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# CX

MONTHLY TECH NEWS  
entertainment & broadcast

CX 79, MAR 2013 \$5.50

**GOTYE**

Making Mirrors  
Selling Millions

**ROADSKILLS**

with Cat Strom

**CAIRELLIE**

Celebrates  
10 Years

**GEARBOX REVIEWS:**

- ClearCom HelixNet
- JANDS Vista M1
- RTW Touch Monitor TM3
- SONY MCX-8M
- Rare Audio RA-VEXI 5A-500R

**CX NEWS:**

- Roadshow Wraps with Raps
- Safety Guidelines with LPA
- SSE Stage Mystery
- Klotz Cables for CMC
- Book Review with Andy

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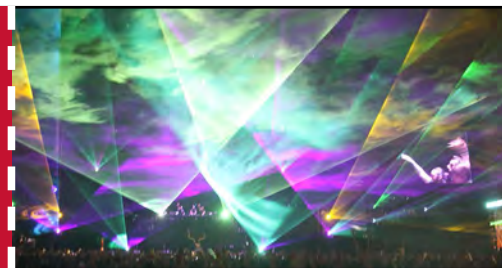
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**THE PERILS OF CORRECTNESS – AND TRAGEDY**

Our Facebook page ([facebook.com/cxmagazine](http://facebook.com/cxmagazine)) is a good leveller. When we emphasized the beer regime in each city on the Roadshow, a post cautioned that drinking abuse was a big issue. James Whittall asked: ‘Why do you promote beer so heavily when you have young readers who now think it’s cool to be a drinker in the industry? Many people’s lives have been ruined from alcohol in this industry.’

We replied the bigger issue was smoking, where our industry seems to encourage this judging by the number of crew on smoke breaks we see. But of course James has a point.

So to throw the switch and abandon political correctness altogether, what better target than someone who cannot be offended?

**Let’s poke fun at Julius! Hang on, that’s me.**

On Roadshow many seized on Francesco Calvi’s CXtra show comments, most of which were plainly not politically correct. That’s why we love having him on the show! (Watch the February edition at [cx-tv.com](http://cx-tv.com) for a good dose of Calvi).

Calvi managed to imply that I am a serial marrier, ‘Elizabeth Grafton’ and ‘Zsa Zsa Gabor’ were used in reference to my continual stream of divorces. I am currently processing one as we speak. Like all things they get easier the more often you do them.

The **CX** Roadshow we just completed thus became ‘the divorce tour’, and the next one apparently is the ‘next wife tour’, followed kindly by ‘the next divorce tour’. It is so helpful to have this theming drafted for us! Thank you.

One of my oldest friends just threw his hands up and said ‘Julius, you’re f—ked in the head!’ when I told him Karen and I had split. She’s a lovely girl! Most people looked genuinely sad and concerned for me. I retaliated by showing them a picture of my new girlfriend, which implies (correctly) that I am emotionally resilient. I’d best not publish the picture here, lest something go wrong and she becomes replaced or dumps me.

This editorial is thus also a short tale of the human condition. One man’s tragedy is another’s challenge.

**Some quotes:**

*“Life is a drama full of tragedy and comedy. You should learn to enjoy the comic episodes a little more.”* - **Jeannette Walls, The Glass Castle**

*“The whole world can become the enemy when you lose what you love.”*

- **Kristina McMorris, Bridge of Scarlet Leaves**

*“Life is a comedy to those who think, a tragedy to those who feel.”* - **Jean Racine**

**I saved the best for last:**

*“There is a saying in Tibetan, ‘Tragedy should be utilized as a source of strength.’*

*No matter what sort of difficulties, how painful experience is, if we lose our hope, that’s our real disaster.”* - **Dalai Lama**

-Julius

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# MORE ME PLEASE



## ME PERSONAL MIXING SYSTEM

Designed for use with iLive, GLD and other professional digital mixers, the ME Personal Mixing System puts the musician in control of their own monitor mix. Each performer's ME-1 personal mixer can be set up to work perfectly for them, whether they crave maximum control over the fine details of their mix or just want the minimum of keys to press. ME-1 is easy to use, with straightforward controls, a clear display and custom naming for instant familiarity. The end result - slicker soundchecks, quicker setups, lower levels on stage and more engineer time devoted to enhancing the audience experience.

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# NEWS

CX INDUSTRY NEWS

CX Roadshow built 40% on the first tour, with almost 1,500 industry types attending across six capital cities. The Roadshow visited Canberra for the first time, with disappointing attendance that possibly reflected a small market.

The 20 firms exhibiting agreed to try Canberra one more time, with the other five cities delivering very solid targeted attendance. The 2014 event has been programmed, with dates online at [cxevents.com.au](http://cxevents.com.au)

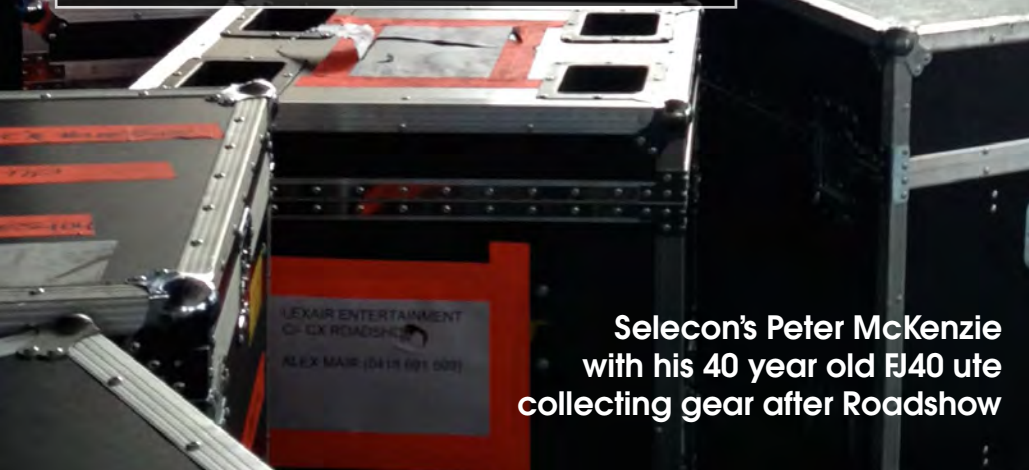
Heading the 2014 tour in February is The Sustainable Stages conference, which will bring international best practice into focus, as venues and events strive to reduce emissions and minimise impact.

Also scheduled is the Swami Candelilla Psychedelic Lightshow, with Astrid Traveller. CX has managed to secure a 1960's edition Super Trooper carbon arc followspot, and provided it is restored beforehand we plan to strike the arc and incinerate anyone silly enough to stand in front.

## ROADSHOW WRAPS WITH RAPS 2014 PROGRAMMED AND LAUNCHED



'One team one dream', said Blair Terrace as he, Lenka Satankova and Cuono Biviano of ULA packed up at the final Roadshow date in Brisbane.



Selecon's Peter McKenzie with his 40 year old FJ40 ute collecting gear after Roadshow

DELEGATES IN  
ADELAIDE, WITH  
LPA DIRECTOR  
DAVID HAMILTON

## SAFETY GUIDELINES MAKE PROGRESS LPA INDUSTRY REVIEW ON ROADSHOW



**Safety Summits were held at CX Roadshow across Australia last month, with broad industry endorsement of the proposed Guidelines. Live Performance Australia are developing new Stage Safety Guidelines, with a steering committee from most sectors of the live industry.**

At the Summit delegates heard of the current legislation and how the Guidelines need to fit. A hierarchy of control and influence was revealed that firmly places the Venue at

the top level – a matter of concern for smaller venues and local government.

Some were surprised to learn that Designers also sit in the top level, with discussion surrounding inability or unwillingness of some designers to produce plans in advance for venue approval.

Over a dozen sets of risks were tested across the national Summit, with some refinements heading back to the next working party meeting. LPA expect draft Guidelines should be ready for industry comment around July.

**CX will keep you updated.**

## SSE NOT A PHOENIX

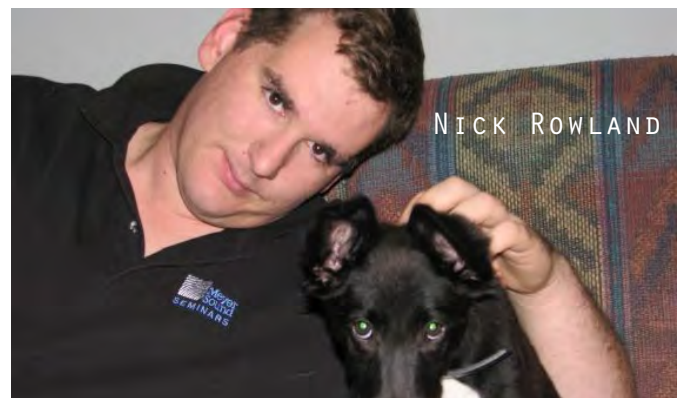
### New old stage company mystery

**When Queensland firm Specialised Stage Equipment Pty Ltd went into administration, its clients and work in progress would be assumed to cease. Yet almost at the same time, a new company called SSE Specialised Stage Equipment Pty Ltd appeared with the same management.**

CX called to talk to Nick Rowland, the new director of the new company, but he was unavailable. We asked Tony Peaker, the sales manager, how the situation came to pass. He explained the old company was owned by Geoff Manthorpe, whose main line of business is More Skills Australia – a registered training organisation that teaches rigging and some other certificate courses.

According to Peaker, More Skills ran into trouble and went into administration. That company was then reborn under the same name, and somehow remains a registered training organisation – although with a different Australian Business Number.

Peaker says that he and Nick Rowland and a number of the dozen staff left, set up new premises and made an



NICK ROWLAND

offer to the administrators. CX called Vincents Chartered Accountants in Brisbane to establish what their view was, but they did not return our call.

Industry sources say that some work in progress, such as an orchestra lift for a school on the Gold Coast stopped, while some jobs have been billed out of the new company.

CX asked Peaker why the new company, if at arms length from the old, chose to retain the branding and name of the failed firm. He said it made sense from a customer point of view. When asked if it was sensible to attach a new company by name to one that had failed, he said it remained to be seen.

# KLOTZ CABLES FOR CMC

Sydney importer CMC Music have acquired the Music Cables line of Klotz Cables, a global leader in audio and entertainment cabling. CMC offer premade cables, including the new KLOTZ Signature Cable by Joe Bonamassa.

This is an instrument cable and a patch cable, with straight or angled connectors. The new Signature Cable features the high-quality Golden Tip jack made in Germany by KLOTZ Cables.

Pro AV Klotz Cables are distributed by Production Audio Video Technology.



## SOPHISTO-PUNK

THE STORY OF MARK OPITZ AND OZ ROCK.

Authors: Luke Wallis,  
Jeff Jenkins and Mark Opitz

Mark Opitz has contributed so much to popular music in Australia over the last 30 years it almost beggars belief. His credits list is so extensive it's probably best summed up by Mick Malloy, who had this to say when he met up with Mark a year or two ago: "I wouldn't have a job if it wasn't for you – Triple M wouldn't have any records to play!"

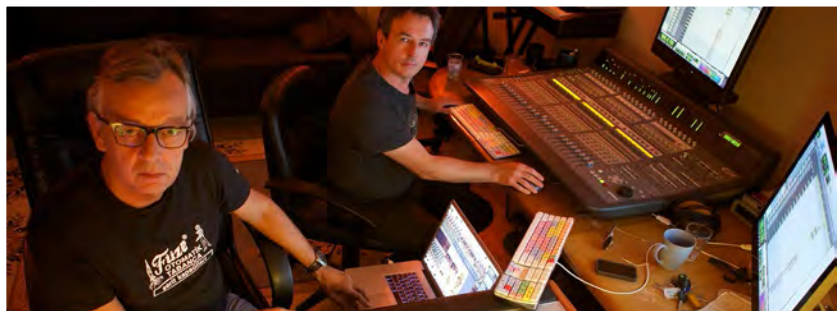
Whether you work in the live industry, on radio or in the studio, Mark Opitz's new book, *Sophisto-Punk*, is a dead-set must read. Covering several decades of the Australian music industry (and beyond), the book is a quick-witted, fascinating insight into the machinations of some of Australia's seminal bands. From AC/DC, The Angels, INXS, Cold Chisel,

Divinyls, Kiss, Paul Kelly and The Reels (to name a few), there are enough anecdotes here to satisfy even the grumpiest of hardened music industry 'lifers'.

Some books like this tend to be little more than a thinly veiled promotional catalogue for a record company or try-hard producer. Mercifully, *Sophisto Punk* is nothing of the sort. It's fascinating one minute, hilarious the next. It entertains and informs in equal measure, is never boring, and leaves you with an expanded understanding of the recent history of the Australian music industry. Unlike some stories told in print, when you've produced albums like Cold Chisel's *East*, INXS's *Shabooh Shoobah* and Divinyls' *Monkey Grip*, your yarns are worth reading.

When I ripped through *Sophisto-Punk* last week, I laughed, I cried, was moved and quite gob-smacked on so many occasions I lost count... after page 30. It's the sort of book you'll read over a weekend even if you haven't read one in 20 years. Do yourself a favour. If you never read another book but claim some involvement in the music industry, don't let this one slip through the cracks.

**Publisher: Random House**



BOOKS

BY ANDY STEWART

## Short Technical Courses in July



Juliusmedia and The Concourse (Chatswood) have partnered to deliver short sharp technical training courses within Sydney's newest performing arts centre. These new CONCOURSES draw from a decade of training experience at Juliusmedia and take advantage of the latest technical equipment installed at Concourse. Concourses are for people interested in developing skills for live production in theatre and venues.

Concourses are INDUSTRY ACCREDITED.

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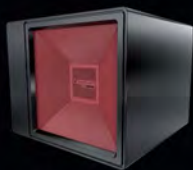
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## ALLEN & HEATH ME-1 PERSONAL MONITORING SYSTEM



Allen & Heath's ME-1 is a personal monitoring solution, universally compatible with Allen & Heath and other pro digital mixers. Central to the system is the small and fully-customisable ME-1 personal mixer, powered and connected via CAT5 and capable of managing up to 42 sources.

ME-1 receives 40 sources via CAT5 (either mono or linked as stereo) plus a built-in ambient mic and a local stereo aux input. The mixer's flexible grouping function enables any combination of sources to be mixed and laid out on the surface from a simple 2 button 'Me and Everything else' to a full mix. The configuration and up to 16 presets can also be stored, recalled and transferred via USB key.

## SHURE KSM9HS HANDHELD VOCAL MICROPHONE

A vocal microphone, with switchable hypercardioid and subcardioid polar patterns, the KSM9HS delivers clear articulation, functional flexibility and precise vocal reproduction for a wide range of live performance applications.

Features include a Class A transformerless preamplifier circuitry for transparent sound capture, dual gold-layered diaphragms that reveal every nuance and subtlety and an advanced suspension shock mount virtually eliminates handling noise.



## MEYER SOUND GALILEO CALLISTO 616

The Galileo Callisto 616 array processor is a hardware and software solution for driving and aligning Meyer Sound loudspeaker array systems. The 2-space, rack-mount Callisto 616 includes six inputs, 16 outputs, and a fully digital matrix processor. The accompanying Compass control software provides comprehensive control of all parameters from a Mac or Windows based computer.

The Callisto 616 features delay integration for aligning loudspeaker arrays, user defined shaping filters, and simultaneous low and high-pass filters for subwoofer control. The Callisto 616 offers an extensive equalization architecture that includes U-Shaping equalization, comprised of five bands with adjustable slopes, widths, and gain, and 10-band complementary phase parametric filtering, both available on outputs.



## PHILIPS VARI-LITE VL3015LT SPOT LUMINAIRE

The VL3015LT Spot luminaire is the latest moving head fixture in Philips 1500W series and combines a powerful beam with a broad zoom. The VL3015LT uses a 1500W Osram double-ended short arc lamp to produce 42,487 lumens of output, features 10:1 zoom optics, CYM color mixing, variable CTO wheel, two five-position color wheels, three gobo/effects wheels, a beam size iris, and separate dimmer and ultra-fast strobe mechanisms.



PHILIPS VL3015LT

A standard palette of gobos, effects and colors is provided with the luminaire, and custom gobos, effects, and colors are also available. Additionally, the VL3015LT Spot contains an independent rotating and indexing 3-facet prism as well as an independent frost glass, and a 6° to 60° zoom range.



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NewTek 3Play is a multi-channel high definition video device supporting simultaneous recording, display and instant replay of multiple audio and 4 video sources. Its output possibilities include professional hardware connections capable of conveying two fully independent video streams to external video systems such as live broadcast switching equipment, and of course file export.



**ROLAND V-4EX LIVE VIDEO MIXER**

Roland Systems Group is releasing the next-generation product in the V-4 and V-8 lineup of Roland live performance video mixers. The Roland V-4EX advances the Roland V-4 four channel video mixer by incorporating HDMI inputs/outputs, USB streaming, HDCP support, built-in touch multiviewer and audio embedding. The Roland V-4EX's features are designed for many markets including clubs, concerts, worship, events, meetings, trainings, weddings, education and sporting events.



**CLAY PAKY ALPHA PROFILE 800 ST**

Clay Paky's Alpha Profile 800 ST includes a miniaturized four-blade framing system that adjusts over 90°, a zoom from the narrow angle of 7.6° to 55°, an auto-focus system, and the Dyna-Cue-Creator function. Using an 800W lamp with a color temperature of 6,000K, the light includes CMY color mixing, plus eight-color wheel, and a linear CTO filter. The fixture has seven rotating gobos, a nine-facet prism, a mechanical iris, interchangeable frost filter, and a hybrid dimmer that combines electronic and mechanical control. The unit produces 42 dBA.

