panasonic CCTV systems and cameras in Australia. We are Panasonic in Australia. They have a presence in Australia; they have a small sales marketing team in Australia, but their products are exclusively distributed through our Pacific Communications business. This is the same as Crestron, exactly the same. Crestron needs to be able to represent itself clearly in the Australian market. It's about Crestron. We're the value-added distributor.

CX: Audio Products Group; what's the thinking around buying this?

Brad Newton: It's my job to look at how do we become the largest value-added distributor of building technologies specialising in the areas of CCTV, access control, audio. Any technology that goes into a building, we want to be a value-added distributor for that. We want to be the largest in Australia and New Zealand.

Audio and audio-visual are components of building technologies that go into a building. So what we're finding in the feedback that we've had from not only the construction companies, the consultants, integrators is what they want is they want to participate across the spectrum of technologies that go in the building. They want to have a much more simplified business model where they go to a single distributor as much as possible for the supply of product. But also, what they're looking for as well is how do we help them do the integrated design? A lot of these systems now obviously are talking to each other.

They're all becoming IP based – the cameras, access control, AV systems are all on the one network. They're all IP based; they're all becoming more and more integrated. How do you participate in the larger projects; how do you participate from end-to-end; and how do you get support from your value-added distributor to help you with the design, the staging, the training, all those sorts of things? So our goal is to be able to provide that value in the Australian market. Putting APG aside, when we look at our current stable of value-added distributors, once we integrated those together, we will represent about \$400 million worth of revenue in the Australian-New Zealand market. We've got about ten times more revenue than our nearest competitor. It's about 17 times more staff. I think it's

about eight times more locations and branches across Australia and New Zealand than our closest competitor.

CX: But that \$400 million, that's represented by which divisions of yours?

Brad Newton: That's all of our value-added distributors; security, CCTV, it's SVL, it's all of those brands together. We want to be able to go to an integrator – as an example, Fredon Technology – and we want to be able to say to Fredon we can help you with the CCTV on that project. We can help you with the AV. We can help you with the security and access. We can help you with the MATV. We can help you with a whole lot. We can help you design it. We can help you stage it. We can help train your guys. We can do all of that work for you. That's the play that we want to have in the Australian-New Zealand market. And that's the journey we're headed on. With APG, our goal right now is – we've got a lot of integration work to complete with SVL and Pacific Communications and DAS and Intek and OPS and so forth, so we're focused quite heavily on that. Our view is we're going to keep APG completely separated, running under Ken Dwyer's direction. Business as usual.

CX: Yeah. Ken's a good guy.

Brad Newton: Ken's a great guy and well respected in the audio industry, and we need to give him the support. We've got some benefits to add to APG. We've got a very, very strong balance sheet. The balance sheet, support, and access to capital and finance can help Ken grow his business and take away some of the limitations he would've had if he was running that as a private organisation.

CX: But it's going to involve a reorganisation of brands.

Brad Newton: Look any reorganisation of brands I'm leaving up to Ken to work through as the head of APG.

CX: Particularly, he has opportunities there, too, because it's a reorganisation of the playing field.

Brad Newton: Yeah, sure. We're focused on making sure that we sit down with Ken. Ken needs to work his way through and develop out the plan for the brands. But we also need to do that in conjunction with our brands, with our suppliers. So any decisions or any changes that Ken wants to make obviously has to be in conjunction with the suppliers, with brands as well.

CX: How do you characterise the SVL client base? Do they – the AV guys - have similar issues to the other units in the group, or do you see the SVL client base as being somewhat more precious? That's my word, not yours.

Brad Newton: Well, there's some complexity in there.

CX: Well, you're facing this right across the board.

Brad Newton: No. Look, I think from a customer service perspective, we've gone through a very, very large restructure and reorganisation, and we've now come out the end of that. And one of the key messages that our CEO Ted Pretty had said to every employee at the start of this financial year is that the restructuring is over.

ons for Hills

Interview with Brad Newton, Chief Operating Officer

I think part of the challenge last year is about – as we rationalise and as we changed the company from a \$90 million loss to a \$27 million profit - we had to do a lot of change, and as a result of that change, a lot of our employees were under pressure, they did not know what the restructure meant to them. And that causes a lot of stress, and we appreciate that. And that's why as soon as we completed the restructuring, the first thing we went and said to every single employee was, "Guys, restructuring is now complete." So hopefully, that takes the pressure off and we can start to focus on stabilising and obviously growth. We had great growth year last year. SVL has been phenomenal – during the course of all of that restructuring and change - they have delivered phenomenal growth. So hopefully now, with the restructuring complete, everyone can get back to business as usual. That means even more growth for us this year.

CX: Yeah. There were criticisms with the call centre?

Brad Newton: Yeah, look, our intention all along is to provide better customer service.

CX: On the other side of those criticisms, other people were saying, "Well, we're not having the problem 'cause we just dial a mobile number of our local SVL guy, and he sorts out everything for us, yeah? I guess it's when those guys leave and that customer is then forced to deal with a call centre. It's a big difference from me ringing you, big difference to then ringing a call centre and trying to talking to someone about pro audio."

Brad Newton: Our intention with the call centre was how do we, as an organisation, deliver better customer service? And what does that mean? Our view of better customer service was freeing up our account managers to get out of the office; so instead of sitting there and answering the phone and entering orders into the system, we want our account managers, our sales guys, to be out in front of our customers, to be out in front of the integrators, working with them on 'what do you need from us; how can we support you; what are the projects you're working on that we can provide assistance and designs or training or build some materials and things like that'. So the goal of the call centre was to centralise a whole bunch of that administration work so that our sales guys could be freed up and get out on the road to visit their customers. That was our goal. So our goal from the start was 'how do we deliver better customer service by getting our sales guys out on the road visiting customers'? Now, reality-wise, our customers didn't want to be calling the call centre and didn't want to be dealing with someone they didn't know in the call centre.

CX: So it's about the sales guy, but what if the guy left ?

Brad Newton: Correct. They want to deal with the branches, and they want to deal with the sales staff. So we've taken that on board, and we've taken that feedback and criticism, and we've rolled all of the calls from the national call centre back to the branches. We've taken staff out of the call centre, put on new staff out in the branches because we have responded to the feedback. And we'll continue to respond to the feedback. Anytime we get constructive feedback, we will absolutely take it to heart and we will respond to it as long as it's constructive.

CX: How constructive has it got to be? <laughs>.

Brad Newton: There is a constructive element to all feedback, right?

CX: Well, I'm curious about you – because you have a good overview of a wider technical industry, are we AV people in the SVL-type world all that different to the rest of your clients?

Brad Newton: No, I don't think so. I think CCTV and security are very similar. I think whether it's fast or slow, the world is changing and I come from the IT industry; I have an IT background. I was over in Vegas at Infocomm and it's fascinating because the AV industry is starting to emulate the IT industry. It's about integrated solutions. It's about lots of new functions and product releases. That's just like the IT industry. The IT industry drives sales through releasing a new product and new functions and new technology and new capability on a very fast product cycle release frame. And in the AV industry, what I'm starting to see – because I've now been involved in the last 18 months and I've been to a number of the trade shows and I've spoken with a number of suppliers - is the IT industry being emulated in the AV industry. It's becoming more connected, it's becoming all network and IP based, and there are more and more technologies and functions being added to all products.

CX: We in AV are more disparate, we're not operating-system dependent. So to you, did it look weird when you started to analyse it?

Brad Newton: I think it's a hugely fascinating time for AV, and I think this whole industry – and part of the reason we invested in APG was we see it as a growth industry. AV is a growth industry. CCTV is a growth industry because there's an enormous amount of analogue systems out there that need to be updated and upgraded to IP. AV is the same. It's a growth industry because it has to go through and it will go through a major refresh. All the suppliers are doing an amazing job in bringing these integrated solutions that add significant value to the older legacy systems. Customers will want to upgrade because it'll unleash a whole bunch of extra power and capability they haven't had before. I think it's an exciting time for the AV industry, but it has to go through some change and will go through some changes as customers – I think customers have become more demanding because all of this technology is available for them now.

CX: So what have you found surprising in analysing the AV industry?

Brad Newton: My biggest surprise is how connected to these other building technology pieces it really is. I sit across CCTV and I sit across security and some of these other building technology areas and I'm seeing the integration benefits. I'm seeing the crossover between these different industries. They're becoming more and more connected, and that's what I'm starting to see. So I think the AV industry has a huge opportunity to take advantage of that by branching out and looking left and looking right into some of those adjacent technology areas.

CX: Yeah, it's the looking around that's critical because you go into a brand new performing arts centre, there's the evacuation system, the building management system, the audio visual – and it's all different, and it hardly talks.

Brad Newton: But the customer wants it to talk together,

and the customer wants it to be simplified and easier to manage, and I think that's the opportunity for all of us in this industry.

CX: Yeah, the problem is there's no one consultant or there's no one architect -

Brad Newton: Yeah, exactly.

CX: - who has those skills. How do you -

Brad Newton: And that's the challenge. So that's right.

CX: As a market leader then, how do you embrace the education shift, and what -?

Brad Newton: It is a great question so I'm glad you asked me because one of the key focuses for us this year is training. I think we trained about 3,000 individuals last year, and this was on industry ready programs, it was on basic 101 IP networking, and it was on product as well. We've got 26 branches across Australia and New Zealand. Every one of those branches has a dedicated training facility built within the site. Our job this year is to go from training 3,000 people last year to double or triple that. Success for me looks like tripling that number. But not just tripling that number for the sake of it, but adding really strong value-added training to our integrators to make their jobs and their lives easier, and that's what we're going to focus on. So as a massive player in the market, the largest player in the market, I think we have the capacity to make significant investments in providing that training. We're focused on rolling out training. We have just hired a professional learning and development specialist who is going to help us actually deliver training at a much higher-level standard.

CX: You haven't had any criticisms in training, which is really good. Not from the SVL world, anyway.

Brad Newton: We can always improve and do a better job.

CX: The challenge there is engaging so people actually get trained 'cause they gotta give up time to do it.

Brad Newton: Yeah, exactly. And it's hard, so we have to be smarter about how we do the training, where we offer the training. I think we've got the foundation; we've got the capacity; we've got the balance sheet to be able to really dominate in the area of providing quality training. We're taking it seriously that's why we've gone and hired a learning and development expert to come and help us lift this scale of training that we add in the market.

CX: There's a lack of a common qualification framework in audio visual completely. It's just so surprising.

Brad Newton: I think you're right. I think there's the Crestron training, and there's the audio training, and there's some training around specific suppliers and brands. But I think there's the other stuff, such as the core training, IP networking and all those sorts of things. And I think we've got those courses built. We're delivering it in some capacity, but we need to be able to up the ante and I'm going to focus on that this year. If I look at what our key focus areas are this year, one of them is to deliver training. It's really anything that's going to be a value-added service to our integrators. Our job is we're a distributor. That's what our job is, and we know that. That's where we exist in the value train. The more value-added services I can offer to the industry, the better. We've released a financing option for some of our integrators, where there is a large project and the customer doesn't have access to capital. We'll

help facilitate to the integrator a financing option to be able to be presented to the customer.

CX: Is that just to the project completion stage?

Brad Newton: No, it's to fund the whole works. So it really depends on what the customer and the integrator want.

CX: What kind of customer would typically engage that?

Brad Newton: An interesting one that we did recently in Queensland was a government department working with an integrator that did need it. This was a massive CCTV roll out.

CX: There's no risk in that.