**RØDE iXY STEREO MICROPHONE**

The RØDE iXY stereo microphone offers up to 24-bit/96k recording and on-board high-fidelity A/D conversion making recordings rich, smooth and accurate. It is compatible with iPhone 4S, iPhone 4, iPad (3rd generation), iPad 2 & iPad.



iXY is the microphone for capturing music, from local café gigs, to large stadium shows or even recording your band rehearsal and songwriting sessions. The iXY is a recording solution for field reporters, giving you broadcast-quality audio at a moment's notice. Use RØDE Rec (RØDE app) to edit your recordings on the spot and upload to SoundCloud and Dropbox.

**TURBOSOUND MILAN SERIES LOUDSPEAKERS**

The new Milan series has improved performance with ultimate convenience for musicians, DJs and AV applications in a range of portable powered loudspeakers. Full-range models feature 1,000 watts of bi-amplified power coupled with sophisticated KLARK TEKNIK digital signal processing, while the two subwoofer models are powered by 1,500 watt amplifiers with integral stereo crossovers, allowing left / right stereo systems to be built with only one subwoofer.

The M10, M12 and M15 two-way full range loudspeakers all have two fully independent channels with electronically balanced mic and line inputs, two-band EQ and a Mix Out function to extend a Milan system with additional speakers. The switchable 100 Hz low-pass filter ensures seamless integration when teamed with subwoofers, or when used on the floor as wedge monitors.



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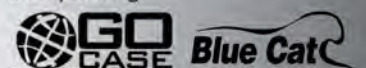


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## BEHRINGER X32 DIGITAL MIXERS

Behringer have added 4 new digital mixers to their X32 line, The X32 COMPACT, X32 PRODUCER, X32 RACK and X32 CORE all share the flagship X32's performance specifications with digital connectivity, plenty of virtual FX, MIDAS-designed mic preamps, and a wide variety of inputs and outputs. All models include KLARK TEKNIK-engineered AES50 ports, which can be connected to BEHRINGER S16 Digital Snakes for expanded I/O regardless of mainframe size, and can be controlled using XControl for PC/Mac/Linux, XiControl optimized for iPad and XiQ for iPhone/iPod Touch.

The X32 COMPACT is a 40-input channel, 25-bus Digital Mixing Console with 16 programmable MIDAS Preamps, 17 motorized faders and all of the features, functionality and intuitive workflow of the original X32. Sporting a slimmed-down chassis, the X32 COMPACT is designed for applications where space is limited or the application only requires 16 local mic inputs. When connected to an S16 Digital Snake, I/O is expanded to full X32 capacity.

The X32 PRODUCER is a 40-input channel, 25-bus Digital Mixing Console with 16 programmable MIDAS Preamps, 17 motorized faders and a form factor that makes it ideal for professional and home project studios.

The 40-input channel, 25-bus X32 RACK Mixer features 16 programmable MIDAS Preamps and a high-resolution 5" day-viewable TFT, housed in a rugged 3U rack housing.

X32 CORE is a 40-input channel, 25-bus Digital Rack Mixer that packs all of the mixing, routing and FX power of the flagship X32 into a 1RU rack-mountable chassis. I/O connectivity requires the addition of S16 Digital Snake boxes and accommodates up to 96 remote inputs, or X32 CORE can be connected to a DAW with a full 32 x 32 channels, massive FX and near-zero latency using USB 2.0 or FireWire.

## WHIRLWIND POWER DISTRO

Whirlwind have introduced its full line of AC power distros, including a new series of modular units, which allow users to easily design a custom power distribution system that exactly meets their needs. Customers can select from a huge variety of rack mount Input Panels, Main Breaker Panels, Combo Panels, Breaker Panels, Output Panels, and Power Meter/Accessories — all made from lightweight aluminum panels, premium fast-response magnetic circuit breakers and top of the line components.

Also available is DesignPRO 2.0, Whirlwind's drag/drop AC distro design software, a free download that lets users quickly and easily configure a complete system for their needs.



## ELATION PROFESSIONAL TVL1000

Elation Professional's TVL1000 is a white LED panel with variable color temperature and a battery-power option for any TV or broadcast application. This compact, lightweight panel features 200 warm white and 200 cool white LEDs, which can blend to create any shade of warm or cool white. It also operates with a battery option, making it usable anywhere.

Using either onboard controls or a standard DMX-512 controller, broadcast lighting professionals can quickly and easily adjust color temperature from 3200°K to 6500°K. The TVL1000's variable color temperature capability makes it possible to instantly customize studio lighting to complement any skin tone or scenic/production environment with a soft, even white output.

The SD5 has 124 input channels; 56 configurable busses, plus up to 5.1 master; a 24 x 24 fixed matrix; DiGiTubes on every channel, buss and output; 24 assignable Dynamic EQ; 24 multiband compressors; 24 stereo effects; 32 Graphic EQ; 10 x 4 (40) RGB backlit macro buttons; plus the ability to add a Waves upgrade.



I/O RACK

# RIO SERIES



Yamaha's RIO-series I/O racks can be used to expand and improve the head-amp capabilities of any LS9 or M7CL mixing console.

Contact your local Yamaha Commercial Audio dealer to arrange a personal demonstration.

Until the 31st March, 2013, **RIO1608D** and **RIO3224D** will ship with a **bonus MY8-DANTE** expansion card to provide connectivity and serial control of RIO from the LS9 or M7CL.



**YAMAHA**

**CO**  
commercial audio

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Terms and Conditions. The offer of a bonus MY8-DANTE card applies only to RIO1608D and RIO3224D units purchased from an authorised Yamaha Music Australia Commercial Audio dealer until 31st March, 2013 and whilst stocks last.

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[www.yamahaproaudio.com](http://www.yamahaproaudio.com)

**PRESONUS STUDIO LIVE 32.4.2AI DIGITAL MIXING SYSTEM**

PreSonus' new StudioLive 32.4.2AI 32-channel performance and recording digital mixer includes a dual-core computing engine with more than 64 times the processing power (and 10,000 times more RAM) than the previous top-of-the-line StudioLive 24.4.2. Its integral communications also makes possible wireless control of the mixer without requiring an external computer.



Featuring 32 Class A XMAX mic preamps with individually switched phantom power, 32 line inputs, 14 aux mixes, 4 subgroups with variable output delay, Fat Channel dynamics processing and parametric EQ and a 48x34 FireWire S800 audio interface. Also new in this model are six mute groups with All On/All Off switches and six user-assignable Quick Scene Recall buttons that let you load specified, saved mixer scenes - sort of a speed dial for mixer scenes.

**APOGEE ONE**

Apogee Electronics has introduced the redesigned ONE, a 2 IN x 2 OUT USB audio interface and microphone. The new ONE is a studio quality audio interface and microphone that makes a direct digital connection to Apple's iPad (iPhone, iPod touch) and Mac. ONE features Apogee's Maestro control software, iOS device charging, optional battery power for portable recording with iPad and professional sound quality. ONE is the all-in-one solution that makes it easy for musicians, songwriters, recording engineers, film makers and audiophiles to experience professional sound quality on iPad and Mac.



ONE offers three input options; a built-in omni-directional condenser microphone, XLR input for dynamic, condenser or ribbon microphones, and 1/4" instrument input for electric guitars, keyboards or any instrument with an electric pick-up. An upgrade from the original design, ONE now has the ability to record two inputs simultaneously (instrument plus built-in microphone or external microphone). The updated AD/DA converters and mic preamps deliver studio quality sound and allow you to capture and playback your recordings with incredible clarity and detail.

**ETC PARADIGM RESPONSIVE CONTROLS**

ETC's Paradigm Responsive Controls reduce wasted electricity in any indoor or outdoor space. Paradigm Occupancy/Vacancy Sensors use passive infrared sensors (PIR) to detect vacancy, automatically shutting lights off when a space is unoccupied. They can also be configured to turn on when someone enters a room.

The sensors can also adjust the output of lighting fixtures based on the amount of natural light in an area.



**KALTMAN CREATIONS RF-intermodPRO**

RF-intermodPRO is a new software product that aids in calculating, predicting and identifying intermodulation interference of wireless devices, has been introduced by Kaltman Creations LLC under the Invisible Waves product banner. The product refines and simplifies the process of identifying intermodulation distortion (IMD) frequencies in a given RF spectrum and is available as a standalone PC-based software product or as a plug-in option for the Invisible Waves RF Command Center.



**LOGITECH ULTIMATE EARS VOCAL REFERENCE MONITORS**

Ultimate Ears Vocal Reference Monitors have been designed with two different sound signatures to accommodate male and female voice frequencies allowing singers to concentrate only on what they need to hear.

Ultimate Ears Vocal Reference Monitors act as an earplug and reduce overall stage volume by up to 26 decibels through passive noise cancellation. This brings the sound pressure levels down so that vocalists can hear their own voice more clearly. Instead of hearing a full frequency mix like most other monitors, the three balanced armatures in each ear are engineered to emphasize the general voice band, with frequency response between 90Hz - 8kHz, so that singers can hear what's most important to their performance.



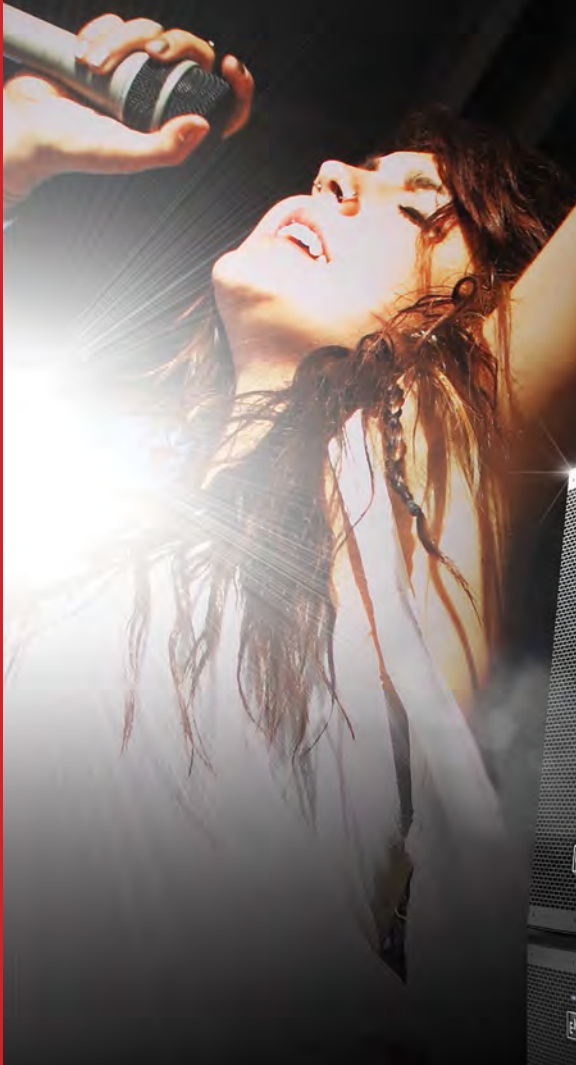
**GAM MARK LITE**

GAM Products' Mark Lite is a self-contained, battery-operated LED safety light that weighs less than 29 grams (1 ounce) and produces a continuous light in either red or blue. It is designed to increase safety backstage (along the edges of platforms, or marking overhead beams, mark a passage in a blackout) or on stage, where it can mark centerstage or quarterstage, or any other mark. It is driven by two AA batteries, which last for months.





# Electro-Voice

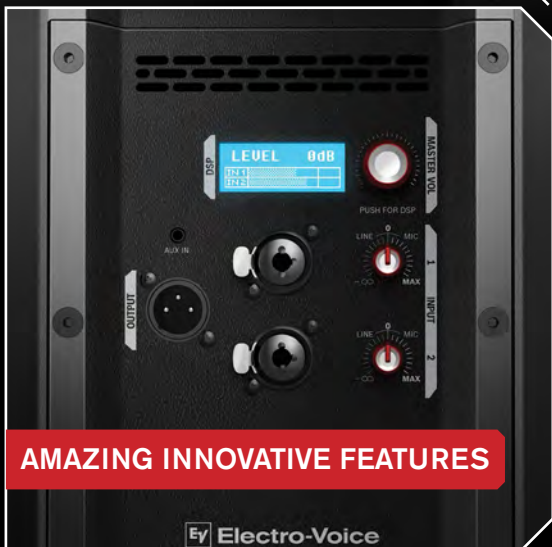


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*ZLX is available in 12" and 15" versions.  
Passive models also available.*



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# GOTYE

## MAKING MIRRORS & SELLING MILLIONS

BY ANDY STEWART  
PHOTOGRAPHY BY ALAIN BOUVIER

LEFT TO RIGHT: ANDY STEWART, FRANC TETAZ AND WALLY DE BACKER AT WORK ON THE NEVE 51-SERIES CONSOLE DOWN AT THE MILL.

GOTYE'S *MAKING MIRRORS* JUST WON 'INDEPENDENT ALBUM OF THE YEAR' AT THIS YEAR'S GRAMMYS. ANDY STEWART REFLECTS ON HIS INVOLVEMENT AND THE ALBUM'S RUNAWAY SUCCESS.

I'd have to check my diary, but I think it's been nearly three years since Wally de Backer, his partner Tash Parker, and my long time friend and audio cohort Franc Tetaz, were staying down here at The Mill to record and mix the Gotye album that would later be known as *Making Mirrors*. Last week the album won 'Independent Album of the Year' at the Grammy Awards in the US, along with two others for best single. Before I begin, may I just say how proud I am of the achievement, and that it couldn't have happened to a nicer guy. 'Lord Waldo,' you are now officially a pop star, if you weren't already.

### MIRROR, MIRROR ON THE WALL

While working on the first group of songs for the *Making Mirrors* album, we had no real expectation that it would go on to become one of the most significant releases by an Australian artist in years. Saying that, we did have ambitions for it to be hugely successful, make no mistake... Wally's manager, John Watson, even ringing during one of those early sessions to make the comment that he wanted the album "to win a Grammy." At the time I remember choking on my Weetbix, no doubt making some wise-crack along the lines of: "let's try getting at least one song finished first shall we, before we start talking like that." At the time I think we'd been working on the song *Eyes Wide Open* for about a week!

I guess my reaction to John's 'Grammy' comment was simply me trying to do my bit to keep the sessions free from outside pressures and distractions... a natural instinct during any record's development. Sometimes it's disastrous to have managers, A&R guys and erstwhile hangers-on dropping by or adding their often ill-informed two bob's worth over the phone.

I needn't have been concerned. Sure, at times Wally felt

the weight of expectations bearing down on him, and he did do some serious soul searching on occasion, but none of it really seemed to change his stride much. He's a very determined bloke is our Waldo, and given previous Aria success a few years earlier, he's no stranger to the pressures of musical expectation.

### AWARDS NIGHTS

Since *Making Mirrors* hit the shelves and airwaves, Wally has won three Grammys, four Arias and who knows what else around the world. He's probably won a meat tray down at the local cricket club without realising it for all I know. The smash hit off the record, *Somebody That I Used to Know* has been viewed on YouTube over 375 million times (a rare lecture by one of the most famous men in modern history, Neil Armstrong, has had 3,356 in the same time period). If you include all the spin-off and parody videos (including Wally's own edit of everyone else's versions of the single – which is brilliant) it's probably well over one billion by now.

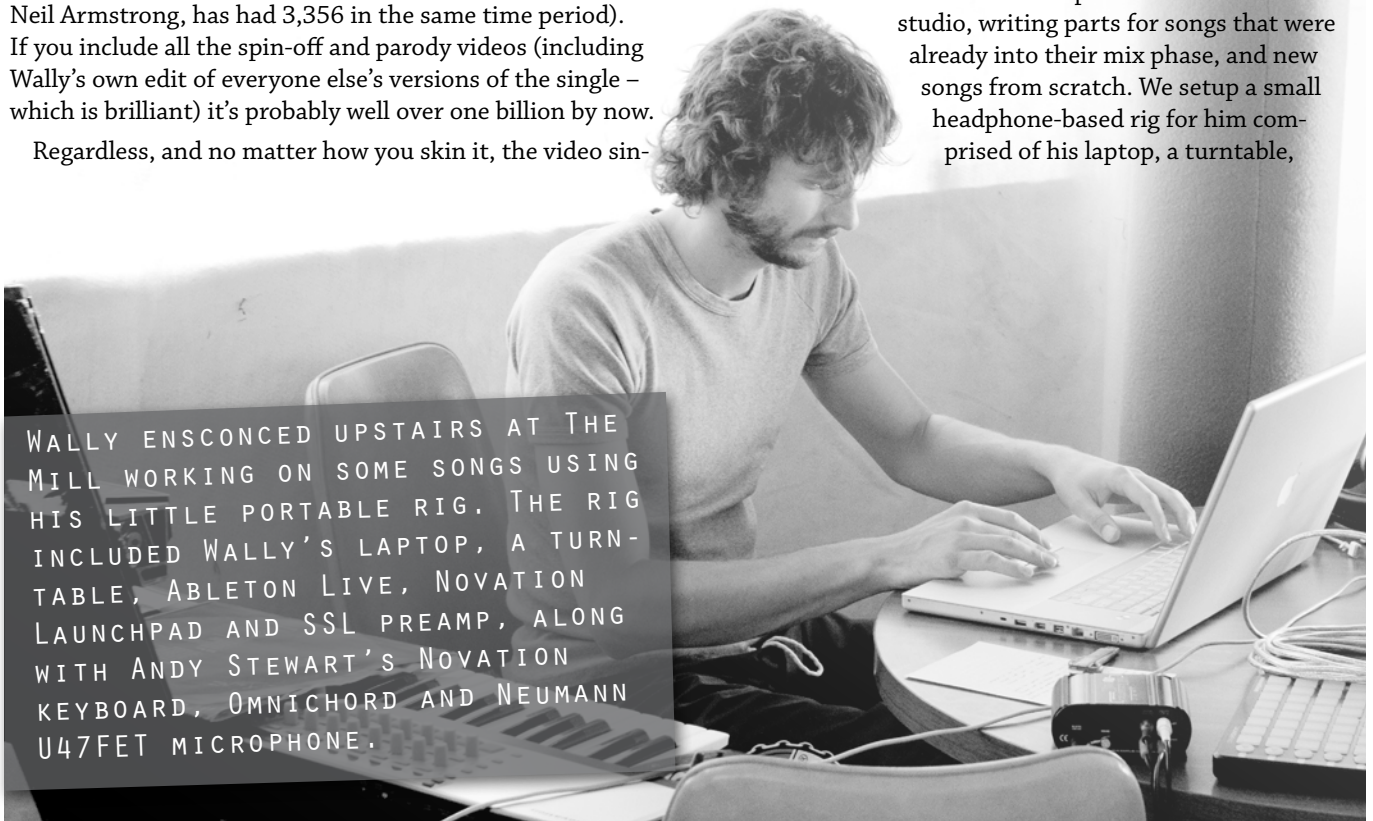
Regardless, and no matter how you skin it, the video sin-

gle has been nothing short of a global phenomenon. When I was in the US last year during 'summer break' I heard the song everywhere: in malls and shopping centres, on TV... even coming out of convertibles packed with 20 year old frat boys driving around Lake Tahoe. It was weird. Something was happening...

### BS

But in the early days of the record's development, 'Somebody' didn't exist, (let's call that time 'Before Somebody,' or 'BS') and although things were going well and sounding good, there was no clear hit amongst the songs on the record at that stage.

While Franc and I worked on the mixes, Wally spent some of his time in the upstairs mezzanine of the studio, writing parts for songs that were already into their mix phase, and new songs from scratch. We setup a small headphone-based rig for him comprised of his laptop, a turntable,



WALLY ENSCONCED UPSTAIRS AT THE MILL WORKING ON SOME SONGS USING HIS LITTLE PORTABLE RIG. THE RIG INCLUDED WALLY'S LAPTOP, A TURN-TABLE, ABLETON LIVE, NOVATION LAUNCHPAD AND SSL PREAMP, ALONG WITH ANDY STEWART'S NOVATION KEYBOARD, OMNICHORD AND NEUMANN U47FET MICROPHONE.

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Ableton Live, a Novation Launchpad and SSL preamp, along with my Novation keyboard, Omnichord and Neumann U47FET microphone.

That was arguably the most important part of the evolution of the record in hindsight. Wal's songwriting never stopped. That critical part of the process was never off the table and was always encouraged. Indeed, there were no clear lines between any of the processes really: songwriting, recording or mixing. Wal was always pushing songs forward, and always determined to make them better, yet happy to backtrack where necessary. Regardless of whether a song had been worked on for 10 hours or 10 days, if he wasn't entirely happy with it there was always a steely resolve in him to improve the sound or work harder to achieve the outcome he imagined in his head.

### ON REFLECTION

I think about it now and wonder what would have happened to *Making Mirrors* if everyone around Wally, and indeed Wally himself, had set about making a record using only the songs he'd written when mixing first began. I'm sure he would have had moderate success but perhaps nothing more – it's hard to say. But my strong feeling is that without honesty having been served up in measured doses throughout the process, from outside and within, *Somebody* may never have popped into Wally's head. He may disagree, or have forgotten... I'm not sure.

Certainly there were several pretty honest 'discussions' early on between the three of us – Franc, Wally and myself – where Wally and Franc, it seemed to me, were determined to stylise and pigeon-hole certain songs – 'Oh, that's Italian House, you can't put real drums on that'. To me, limiting the instrument pool that's relevant to a song, based on its preordained 'style' was frustrating in the extreme – particularly when a song wasn't working. It didn't seem to play to Wally's strengths at all. I was always advocating going up to Sing Sing studios and getting Wally on the drumkit (where he really lets rip in spectacular fashion), in an attempt to solve some of the rhythm based problems we were having, but it never happened. I still believe there are things about *Making Mirrors* that could have been better... but given its success it's hard to argue that now without sounding like a sour lunatic.

### THE PUSH

There has been so much written about this record, so much commentary and so many hangers-on since the album came out that I'm sure many people are entirely fed up with hearing about it. I sympathise.

But one thing seems to have been overlooked amid the mayhem that is Wally's success, particularly in professional audio magazines: the scale and the significance of the push from the back end. If you think a single like *Somebody* becomes a success because of one isolated element of the production: a lyric, a melody, a record contract, a nutty film-clip or a fancy plug-in that makes a sound no one's ever heard before, you're wrong. It's been a massive team effort to get Wally to where he is now, and it's important to realise that. Wally certainly does, hence his admirable humility in the face of this crazy whirlwind, but others continue to try to reduce his success to one thing, in a naive bid to deconstruct and/or replicate it. If it were easy or predictable to pull off a coup like this, everyone would have a hit single and be winning Grammys.

Countless people have said to me recently: "There will be a lot of pressure on the next record Wally makes... follow-ups are always hard." That's true, but what most people seem to have forgotten is that *Making Mirrors*, was the 'follow-up' album... to the very successful *Like Drawing Blood*, which came out in 2006. That album produced the hit *Heart's A Mess*; a fantastic song that went to No.1 in Australia (and had an equally fantastic video). It's remarkably like *Somebody* in many respects, and was the song I always respectfully pointed to as being stylistically absent from *Making Mirrors* early on.

The next Gotye album will be fascinating regardless of who makes it or when it comes out because it will be the follow-up to the follow-up... the world is his oyster. Look out.





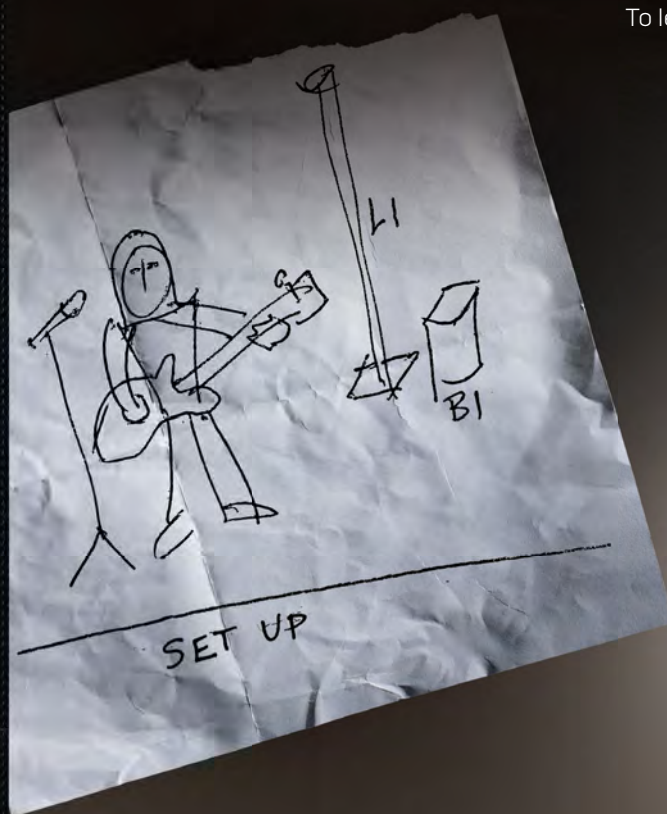
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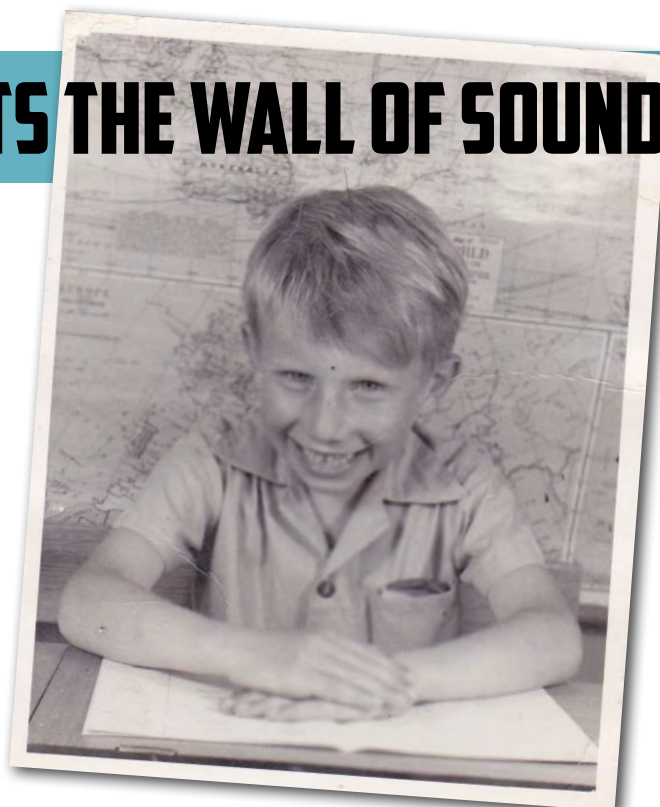
# THE DEVINE LIGHT MEETS THE WALL OF SOUND

## WE'RE BLESSED WITH THE BEST AND STEPHEN DEVINE IS ONE OF THEM.

BY MARK TAYLOR

HE'S THE FATHER OF OUR WINCH UP AND AS A LIGHTING GUY HE DOES A PRETTY GOOD JOB SELLING SOUND EQUIPMENT. TONS OF IT.

WE STUMBLED ACROSS EACH OTHER 35 YEARS AGO AND HAVE DONE A HUGE VARIETY OF THINGS IN THAT TIME. HE DID THE LIGHTS FOR MY 21ST. HE'S CURRENTLY BUSINESS PARTNERED WITH HARLEY RICHARDSON BUT THAT'S GOING TO BE ANOTHER STORY.



Canberra. No one in their right mind would have dared to compete. No one did.

His notoriety on the national stage increased as he continued to pull off sales successes. He's the only person to sell 400 Strand Minims and a one unit dimmer for each one to a well recognised artistic venue. He also bought equipment from one division of a well known entertainment technology company and sold it back to another division of that company that operated nightclubs at the time. He awarded a salesman from a competing brand a plaque in recognition for his work selling his products. He stayed up for a week straight working on a massive install in the early 80s.

He sold Topstage Productions in 1995 and moved to Queensland.

Stephen was and still is a force to be reckoned with.

**MT: You've been in the industry now for over 35 years. What are we doing and where are we heading?**

**SD:** I see an industry that is coming of age and is finally recognised as a valid place in which to have a legitimate career. The development of training courses and subsequent qualifications is a great achievement and I hope it continues. The establishment of our industry peak body, ACETA, is a big step toward us being a force to be reckoned with, especially at government level. Up till now we have only been able to lobby as individuals, not as a group. Our voice is finally being heard where it counts. This is only the beginning. I see great things ahead.

I do however, have a number of concerns with the industry.

The music we download on line is generally compressed to reduce bandwidth and lacks the dynamic range that is available in older formats. I am concerned that we are developing a generation of people who don't really know what good sound is because they have only heard music in this format. The improvement in Cinema Sound is great, but the fall off in the quality of normal peoples' listening material concerns me.

Stephen and Harley represent Meyer Sound in Australia. Meyer Sound is more of a family type product. Arrays are named after grandchildren as opposed to model numbers. John and Helen Meyer made the bold move to put amps in all the boxes a few years ago and the industry has been battling to keep up ever since. John Meyer made his name developing the wall of sound for the likes of the Grateful Dead and invented the trapezoidal speaker box and the loudspeaker processor.

Stephen is also on the board of our industry peak body, ACETA. <http://www.aceta.org.au/>

The winchup came from an adaptation of a stand used to raise air conditioning sections in place on a building site Stephen was working on in Canberra. Phil Salmon made the first 4 prototypes out of tube and fit and Richard White from Rock Industries got on with the next thousand or so.

Stephen's first business was called 'The Devine Light' and parcan by parcan it developed into a huge thing in Canberra. He developed the first chaser, years before John Gunton mastered the triac, which was a Hills Hoist rotary clothesline winder with a copper strap attached under the handle. One operated it with a rubber glove. It swung around a 12" circle of 3/8" bolts with wires running off to the lamps. The active was in your hand. 12 channels, very tactile, a lightshow in itself and thus he coined the phrase 'fly by wire'.

Stephen later suggested to John Gunton, Ceitex at that time, that he could make good money manufacturing architectural dimmers as well as entertainment product, thus Dyalite was born.

He and the family settled in Sydney in the early 80's and he became Roger Foley's production manager. That went well for a few years then he went back to Canberra to continue his career as owner of Topstage Productions. Topstage was the first one stop shop for entertainment technology in



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The improvement in technology is taking away the creative side of our craft. It's very easy to fill a stage with a pile of moving lights and then program them to do all sorts of amazing things, however if you want to change anything or be spontaneously creative during the show then that's another matter.

**MT: Is the government serious about the reallocation of the wireless mic bandwidth and are they just brushing us aside? Are the users really going to see the government paying them out?**

**SD:** I cannot speak for ACETA, who are involved in negotiations with the government on this issue, but I do have my own opinion on this matter. I am concerned we are too small an industry to have much influence on government policy. The government is selling these frequencies for a lot of money. The people who buy them will expect them to be clean and without any interference. Currently they are occupied by wireless microphone systems ranging from those used by gym instructors to those used at Olympics ceremonies. The problem the government has is that the smaller users will not vacate these frequencies if it involves handing over their own money for new wireless systems. Unless the government sets up some sort of compensation for users, they are not going to have clean frequencies to sell.

**MT: What have been the most significant progress points in the industry over the past 30 years?**

**SD:** Gosh, there are so many, I can think of a few personal high points.

Paul McCartney "Wings around the World" toured here in the 70's and showed us what a rock lightshow was all about. I was enthralled.

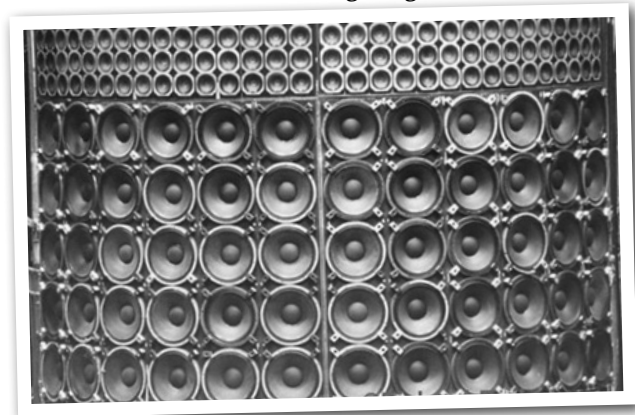
Hearing Canned Heat and Stephen Stills at Mulwala in 1972 through a very early Jands PA system showed me that we can do it locally. The oil lightshow behind them was pretty cool as was the punch.

Deep Purple bringing 16 PAR 64 Lights with them to Sunbury in 1974 introduced Australia to an affordable rock lighting fixture. We made them here in their thousands. With the introduction of LED technology you cannot give them away.

Norwest Productions who consistently beat the rest of the world providing audio for so many international events.

Lake Technology who have developed world class audio technology and even better, have had it accepted.

Jands and their world class lighting consoles.



The establishment of our peak body ACETA. We finally have a voice.



**MT: At the time you could have picked up a bunch of audio agencies. Why the decision to go with Meyer?**

**SD:** Meyer sound came along almost by accident, it was a sleeping giant. It's in my nature to wake sleeping giants.

I ran Topstage Productions Canberra from 1982 until 1995. We were the Jands dealer for the area amongst other things. One day I woke up and realized I was an accountant, not a lighting or sound guy. I ran a business that developed from a backyard hobby into a monster that had staff, overheads and hassles.

I realized that it was a millstone and decided it had to go, I also felt that I had done all I could in Canberra and needed to leave the place. I broke the business up and sold it in 4 weeks. I moved to Queensland with nothing in particular on my agenda. I knew I did not want to build a business with a lot of staff and high overheads. I felt I had something big on the horizon but I wasn't sure what it was. I met Harley Richardson one day in Brisbane. We clicked.

Harley and I opened a contracting and cardboard box sales business simply called 'Richardson and Devine'. We were the margin murderers from hell. We based quotes on the number plates of cars that drove past our office window. It was controlled insanity. Some might think it still is. One of our customers was the Queensland Performing Arts Trust (QPAT). They bought XLR connectors from us. We tried to charge them by the kilo so we didn't have to count them.

QPAT had a Meyer Sound UPA-1 system that needed new HF drivers. Neither of us new who the distributor was so I rang Meyer Sound in the States and got to talk to Mike Cooper, the Director of International Sales. At that time, Meyer Sound had no distributor in Australia, so Mike was happy to do business with us. The business took off. We discovered very quickly that distributing Meyer Sound takes very deep pockets because Harley and I ran out of money even faster than customers purchased product. Mike Cooper suggested we start a company called Meyer Sound Australia and convinced John and Helen Meyer to step up to the plate. In December 1998, Meyer Sound Australia was born.

Up until recently I felt we should do one thing and do it really well. Consequently we rejected quite a number of offers from other manufacturers to represent them here. We were, and still are, determined never to represent something we don't totally believe in or competes in any way with Meyer Sound.

Times change, however and I have rekindled my interest in lighting...

**MT: Who are the people that you admire in the industry?**

**SD:** I have met so many talented people in 35 years. It's one of the big pluses of being in the business.

John and Helen Meyer because of Johns unwillingness to compromise in what he believes in that results in amazing outcomes and Helens ability to turn Johns dreams into a reality. They also gave me an opportunity with Meyer Sound, based on a handshake, that I will never forget.