Brad Newton: We'll look at services around financing things like that if the integrator sees value in it. Staging and developing and integration services - we're going to try and do that and then we're going to focus a lot this year on our tech support. We want to be the industry leader in level one, level two, and level three tech support. Right now in the business, I've got 80 people sitting in various support roles across the Hills Building Technologies value-added distribution part of the business. What I need to do is get those 80 people focused on delivering the best technical support in the industry.

CX: It's a massive umbrella, though. I mean, that's 80 people across a lot of technologies.

Brad Newton: 80 people in support are bigger than some of our competitors' entire organisation, it's really four of five key areas.

CX: So what kind of information system are those people going to be drawing on?

Brad Newton: Yeah so we've got Salesforce and we're using Service Cloud, which is an add-on to Salesforce, and we're building our knowledge bases as part of our Service Cloud implementation. We've already done a fair bit of work down the path of centralising the knowledge around various common, known challenges and issues related to a supplier, and it's all about support people who have access to that knowledge base which is in Service Cloud. Previously, as an organisation - as Hills - we never tracked why a customer called; we never tracked how we resolved their issue; we never tracked what the issue was; we never tracked how long it took us to solve their issue. We're now starting to do all that because that's helping us become better and better and more efficient at being able to resolve customer issues. You'll hopefully see over the next six to 12 months, we'll make considerable progress forward on that. My key KPI for me this year is obviously I've got to make the revenue targets and end of year targets, but I'm going to focus on delivering the best value-added services and support in the industry, and that's what's going to make - that's what I believe is going to make the biggest difference for our suppliers and our integrated customers.

CX: You seem quite enthusiastic about it.

Brad Newton: I am. We are standing on a huge opportunity. I think the hard work, the really big, disruptive hard work that we had to go through - the transformation is now complete. For us now, it's about fine-tuning every hand to the pump, pumping in the same direction and really making a difference to the industry. And I think we can; I think we have the capability to do that.

IP RATED MOVING FIXTURE

BY JIMMY DEN-ODEN

SGM G-SPOT

“NOT FOR HOUSEHOLD USE”, “SUITABLE FOR WET LOCATIONS”, AND “RISK OF FIRE”. THREE WARNING LABELS THAT INSTANTLY TELL YOU THIS IS GOING TO BE AN INTERESTING REVIEW...





The G-Spot is an LED powered moving head fixture designed specifically for use in humid and wet conditions, so next time you want to throw a rave in a tropical jungle it's probably the new go-to fixture. The LED source is RGBY and rated to an expected life of 50,000 hours. Photometric bragging rights include 17,000 lumen output, and an efficacy rating of 15.5lm/W. CRI ranges sits at or above 80-85 depending on colour temperature. That's not real high, but then as I've mentioned in previous issues it's possible for a great LED fixture to yield lousy CRI scores due to the way in which CRI is measured. I'm disregarding the CRI score on the basis that I don't care if the fixture does or doesn't satisfy a largely irrelevant spec. If you're really worried don't put it in a TV studio – not that you probably would anyway.

The G-Spot weighs in at a staggering 52kg and took two of us to move. Not only is it heavy, but physically quite big – still at least that makes it easy to find. But here's the kicker – G-Spot is IP65 rated. It's dust tight, and protected against ingress of water jets from any angle. Read up on IP ratings for further details, or just watch the video we made to see this in action. Amazingly, you can mount it in any orientation and the rating is maintained. For a thing full of electronics, heat and moving parts that's nothing short of impressive. All the cooling, motors, and cabling needs to be up to task to achieve this, so you can understand why quite a bit more weight might be necessary.

Not only is it good in the wet, SGM has thought about sunshine too and built the enclosure to be UV resistant. Power input is Neutrik powerCON TRUE1 connector, and DMX is via 5 pin Neutrik HD XLR. Mounting is dual Omega clamps.

Added to the IP rating is a long list of beam features similar to what you could reasonably expect from any modern moving head. Pan –

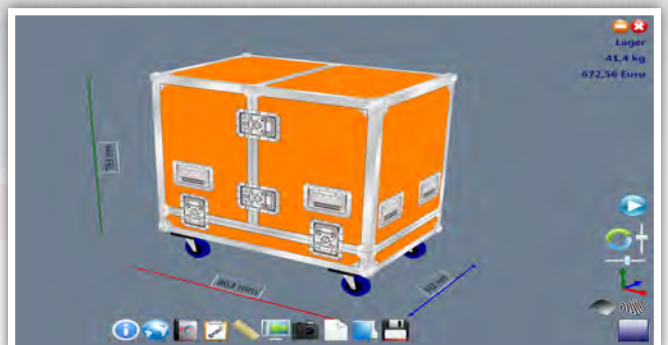
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540 degrees. Tilt – 270 degrees. 2 rotating gobo wheels (5 positions + open). 1-50Hz strobe. Active cooling. Operating temperature from -10 to +40 degrees C (not such a common feature, but definitely a good one). 8 to 43 degree zoom, 4 facet prism, and variable frost from 0 to 100%. Obviously with an RGBY engine you can pick any colour you like too. Add in to this LumenRadio wireless DMX with RDM support. DMX control requires 24 or 36 channels.

So that's the tech side of things, now onto the opinions. Once we got the G-Spot into the studio and wrangled it onto a bench I took the time to have a long hard look at it. I've got to hand it to SGM, they really do have a high level of build quality. The rubberized buttons, OLED menu display and general level of finish are all excellent. The little touches haven't been forgotten either – the dual handles on the base and yoke, as well as the handle recesses into which the DMX cables slot for storage. It just feels nice. I played with the fixture before I discovered the price – I was expecting north of \$20K and pleasingly I was wrong.

I fired up the fixture in test mode to start with and was taken aback by the output and optic quality of the beam. Test mode seems to use all the LED engine colours which produces a pinkish white, but using an actual lighting controller this is not a problem. My fixture profile defaulted to the pink white, but dialing the colour temp channel up and down gave me a wide range of believable white – I put the pinkish hue down to a slightly incorrect library file. Beam edges are generally sharp, with a very slight colour fringing noted when a gobo was combined with the prism. Focus is responsive as is pan/tilt movement, while gobo rotation is a little "steppy" at extremely low speed. Putting my hand into the beam provided a rapid explanation of the ">0.3m minimum distance to combustible materials" spec. There's quite

a bit of beam heat at close range for an LED fixture, but then there's quite a lot of light there too.

All the features worked exactly the way I expected, and all that remained was to check what happened when it got wet. I took the G-Spot out to our loading dock, turned it on, then sprayed it with a hose for a while. I made sure to get plenty of water into the cooling ports too. The fixture ignored the water pounding at it from all angles and just kept doing its thing. Honestly I reckon I probably pushed the limits of the IP rating friendship and I just couldn't fault the G-Spot. Perhaps the only comment I would make is to dry off the area around the power connector before disconnecting it – powerCON TRUE1 is IP65 rated when mated.

Short of perhaps the "House of the dancing waters" show, I don't think we're likely to see the G-Spot on stages much simply because there are cheaper ways to light an indoor stage (even if the price difference is pretty marginal). As I see it, the G-Spot is designed to safely and reliably deliver kick arse lighting in the wet, and on that note it sure hits the spot. With festivals such as Sydney's Vivid and the Brisbane Santos City of Lights gaining momentum every year, the future for the G-Spot certainly looks pretty bright.



BRAND: SGM

MODEL: G-SPOT

RRP: \$15,950 INC GST.

PRODUCT INFO: WWW.SGMLIGHT.COM

DISTRIBUTOR: WWW.ETAUST.COM

CX SUMMER ROADSHOW

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*WE'RE ON THE ROAD
FEBRUARY 2015*



AUDIX SCX25A



PRO CARDIOID CONDENSER

BY JIMMY DEN-ODEN

I'M GOING TO START THIS REVIEW BY TALKING ABOUT A DIFFERENT PRODUCT. I'VE OWNED MY AUDIX D4 FOR ABOUT 8 YEARS, AND IT WAS ALREADY A GOOD 5 YEARS OLD WHEN IT BECAME MINE. IT'S BEEN DROPPED, SCRATCHED, AND LUGGED ALL OVER THE PLACE AND CONSEQUENTLY LOOKS PRETTY WELL ABUSED. I ORDERED A NEW D4 RECENTLY, AND WHEN IT ARRIVED I PUT IT ON THE TEST BENCH AND MEASURED (SONICALLY) IT AGAINST MY OLD ONE. DESPITE A SIGNIFICANT AGE DIFFERENCE BETWEEN THE TWO, THEY MEASURED UP PRETTY WELL THE SAME. THAT SHOULD GIVE YOU SOME IDEA OF HOW WELL AUDIX BUILDS MICROPHONES.

The SCX25A is a large diaphragm condenser mic with a wide cardioid pattern. It's available as a single unit, in matched pairs, or in pair with piano mounting hardware. Whatever choice, the mic ships in a lovely wooden case with accompanying heavy duty nylon DCLIP.

Truth be told I was expecting the mic itself to be physically bigger – the whole thing is just shy of 150mm in length, and the actual head is 50mm diameter. It looks kind of like a fancy brass lollypop, and it sounds pretty sweet too. On-axis frequency response according to the graph in the spec is within 0 to +2.5dB from 20Hz right up to around 16kHz, and eventually ends up around -5dB at 20kHz.

No biggie, lots of mics have very flat frequency plots. What's far more interesting is the polar plot. Looking at this we can see the pattern is extremely consistent across the spectrum, right up to 16kHz where we see a narrowing of the pattern. Not entirely unexpected since we live in a world where the laws of physics apply. Anyway I reckon the wide cardioid pattern is very clever and if the spec is anything to go by, Audix has done very well indeed to engineer this.



Another thing well done is the spec sheet – it's concise and contains all the info someone like me wants, as well as some good user tips. "Which side of the mic to point at the sound" is the first of these, but also included are suggestions on distance for various applications. There's even a section about placement on piano – this seems to be one of the primary applications.

Technically the SCX25A is a studio mic, but with SPL handling capability of >135dB it wouldn't have any trouble performing on stage, be it in front of an acoustic guitar or as a drum overhead. The mic capsule itself is shock-mounted such that it is isolated from the mic body.

I had a unique application during the review time which called for some audience mics on low stands at the front edge of a stage. The danger of using something very directional in this application is picking up individual voices rather than the crowd. I used a pair of SCX25A mics set back about 1.8m from the crowd, and elevated about 600mm above headheight. The result was a pleasing mixture of audience which sounded full and crisp without being too specifically focused on any one person.

For me, the SCX25A performs just as well as it's specified to, and the wide cardioid pattern makes it very versatile. It's not cheap, but considering the range of deployment options it is definitely good value. Maybe now I should go try it out in a studio?

BRAND: AUDIX
MODEL: SCX25A
RRP: \$1018 INC GST,
OR \$2193 INC GST FOR A MATCHED PAIR.
PRODUCT INFO:
WWW.AUDIXUSA.COM
DISTRIBUTOR:
WWW.PAVT.COM.AU





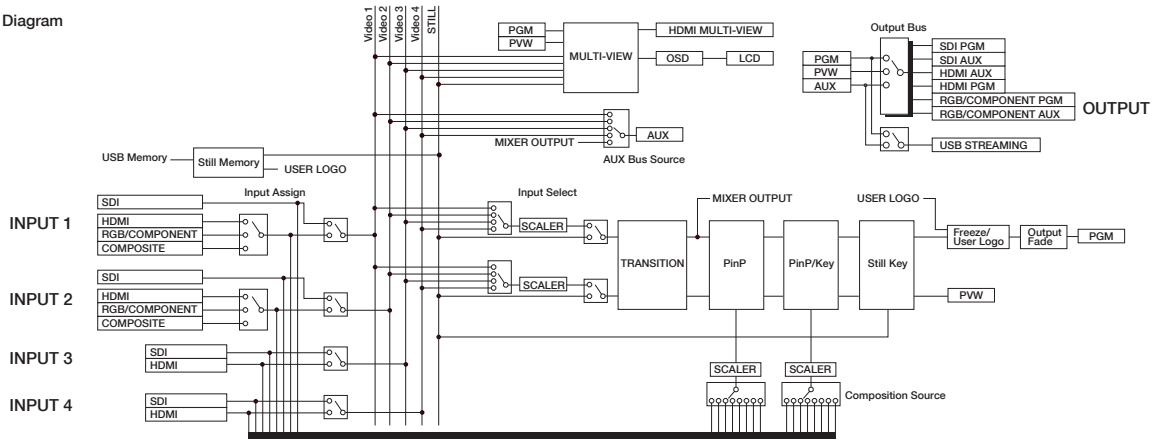
THE VR-50HD IS AN ALL IN ONE AV MIXER, MEANING IT DOES FORMAT CONVERSION, VIDEO SWITCHING, SCALING, AND AUDIO MIXING ALL IN ONE BOX. IT'S QUITE A COMPACT LITTLE UNIT, AND WHILE THE FORM FACTOR IS SIMILAR TO THAT OF THE MUCH EARLIER V-440HD, THE LAYOUT AND FUNCTIONALITY IS VERY DIFFERENT.

ROLAND VR-50HD

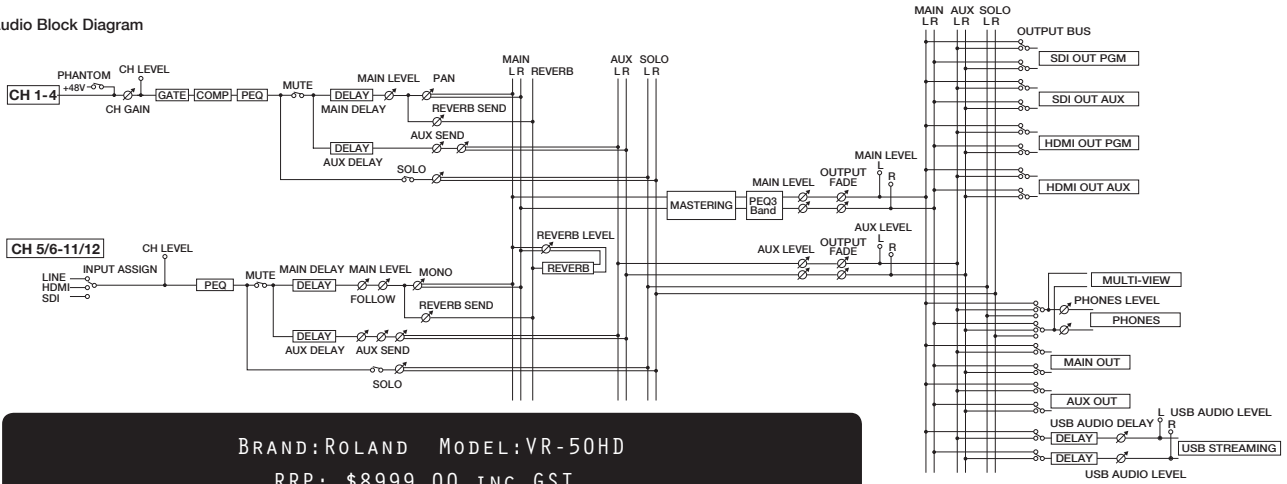
ONE AND DONE

BY JIMMY DEN-UDEN

Video Block Diagram



Audio Block Diagram



BRAND: ROLAND MODEL: VR-50HD
 RRP: \$8999.00 INC GST.
 PRODUCT INFO: WWW.ROLANDSYSTEMSGROUP.COM.AU
 DISTRIBUTOR: WWW.ROLANDCORP.COM.AU

The VR-50HD has a lot of different types of inputs, but at the core it's a four channel device. Each of the four inputs include SDI and HDMI as source options, and inputs one and two add composite, and RGB/component. SDI outputs include PGM and AUX, as do HDMI and RGB outputs. Any input or PGM can be routed to the AUX bus, and each signal can be routed independently to every single output connector. Added to this is a multi-view HDMI output.

Video processing on each input is comprehensive and includes colour and picture level adjustments, preset scaling modes, as well as zoom (up to 1000%) and position adjustments. Similarly the output can be scaled and switched between a number of formats including 4:3 576i, 720p, 1080i, 1080p, 1024x768, 1920x1080, and several others in between.

In addition to the video outputs, there's also a USB 2.0/3.0 streaming output. Routing, resolution and audio level/delay can be adjusted independently to this output. No excuses for crappy lip-sync now!

The VR-50HD has four mono mic/line inputs on combo jacks, each of which has independent gain, level, pan phantom power, EQ, aux send, gate and compressor parameters. The main level is adjusted via faders on the surface, and reflected on the channel setup screen. Because the faders don't track on-screen level adjustments some care is required when moving faders after adjusting a level on-screen. There's also a reverb send level, with a reverb master level pot on the surface.

Added to the four mono channels are four stereo inputs, two on RCA and two on TRS. Within the setup for the stereo channels, you can also select instead to use audio embedded on video inputs 1-4, and this can be done on a per channel basis. Again there's independent level and delay to PGM and AUX for each channel. The EQ is quasi-parametric for low and high bands with a full parametric mid, and you can even switch each of the stereo channels to run mono.

Getting the VR-50HD setup to do what you want it to is pretty straightforward thanks to an inbuilt touch screen, which also serves as preview monitor and even allows you to switch inputs by simply touching the desired source. The menu system is accessed via adjacent menu, enter and exit keys. To change a parameter on-screen just tap it then use the rotary encoder. Most functions like input setup for video and each audio source have dedicated keys which allow you to get straight into the relevant part of the menu. You can get there through the menu too, but the buttons make it much faster. Changing screens within the menu itself feels only the tiniest bit laggy.

Another thing I like about this device is the AFV (audio follows video) implementation – it's simple but effective. To use it, just hit the channel setup button and turn on the Follow option. This illuminates a green LED above the audio channel – then when you select its corresponding source, the LED turns red to show the channel is on-air. Really easy. There's also a four slot still-store into which BMP files can be loaded, as well as Picture in Picture, PinP Key, and Still Key features. You can use any of the connected inputs as key sources too, which means you don't need to burn a cut-row button just to do a key.

The internal audio processing is way more comprehensive than you'd expect from an AV mixer, but I guess it's commensurate with the level of video processing. I talked to a guy who bought a VR-50HD and uses it a lot in his venue, and he's very happy with it.

If you just need to switch video then cheaper devices like the Blackmagic Design ATEM series are appealing, but once you start to add in monitoring, cabling, a decent control surface, and the cost of moving all that extra weight around the price difference becomes less apparent. If you need scaling, streaming and audio processing functionality then it's not even a contest – I reckon the VR-50HD would be way cheaper and way more convenient than using discrete elements. Look at the block diagram if you don't believe me.

The VR-50HD packs a hell of a lot of functionality into one tiny box, and while it isn't cheap it's certainly a convenience I'd be prepared to pay for.



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JBL VTX V20 NOT WHAT WE EXPECTED...

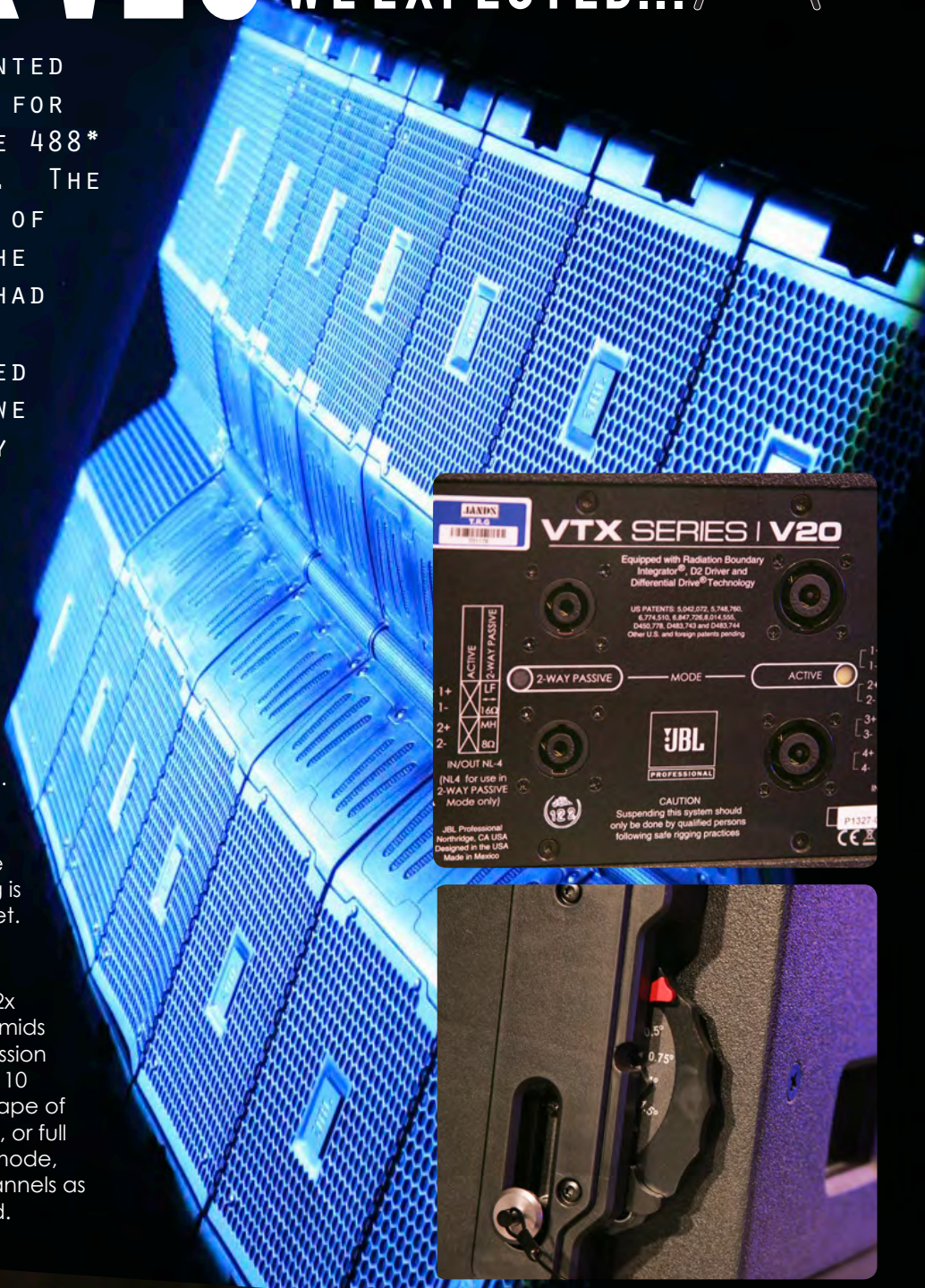


JBL HAS HAD A FOOT PLANTED IN THE LINE ARRAY CAMP FOR MANY YEARS NOW WITH THE 488* SERIES VERTEC CABINETS. THE MOST RECENTLY RELEASED OF THESE IS THE BABY OF THE RANGE, THE 4886 WHICH HAD SOME NEW TRICKS BUT IT STILL LOOKED AND SOUNDED A LOT LIKE THE VERTEC WE ALL KNEW. THEN ONE DAY ALONG CAME VTX V25.