Mike Cooper, Director of International Sales at Meyer Sound who has been my mentor in so many business and personal situations. Wisdom like his you cannot buy. Paul and David Mulholland, Eric and Ed Robinson who built Jands from a shop in Rose Bay to the powerhouse it is today. Jands' contribution to our local industry has never been fully recognised.

Roger Foley, who I recently reconnected with after about 30 years inspired me to think outside the square when it came to creating wonderful effects out of the simplest of materials. Roger showed me that it is indeed smoke and mirrors.

My business partner, Harley Richardson. The sum of the parts is greater than the individual. Just don't tell him I said this.

The numerous consultants and design professionals I work with who constantly battle for quality in our industry. John Gunton and Jeremy Collins who built Dynalite and Selecon into global brands both so successful that Philips bought them.

My wife Louise, for holding the sticky tape while I put cellophane on light globes in 1969.

**MT: What's your Credo?**

1. Seize the moment before somebody else does.
2. The universe never dishes up more than you can handle, you just don't always realize it at the time.
3. If it was easy, everyone would be doing it.
4. You can choose what person you want to be. There are the people who watch it happen, the people who make it happen and people who say "What happened?"
5. Loudspeakers and anything else flown overhead do not bounce.
6. It's all very well doing it for the Art and Science but for it to work for any length of time you need to see some money as well.
7. Be professional be passionate and be careful.

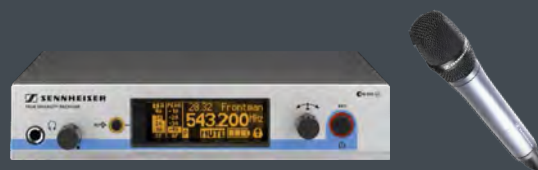
**MT:** I thought there would be one not seven. Regardless, if you are a newbie to this industry you can see that we're all after the same outcome.

**You can talk to Stephen: [steve@meyersound.com.au](mailto:steve@meyersound.com.au). He's a mentor, he is a rock and he's another of the Knights of the Round Cable.**

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# What-If?

## What If my stage machinery keeps tripping RCDs?

BY ANDREW MATHIESON

**This issue comes up quite regularly when installing Stage Machinery, particularly when the machine is relatively small and operates from a single phase power supply.**

When we ask the electrical contractors on the job to provide us with, say, a single phase 10A supply, they will, more often than not, provide this in the form of a garden variety 10A socket outlet.

Now, as every good electrical contractor knows, AS/NZS3000-2007 (The Wiring Rules) tells us that every socket outlet of 20A or less shall be protected by a 30mA trip current RCD (Clause 2.6.3.2.1 (a)) and so that 10A socket outlet that has been provided for your small machine will be protected by an RCD.

The problem is, a lot of small machines are driven by 3 phase motors controlled by electronic inverters (variable speed drives) which require a generic single phase supply. Now, depending on the type of inverter, the manufacturer, or any number of other factors, these inverters may produce an earth leakage current (particularly when first energised) which can trip a 30mA RCD. The same can apply to switch-mode power supplies and similar components in a machinery controller.

So the discussion (dare we say “argument”??) that usually ensues with the electrical contractor goes along the lines of: “Could you please remove the RCD protection from that socket outlet?”

“Are you insane? The “RULES” say you have to have an RCD on a socket outlet – you need to sort out the obvious safety issue with whatever it is you’re using the socket for – if it’s tripping the RCD, the ONLY reason is because the

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equipment is faulty”

There is often some reference to glorified set builders and mechanics thinking they know anything about mains wiring, or licences being revoked if the RCD was removed and “The Inspector” found out about it.

So how do you win this argument?? You suggest, very politely, that the contractor may not be aware of the fact that there are 2 amendments to AS/NZS3000-2006 (cunningly titled “Amendment 1” and “Amendment 2” – available for free download from SAI Global) that provide exceptions to the “every socket must have an RCD” rule, specifically written to deal with cases such as these.

These exceptions are found in Clause 2.6.3.2.1 “Exceptions”, the most relevant being **6 (a)** thru **6 (d)**. Rather than quote these clauses verbatim, we’ll paraphrase and add a commentary.

**6 (a)** When operation of the connected equipment is necessary for the performance of the installation, and interruption of the power supply via an RCD would adversely affect performance of the installation, AND

**6 (b)** The connected equipment is designed, constructed and used in a manner not likely to present a significant risk of electric shock (this would be satisfied if the connected machine was designed and tested to AS60204.1 Safety of Machinery – Electrical Equipment of Machines or an equivalent standard), AND

**6 (c)** The socket outlet is located in a position that is not likely to be accessed for general purpose use (this one is just common sense – if the socket for a machine is located next to a wall mounted socket outlet used by cleaners for their vacuum cleaner, then it is fairly likely that they may unplug the machine and use the socket outlet – if the socket outlet is installed above a ceiling, and you need a ladder and harness to get to it, it is unlikely it will be used for a hair dryer or a toaster), AND

**6 (d)** The socket outlet is clearly marked to indicate what is supposed to be plugged into it, is clearly marked as a restricted purpose outlet, and is clearly marked as NOT PROTECTED BY AN RCD.

You can’t pick one of these 4 clauses to comply with – you must comply with (a) AND (b) AND (c) AND (d). Alternately, you could just cut the plug off the machine and hardwire it into an isolator – no socket outlet, no argument about RCDs...

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.

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# Cairellie celebrates 10 years



Sydney based live production specialists Cairellie just notched up ten years. CX attended the Opening Ceremony for the Australian Youth Olympics Festival at the Sydney Entertainment Centre (12,000 seats), where Cairellie supplied almost everything.

BY JULIUS GRAFTON



Steve Knight with d+b J series

**Cairellie say they are the only firm in Australia that can supply sound, lighting, vision, communications and staging at arena level. The Youth Olympics bore this out, with arena audio (d+b J series), 150 Vari\*Lite's, Barco Encore, 44' blended screen with 20k FLM projectors. And everything else except pyro, all from one firm.**

Inspecting the system prior to the show, all equipment did indeed bear the Cairellie name, and the unified crew answered to one technical director, in this case Cairellie Managing Director Steve Knight.

**CX** met Steve a week after the gig and inspected their 4,200 square metre facility in Sydney's North West. The warehouse has a large covered hard stand, and space for multiple trucks to load at once. They have outwards and inwards separated, to eliminate contamination. It is large, and impressive.

We asked Steve Knight the obvious question: What are the advantages of a one-stop shop?

"We don't get held up by other companies", Steve told **CX**. "There's a couple of levels that you win on. You have the economy of scale. There's freight, transport, and labour – this wins straight off from the beginning."

"Imagine you are trying to put in a job, and you have to

wait for a truss before you hang a PA or a screen. If we get held up, all our guys make something happen. It's one company working together, and not fighting internally. There are big wins on that level."

"The client wins because there is a budget saving – we pass on some, and keep some".

Why the obscure name? "It's the surname of a family friend of my business partner David Gleig". Right. Understood. But Steve further explains that unique names are the new normal, in a world where a corporation can assert ownership over a name or a phrase or even a colour, under trademark law.

## STRENGTHS

Talking to Steve Knight is interesting. He is tall and intense, clearly very smart, and it quickly becomes clear that he is on top of his game. Until very recently he managed all the accounting functions within the firm, and drove the projects and equipment.

His partner David Gleig does project management – "He spends a lot of time selling concepts to clients, looking after them", says Steve. "He is involved on a side level in efficiency".

There's a fairly unique set of procedures in play at Cairellie. The first thing you notice is the ubiquitous whiteboard, but it isn't. They have four large flat panel displays, fired off a database that show more detail than a whiteboard ever could.

Crew, shows and movements all appear in a timeline, and it can be accessed remotely. The code was written for Cairellie, and having seen how it drills down, it is a winning system. Long term operations manager Andrew Carson sits there and makes things connect. Andrew started with

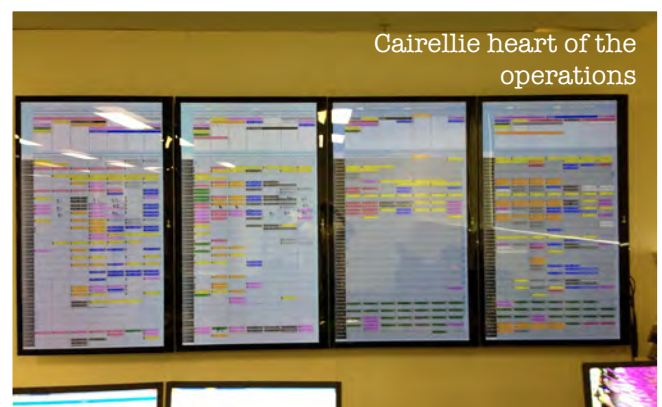


Cairellie - a system for everything

Right: Back panel of an 8 channel Shure UHF-R Receiver Rack. It provides the outputs of the receivers on XLR and 16 way multipin, as well as access to the other 8 channels on XLR or multipin loop through from another rack. This would then connect to the split system.



Above: Front and back of the 48ch active split system incorporating a long-frame patch bay. It essentially is a 5 way 48 channel split with the ability to route 96 input lines and 96 output via the patch bay making it very quick to access and patch in a special event environment.



Cairellie heart of the operations

Cairellie almost 9 years ago as Operations Manager and has moved around various positions within the business so he has a lot of varied experience.

Then there's a system in play where different situations trigger different responses. Colour coded paperwork denotes cross-hires, repairs, shortages in, and presumably missing equipment. The detail work is a Cairellie strength.



# Cairellie celebrates 10 years



Left: 4 camera flyaway video camera system which includes a Sony DFS800 switcher, 4 Sony D50 Camera Control Units, a 40 x 40 Black Magic SDI Router, a Clearcom 36 port Matrix Comms Master, a Hamlet vectorscope, 2 clearcom V Panel intercom stations and enough monitors to function effectively.

## TECHNICAL

Steve Knight makes a controversial claim, that he is technically up there. After a while, it appears less arrogant and more actual. Despite a veneer of exhaustion on the day we visit, he is keen to show the little things that he says make a difference.

“For what it’s worth, we have our gig together”, he says.

“Example is when communications aren’t going right, you (the production manager) are out of the chair and on the phone a lot. (If that’s me) I need to get the people I want, and the ability to speak to them.”

“I think we’re the only firm in Australia who can deliver a flipboard, and a projector in a hotel, while dropping three semis at Allphones Arena (15,000 seats).

It’s a powerful offer.

They have staging elements, lifts, drapes and what is required there.

## BEGINNINGS

“At high school (Newington College), we had a TV studio, and worked with up to 40 lines off stage for a school musical”, Steve says. “I’d put a truss grid and motors on for an art show. I was the kid climbing through truss. Then I worked at Chameleon as a kid.”

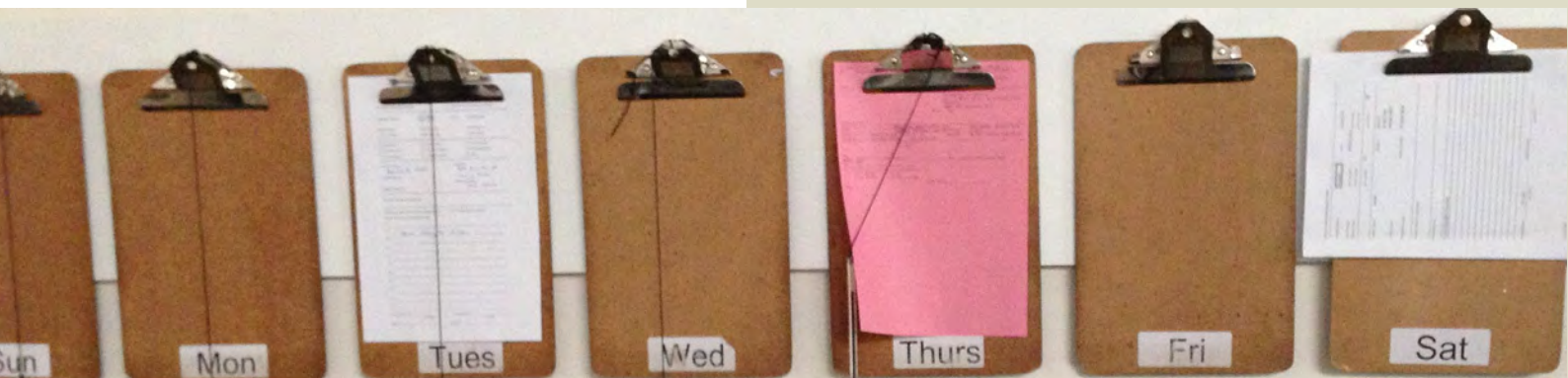
“I left school and had a straight job, but I also was involved with a lot of church based work. I ended up with all this gear, and started to do some corporate gigs. I bumped into (partner) Dave Gleig on one of my jobs, we made a go of it, and turned it into a business.”

Starting ten years ago, they built up inventory. “I built all my own multicores, pulled apart sound desks to multipin them and make it quicker – I wanted setup to be as fast as

Right: Front of the generic QSC amp racks showing the custom system panels which are interchangeable and simply reconfigure the rack for different speaker systems and applications.

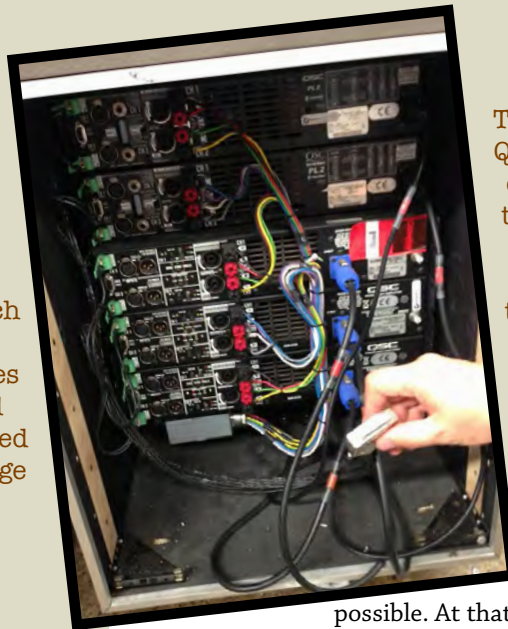


The drive rack for the D&B J System incorporating a Dolby DLP for EQ & Alignment, an Optocore unit which provides a fiber transport solution for control network and AES audio, and a custom 12ch 20A distro for powering the amplifiers. It also shows the 8 way LK multipin which links to the amplifier racks and the fiber bulkhead connectors which link the drive racks together and to the Front of House console.





A 48 channel passive 3 way split with a patch bay at the input stage. It provides a direct, ground lifted and isolated output from stage inputs.



The back of the generic QSC amp racks and the connectors which link to the interchangeable system panels.

These panels enable the rack to be patched for different speaker systems simply by changing the system panel which saves time and ensures accurate patching.



# wireless mic selection



possible. At that time my sound system ran off one 10 amp power point!"

"Then I remember starting to put 3 phase into FOH, now days we run 200 amp Powerlock into an audio system!"

"I remember when we leased our first van, the banker said most businesses fail in two years, so we had two years to prove ourselves".

How about buying the right equipment? "It's a gut feeling, knowing, talking, listening, and not going to trade shows! It's about doing your home work and thinking logically. We spent the better part of two million on a PA system – the best thing we ever invested money in. Sticking with Vari\*Lite was a great decision. That's held us in good stead."

"I remember when we bought our pair of Yamaha PM5Ds – we'd generated enough work by hiring them from others, so we had confidence we were making the best decision. That's when they were 100 grand each and that was a lot of money to us then".

## THE FUTURE

"We pick up clients as we go along, and eject some", Steve says.

Dave Gleig handles project management incredibly well and he spends a lot of time working alongside clients and their concepts, and he finds ways to bring their events to fruition.

"We have to solidify the base before we build more at the top of the tower. We chase efficiencies, finishing systems, and try to be happy where it is at.

With 17 full time staff, now there is a financial controller so that Steve can spend less time on accounting and more time on growing and fine tuning the business.

"We have to manage expectations of staff better. We need to deal with managing HR better."

There's a lot to do, and several directions they can go. **CX** leaves impressed at the systems and methods in play.



# CX



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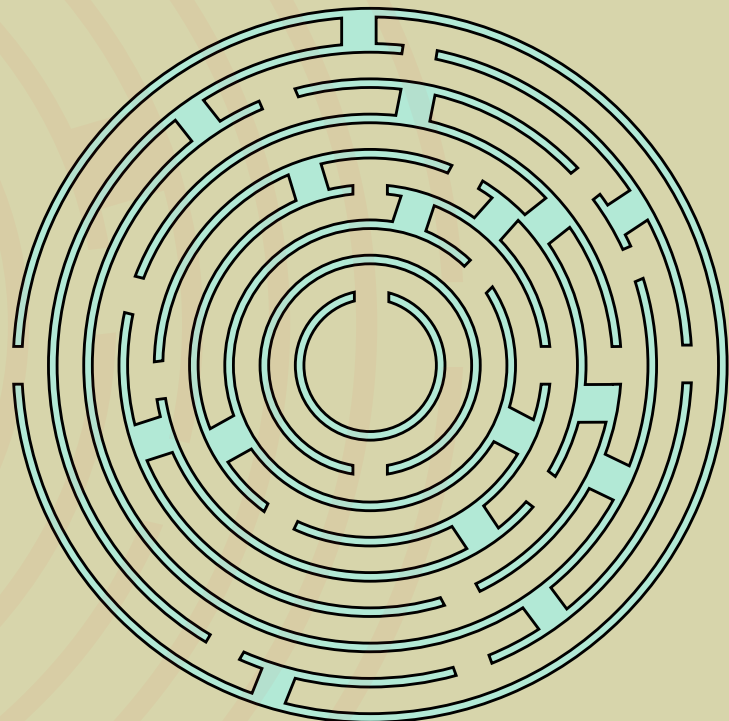
- Sydney February 10
- Brisbane February 12
- Canberra February 14
- Melbourne February 17
- Adelaide February 19
- Perth February 24



# INSTALL ADVISOR

## CONCERT VENUES

BY JIMMY DEN-ODEN



### INSTALLED VS. TOURING PA

**It's the classic conundrum for venue operators: install a PA, or use touring systems? The upside to installing a PA is that it speeds up bump-ins and bump-outs dramatically. The downside is that one size never fits all, so you're virtually guaranteed that whatever system you put in, someone from some show will insist on something else. The happy medium for many venues is to do both.**

This can happen one of two ways: the house system can be removed for touring systems to take its place, or it can co-exist alongside visiting systems. The first option means that both systems can take advantage of prime location, the downside being that significant labour is required to remove and re-install the house system every time a touring system comes through. Furthermore, when the house system goes back in the process needs to be overseen by a suitably experienced person to ensure the system goes back together correctly.