To me, VTX represents the next generation of array from JBL, benefiting not only from experience but also the inevitable advancement of technology over time (and some new thinking too). V20 is the latest addition to the VTX range, which also includes the S28 and S25 subwoofers (both of which can be flown, and the latter of which can be cardioid arrayed).

Physically the V20 is what I'd call a mid-size module. It comes with handles on each end and also in the back of the enclosure, and all the box-to-box rigging is incorporated into the ends of the cabinet. In spite of all the flyware, at 40kg it's not really a stretch to move it around.

The V20 uses a total of 9 transducers – 2x 10" Differential Drive LF drivers, 4x 2164H mids and 3x D2415K dual diaphragm compression drivers. Nominal horizontal coverage is 110 degree, and vertical depends on the shape of the array. The V20 can be run in passive, or full active mode. We heard it in full active mode, an exercise which requires four amp channels as each LF driver is independently powered.



BRAND: JBL
MODEL: VTX V20
RRP: V20 - \$13875.00
S25 - \$10295.00
VRACK STARTING AT \$48229.00
PRODUCT INFO: WWW.JBLPRO.COM
DISTRIBUTOR: WWW.JANDS.COM.AU

BY JIMMY DEN-UDEN

Because JBL is owned by the Harman group who also own Crown, VTX runs very easily off Crown VRacks. VRack is essentially a flyable rack containing three dual or quad channel I-Tech HD amps, plus all the necessary connection plates and hardware to make for a very tidy drive solution. VTX drive presets are stored within the VRack so no external processing is required. Better yet is the remote setup and monitoring V-Rack allows through Performance Manager – you can even see what the impedance of every drive channel of your system is doing in real-time. Cool.

Back to the V20 though – whereas previous VerTec systems allowed only for rigid rigging configurations, the V20 adds the option for compression rigging. In other words, you can pick up the array, dial your angles in on the sides, then compress the back section to achieve the required curve. You can even pick the bottom of the array from a separate chain motor then adjust height and tilt from your motor controller. There's a slot on the front of the module into which the VTX laser can be mounted for additional precision.

On the basis the end caps of the array modules are typically the first bit of the box to sustain damage and look shabby, JBL has gone for an ABS end piece that is cheaper to replace than a metal equivalent would be. It's a little thing, but considering the investment a line array represents it's nice to know you can maintain it in good aesthetic order too. V20 is a good looking cabinet by the way.

V20 employs several JBL technologies including "Differential Drive", and a "Refined Radiation Boundary Integrator Waveguide", but to me the most interesting is the D2 Dual Diaphragm Dual Voice Coil compression driver. The basic idea is that to get better high frequency from the compression driver, the diaphragm needs very low inertia. JBL has solved this by effectively making two drivers into one. I've made it sound very unscientific here, but what it means is HF extension can be reached at higher frequencies and output levels before encountering breakup modes. In other words, it goes higher and louder.

I've gone on about that a bit because I reckon it explains why the V20 sounds like it does. In the interests of forming a valid opinion, rather than plug in one array element here at CX, I went and listened to a full system of V20. To be specific, it was 6x V20 cabinets and 3x S25 subs flown above in cardioid mode. Per side. Four VRacks powered the whole rig.

Because VTX is a new generation of VerTec I expected it to sound a bit better, and this much is certainly true. To me it also sounds very different from the 4887/4888 series, although it has been a fair few years since I stood in front of either of those. Still, I certainly don't remember them reaching as high up the spectrum as the V20, nor doing it as smoothly. It's kind of like the V20 takes the same energy but better balances it over the high frequency spectrum. Everything seems right down in the low end too, although I'm still not sure I'm sold on the idea of flown subs. The V25s have a lot of punch, but if you need real low end growl you'd probably want some bigger drivers on the deck too.

Two final points about the V20 very worthy of mention are the off-axis response and stereo imaging. Once you get in-line with the side of the V20, you basically can't hear it. Sure there's some bounce off venue surfaces and you get that, but the actual "null" of the speaker is really well controlled. Stereo imaging was effective too - Jason (CX) noticed especially listening to some big musical pieces the V20 system really gave a good sense of physical positioning to the various track components. I've yet to figure out precisely what makes for great imaging, but I suspect the new waveguide is at least partially to thank.

Perhaps the final note is an observation relating to content – we listened to a variety of playback as well as live vocal, and multi-track playback. Not surprisingly, there was a difference between the multi-track and the compressed, produced stereo tracks. What was interesting was just how huge a difference it was, and I think for the V20 to make it so obvious it's doing something right.



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PIXELMAP THE GREAT OUTDOORS



ANOLIS ARCDOT

THE ANOLIS NAME GRACES THE PAGES OF CX PERHAPS LESS FREQUENTLY THAN IT SHOULD, BECAUSE THE COMPANY MAKES SOME PRETTY COOL ARCHITECTURAL PRODUCTS. ARCDOT IS ONE SUCH PRODUCT.

I supposed the best way to think of ArcDot is as an RGBW LED pixel mapping system for buildings. The enclosure is turned aluminium with a frosted polycarbonate dome. The dome gives a usable viewing angle of at least 180 degrees, and the output looks very consistent across this range. The ArcDot units are IP67 rated and the dome is UV stable, so clearly it's intended for outdoor use. The units are available with 2 cable variations and the base can accommodate either side or rear entry cabling. The cable entry points have nice strain relief glands to assist with IP rating, and the cabling system uses 3 pin IP68 connectors.

The cabling system is minimal so the

ArcDots themselves have to be pretty smart. Presumably the 3 conductors carry ground, supply and data, and all the addressing and dimming intelligence is within each ArcDot. Whatever it is, it certainly works. Cabling can be done "daisy chain" style, or using a single cable to each dot with T connectors taking a split off the feed.

Up to 100 ArcDots can be run from an ArcDot Power unit, which has four separate outputs. You can in fact hang up to 35 dots off a single output, but the total still needs to be 100 or less. The end of each run needs an active terminator for the addressing process. These can be changed for passive terminators later, but I'd probably just budget to leave the active ones in.

Once your dots are all connected to the power supply, get into the on-board menu and hit "find". The unit then figures out what's connected to each output so it has a total count. Next, choose "sort" so you can address them in a logical order. Finally, "store" your new configuration. That's about all there is to the setup, it's very no-nonsense and straightforward.

For our review we were lucky enough to have some 31 ArcDots plus a power unit all nicely attached to a display board. I plugged in some DMX and just fed RGB control – 3 channels per dot. Just for fun I took a single dot into the office kitchen and ran the tap over it. Pleasingly enough, there was no loud kaboom, no smoke, not even a whimpering fizzle noise – the dot ran just as well under a stream of water as it did dry.

Really there's not much more to say about the product – it's something different and inventive, and it works exactly like it's supposed to. With a bit of clever thought on deployment and programming, ArcDot certainly opens up some very cool possibilities not only for lighting buildings, but theming them with light.



BRAND: ANOLIS MODEL: ARCDOT
 RRP: ARCDOT - \$299 INC GST.
 ARTDOT POWER - \$1500 INC GST.
 TERMINATOR - \$16 INC GST.
 PRODUCT INFO: WWW.ANOLIS.EU
 DISTRIBUTOR: WWW.ULAGROUP.COM

BY JIMMY DEN-ODEN

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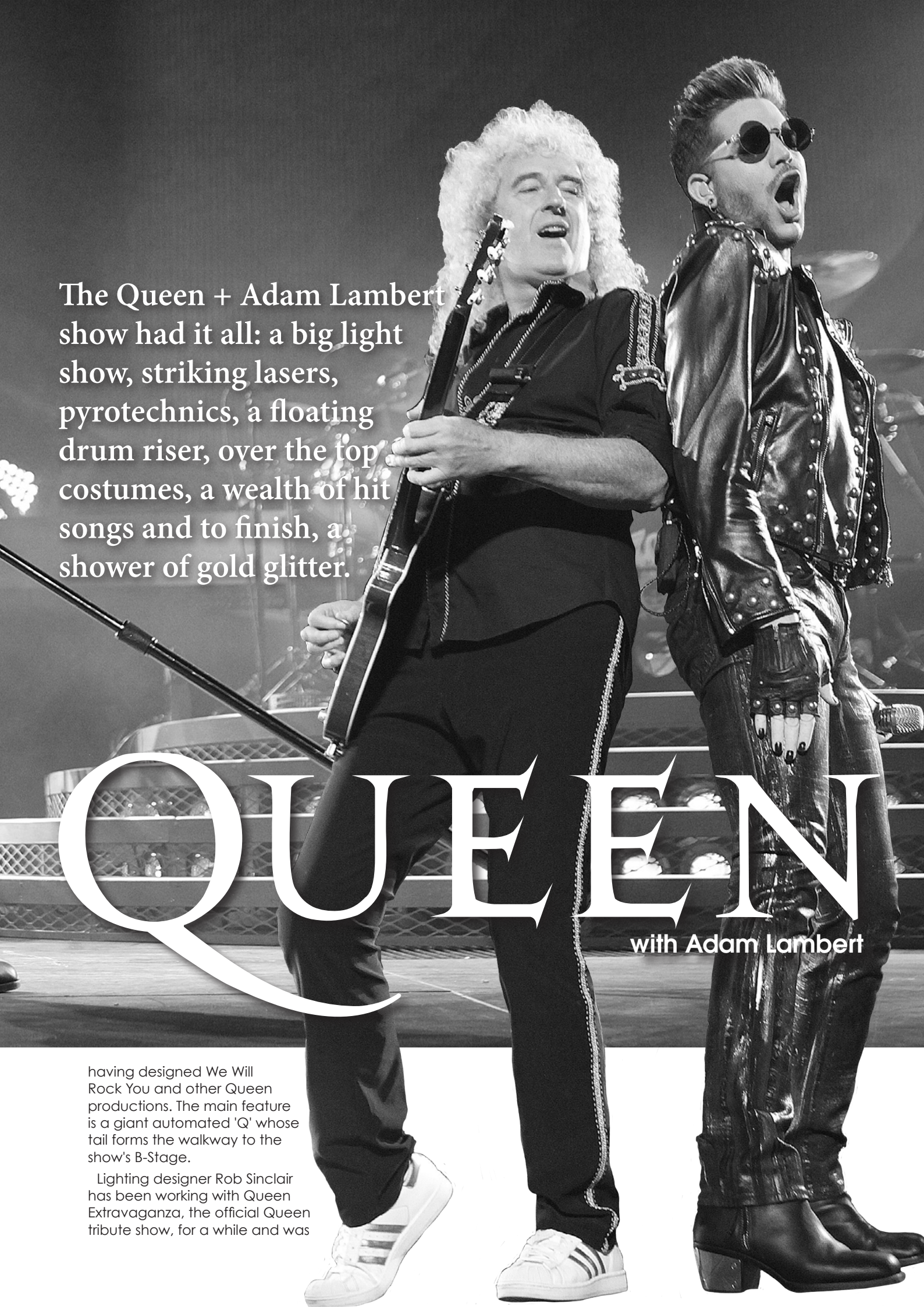
ROAD ★ SKILLS



Most importantly, it had a lead singer who evoked subtle memories of Freddie Mercury, whilst also owning the stage in his own right. Having said that, the most poignant moment in the show was when Freddie joined in via footage flashed on to the key circular screen.

The set was designed by Ric Lipson and Ray Winkler from StuFish, the late Rick Fisher was an old friend of the band

Editorial by Cat Strom
Photography - Troy Constable



The Queen + Adam Lambert show had it all: a big light show, striking lasers, pyrotechnics, a floating drum riser, over the top costumes, a wealth of hit songs and to finish, a shower of gold glitter.

QUEEN

with Adam Lambert

having designed We Will Rock You and other Queen productions. The main feature is a giant automated 'Q' whose tail forms the walkway to the show's B-Stage.

Lighting designer Rob Sinclair has been working with Queen Extravaganza, the official Queen tribute show, for a while and was



Lighting
designer
Rob Sinclair



delighted to be asked to do the real thing! He took on their incredible legacy of very big light shows and didn't disappoint.

"We really had to reference the big light shows of the seventies and eighties," commented Rob. "It needed to be a big, impressive and powerful looking light show however, it needed to be contemporary too. The band said that one of the things they could never do in the

old days with their lighting is make the whole stage go red or blue, and that is something we can now do which is great. Hopefully it is identifiable as a Queen show but using modern technology."

A circular screen (the 'Q') dominates the stage and becomes the main focus, which is what the band wanted, although initially Rob was concerned with the amount of space it would take up on stage and that it would push the lights out to the side too much.





The circular screen is flanked by walls of 97 Martin MAC Viper Profiles interspersed by 2 light duet molefays, for an old school tungsten blinder look, and 45 SGM X5 LED Strobes. More 2 light molefays as well as 8 light molefays are positioned around the set. Vari-lite VL3500 Wash FX fixtures, rigged on the front and side trusses and as part of the floor package upstage, provide a lot of the key light whilst also punching through from the back. Ayrton Magic Panel 602 LED fixtures are rigged around the circle and Clay Paky Sharpys cut through everything when extra dazzle is required.

"The thing with Queen songs is that they all start big so you always have to hold something back and the Sharpys help with that adding an extra layer," said Rob. "The lighting is not as in your face as when we first started programming it; you forget that you're working for people not in the flush of their youth and what I may like, is not what they like. I had to tame back quite a lot the lighting of the audience as the band didn't like that. They are very involved in the show and I've found that working for clients who have been doing shows for a while, are very production aware. They've been talking to people like me for forty years so their opinions are definitely worth something!"

Rob is a longtime fan of the Jands Vista and this production was no exception with a Jands Vista T2 and two M1 wings on the tour.

"I've been using the Vista for nine years now and a lot of it is down to familiarity," he remarked. "Using it and asking it to do things for me is very second nature to me – it feels as if it's an extension of myself. Production rehearsals are incredibly expensive times and you don't want to be using unfamiliar equipment as you need to move very quickly."

Rob lists a number of features that he favours with the Vista; the fact he doesn't have to remember numbers, he can work very visually and it's easy to connect with what he wants to do with how he is able to do things. Plus, he says that he likes the people at Jands and he has a good dialogue with them.

"I like the way that they think and the products that they make," he stated.

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the VOICE

For several weeks as The Voice aired on the telly we were treated to a delicious array of spectacular lighting by Hugh Taranto

However with a much smaller audience than the millions that tune into the broadcasted show, the live touring show was considerably more budget driven but that didn't stop Hugh from pulling off some impressive looks.



Lighting designer Hugh Taranto

Hugh wanted to use as many elements from the TV show as possible to try to carry over the 'look' and so he included Clay Paky Sharpy Washes and Spots into his rig as they had been an integral part of the TV design. Pro Shop PixPads, Sunstrips and Martin Vipers had also been used extensively and so were added to the rig. Added to that were ten VL3500 Wash FX.

Due to budget constraints the show did not have screens which I thought was quite unfortunate although Hugh quite enjoyed having control over his lighting without having to consider screens that may pollute his looks!

The crew had an extremely tight turnaround in most of the venues; Friday in Melbourne, Saturday in Sydney and Sunday in Brisbane. Consequently the



lighting rig was designed to go up and pack down very quickly, and there was no conventional lighting to focus.

"The upstage lights were all put on to six metre Tri trusses which were all marked up and travelled together so they didn't have to be assembled on site," added Hugh.

"We also had to be set up quickly as the staging was quite large and needed a fair amount of time to set up."

Sound engineer George Gorga

Hugh's other main challenge was to design a show that was vibrant and adaptable enough for all the styles of music and performers on stage. This is where the Sunstrips and PixPads came into their own as they were pixel mapped by a Catalyst v4 Pro media server.

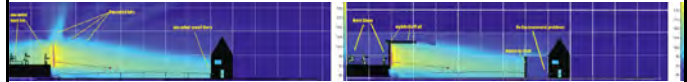
"Whilst we didn't have screens we were still able to run content to try get some more dynamic looks in some

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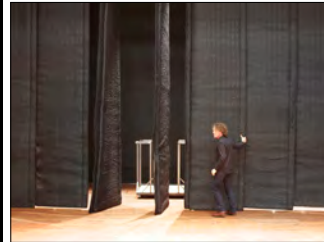
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of the songs," said Hugh. "Rather than just playing chases we were able to run video content through them which helped increase the look."

For control Hugh ran a MA grandMA2 light with an NPU and an ELC Node8s Artnet - Dmx node.

Chameleon Touring Systems provided the crew and gear for both the TV show and the tour. The final TV show finished on the Monday night and the tour truck drove to Perth on the Wednesday so the Chameleon crew had to work very hard especially as Hugh had specified so much of the gear that was used from the TV set.

"It was pretty impressive considering many of the lights were hidden up in the set," commented Hugh.

With so many performers lacking in stage skills and a tight schedule, an experienced and accomplished sound engineer was definitely required hence the hiring of George Gorga.

"The group numbers were the hardest to mix, although they all have great voices, microphone technique and



delivery are something you learn with time," he said. "It was a bit of a battle chasing dynamics. In the group numbers where they may sing one line each in a song, your levels are all over the shop because they're not balancing themselves. I know it's a hard thing to do with in-ear monitors as you're not hearing the whole mix – you become quite isolated and don't know what level to sit yourself at especially with harmonies. The band was fantastic with the calibre of musicians being world class. They'd been together for the whole TV series as well so all the arrangements were well-rehearsed."

George mixed on an AVID Venue console, a console he describes as easy to use for the way his brain works!

"I use a lot of plug-in compressors, in particular the Focusrite Red 3 and the Bomb Factory BA-2A Limiter," explained George. "Basically every vocalist gets their own compressor and then I use the limiter over the vocal group just to keep everything in line. Sometimes you have to sacrifice dynamics for control so I'm happy to over-compress something if required."



Crew

Touring Audio

Monitor Engineer: Matt Debien

Monitor Tech: Andy McKeown

RF Tech: Adam Smith

LX

Crew Chief: Micheal 'Simmo' Simpson

Lighting Tech: Patrick Williams

Lighting Tech: Kareena Daws

Account Manager: Graham Walker

George only uses standard plugins adding just a couple of outboard pieces of gear; an Alan Smart C2 2ch Compressor and a TC Electronic M5000 Digital Reverb.

"The Alan Smart C2 2ch Compressor is a staple for me over the mix and I take it everywhere with me," said George. "Although there are some great reverbs onboard, the TC Electronic M5000 Digital Reverb is just a personal favourite. There were over seventy inputs from the stage."

Over the years George has trialed many microphones but he believes that you can't go past the classic Shure Beta58.

"The Shure Beta58 is very forgiving and works 100% of the time, so if you don't have good mic technique it's a good choice," he said. "It's a great sounding microphone and I still use it above any others, it's been working for me for twenty five years and I don't have a need to change. I'll always audition gear but I'm not the sort of person to use something just because it's new.

"Similarly, I'm still a big fan of the V-Dosc system even though it's an older box. It works the way I want to mix and it gives me what I want, so there's no real reason to change."

An L'Acoustics V-Dosc speaker system was picked up in each city (except Melbourne where JPJ Audio supplied a d&b 'J' System) with JPJ Audio also providing the touring control gear.



Inspired by Nature



NEW RANGE IN STOCK



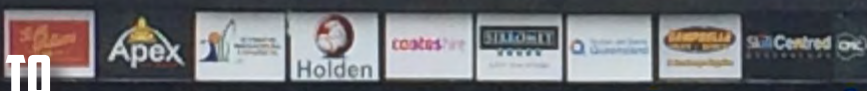
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1982 - 2014
MUSTER



GYMPIE M



The entertainment precinct boasts eight on-site venues each hosting its own array of talent during the four-day festival. Most venues are housed under huge marquee structures to ensure patrons enjoy the entertainment whatever the weather. The Main Stage is held within a natural amphitheatre under the forest canopy.

Norwest Productions supplied audio and lighting for the three main stages at this year's event with local company DW Sound looking after the smaller stages. Norwest as a company provided audio for the Muster once before but many of their Queensland staff are experienced with the event as individuals.

The Muster has a reputation for either being soaking wet or blisteringly hot but this year the weather was

perfect, a big relief for the Norwest crew who camp out for seven days from load in to bump out.

"We live in tents and eat onsite which generally means a bit of a meat-fest with not too many salad bars," laughed Graeme (Gra) Whitehouse, Norwest's general manager.

The remoteness of the site makes it a fairly expensive production and so correct planning is essential to ensure that every piece of gear that may be required is packed in the trucks. With the trip to Brisbane taking at least three hours, the crew can't just pop back to the warehouse for a spare piece of gear.

"They're the technical challenges, and of course the genre of country music comes with its own unique audience, however we have a lot of guys who have




AUSTRALIA JUSTER 2014

come through the country music scene as production managers or sound engineers," said Graeme. "A country music audience has their own idea on how a mix should sound. In the rock industry they like it to sound big and tough and not necessarily exactly like the record but the country audience, especially the older ones, won't stand for that. In the end it all comes down to good system design and talented engineers. We didn't get any patron complaints which was nice."

When it comes to audio, Gra reveals that the visiting artists tend to specify a level of equipment as opposed to specific brands.

"To them it's more about the brand on our shirts than the brand on the box," added Gra. "They know that we will supply a well-designed, modern system. There are certain console specifications but it's all fairly standard gear such as AVID Profiles and Yamaha PM5D's. Some



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
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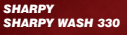
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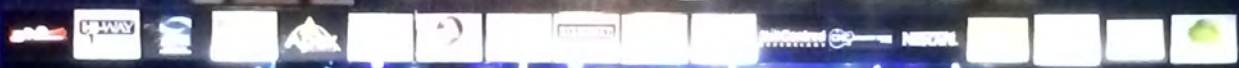


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of the acts bring sound engineers but a lot of them don't and will use our guys. That's where Norwest has an advantage with so many of our team hailing from the country music scene, in fact some of our guys were mixing these acts when they were teenagers in talent quests! Plus we've also done the Tamworth Country Music Awards for close to fifteen years."

The Main Stage was a combination of L-Acoustic V-Dosc mains with Kudo outs, the Crowbar Stage had Kudo and DV-Dosc was used on the Blues Stage. Front of house were AVID Profiles with Yamaha PM5D's for monitors, thus keeping a consistency as some acts would play a couple of stages. The facility for engineers to carry their mix between stages was in place and to provision that, consistent input lists were run across each stage. Lee Kernaghan brought in his own Digico consoles for which Norwest supplied infrastructure.

Every year a large contingent of students from the Southbank Institute of Technology's technical production course are given the opportunity to work alongside the events technical team. Gra stresses that they are more than loaders but actual technical assistants.

"They live alongside of us in our tent city for seven days, immerse themselves in the whole thing and are really invaluable," he remarked. "In fact, I would say 80% of our audio staff in the Brisbane office have come through that course, and some have filtered out to our other offices. They find their way into the biggest companies in Australia."