The option of having both systems co-exist is initially likely to be more expensive as additional rigging points will be required, along with motors and such. Such costs however will be quickly off-set with the savings made on labour. These savings can be passed on to clients, making the venue a more attractive proposition. Indeed, it's possible to have

the best of both worlds if the house system can be moved back to allow a touring system to take its place. The Hordern Pavillion in Sydney is a good example of how this works, where the house system tracks backward on rails to make way for different PA hangs.

Selecting the right system is the key to making it acceptable to most clients. Reality is that large format PA systems from reputable manufacturers largely do the same job as each other, but some are more readily received than others. Choose a system that is rider friendly, otherwise you'll be pulling it down regularly in place of one which is. "Rider friendly" is an interesting term, in that what is a standard in one part of the world may not be so well known in others. If the venue hosts a lot of international shows, consider where the majority of these originate, and find out what's commonly used in that part of the world. It's truly unfortunate that so much of what is seen on riders is dictated by "fashion". Truth is, if the system is up to the task, a good operator will just use it get on with the job rather than make lofty demands that it be replaced with something else.

More is more. Install more PA than you're ever likely to need. It's all too easy to overdrive a system that is too small for the venue in an attempt to produce the required level, and ultimately this will lead to poor reliability and increased service costs. A larger system won't run out of headroom, and will likely suffer fewer failures. The real problem is the operator who comes in, sees a huge system and decides that they still need to redline it. Such clowns are all too common (even on "high profile" acts), so take measures to control them. In other words put a good limiter in to protect the system, but do it subtly. Give the system enough headroom to be convincing, and put the limiter out of the way somewhere. Under the stage in an amp rack is usually good.

CX SUGGESTS :

**The EAW QX series** of loudspeakers are the perfect devices for an In-House PA that is affordable, high-power with excellent pattern control. Due to their small size they are able to be left in place and not block any rental system.

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## House lights – is anybody home?

HOUSE LIGHTS ARE AN OFT FORGOTTEN FEATURE IN VENUES, AND THEY CAN MAKE LIFE EASIER OR MUCH, MUCH HARDER. HOUSE LIGHTING NEEDS TO SERVE MULTIPLE PURPOSES, AND THESE SHOULD BE CATERED TO WHEN PLANNING A SYSTEM. PLANNING NEEDS TO COVER NOT ONLY FIXTURE SELECTION, BUT ALSO METHOD AND LOCATION OF CONTROLS.

House lights will commonly be in one of four states: Off or dimmed low for performances, brighter for audience entry and exit, and a very bright “work light” state. A good system will be able to provide these states effectively to the users who need them.

First up, consider what areas need light, and what type of light is required. Sure banks of fluoros are easy to put in, but they’re not exactly imaginative or aesthetically pleasing, nor are they very directional. If you must go down that path, at least consider using tubes with a warm colour temperature to make the venue more inviting. Fixtures which have internal reflectors make more efficient use of light from the tubes, but be aware that such reflectors can rattle at high SPL. This said, fluoro battens are not all bad – they can provide relatively good work light for times when no audience members are in the house.

Another valid choice for “work light” is the discharge lamp. Commonly these produce more light than a fluoro and it’s generally better focussed. “High-bay” fixtures are

very effective, but usually require a lot of ceiling height to allow the light to disperse over an appropriate area. Note also that discharge lamps cannot be dimmed, take time to “warm up” to full intensity, and often have a re-strike delay of several minutes.

For times when the venue is occupied by punters, the obvious choice is to present it as well as possible. This generally means using directional fixtures to put light where people need it. A room lit with simple halogen downlights will look infinitely more appealing than one lit with high-bay discharge lamps – not to mention that halogens are dimmable. Downlights are basic, and work well in small spaces with relatively low ceilings. Most concert venues will have high ceilings making little halogens an ineffective choice, but for under-balcony areas in smaller places they can work very well.

Some venues choose to employ “theatrical” fixtures such as multi-pars for house lighting. They’re directional, the beam angle can be changed quite easily and they can be dimmed. Barn-doors can be fitted to prevent spill into unwanted areas. The flipside is that a reasonably high density of fixtures will be required, which means more lamps to fail and more energy used. Whatever the solution, consider the ongoing costs to keep it running. Lamp replacements aren’t cheap, and some fixtures will require them more frequently than others. Dead fixtures in the midst of a nicely laid out grid are very obvious!

LED is yet another valid choice for house lighting, and at this point it’s probably the most ecologically sound. Many suitable fixtures are available in “white only” models, some with a choice of colour temperatures. LED fixtures are likely to carry higher initial costs, but in time this is offset by reduced power requirements. Most LED engines are rated for many tens of thousands of hours before replacement is

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required, meaning no real bubble replacement costs to consider. Some fixtures require power and control signal to be input and manage dimming functions internally, while other “retro-fit” LED engines can be installed into existing fittings and dimmed in the same manner.

LED is not only good for functional white light, but because of the array of sizes and shapes in which LED is available it’s a great choice for colour accents in a venue. Strip LED lights can be concealed within pelmets or behind bulkheads, or even used to provide a visible indication of where the stage ends. How these are controlled is important, as is the rest of any house light system.

Sometimes in theatre shows, the stage manager will operate house lights but in some cases it’s left up to the lighting operator. House lights should be fully controllable from the SM position at side of stage and from the bio-box if the venue has one. “Work lights” (or cleaning lights) should be accessible from several points throughout the venue, however such controls need to be disabled during performances to prevent activation by punters. Ideally the house lights should be operable from wherever the lighting console is likely to be found. Control systems with a “bus” style interface are good in this case – additional controllers can be plugged into the system from various locations.

## CX SUGGESTS :

The LED Recessed **Chalice Downlight from Altman** uses a 100W LED driver and has 9 interchangeable lenses. It’s DMX controlled with a 3 button addressing system, but there’s also a mains controlled version available for venues with no DMX network for house lights.

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The **Pathport system from Pathway** includes a number of single and multi-channel DMX nodes, each of which can input or output control data. The system runs over Ethernet for deployment across existing data networks, and allows priority based soft-patching of control data. [www.pathwayconnect.com](http://www.pathwayconnect.com)

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## Data Infrastructure

WITH SO MUCH EQUIPMENT NOW CAPABLE OF RUNNING OVER CAT5, CAT6 OR ETHERNET, OMITTING TO PLAN YOUR DATA INFRASTRUCTURE IS SOMETHING AKIN TO BUILDING A VENUE WITH NO TOILETS. CONSIDER WHAT DATA FACILITIES ARE REQUIRED IN WHAT LOCATIONS ABOUT THE BUILDING – IT'S MORE THAN MOST PEOPLE REALISE.

First up let's consider venue admin requirements. Box office, administration areas and such will all require Ethernet ports for computers. Some printers, scanners and fax machines run over Ethernet too, so this will increase the requirements. Some ticket sales terminals may require dedicated data connections supplied by the ticketing company. As a general guide, if you think an area requires one port it probably needs three. With the relatively low cost of data cabling, it's generally cheaper to put more in than required than it is to retrofit later.

Some venues use ticket scanners to scan patrons tickets on entry. These scanners commonly communicate via WiFi back to a central point, meaning that areas where the scanners are used will need WiFi points or antennae. Commonly these devices use POE (power over Ethernet), which needs to be supplied by a POE network switch. Also making use of POE now are some surveillance cameras, which can record HD security video to an internal memory card. Such cameras can then be accessed via web interface, but of course a network path needs to exist from the terminal to the camera.

Phone systems are now available which run over IP connections – VOIP phones. These are fine, but consider that they rely on the data network and the incoming internet connection to work properly. VOIP systems require reasonable bandwidth, as do security cameras. Make sure your incoming internet connection is sufficiently fast to accommodate these and all other requirements. It's wise to still have a standard telephone line somewhere in case the VOIP doesn't work in an emergency.

Also relying on the internet connection will be admin staff, and guests to the venue such as performers. Bear in mind that each guest may have a smartphone, tablet, and laptop computer. Potentially that's three WiFi connections per user, and that's before in-house staff requirements. Make sure WiFi points are sensibly located in places like dressing rooms and green rooms. Also run some cabled points to these areas.

Point of Sale systems rely on IP connectivity for end of day reporting, price changes and such. Everywhere a POS terminal is located, so must there be a network connec-

tion for it. This can pose challenges in large venues where distance between POS terminals may exceed maximum cable length specification for Ethernet. 100m is generally safe, more than this and you'll need to regenerate the network connection, or look to a fiber based solution. Ethernet data doesn't generally travel well through more than a couple of network hops, so hanging switches off switches off switches is inadvisable.

A central point is a good place to terminate data runs into patch panels. Group runs from the same location together on patch panels as much as possible, and make sure every data point in the building has a label stating where to find it on a patch bay. In some cases it's a good idea to put mission critical systems on a separate patchbay to prevent something important being accidentally unplugged.

The basic structure of a network is to have a main network switch / router, which connects to switches in specific areas (in office buildings it's split up by floors). All facilities such as incoming data connections are terminated at the main network switch, and equipment such as servers are usually housed in the same location. Keep in mind that if the main network switch fails, so does everything hanging off it. Individual area switches will maintain connectivity, but once machines start to try and re-generate DHCP assigned IP addresses even those areas will experience failure. In other words, go for decent quality network equipment – preferably with a redundant power supply hanging off a UPS. Domestic network gear simply isn't designed to work in professional environments.

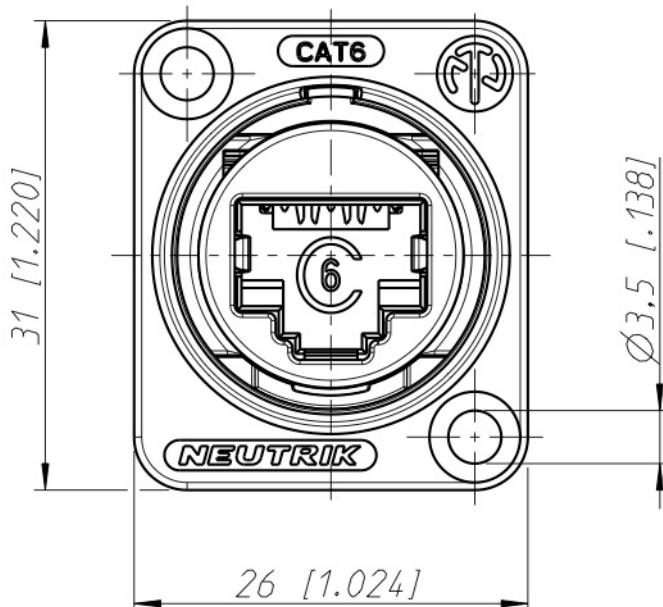
Now you know about some of the other guff hanging off the building data network, do you really want to run your lighting or FOH audio system through it as well? Some protocols such as Dante are designed to work in with existing network traffic, while others like REAC (which works over standard Ethernet switches) aren't really designed to co-locate with other network traffic.

No matter either way – if data points are installed in all the right locations then it should be a simple matter of inserting a patch lead in the patchbay to join data points at two locations directly together. If you need a full-on network for DMX distribution, put a second switch in at the patchbay and use that only for production equipment data.

Ultimately with the convergence of AV and IP, a good network needs to involve all stakeholders in the design stage. Adversarial relationships hinder this process and should be avoided – remember we're all on the same team! Different applications require different solutions so most important of all, treat the above as a starting point, and seek out advice from a network professional who understands your situation and needs.

CX SUGGESTS :

**Neutrik EtherCon connectors** are ruggedized and lockable – two things ordinary RJ45s are not. They're available for Cat5 and Cat6 connections in a range of mounting options, and an ideal choice for data outlets in FOH locations.  
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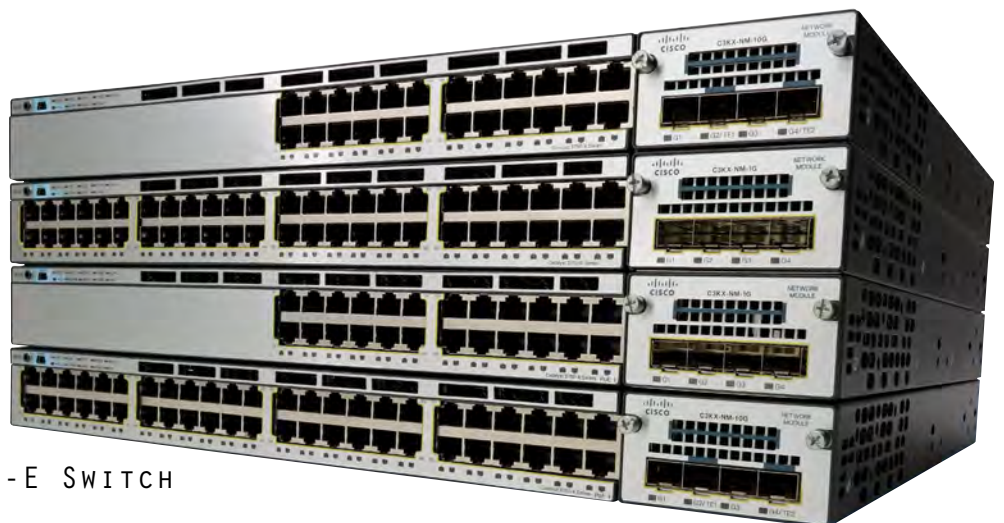
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CISCO CATALYST 6504-E SWITCH

# THE MILL REPORT



## FROM RUSSIA WITH LOVE (THE SONG IS KING)

BY ANDY STEWART

**THE NOISE AND HOOPLAH SURROUNDING WALLY DE BACKER'S GOTYE SUCCESS AT THIS YEAR'S GRAMMYS – SUBSTANTIAL PORTIONS OF HIS SMASH HIT *MAKING MIRRORS* ALBUM WERE RECORDED OR MIXED HERE AT THE MILL BY FRANC TETAZ, WALLY AND MYSELF – HAS RUBBED OFF IN SOME UNFORSEEN AND PECULIAR WAYS FOR ME AND MY STUDIO.**

Last week I went through my emails and got yet another piece of random spam from Russia... or so I thought. Just before I hit delete, I thought, 'hang on, this actually appears to be a legitimate letter from someone in Saint-Petersburg'. Closer inspection proved this to be the case – a letter from a Russian producer looking for an engineer to mix his band's newly recorded potential hit song. He was "looking for a studio to make quality mixing and mastering" and due to current successes, and the fact that I owned a Neve console, I was apparently the man for the job, despite being quite literally on the opposite side of the globe.

It was all very interesting, and mildly flattering, but I was immediately concerned about two things: what the song was like, and how (or in what currency) I might get paid. My mind then started spinning with internal musings about whether the Russian Mafia might want a say in the final mixes, or threaten to come around and beat me up

(or worse) if things "didn't go smoothly" – (this quote requiring a Russian accent when spoken out loud).

I guess my concerns about taking on a job like this stemmed largely from my newspaper-headline prejudice and general ignorance of Russian society, mixed in with a bit of Eurovision Song Contest and Get Smart humour for good measure (were Siegfried and Shtarker Russian? I think they were...)

Anyway, I thought I'd better shake off my misgivings, click on the Soundcloud link this gentleman had sent me and have a listen. What came down the pipe was, well... interesting to say the least.

### THE SONG, WHERE IS THE SONG?

Now without going into too much detail, and at the risk of running down these well-meaning folk from Russia, what's mostly relevant to this story isn't whether the song originated from Saint-Petersburg or Timbuktu, but whether the song was any good and ready to mix. In this case it probably wasn't.

While songs these days can be turned upside down and almost entirely re-imagined during the mixing process (if that's what's required), the most crucial ingredient is still the song itself. Sure, there are exceptions – there always are. Some songs do well despite being made almost entirely of faeces and desiccated cat hair, but as a rule, when a song fails to pass muster early in proceedings, there's no amount of mixing or fancy production that can save it.

### WRITE BEFORE YOU REAP

Having good engineering skills is important during the recording process, and mixing and mastering skills are vital

further down the line, but the make or break point for a song typically exists long before any of this is set in motion. In the same way a good television show starts with a great script, a good song starts and ends with good melodies and lyrics. Without them, you're wasting your time.

However, music is an art form – we should never forget that – and rules don't sit well with any creative pursuit, so if you're champing at the bit to start recording an album, by all means go for it, but wherever possible, *don't stop writing*. That process doesn't suddenly cease the moment you start recording. If we'd compiled the Gotye record using only the songs Wally had written when we first started mixing, 'Somebody That I Used to Know' wouldn't even exist... and nor would any of his Grammy success. Wally wrote songs all through the recording and mixing process, and we were always encouraging him to write more.