Norwest's FOH sound engineer on the Main Stage is Ian Taylor who also happens to be the Head of Audio on the course and that's how the synergy works with the students.

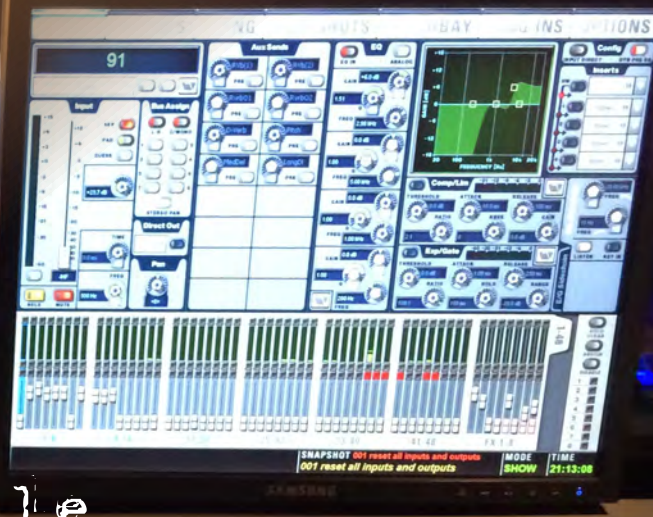
Lighting for the three main stages consisted of Martin and Vari-lite movers, as well as generic LED product and Robert Juliat followspots. Control was all grandMA. Luke Van Roy designed and looked after all of the lighting, including drapes and rigging, which was trucked up from the Sydney office. The event was another showcase of Norwest's ability as a full-service technical provider, with the festival lighting rig being more than capable of keeping all incoming LDs happy, without the need to add any specials. Veteran LD, Micheal

Avid Profile

MAIN STAGE:
FOH: IAN TAYLOR
MON: LEON DARCEY
PATCH: MATT WHITEHEAD
LD: LUKE VAN ROY
LX: TERRY SHEPHARD
BACKLINE: BOI CROMPTON

CROWBAR:
FOH: JAY VAN LIESHOUT
MON: NATHAN COLEMAN
LD: ADAM VOLZ

BLUES:
FOH: JASON NORMAN
MON: STEF FULLER
LD: MATT FORDHAM



Crew accommodation



ED: Luke Van Roy



MOW: Leon Darcy



EOH: Jay van Lieshout

"Simmo" Simpson was heard to comment "That's just an awesome festival rig!"

Festival Production Management, including Stage Management, was provided by Darren Bell and the team from Eventco. Deserving of special mention, the Eventco team should be credited with really lifting the Muster's production values, according to Gra.

Backstage and onstage ran like any other slick festival, with all stages running perfectly to time all week. Backline, the final piece of the puzzle, was supplied by General Backline Hire from Brisbane.

"The weekend ran perfectly with no problems such as noise limits and there was great feedback from the acts as well as from the punters" concluded Gra.

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MANY PEOPLE HAVE A PERCEPTION THAT IF A RADIO MIC WORKS WHEN THEY TURN IT ON, IT WILL CONTINUE TO DO SO FLAWLESSLY FOR THE ENTIRE GIG. THE REALITY IS THAT MOST RF FAILURES ARE NOT CAUSED BY GEAR FAILURE, BUT RATHER POOR DEPLOYMENT OR SETUP OF THE GEAR.

Most radio mics transmit in UHF. If you run into a VHF system you're dealing with some seriously old kit which could give you problems of both the technical and legal variety. Recently we've started to see systems which operate in the 1.8 and 2.4GHz frequency ranges, but still more common are units in the 520-800MHz band. As of 2015 it will be illegal to operate wireless systems above 694MHz due to the digital dividend. If you haven't heard of the digital dividend, google it because it's something you really need to know about.

Each wireless system requires its own unique frequency in which to operate – not just mics but also in-ear monitoring systems. If you assign two transmitters the same channel you'll likely get some pretty horrible noises on the receiver. Not only do the channels need to be unique to each system, but they also need to be correctly allocated to avoid creating "intermods" (interference caused by a mathematical relationship between carriers). The best way to manage your frequencies is using one of the many on-line or downloadable tools – I like Wireless Workbench from Shure (free to download).

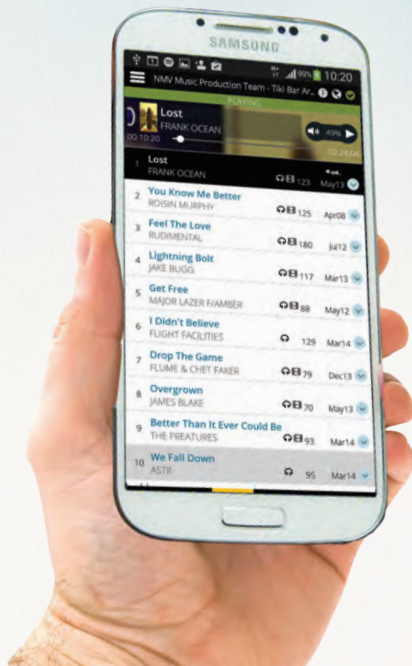
All **tunable systems cover a specific range**, and the more you spend on the gear the wider the tuning range will commonly be. Systems are usually available in different "bands" – make sure to pick one appropriate to your area when purchasing.

If you don't think reliable RF is really worth spending ten minutes on the computer, then you can just get out on-site and hope for the best. Remember most systems are setup such that you can operate multiples on different channels in the same group. Channel groups usually contain a bunch of frequencies designed to be compatible with each other. Don't mix group numbers unless something in the manufacturers software says it's okay to do so!

BY JIMMY DEN-ODEN

THE RF JUNGLE SURVIVAL GUIDE

THIS MONTH BRAINY TYPES COVERS THE BASICS OF RADIO MICS – THE STUFF YOU ABSOLUTELY NEED TO KNOW.



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Don't underestimate the importance of choosing the best possible frequencies. Most "it doesn't work" issues come down to poor frequency choice. A VERY simple test is once you have set everything up, switch off all your transmitters and check the RF level meters of your receivers. You want see as close as possible to no signal. More than one or two LEDs illuminated means you are attempting to operate on top of something else (either TV, another mic, or something unknown). This will lead to reduced range before drop out, ultimately compromising system performance. If you are trying to use product without RF meters in a professional environment, buy better hardware!

Batteries are important since without them, radio mics don't work. Stick to quality batteries like Procell, Energizer or Duracell. If you're investing in wireless systems, look at rechargeable battery options. The major players all have excellent rechargeable systems which offer great operating time and have a far smaller environmental footprint than disposable batteries.

Digital systems are now a viable option, and most of them offer encryption which enables signal reception only on a receiver paired with the mic. An amazingly small number of people actually think about who else could be receiving their radio signal, and unless the signal is encrypted then the answer is always "anyone in range with a scanner". Corporate situations with commercially sensitive content should use encrypted mics. So should any performer who doesn't want to risk the world discovering how they actually sound. Encryption offers additional protection from interference to your system. Even if another transmitter fires up on the EXACT same frequency as you are using, no audio will pass as the encryption keys will not match.

Many receivers have a **mic/line output level** selector switch. It's probably just a personal thing, but I've usually found that line output level gives me better signal to noise than mic level, and it's easy to pad the console input to accommodate it. Talking signal levels, look out for powerful vocalists over-driving transmitters. Different systems hide transmitter attenuators in different places – some require you to unscrew the mic capsule to turn a trimpot, others simply have a menu option. If the signal is hitting clip on the receiver and sounding lousy, attenuate the transmitter.

Unless you were the last person who used the gear, it's wise to **check all the settings on every TX (transmitter) and RX (receiver)**. Maybe there's no pilot tone enabled when there should be. Maybe the power switch is locked when it shouldn't be. Maybe the IEMs are panned full left, or set to mono instead of stereo. Check the settings to avoid embarrassment. Many systems which sync via IR will allow you to do the setup on the receiver then sync not only frequency but also all the TX settings via IR.

Diversity systems use two antennae to receive the same signal, then the receiver seamlessly switches between which ever antenna sees the best signal strength. Obstacles like walls, proscenium arches and even people can block RF signals so consider antenna positioning carefully. Line of sight is good and generally a safe bet.

Antenna combiners are a great way to keep the RF side of things tidy when you're using multiple radio systems. Make sure you use an appropriate type and length of cable when hooking up paddle type antennae. With low losses, 50 ohm RG8/U is a pretty good choice for installs, but tends not to coil and uncoil well repeatedly. RG213 is better in touring applications, while 75 ohm RG59, RG6 or RG11 are not such good choices. Also, remember that if the antenna combiner is an active device it doesn't work unless you switch it on. Passive splitters are available but result in losses – don't passive split to more than 2 destinations.

Some receivers have cascade ports, which allow you to link the antenna signal into another receiver. The **cascade port is an output** and needs to link to an input – linking to another cascade port doesn't work.

External antennae and in-line **boosters** can both have gain settings. Some of these offer a choice of +3dB or +10dB. Unless you're in a stadium or you've got huge cable losses, you probably don't need to run 10dB of gain on everything. Remember it's not just your RF you boost, but all the background RF as well. In areas with a high density of RF systems, lower power settings typically work better. Keep RX and TX antennae separated from each other too!

Finally, remember this: your clients generally don't know or care how the radio microphone works – they only care when it doesn't work. Don't under-charge for RF gear prep. Batteries cost money, and frequency management takes time. What might seem like a cheap option at the time could prove very costly to your reputation if it goes wrong!

CX thanks Jeff Mackenzie of Jands TRG for assistance with this article



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DOWN

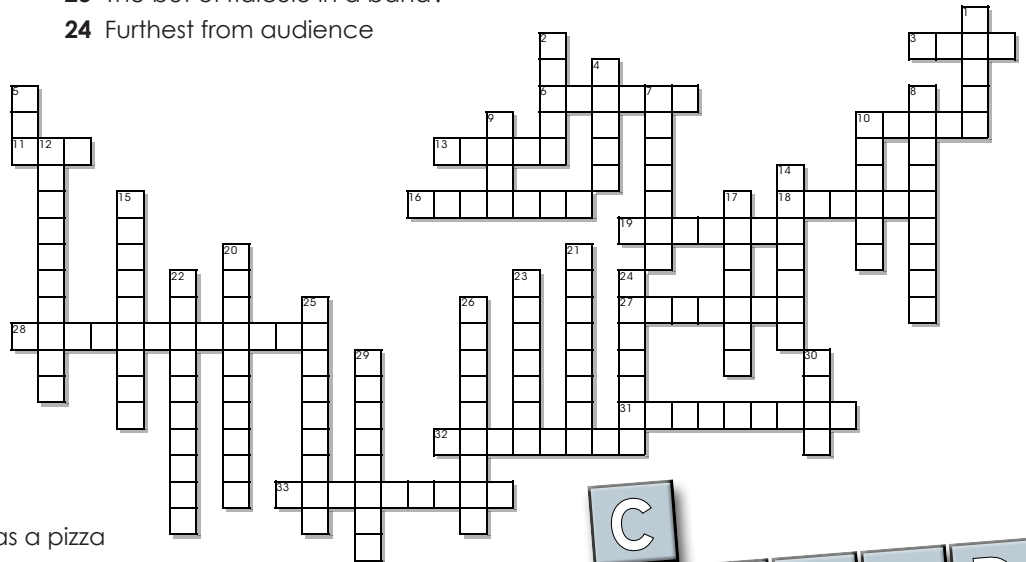
- 1 Lee 139
- 2 Pointing the lights
- 4 Birds have them
- 5 Australian audio company
- 7 Canadian audio maker
- 8 Out and in
- 9 To hide
- 10 Ratio for screen