### THE HIT FACTORY

Let's now say you have a hit song on your hands... Of course no one knows if it will be or not at this early stage, but if you're absolutely convinced the song you've written is amazing, that's when all the other processes swing into action and become important. Before that they're all meaningless. Now you can finally concern yourself with how to arrange it, record it, mix it and master it. Now you can delve into the world of sound to find something unique to frame the lyrics and bring the song to life. Finally you can indulge in microphone choices and preamps, fancy guitars and funky samples without feeling like the cart's before the horse.

### THE HONESTY BOX

There are too many musicians in Australia who reach for the recording process when they feel like their songwriting has run its course. There's a reason why songwriting is considered the hardest part of the album making process – it is! But running away from it when you're in the back straight, not the home straight, and heading into the studio with 14 average songs is not the solution.

It's easy to say this here – much harder to do – but if you're a songwriter, you need to remain open to new songs no matter where you are in the recording process. Keep at it and be honest about the songs you've written so far, to yourself most importantly. Better still, work with someone whose musical taste you trust and bounce the songs off them as well. Be open and fearless, and ready to take any responses they offer in a positive fashion. Don't be defensive; that won't help, nor will it encourage your partner in crime to be truthful. Remember, the truth is out there, and beyond that is a great song.

Andy Stewart runs The Mill in Victoria, and is happy to hear from anyone who thinks they have a hit on their hands but no idea how to go about producing it.

Contact him here: [andy@themill.net.au](mailto:andy@themill.net.au) or go to [www.themill.net.au](http://www.themill.net.au)

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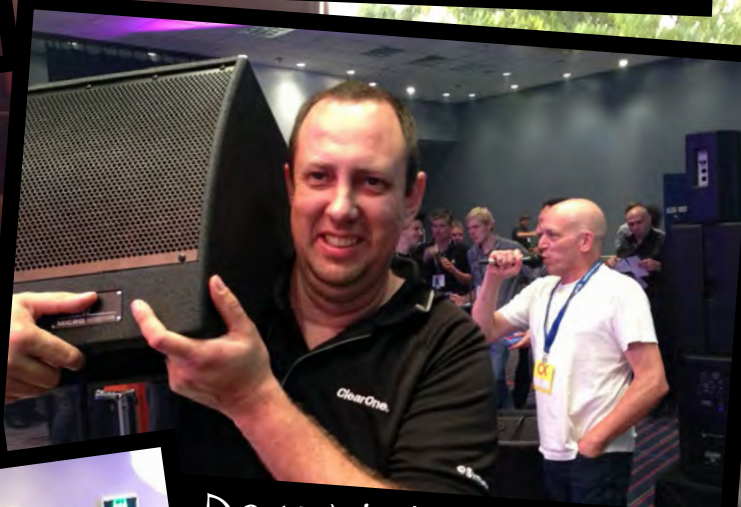
Brett from Bosch gives away an EV radio mic



Adelaide's, and indeed Australia's smartest technician (according to us), Stephen Dean



Harley and Valmae Richardson



Dave Watson does double duty as a speaker stand

Jeff Mackenzie from JANDS gives away a Shure USB mic in Brissy

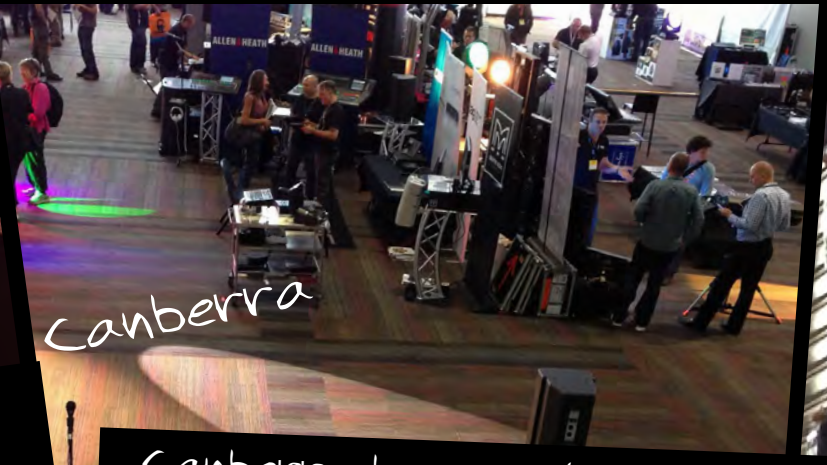


Adelaide bump-out crew



Clearly not sure what day it is, or which city he's in





Canberra

Cases.com.au gave away a case in every city - thanks Mitch!

Canberra bump-out crew got the show out fast - love the hair, guys....



Jimmy loving the Adelaide production office



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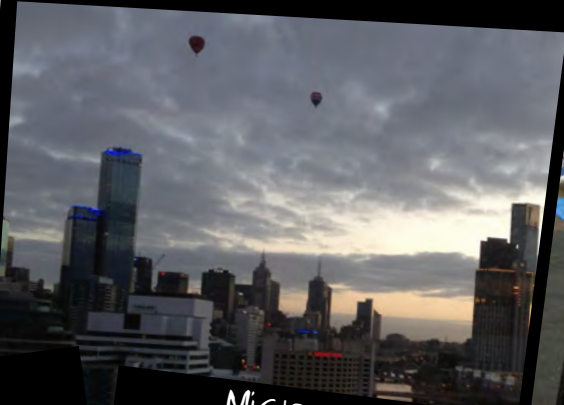


Jimmy with John Maizels, winner of the Quiz in Sydney



Melbourne

Melbourne on show day, complete with hot air balloons



Microwedge - 102 uses! Thanks PAVT for the Quiz PA



The final loadout was the fastest. Thanks All Access in Brisbane!



Millsy from Canberra brought his own sound system to load out



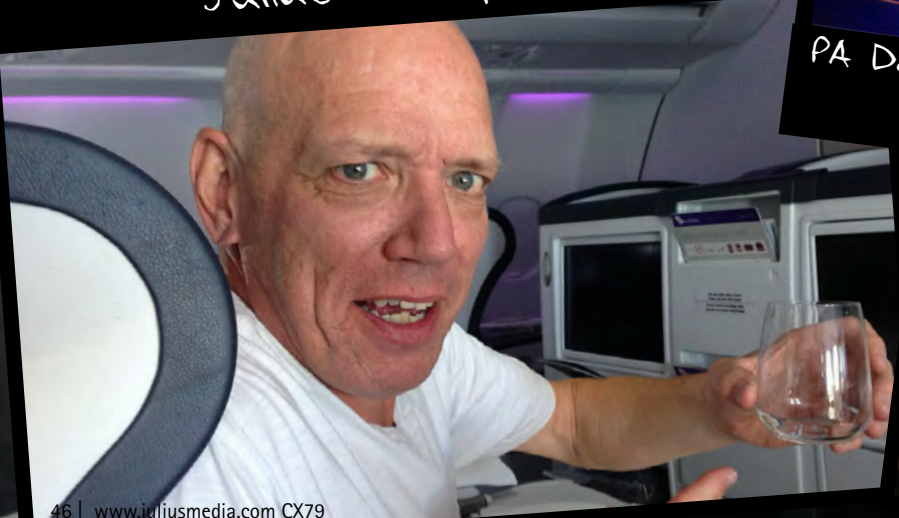
Jimmy vs. Pacman



Julius vs. empty glass



PA Demo in Sydney, where it all got a bit fancier



Mitch, Eddie and JMack from JANDS tirelessly did every date on the whole tour



Perth



Vince Haddad from Show Tech with Francesco Calvi



Tony from TRC gives away a KEM iPad holder



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# ClearCom HelixNet

BY JIMMY DEN-ODEN



S M A R T Y

P A R T Y L I N E

PartyLine systems have long been popular in theatre and countless other live production situations. The basic principle of Partyline is that it runs on XLR cables, with the shield carrying ground, another pin carrying power, and the third transmitting and receiving unbalanced audio.

If you need multiple channels, you add conductors to the cable and pins to the XLR.

HelixNet is similar in some ways – it still runs on mic cables. In fact it runs on just about anything you can jam into an XLR, including Cat5. There are some limitations on distance depending on the type of cable used, but suffice it to say if a normal partyline system runs on cabling then HelixNet should have no problems. The difference is how the signal is delivered – using “powerline”. First thing to know is HelixNet runs a higher supply voltage to each beltack – this means it’s not a good idea to plug a standard beltack into a HelixNet powerline cable. Secondly, audio is multiplexed and delivered digitally. This means it’s less susceptible to induced noise, it’s higher bandwidth, and you can fit more channels down one cable.

The HelixNet base station has four channels, and each beltack can access any two of these simultaneously. Channel selection is done via menu on the beltack, driven by

# Waterfall style menu system



the menu and call keys and navigated on a gorgeous OLED display. The beltpacks look pretty sexy, and the big heat-sink fins down the sides also serve to cool the internals of the pack. They run pretty cool – not much above ambient temperature.

Because each beltpack is digital this makes things like adjusting sidetone a much more precise science. In addition to the two talk channels, an external program feed from the base is also delivered to each beltpack, with listen level

selectable via an encoder on the bottom of the pack. Next to the encoder is a mini-jack output, where the program signal also appears in isolation.

Self contained the HelixNet system is pretty cool, but the more interface options any comms system has the better its value. The HelixNet base has a trio of card slots into which can be installed a number of cards. There's a dual 2 wire interface card which allows the HelixNet kit to communicate with standard partyline systems on both ClearCom and



The Lighting Company

## australia

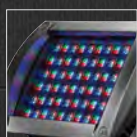
step towards the light.....



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# 4 wire and 2 wire cards



RTS standards. A dual 4-wire card provides better options for matrix and IFB feeds, and as with the 2 wire card the channel routing to the card is selected from within the base station menu. Also slated is a dual Ethernet card which will not only allow IP connectivity, but also enable up to 5 Helix-Net bases to gang together and share resources.

The base station menu system is “waterfall” style, so as you change selections on the first screen using the encoder the nested options show up on adjacent screens. HelixNet is likely to find its feet not only in new installations, but also existing installations where the previous system has either failed or no longer offers the capabilities required. It’s the next logical evolution of the cabled belt-pack system.



BRAND: CLEARCOM  
 MODEL: HELIXNET  
 RRP: HMS-4X BASESTATION - \$6165.00.  
 HBP-2X BELTPACK - \$1415.00.  
 INTERFACE CARDS FROM \$1345.00.  
 HEADSETS FROM \$455.00.  
 ALL PRICES INCLUDE GST.  
 PRODUCT INFO: [WWW.CLEARCOM.COM](http://WWW.CLEARCOM.COM)  
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WA Health Directorate 2004 (Guidelines for concerts, events and organised gatherings)  
Crowd Control At Venues And Events, A practical Occupational Health and Safety Guide, WorkSafe (Vic) September 2006  
Australian standard AS/NZS 1170 parts 0,1 and 2:2002 (AKA loading codes)  
Australian standard AS/NZ 1664: 1: 1997 (Aluminium structures)  
Australian Standard AS 4687-2007 (temporary fencing and hoardings)  
MCK Metals Pacific, Strength and resistance load testing, November 2006  
Patent pending. Registered design. 2007 © All rights reserved.  
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## Jands Vista M1 Control Surface

### Simple things done well



BY JIMMY DEN-ouden

**Vista v2 is the current software version of Jands' Vista lighting control platform, and it's basically version 2 of Vista.**

**Vista v2 has seen a big overhaul of the platform, and brings with it better reliability and a lot of other good stuff. We'll look at it in detail real soon, but for now this story is about hardware.**

Jands make really nice hardware. This applies across the board, from the full size Vista consoles down to the Stage-CL console. It all feels good, and the M1 control surface is no exception. It's very compact – our test unit shipped over to the CX Bunker in a Pelican case (a 1520, not one of the huge 1600 series), and there was still some air space inside.

The wing itself is constructed from extruded aluminium with a nicely screened metal faceplate. The back panel has a pair of 5 pin DMX ports, a USB connector and Kensington lock slot. A Kensity lock is probably a good addition, since the size of the wing makes theft from a venue a believable possibility – you could actually stuff it down your trousers. There's no power connector required since the M1 is pow-

ered directly from the USB bus. Depending on what you connect it to this could be a good or a bad thing – it worked first go on my Mac. You can also hook it up to a larger Vista console and use it to extend the surface.

Vista is “self aware” enough that I didn't need to tell it the wing was connected – clicking into the “console” tab the M1 just showed up. The surface itself has 5 faders, each with a key below and two above. The normal purpose of these would be flash, go, and step back buttons but Vista v2 allows you to assign any mappable function on any key. There is a swagload of choices.

Four additional modifier buttons at the upper right corner of the surface perform various functions – for instance hold the green button and the go keys become release keys for their assigned cuelists. Lists can be as complicated as you like. There's a rotary master fader and a DBO button top left. The red LED inside the button does double duty as a quick diagnostic tool - fast flashing means no connectivity to v2. Page up and down buttons adjacent to the fader bank allow you to have more than one page of lists assigned to the faders. Granted you're limited to accessing 5 fader strips simultaneously, but if you're clever about it that doesn't matter.

I like what the M1 can do, and how easily it does it. I like the price and the fact it weighs a mere 2kg. But mostly I like how it feels. I reckon I could stand there excitedly smashing buttons for a week solid, and I'd give it up well before they did. It's funny how something so small can yield so much satisfaction, yet somehow the M1 just manages to.

It's even made in Australia



Small form factor

BRAND: JANDS  
MODEL: VISTA M1 CONTROL SURFACE  
RRP: \$1120 INC GST FOR THE M1 SURFACE ONLY, OR AROUND \$1495 BUNDLED WITH VISTA V2 SOFTWARE AND 512 DMX CHANNEL LICENSE.  
PRODUCT INFO: [WWW.JANDSVISTA.COM](http://WWW.JANDSVISTA.COM)  
DISTRIBUTOR: [WWW.JANDS.COM](http://WWW.JANDS.COM)

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# RTW TOUCHMONITOR TM3

## TOUCH AND GO

BY JIMMY DEN-ouden

Here at CX we've previously identified the need for broadcasters to conform to loudness standards. EBU R128 and ITU-1770 (and its revisions) are probably the most widely accepted standards. We've looked at some very good solutions, but they're not within everyone's reach. Equally important as content delivery is content creation by the post production houses of the world.

The TM3 is a compact desktop metering device which will be comfortable on any edit or DAW station. The system comprises two main components – the touch sensitive display, and the brain module to which it connects. The TM3 is available in two hardware variations – both feature balanced analogue and 3 AES inputs via 25 pin D-Sub, plus stereo unbalanced RCA analogue. Physically it's a deviation from earlier RTW gear, which always looked a bit "utilitarian".

Somebody actually designed this thing to look good even when it's turned off.

The 3G model has BNC input and loop connectors to connect a video input, while the stereo & 6 channel models have SPDIF input and outputs in this area. The stereo and 6 channel models are actually the same hardware, with the additional 4 channel capability made available via paid software upgrade. Smart manufacturing decision by RTW. We tested the 6 channel model but as I only had a stereo SPDIF source at hand that's what I used to test it. I can only presume that the additional 4 channels work the same way as the two I tested. The TM3 can be run in vertical or horizontal configurations – just rotate it then swipe the screen to select your chosen screen layout. Then press the play icon on screen to start monitoring.

Many default layouts exist, different ones addressing different inputs (AES, SPDIF and analogue on our unit). You can choose anything from basic PPM metering through to time weighted loudness measured according to a variety of standards.

If the default layouts don't suit your needs it's quite easy to generate your own custom set,



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and this is done through the DevicerDC software via USB connection.

The software is perhaps not as intuitive as it could be, but after a little experimentation it gets the job done. You can save multiple configurations (including several meter sets), and upload them to the TM3 quickly. So changing the monitoring setup from job to job isn't out of the question. DevicerDC found the connected TM3 with no hesitation, and I was pleased that it allowed me to re-size various screen elements according to what I thought was important. Elements including phase correlation, M/S loudness metering, PPM and LU can all be simultaneously shown. Different inputs need to relate to different screen setups, so changing inputs does involve a short delay while the new layout "starts".

Some elements have minimum sizes, so with a 4.3" screen there are limitations to what you can do. But if you want one really big meter and a number for Loudness Units, that's easy. You can actually fit quite a bit more on screen and it's still extremely usable. I've had the TM3 sitting on my desk for a few weeks now, and in that time made some interesting discoveries about the some of the content I've recorded over the past few years. Not to mention some of the stuff I've bought online recently - it seems the loudness war is heating up. I could probably find a plug-in to do some of what the TM3 does, but some applications don't run visual plug-ins especially well. The TM3 on the other hand will display info for whatever you plug into it, so no software integration is needed and there's no processing overhead. It looks cool, and serves its purpose very nicely indeed.



THE BRAINS OF  
THE OPERATION CAN  
BE HIDDEN AWAY



BRAND: RTW  
MODEL: TOUCHMONITOR TM3  
RRP INC GST: TM3 STEREO - \$3333.  
TM3-6CH - \$3333. TM3-3G - \$3333.  
PRODUCT INFO: WWW.RTW.DE  
DISTRIBUTOR: WWW.SYNTEC.COM.AU

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# Sony MCS-8M

Small-format Sony with a large-format feel

BY JIMMY DEN-OUDEM



The MCS-8M from Sony is quite a symbolic little thing. Seeing a leading broadcast manufacturer turn out an “all in one” solution could be taken as an indicator that such solutions are here to stay.

The MCS-8M is a multi format compact production switcher. Like pretty much every professional Sony product ever it looks and feels like a serious piece of kit, despite its toy-like size. It's definitely no toy, just an elegant example of how much more compact digital video technology has become. The physical appearance of the MCS-8M is beautiful to look at, and really echoes of much bigger switchers.

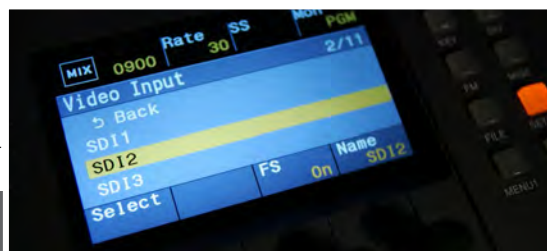
The front panel has the obligatory program and preview cut-row buttons – 8 of each. Adjacent to this are auto and cut buttons and a shiny silver T-bar for manual transitions. Fade to black and Key Transition switches are to the right, then snapshot and wipe pattern select keys. Above the cut row is the audio mixer section – 6 stereo faders plus meters and master fader. Each channel has dual LEDs for signal and peak indication, as well as channel on and PFL keys. The PFL keys don't appear to latch. Monitoring controls include level pot, dim and monitor select keys. Next to this is the backlit LCD screen with four turn/push encoders beneath. A bunch of keys to the right enable access to various menu screens, and there's a positioner control at the upper right edge. Everything's exactly where you expect it to be. Round the back inputs include four SDI, a DVI-I, three HDMI or composite inputs plus reference input. Two DVI-D outputs sit adjacent to four SDI outputs. These can deliver PGM,

AUX1, AUX2 or multiviewer signals and you can route most anything to any output. There's also a composite output, though it's not clear how to assign to this. My best guess is it mirrors the PGM output. The MCS-8M doesn't support HDCP, and understandably you can't use the HDMI inputs when in SD mode, or the composite inputs when in HD.

A 9pin D-SUB is used for remote, and a 15 pin for tally and GPI. Audio wise, the first pair of inputs is mic/line on XLR/TRS combo jacks, followed by another four jack inputs and a pair of RCA sockets. PGM output is on XLR, “mix” out on RCA, and two aux outputs are on jack connectors as are the monitor and headphone outputs. As well as analogue audio inputs, you can select audio from the SDI inputs.

Operationally the MCS-8M feels like a bigger mixer. There's an input freeze function for every input, as well as frame synchronizers. There's a frame memory into which images can be loaded via USB key – the socket is just behind the screen on the back panel. The mixer itself can run in a number of HD or SD modes from 1080/59.94i to 1080/50i right through to 480/59.94i and 576/50i.

The cut-rows can run as rows of 8, or you can make the 8th key a shift and have dual function rows of 7 keys. Any of the inputs are assignable to any of the keys, as is the still store and signal generator. As far as I can tell, the only major limitation seems to be that you can't use identically numbered HDMI and composite video inputs simultaneously. Assigning inputs to the audio mixer is much the same deal – pick what you want assigned to each channel. There's an “AV switching” menu option I assume enables AFV switching. I still haven't read the manual for the MCS-8M because most of it is pretty easy to figure out without it. Even assigning sources to the multi-view screen is just a simple menu



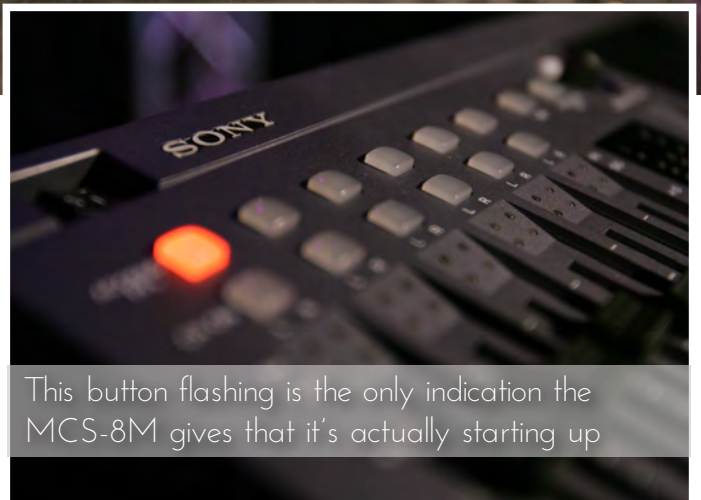
# Back panel with all the right stuff



selection – the waterfall type menu is very good to use.

Other nice touches are the internal tone generator which can be used for audio output level line-ups. The audio faders feel kind of small, but they're certainly functional enough. Surprisingly in a time when nearly everyone's putting Ethernet on anything they make, such a port is absent from the MCS-8M. Not exactly a problem since the 9-pin remote port still lets you interface it to stuff, just more a surprise. The only real omission (if you could call it that) is a nice way to mount the thing – there's nowhere to attach brackets, or screw it to anything. Normally you'd drop the mixer into a hole in a production bench, but some of the connectors on the MCS-8M might foul on the edges a bit were the bench too thick. If it really mattered you'd find a work around.

Pricewise it's probably not the cheapest thing around to do what it does, but in this case I'd say the Sony broadcast heritage probably justifies it. For what it is and what it does, I reckon the MCS-8M is a pretty big deal.



This button flashing is the only indication the MCS-8M gives that it's actually starting up

BRAND: SONY  
 MODEL: MCS-8M  
 RRP: \$7370.00 INC GST  
 PRODUCT INFO: PRO.SONY.COM.AU  
 DISTRIBUTOR: PRO.SONY.COM.AU

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# Rare Audio RA-VEX15A-500R Self-powered 15" & horn

BY JULIUS GRAFTON

It was more than one tradeshow ago that I kept hearing the opening riff from Back In Black, far too loud, just long enough that it irritated everyone.

Especially me. Because when I started ENTECH I declared No Audio Demonstrations, at a time when some tradeshow halls were like the battle scene in Apocalypse Now.

**Then the culprit speaker box actually arrived at our studio for review. We didn't actually play Back in Black through it.**

While Jimmy fuffed about with his critical listening test paradigm, I went for a screwdriver. The box, loaded with a 15" and a horn, weighed just 21kg complete with 'active amplifier', and I wanted to know why. Why so light? And how the 500 watts RMS claimed?

Getting the grill off did not involve screws. Off it came, all wobbly and bent out of shape. Like the wobble board in a Rolf Harris song!

Once the 15" driver was removed, the surprises started. The speaker itself must have been designed around a rare earth element, like Unobtainium, because it was so incredibly light. But wait – that's because it is actually a pressed metal, lightweight speaker, of hitherto unknown origin. Suim Zebra 15, it says on the back. Google didn't shed light on Suim. Look, I didn't insert the CX boroscope inside the magnet, so I can't say with

absolute certainty that there wasn't a hitherto unknown element within there. But I am 99% certain this was just a cheap little speaker. It has, quote, a 'paperbark cone technology that ensures additional rigidity for longer life'. This is a visual device that sets the product apart from others.

Then there is a passive crossover network, happily sitting within the wooden box. This is because the amplifier module, sitting nearby, is mono. Not bi-amped, like most 'active' or self powered boxes. So they need a passive network to feed the high frequency. Which announced itself as a Suim CSR 150D - High Technology Units. That's nice.



I think the amp module must similarly be constructed of a rare element, as it was cleverly compact. No real need to dissipate heat from that neat little heatsink either, they must have made a new kind of output device in play here. We are fairly certain this is not a class TD, or D, or K device.

It would be good to have definitive answers on these questions, but the web comes up blank. Possibly to avoid pesky retaliation, as JBL and Meyer flock to acquire these technologies?

On the back is a neat looking mixer and connector module. Behind it inside the cabinet is a rough wooden box that had the audacity to leap up and insert a splinter into my delicate finger.

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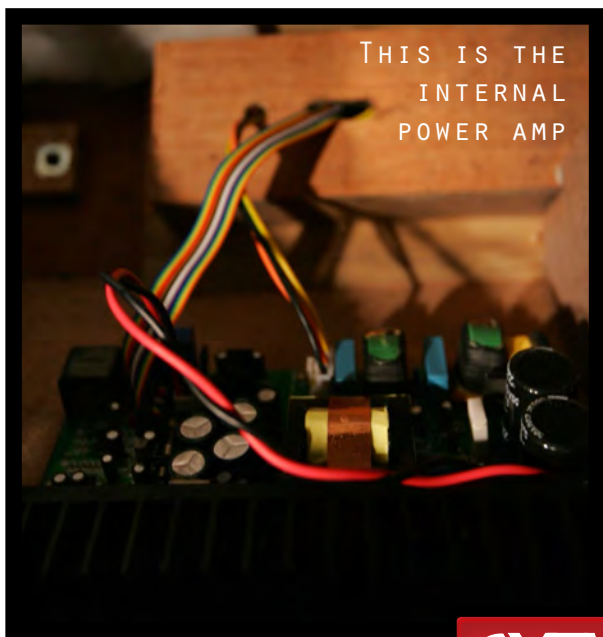
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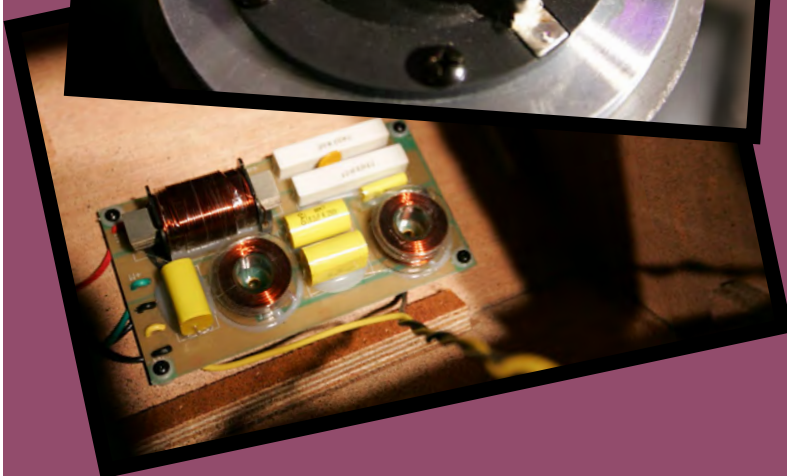
# Searching for the goodness

So we know why it is a lightweight box, and that's because it hasn't got much inside of it. Presumably to help with weight, they helpfully stapled just enough white speaker wool so as to be visible through the vents. Just out of eyesight from outside, the wool helpfully stops. This saves sheep, presumably.

We played some tunes, it sounded like a DJ box. We got a microphone and shouted, and it distorted.



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**MARCH  
2013**

# ROAD SKILLS

**SWEDISH  
HOUSE MAFIA**

**BIG DAY OUT  
JOHN FARNHAM  
ELVIS COSTELLO**

**BY CAT STROM**

**BIG DAY OUT PHOTOGRAPHER - Troy Constable**  
**SHM PHOTOGRAPHER - Troy Constable**  
**JOHN FARNHAM PHOTOGRAPHER - Cat Strom**  
**ELVIS COSTELLO PHOTOGRAPHER - Cat Strom**

First of all a bit of a disclaimer: I'm old and just don't get house music. I don't understand the turntable thing with one arm punching the air and Swedish House Mafia have not one, but three young men doing just that. OK, they're rather easy on the eye - in fact the entire show is a visual splendour of enormous proportions. Even if you're not a fan of house music and dance parties, they have given us some spectacular lighting designs over the years - without a core band to watch the focus is on the visual treats. Something Pink Floyd explored a few decades ago.



**SHM**

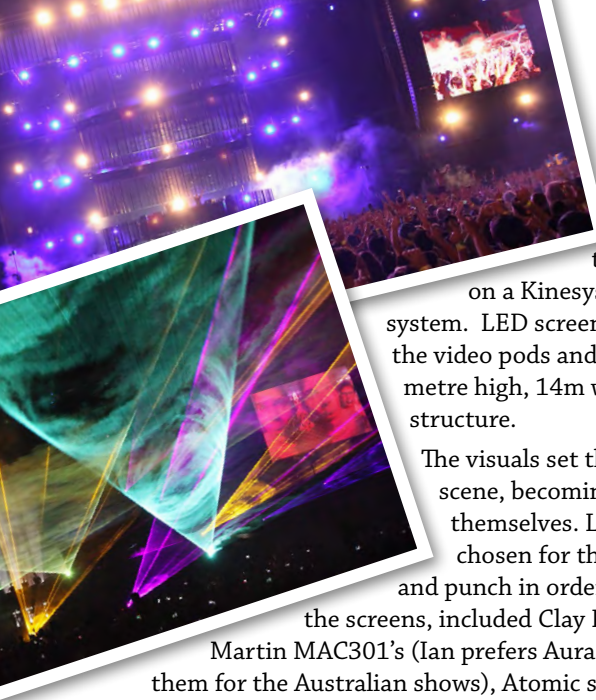
**SWEDISH HOUSE MAFIA** announced their Australian shows by projecting their logo onto Sydney Opera House, a sign that they are as famous for their spectacle as they are their music. Lights, video, lasers, confetti and fireworks - you name it, they have it.

The guys are nearing the end of their farewell tour appropriately named One Last Tour and it seems that where ever they go, the show is a sell out. The Australian leg of the tour was brutal for the production crew with three back to back gigs at the Sidney Myer Music Bowl in Melbourne followed on the fourth day with a massive show at the Sydney Showgrounds.

Much of SHM's touring system is custom made and attempts were made to have the system replicated by local production companies.

"However it was difficult to do in such a short time frame but the local guys did an amazing job and the show was great," commented Ian Tomlinson, SHM's lighting designer. Lighting and crew were supplied by PRG Australia, with Nigel "Skippy" Monk as SHM Crew Chief.

The main set elements were four large onstage video pods - configured into two almost oval shaped concentric rings that slotted neatly inside the other when in the up position.



These moved into different formats and looks throughout the set on a Kinesys automation system. LED screen panels made up the video pods and also clad the three metre high, 14m wide DJ booth structure.

The visuals set the tone and the scene, becoming a lighting tool in themselves. Lighting fixtures, chosen for their brightness and punch in order to compete with the screens, included Clay Paky Sharpys, Martin MAC301's (Ian prefers Auras but couldn't get them for the Australian shows), Atomic strobes and molefays.

Ian's lighting skilfully compliments the video and other effect, filling in gaps for the camera shots and lighting the stage and audience. It's quite a simple rig with three curved trusses behind the video structure, each truss holding exactly the same lighting fixtures. There's a wide header truss to frame the stage and lights situated on the top and bottom of the video panels.

"The lighting is basically there to highlight the structure, it doesn't have to be its own thing," said Ian. "We stagger the effects rather than turn everything on in the first song - the Sharpys don't come on until 45 minutes into the set."

For control Ian used a MA Lighting MA2 light console, knocking back the offer of a full size console.

"A lot of people question me about that but I only use six faders as the whole show is programmed," he remarked. "The SHM guys hate time-code because they feel it restricts their freedom. Even though they play the same tracks, they still mix it all together and throw in some different things. They need to be able to 'freestyle'. We have a VJ who physically operates the video - he doesn't just stand there and press play, he can't as they do so many different things on any given night."



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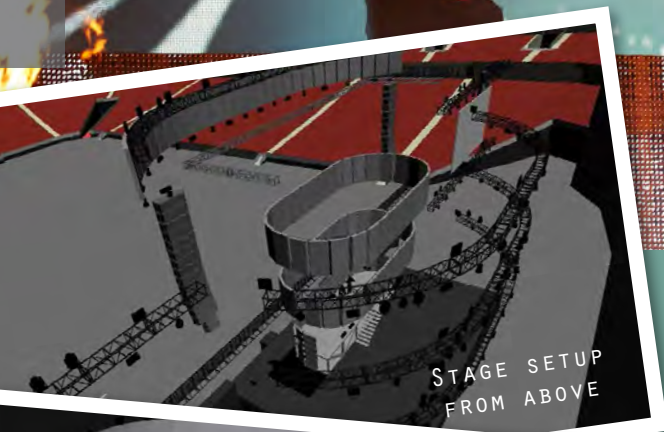
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# SHM

PHOTO BY - DEAN HAMMER



Content for the onstage screens was delivered and created by COMIX from the UK. Operated by Sam Hodgkiss via VDMX and using Madmapper to pixel map the structure. Video LED hardware was supplied by Big Picture.

The Sydney show was somewhat stressful with quite a lot of fixture swapping required and high winds meant the kabukis couldn't be used. During the show the Kinesys system had to be stopped as the screens had started to bang into each other. It was necessary for the crew to pick a position and leave them there for an hour until the wind died down.

"We had something like twelve MDG hazers which we need for the lasers but the wind meant we were fighting a losing battle!" Ian revealed. "And it rained - but it was still a great show and the punters were happy. I have to say all of the local crew were brilliant, PRG were amazing and did a great job."

JPJ AUDIO SUPPLIED THE AUDIO GEAR INCLUDING A LARGE L'ACOUSTICS K1 PA SYSTEM AND V-DOSC DELAYS PLUS A MIDAS PRO6 DESK FOR FOH ENGINEER RABBIT (WAYNE SARGEANT).

LIGHTS - PRG AUSTRALIA

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## 20 Questions with Matt Doherty, Production Director, Big Day out

Training as a sound engineer in the early eighties was Matt's start in the music industry and years on tour gave him an excellent grounding in the hard work of production management. Moving over to Production Management in 1991 was a logical step for Matt as it soon became apparent that his talent was in the field of logistics and planning. Joining the Big Day Out first as sound designer in 1992, Matt quickly took over the reins of the production department. As one of only three people who have worked on every BDO since the beginning, Matt has an instinctive feel for the event and how it works.