- 12 Derogatory term for noisy muso's
- 14 French physicist
- 15 Closest to audience
- 17 Another musician we joke about
- 20 Who, where, when, what why?
- 21 Torture for performers
- 22 Arched opening
- 23 The but of ridicule in a band?
- 24 Furthest from audience

- 25 Black bars
- 26 Space between two given points
- 29 Almost every show has them
- 30 Also done in the bathroom

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- 3 Closed or shut
- 6 Not what happens in sex
- 10 Cooks wear them, theatre's have them
- 11 USA speaker co
- 13 Not units
- 16 A leading Gary in AV
- 18 On which they play
- 19 Electrons moving
- 27 Like ellipsoidal
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Answers - page 72



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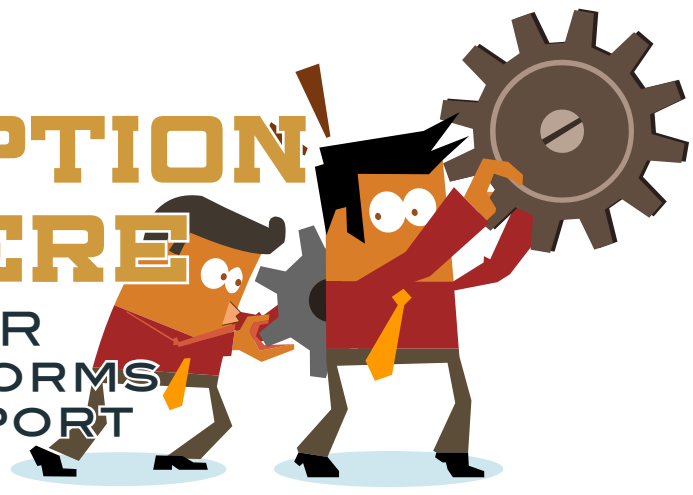
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DISRUPTION IS HERE

UBER TRANSFORMS TRANSPORT



BIZ TALK

with Julius Grafton

IT WAS JUST AFTER MIDNIGHT AND I DIDN'T WANT SHARON TO SLEEP OVER. SO I CALLED A TAXI, AND OFFERED THE DRIVER \$110 CASH TO TAKE HER FROM MY PLACE TO HER PLACE, WHICH WAS WAY FAR ACROSS TOWN. I KNEW THIS WAS \$10 MORE THAN THE FARE. TAXI MAN DECLINED, INSISTING ON A METERED FARE. I DISMISSED HIM AND HE DROVE OFF IN A BLAZE OF TYRE SMOKE.

I remembered something about UBER being a kind of taxi app, and downloaded it. I put in my email, credit card info and hit the screen to set my pickup location. Within 4 minutes a taxi arrived. The fare was later charged onto my credit card (\$89), and I could even see the taxi moving down the map as it took the lucky girl home.

Soon the convenience of not fumbling for payment at a destination won me over, then I realised I could also choose UBER Black, which is a Hire Car. Then UBER emailed to tell me UBER X was available. This is a private car, driven by someone like me, costing about two thirds of a taxi fare. It is always clean, and the drivers do not smell like stale yoghurt.

Now I'm hooked. The minimum fare is \$8 in Sydney, \$7 in Melbourne. The drivers have had a criminal history check, and if they've had a major driving offense in the last five years, UBER will not hire them. UBER has tougher driver standards in NSW than a taxi licence.

The driver rates me as a rider – I usually get 5 stars. I rate them as a driver, again usually with 5 stars unless they annoy me, in which case they might get 4. If their average sinks too low UBER automatically fire them.

The driver system works from a locked app loaded on an iPhone that UBER gives them. When a driver decides to drive, they log on, and the system sees their location. Jobs are allocated based on proximity and, I believe, priority goes to top rated drivers. UBER pays them the fare less 20%. There does not seem to be GST added or collected, which worries me a bit. The drivers say they are contracted to a Netherlands company.

When it rains or gets busy, the system crimps demand with 'surge pricing', and advise riders the fare is now 1.5 x normal due to heavy demand. It can go many times greater, like on New Years Eve. Riders can request a text message when the surge is over, if they don't want to pay extra.

UBER start their service in a city with UBER Black, by aggressively recruiting Hire Car drivers. In the case of Sydney, they quarantined the airport so only UBER Black will get work from there, guaranteeing the Hire Car operators a flow of work. Some cities have UBER Taxi, which are regular cabs where the driver is vetted and uses the app and not the meter to charge the clients. UBER X is also known as UBER Pop in some places, and is usually technically illegal as it operates as a private taxi. In Sydney and Melbourne fines have been levied against a few drivers, and it is rumoured UBER quietly paid these.

I've even used UBER X as a courier, requesting the driver arrive, park, deliver my parcel, then terminate the trip when he or she returns to the car. The app shows me the route and the times. It's direct – door to door – and very cheap. One 75 minute round trip cost me just \$60. Sydney city to the airport is under \$30. Melbourne to the airport was \$49.

UBER forces riders and drivers to be accountable. I have enough trust in their system to send an UBER to collect a school girl from a party late at night and deliver her to her home.

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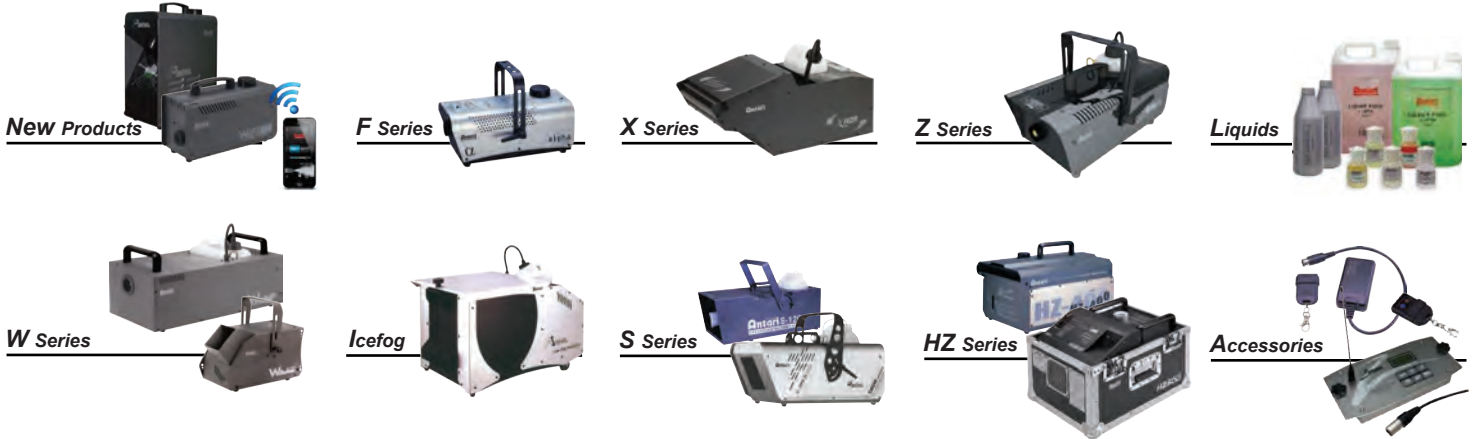
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WHAT-IF?

What If you need to ask an Engineer a question?

A MAN TRAVELLING IN HIS HOT AIR BALLOON REALISED HE WAS LOST AND DESCENDED OVER A SMALL TOWN SQUARE.

SPOTTING A WOMAN IN THE SQUARE, HE SHOUTED, "EXCUSE ME, COULD YOU TELL ME WHERE I AM PLEASE?"

THE WOMAN REPLIED, "YOU'RE IN A HOT AIR BALLOON HOVERING APPROXIMATELY 30 FEET ABOVE THE GROUND, BETWEEN 40 AND 41 DEGREES NORTH LATITUDE AND BETWEEN 59 AND 60 DEGREES WEST LONGITUDE."

"YOU MUST BE AN ENGINEER," SAID THE BALLOONIST.

"I AM," REPLIED THE WOMAN, "HOW DID YOU KNOW?"

"WELL," ANSWERED THE BALLOONIST, "WHAT YOU TELL ME IS TECHNICALLY CORRECT, BUT I HAVE NO IDEA WHAT TO DO WITH THE INFORMATION AND THE FACT IS I'M STILL LOST. YOU'VE NOT REALLY BEEN MUCH HELP, HAVE YOU?"

THE WOMAN BELOW RESPONDED, "YOU MUST BE IN MANAGEMENT."

"I AM," REPLIED THE BALLOONIST, "BUT HOW DID YOU KNOW?"

"WELL," SAID THE WOMAN, "YOU DON'T KNOW WHERE YOU ARE AND YOU DON'T KNOW WHERE YOU'RE GOING, BUT YOU EXPECT PEOPLE BENEATH YOU TO SOLVE YOUR PROBLEM. YOU ASKED A SPECIFIC QUESTION WITHOUT THINKING IT THROUGH, AND BECAUSE YOU DIDN'T UNDERSTAND THE ANSWER YOU'RE STILL LOST AND SOMEHOW IT'S NOW MY FAULT."

SO MUCH FOR THE "ALWAYS OPEN WITH A JOKE" ADVICE. THERE IS A POINT TO THE JOKE THOUGH, SO READ ON...

Last issue we examined how you get a better venue when you know what you are going to use the venue for, and how the job of a theatre designer or consultant is made easier (or less impossible) if they are given a coherent briefing and all of the relevant info.

Well the same applies when dealing with technical specialists, be they engineers, planners or operators. If you ask a poorly defined question, or hold back information you don't think is relevant, then don't be surprised if the answer doesn't solve your problem or if it sends you off in the wrong direction.

There's the example of the lighting operator who spent the better part of an hour with a venue manager who

was asking how to "make the stage look bluer and more like a work place". The lighting operator tried numerous fixtures and colour combinations, doing her level best to achieve "Blue moody industrial chic". Then the venue manager mentioned "I really need it to look like it did just before the opening act, when everything else is dark but the wings are blue" and the penny dropped...

What he was asking for, of course, was "how do you turn the blue workers on?"

A little closer to home is the case of the "static" lighting bar.

The scenario we were given was a static lighting bar weighing "x" (including the payload and electrical wiring) to be hung from 4 wire ropes and specific rigging components (wire rope ferrules, thimbles, clamps, shackles etc). We were asked to do some engineering checks to see if this kit was suitable.

We checked the breaking strains and factors of safety for the non-certified and non-rated components, checked the ratings of the certified and rated components, checked the QA processes (testing, sampling etc) and the experience and qualifications of the installation personnel and concluded that all was ok.

It came as something of a surprise then, when we were asked if the wire ropes had to be fitted to the hoist and reeved through the diversion pulleys before or after swaging on site...

When we pointed out that we were asked to check a static lighting bar installation, we were informed "that's right - we don't own any moving light fixtures and don't plan to use them, so yes, all the lights on this motorised, hoisted lighting bar will be static."

Luckily they gave us the last part of the information before it was all installed.

So not only does it help if you know what the purpose of your venue is before engaging a theatre designer, it also helps if you have all the relevant information to hand before you ask an Engineer a question.

This article forms general opinion only and must not be relied on without a detailed, professional risk assessment undertaken specific to your situation. Consult a professional staging company every time you consider anything that may involve risk with flown objects or people.

JANDS
Staging

BY ANDREW MATHIESON



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Australia is just 90 days or so from the end of the digital dividend process. This means that we are just three months from turning off and scrapping hundreds of thousands of wireless microphones at a cost to the community of more than \$220 million.

We should be all pretty angry about this but it is clear that there will be no transition support for industry or users and that the cost of continuing to use these products after January 1st 2015 falls to users.

Since the beginning of this process it has been an uphill battle. A series of unbelievably poor and inept decisions made between 2007 and 2012, in particular, have found us where we are today. Despite our best efforts we have just not been able to reverse those bad decision of the past.

However, since the change of government it's clear there is a different attitude towards the wireless audio issue. So rather than living in the past ACETA is now working to ensure that wireless audio users are never again ignored by governments when restacking spectrum, a process that both finishes later this year and is about to start again signalling the next round of change.

First a quick recap: one of the reasons that wireless audio users are in this predicament is because the devices operated under a class licence. That means they were effectively invisible to the regulators, who had no idea how many venues were using them or how much spectrum was being occupied. So when the digital switchover was planned they omitted to include wireless audio because they didn't realise how many users there were. Unfortunately, despite our considerable efforts the scale and scope of use continues to go unrecognised.

One of the goals of ACETA's discussions with the regulator and government is to ensure this lack of awareness will never happen again.

In case you might think there will be no opportunity for this to happen again, discussions have already begun for another re-stack. This is not likely to be completed for probably six or seven years, but the consultation is now underway and Minister Turnbull started to outline his vision for future spectrum management at the Radcomms Conference last month.

One solution suggested by ACETA that will help ensure that, regardless of government, wireless audio is included in any future changes is to adapt the existing apparatus licence framework. This approach is used elsewhere to manage spectrum. Currently the apparatus licencing is typically used for individual devices whereas our suggestion is to licence multiple wireless devices across a range of spectrum. This was suggested on condition that the licence fee be reasonable.

Why would we suggest that members and users would want to pay more money than they are now to government? Quite simply, because this then dials us into the discussion. Permanently. ACETA thinks this approach is especially relevant to big pro users like program makers, special events audio providers and other high stake users such as tertiary institutions. Holding apparatus licences mean they have rights, which in turn gives them an increased level of certainty both now and in the future. As we discovered, a class licence doesn't deliver that certainty. For the industry as a whole apparatus licences collectively provide a visibility in the future we have not had through the digital dividend transition.

This suggestion was made to the ACMA and has been well received and was recently going through the public consultation process.

Not surprisingly the ACETA response was favourable and can be seen (see link). Though we expressed some concerns about the mechanics of applying for the licence and communicating the licence to potential users, but apart from that, and presuming the fee is reasonable then we welcomed the proposed plan.

This is, of course, potentially an enormous win for professional users and others who are heavily invested in wireless audio and who do not want to be exposed

BY FRANK HINTON

in the future by the shortcomings of the class licence as they have been in the past.

This comes on top of the big win for indoor use, announced last July. That move allows the use of audio devices across the entire 520 to 694MHz spectrum, in RF-secure venues across the country. In these circumstances users will no longer have to fit in around the TV blocks. They will be able to use the spectrum that has been allocated to TV provided they operate without causing interference to TV broadcasts.

Also, under discussion is use at outdoor events by professional users. Again, this would enable them to use all the spectrum, including that allocated to television. This doesn't mean the church fete. This means big pro audio operator events, such as an outdoor music festival, sporting events and so on. We expect to hear about that move, which we believe will go ahead, in the next few weeks.

With the change of government, it's clear there is a willingness to attempt to right some of the wrongs that the original process created for wireless audio users. It's also clear that some of those wrongs, most notably having to scrap perfectly serviceable gear simply because the spectrum has been sold, cannot and will not be redressed.

ACETA's focus now is to work with the government and regulator to ensure that there is a sustainable and workable regime for the wireless audio users after the January 1 2015 changeover. And that no wireless audio users will be disadvantaged by future 'digital dividends' as they have in the past.

Links:

ACMA discussion paper:

<http://www.acma.gov.au/Industry/Suppliers/A-Type-of-equipment/WirelessMicrophones/licence-fee-arrangements-for-professional-wireless-mic-users>

ACETA response to AMCA discussion paper:

http://www.aceta.org.au/sites/aceta.org.au/files/Apparatus%20Fee%20response%20to%20ACMA%2015%20Aug%202014_0.pdf

To the industry we invite your response,
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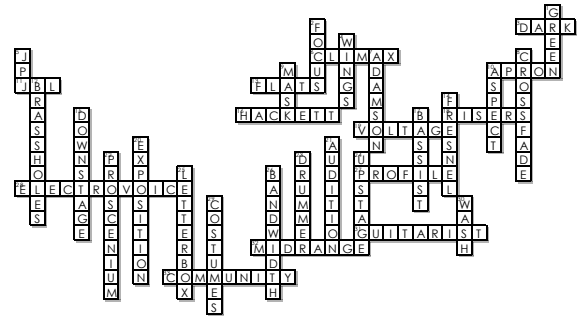
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CX ADVERTISER INDEX ISSUE 97 OCTOBER 2014

• BS Sound.....	72	• NAS.....	FC, 27
• Canon.....	IBC	• Nightlife Music.....	63
• Chameleon Touring Systems.....	59	• PAVT.....	7
• CLS Australia.....	17	• Penn Elcom.....	39
• CX Newsstand.....	11	• Philips Entertainment.....	21
• CX Summer Roadshow 2015.....	41	• Rentalpoint.....	72
• Design Quintessence.....	25	• Riedel.....	23
• Entertainment Assist.....	72	• Roland.....	61
• ETA.....	31	• Rosco.....	55
• Framelock Structures.....	49	• Sennheiser.....	29
• Hospitality & Event Solutions.....	55	• Subscriptions.....	69
• Jands.....	IFC, 3, 65, 71	• TAG.....	15
• LSW.....	67	• The Look.....	47
• Meyer Sound Australia.....	5	• ULA.....	BC, 45, 53, 57

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The Gowerville Hotel

MIXING AND PLAYING IN THE LATE 80'S

THEY SAY MOST PEOPLE WHO WORK AS ROAD CREWS ARE FAILED MUSICIANS, AND I'M NO EXCEPTION, AS EVER SINCE SCHOOL DAYS I'VE PLAYED IN SOME KIND OF A BAND. THIS ONE WAS CALLED HURRICANE, AND WE HAD A RESIDENCY EVERY THURSDAY AND FRIDAY NIGHT AT A HOTEL CALLED THE GOWERVILLE HOTEL IN PLENTY ROAD, PRESTON, IN THE NORTH OF MELBOURNE.



This pub served as a home away from home for psychopathic manic-depressives, social outcasts, and the economically and mentally disadvantaged. In short, society's leftovers and misfits. You were nobody there unless you had a scarred face and arms full of tattoos ... and the gues were even worse!

The pub is still there, as far as I know. Last time I drove past it had been painted trendy lilac, puce and grey, and is now rather inappropriately called The Faraway Tree! What Enid Blyton has to do with the place is beyond me. Possibly with the yuppification of the area the hotel's demographic has changed as well.

I put together a very basic vocal PA for the gig. For speakers I built a pair of very compact horn loaded 15" cabinets, like small flattened 4560s, with a couple of piezo tweeters screwed into each one. Hi-tech it wasn't, but it did the job. Colin Park (later an ARX founder member) put together a 100w per side amp to run it, and helped me build the original Gigmaster Mk 1 eight channel mixer to run it all through. Listening the other day to a desk tape of our last gig there (Hurricane - the final blow!) it doesn't sound bad at all, unbiased as I am!

However, sound quality came a poor second to the overriding requirement that the whole PA had to fit inside my Mini Clubman GT with a Music Man 130w guitar amp combo squeezed into the boot.

When Lazz the bass player left the band after crashing his car on the way home one night, I would give RH Positive, his replacement, a lift to the gig since he lived nearby me, and we'd tie his bass amp to the roof rack. It was at least 30k each way to the gig, but amazingly we managed to make it there and back every time!

Originally I'd take my Afghan hound Genghis Khan to the gigs and leave him in the car to guard it, letting him out to stretch his legs each time we took a break.

When RH joined the band though, there wasn't enough room in the Mini for PA, bass, guitar and big dog, so I would leave Genghis at RH's place where he would happily curl up on his daughters' beds and play with their toys until we came back.

I can't remember how we got the job playing there, but Hurricane's lead singer, a self styled Elvis look-alike called Kenny was the local hero, and consequently the rest of the band basked in the warm glow of his adulation.

There were fights every night. The very first time we got up to play, there was an incident. One of the customers accidentally bumped into another at the bar, and instead of apologising and leaving it at that, he copped a jug of beer in the face. And by jug of beer, I mean firstly he was drenched with the jug's contents, and secondly the jug itself was smashed over his skull!

Naturally he was forced to retaliate by hurling a trayful of empty glasses at jugboy, and then it was on for young and old.

The fight ended with a small amount of bloodshed on both sides. Honour had then been satisfied, and the two wandered off, arms around each other's shoulders, the best of mates until next time.

The band, though, remained untouched by such violence. No matter how many fights started, no matter how many chairs were thrown across the room, nothing ever touched the band. We'd just keep on playing



CX DUNCAN FRY... CONTINUED

while all the mayhem continued. If a stray elbow or fist banged into one of us, there was an immediate "Sorry mate" from whoever had done it, before wading back into the fray.

The pub was a favourite hangout for a lot of single mothers who came along to watch the band, and Kenny regarded them as his own personal fan club. The mothers brought their kids with them as well, probably using the occasion as an access visit to their various fathers. The festivities usually began with the children dancing around the floor, while the mothers alternately screamed at them or screamed for more beer.

One of these mothers we nicknamed BulletHead, since she had a very closely cropped haircut given to her as a souvenir of being detained during Her Majesty's Pleasure. Her kid was an attractive blonde haired, blue eyed little girl, of about three or four, and since she was a chip off the old Bullet we naturally nicknamed her Shrapnel!

One night, Kenny was halfway through 'Unchained Melody', his big ballad number, and the one that usually had all the mums in tears. He was just about to drop to his knees when suddenly young Shrapnel started to wander across the dance floor towards him.

She stood in front of him, staring for a while, swaying in time with the music, then started to tug on the microphone cable.

Kenny gently tried to dislodge her and pushed her away, but she kept coming back and tugging on the cable again and again. Each time she did it there would be a crackle through the PA, since we didn't have such luxuries as Canare quad core mic cable in those days,

and quite possibly my soldering was not up to scratch. (Only possibly, Dunk? Ed)

Kenny was getting a bit distracted by all this; the song was building up to its big climax, and yet he wasn't the centre of attention. All eyes were on Shrapnel, and not on him.

Shrapnel tugged on the cable again, the PA crackled, and Kenny flipped his lid. He roughly pulled the mic cable away from young Shrapnel, drew back his right foot and kicked the kid clean across the dance floor, where she landed in a crumpled heap at her mother's feet and promptly burst into tears. There was a huge gasp of horror from the audience.

Uh oh, I thought, this is it. We're really in for it now. Even Kenny looked worried.

BulletHead got to her feet. The band slowly dribbled to a stop, all eyes expectantly on mum getting all set to lay into us. The silence was literally deafening, as she rolled back her sleeves and raised her right arm. We all held our breath.

"You stupid little idiot," she screamed, and slapped poor little Shrapnel across the face. "I've told you before, stay away from the band when they're playing. Leave Kenny alone, especially when he's singing my favourite song!"

And she slapped her again to reinforce her point. Draining her beer, she put the kid under one arm and disappeared out into the street.

We reached for our beers as one, and breathed a heartfelt sigh of relief. That had been close!

Ah, happy days!



GOWERVILLE HOTEL.
IMAGE: STATE LIBRARY OF VICTORIA
CIRCA 1964



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