**The man behind many of the innovations that has made the BDO strong, Matt has seen many of his ideas implemented industry wide.**

Other projects that Matt has found time for are the beginning, growth and eventual sale of three event infrastructure companies, site and production management of some of the biggest shows that have toured in Australia including The Rolling Stones, U2, The Three Tenors, Michael Jackson, and Muse to mention a few. However, over the past 29 years, the single most satisfying production for Matt has been the raising of his three children.

**1. What are the three best things about your job?**

The people I work with. The crowds I look after. The satisfaction of getting it done.

**2. And the three worst things?**

The food. The bands. The lack of sleep.

**3. What do you never leave home without when working?**

My rain jacket.

**4. What do you do when not working on the BDO?**

**Option 1.** Other tours and festivals...  
glutton for punishment.

**Option 2.** Spend time on my farm tending my garden.

**5. What was the worst nightmare you've encountered with the BDO?**

I had a strange one this year about a disaster that was coming and I couldn't do anything to stop it...pretty scary...woke up covered in sweat.

**6. What has been the strangest request from an artist?**

Too many to mention one that stands out....

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

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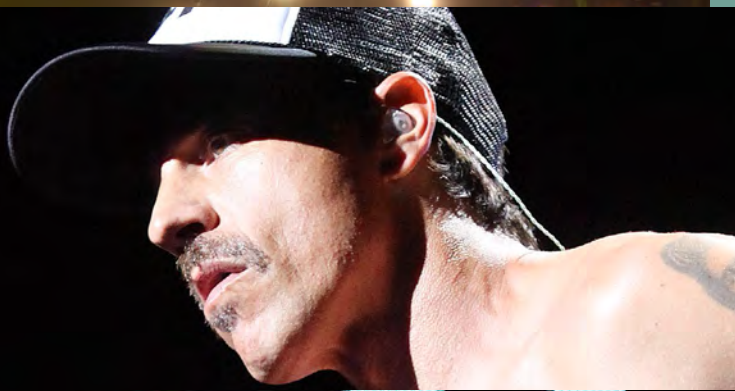


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# BIG DAY OUT



RED HOT CHILI PEPPERS



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

Can I go back into that mess of humans and find my thong?

**9. In your opinion, who performed the best set ever at a BDO and why?**

Rage Against The Machine Sydney 2008....just ask anyone who was there. Probably one of the best live performances ever.

**10. What is the most bizarre sight you have ever seen at a BDO?**

Howard Freeman in a mankini.

**11. Who has delivered the best audio mix at a BDO?**

Colin Ellis for John Butler Trio.

**12. Who has delivered the best lighting at a BDO?**

Ollie Metcalfe for Muse.

**13. Which BDO venue is your favourite and why?**

Gold Coast....Green field sites are the best and the punters have the best time there.

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

It has not been invented yet. The game has not changed.

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

You really think I have ever done anything outrageous?

**16. What was the worst weather event at a BDO?**

47 degrees and then a wind storm this year in Sydney.

**17. What invention would make your job easier?**

A better comms system.

**18. Who would play on your ideal BDO set list?**

Pink Floyd.

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

Stay in your sandpit and play with the toys you were given.

**20. What did you really want to be when you grew up?**

A fighter pilot.



**Side note:**  
CX sent their intrepid photographer Troy Constable into the 47 degree heat to photograph a variety of acts at this year's Sydney BDO. The line up was eclectic featuring the Red Hot Chili Peppers, The Killers (who wouldn't be photographed), The Yeah Yeah Yeahs and many local acts such as Grinspoon and Urthboy. Troy survived due to finding the air-conditioned media tent which served free beer.

## FARNHAM



## John Farnham opens the Event Centre



**Production Manager Adrian Smith comments on the new facility**



The not-so-retired John Farnham performed at The Star's new \$100 million Event Centre, as the first official public performance at the state of the art facility. John's long time crew were with him including lighting designer Chris Newman, audio engineer Grant 'Tosh' Walsh, monitor engineer John 'Hendo' Henderson and production manager Adrian Smith.

Built on the rooftop of The Star with views over Sydney Harbour and the city skyline, the venue has been designed to host acts from around the world in intimate concert settings, as well as domestic and international conferences, exhibitions and awards functions.

As the crew bumped in there was still a bit of wet paint, cables to be laid, gear to be tweaked - all the usual things associated with a new venue - however Adrian Smith reports that everything he needed was there and that he was happy enough with the venue.

"It's just the nature of a new building," he said philosophically. "It's a brand new shiny building that will be buffed into shape over a period of time. The access to the venue is OK - up 2 floors in a large goods lift and a bit of a push - and the dressing rooms / production offices are a bit of a hike away which is a bit painful. There's only one main dressing room onstage level and that's for your principle artist."

Lighting fixtures available in the venue include Vari-lite, Clay Paky, Martin and ETC models with ETC dimming.

Audio features Digico control and d&b audiotechnik speakers throughout including monitors. Shure, Sennheiser, AKG, Audio Technica and Neumann provide a veritable cocktail of microphones. They also have Christie Projectors for left, right and centre video screens.

Grant and Chris used what they could of the in-house audio and lighting but both supplemented gear from JPJ Audio & PRG Lighting.

"In many cases the gear that they have installed will suit but it won't suit every show especially as the venue will cater to such a variety of events," added Adrian. "At this point they are adding an additional twelve Vari-Lite spots to their stock and I'm sure that over time they will amass more audio and lighting stock."

Neither Chris nor Grant used the in-house control consoles as they already had their settings stored on memory sticks for other models. Grant used a Digidesign Venue Profile instead of the in-house Digico SD10 console and Chris a grandMA classic instead of the MA2 ultra light provided. Adrian also bought in a combination of in-ear monitors and radio microphones to cover the stage.

According to Adrian the d&B audiotechnik PA system sounded great and he was impressed by the quantity of boxes which includes a flown centre system and subs.

"They have done a really good job acoustically as the room sounds very good," he said.



## Elvis Costello puts his faith in an Aussie crew

Another month and another winery show, again a Day on the Green show at Bimbadgen Estate but this time with Tex Perkins, The Sunnyboys and Elvis Costello. The heavens had opened for days prior and it looked like the crowd barrier would be replaced by a moat. Miraculously there was very little rain on the night and the event proceeded without a hitch. It has to be said that the event organisers pulled off



a terrific job under difficult circumstances.

Four days before Elvis Costello was due to tour the country his long-time FOH engineer Jeff Hooper fell ill and was unable to travel - that's when veteran Australian Colin Ellis got the call and inherited the gig! No doubt Elvis' people had heard about his reputation and were satisfied to place themselves in his hands.

The first thing that Colin did was change Jeff's FOH specification from an analogue Midas XL4 to a digital Digidesign Venue Profile - with Elvis' permission.

"All the other bands were using a Venue Profile so it made sense to use one too just to simplify things," commented Colin. "We didn't really want to drag around an XL4 and all the outboard gear, although I said I could do that as I have done so for twenty-five years."

Colin was left to his own devices choosing to run the show as he normally does for every other band he works for; same kind of effects and plug ins.

"I've kept it really simple for Elvis as that's how they want

it," he said. "No delays, not much reverb - just basic old school.

JPJ Audio supplied the audio gear including the main and side L'Acoustics V-Disc hangs and a couple of delay towers.

Colin will spend much of the year looking after his main clients John Butler Trio and The Temper Trap. Lighting designer Alex Saad used a PRG Australia supplied rig of Martin MAC2000 spots and washes plus a few PAR cans and profiles - all controlled by a Hog and a wing. With no brief from the client, the tour has been extremely easy going for Alex.

"It's not about lights, it's about seeing Elvis," he remarked wisely. "There's no smoke, haze or beams and you never see the moving lights actually move. My theory is: if no one yells at me I'm doing alright."



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# NOW LISTEN HERE

## It's All About Work Ethic

BY ANDY STEWART

In the tag line at the end of last month's 'Listen Here' article it states:

**"Andy Stewart has seen many a song turned to pea soup and prefers his ingredients raw." Actually, I think I prefer my mixes just right... like Goldilocks.**

Since I made last month's throwaway statement I've mastered several new songs, some of them tending towards the aforementioned soup, other stuff sounding decidedly raw, yet they've all had one thing in common: the mixes were unfinished.

Last issue I described the common scenario of a mix being wrapped up before some of the key elements have been properly balanced in the track. This issue I want to highlight some of the pitfalls that can trick you into thinking you're done when you're not.

### HOOKED ON A PHILOSOPHY

The first pit that so many engineers and musicians seem to fall into is the one where someone involved gets 'hooked on a philosophy'. Whether it's the engineer or the musicians involved (or worse, an outside opinion), getting trapped in a misguided philosophy and using that to drive your thinking is nearly always disastrous. I've heard countless thousands of them, and I've heard some doozies:

"We're going for a vintage sound, that's why all the tracking was done with ribbon mics... that's the 'sound' of old recordings..." Bollocks. "We're working fast because drawn out mixes always end up sounding too polished..." Crap. "We're going for a dull tone because 'digital' makes things sound too bright..." Utter garbage. And the all-time classic: "We couldn't fix all the technical problems we had during the recording, but we were told they could be fixed in the mix." Um... well no, unfortunately not always.

### RUSH TO JUDGEMENT

When an engineer tells you things like: "I never put 400Hz in my mixes because it always sounds crap" or "reverb is something people use to hide things that aren't played well, that's why I never use it," cancel the session and run for your life! There's nothing worse than an engineer who's so set in their ways that they're happy – <<nee proud>> – to prejudge your music before they've even opened the session.

Similarly, engineers should be vigilant against musicians saying stuff like: "We don't like top-end in our music... we want the 'warmth' of the songs to dominate the mixes" or "a mate of mine told us to watch out for the mixes getting too compressed... compression always tends to make things sound unnatural." These sorts of statements lack foundation, and it's the job of the mix engineer to recognise them when they're made. Steering clients away from naïve philosophies like these without being condescending or sarcastic is one of a mix engineer's most important skills. Left unchecked, misinformed clap-trap can send you up the garden path faster than a weasel on a ballbearing. Then, when you arrive at your destination, everyone is unhappy with the result.

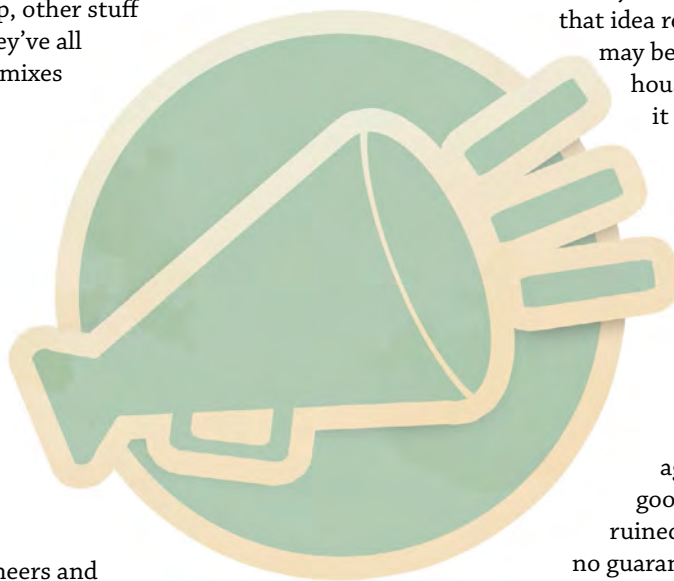
Getting hooked on a philosophy hinders your ability to listen impartially and think rationally. In short, it's naïve. The next time you catch yourself (or someone else) trying to convince you of their latest 'thinking', question it. Ask them, 'Why are you thinking like that? How is that idea relevant to this scenario?' They may be right, but if the philosophy is a house of cards, you're best to knock it over early.

### MONEY MATTERS

One of the key reasons why mixes are sometimes rushed or left unfinished is, of course, money. If there's no budget for mixing, chances are you'll be on the back foot right from the outset and the outcome will be sub-standard. (I've long ago lost count of the number of good Australian records I've heard ruined by poor mixing.) But there's no guarantee things will work out even if there <<are>> funds available. Money doesn't necessarily ensure good outcomes, but it does help... most of the time.

As a general rule, if you want a professional sound for your single, album, film soundtrack or live gig, expect to pay someone for it. If not, fine. No one's forcing you. If there's no budget but you have a mate who reckons he or she can help out, go for it.

If, on the other hand, you *are* paying someone – whether that be in dollars, pésos or peanuts – don't then delude yourself with statements like, "a quick mix is a good mix". More delusional thinking is constructed around budgetary constraints than anything else. If money is tight, be honest about it. If you have to work fast or wrap things up because you're out of money, accept it. Don't conjure up a philosophical cover story to conceal the truth of the matter. By telling



all your musician friends: “Yeah, it sounds cool... mixing fast is the only way to go” – by lying to yourself and them – all you’re doing is spreading the disease. These friends will then take your lie into their next studio session (if they’re foolish enough), and turn your bullshit into a mix philosophy... and so on it goes.

## WORKING HARD

Almost everyone I know who’s ever mixed a great record has the same story to tell about the process: that it involved a lot of hard work. From a personal standpoint, it’s what all my best mixing has been built around.

If you want mixes to sound great, don’t just surround yourself with a mountain of fancy gear and expect that it will all somehow magically conspire to make everything sound amazing. It won’t. Be prepared to work hard. Push yourself: listen and act. Don’t necessarily work for 24 hours straight, I’m not advocating that. But where time allows, keep pushing the envelope and improve the mix wherever you hear a problem. If you’re a slack-arse who can’t handle long hours of concentration: if you can’t bear taking five steps backwards occasionally to find a better path through a mix; or if you’re into wrapping things up quickly because you don’t know how to fix the problems a song possesses, you won’t produce great mixes.

## NAILING IT

The beauty of most modern digital mixing scenarios is that they’re recallable. While this capacity poses its own unique set of problems we haven’t got time to discuss here, it does offer an engineer and clients the ability to work together on the same mix over an extended period of time without tying down the studio in between sessions. There’s a fine line between working hard to make something sound great and obsessing over meaningless issues, of course, but that’s precisely where professional help comes in. Good engineers work hard on things to improve a mix, and are usually experienced enough to know the difference between a client’s insights and phobias. Knowing the difference is the real trick.

***Go forth and work my fellow mix engineers.***

***And when you’re done, work some more.***



Andy Stewart owns and operates The Mill in Victoria, a world-class mixing and mastering facility.

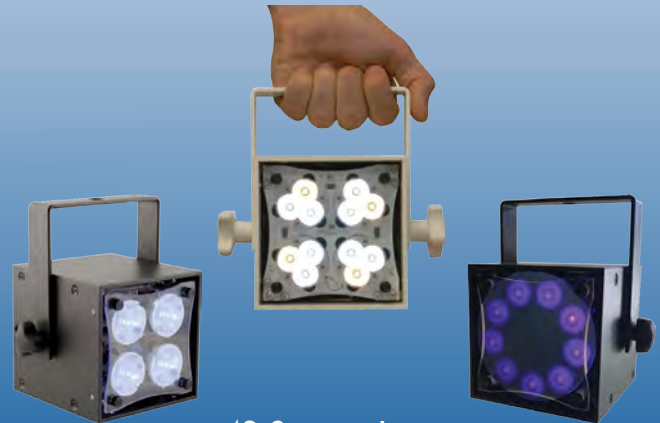
His involvement in the three-time Grammy Award winning album ‘Making Mirrors’ by Gotye is now drawing clients from all corners of the planet, including Russia. Eurovision pop anyone?

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## Do you inspect the venue or site before you start work? As the recent fire in a Brazilian nightclub shows, never assume that the venue is safe. What if that was you or your crew trapped inside a venue with blocked exit doors?

A basic site inspection doesn't need to be a big drama. Here is a link to a sample checklist we have been using for quite some time: [http://www.eventsafetyalliance.org.au/Files/Sample site inspection form.pdf](http://www.eventsafetyalliance.org.au/Files/Sample%20site%20inspection%20form.pdf). The form is set-up in such a way that you just need to tick the boxes if everything is fine.

As an employer, why is it important to have your crew complete this? Well, you still have a duty of care for them when you send them to a job. Too often you won't have a chance to make sure that the site or venue is safe enough for your workers. And if one of your workers was injured as a result of an unsafe place of work, you would be held liable. Using this form can help you provide evidence that you recognised the problem and that you have a system in place to address it.

As a worker, why would you want to take the time to fill-in this form? Two reasons really. Firstly it gives you a checklist that you are not exposing yourself to unnecessary risks and if things are not right, you have a reason to call the company and advise them of the problem. That way your employer can have the discussions with the site / production / event manager rather than you. Secondly, under the WHS legislation you have a responsibility to make sure you don't expose yourself to unnecessary risks. You also have that responsibility for your co-workers. Sharing all identified problems will make it less likely that someone is hurt.

If you have downloaded the form, be aware that it is very generic. Some parts may not apply to you and things that are important for your business may not be there. Don't follow it blindly and think that you are now on top of everything. Use it as a template to put together something that works for you and is relevant for your work and business. Let's have a look at the sample checklist.

Is the work area clean and cleared of all debris? Pretty obvious but how often have you walked into a room with stuff from the event the night before still scattered around and overflowing rubbish bins? That initial impression tells a lot about the venue operator and if that isn't good, be extra vigilant with the rest of the list.

Is the stage area stable and safe to work on? Aside from the odd stage built from milkcrates and sheets of ply, this shouldn't be a problem for indoor stages. But even the best stage system can be shoddily built with trip hazards. And of course outdoor stages are a whole separate can of worms. Is the loading dock clear and without hazards? Particularly important when working in hotels. Somehow they are usually full of broken glass, discarded (broken) pallets and slippery floors with mashed lettuce. It is time we all started demanding that these places get cleaned up. If you would slip and fall backwards onto a broken bottle, things will get very ugly. Remember that bit about not putting yourself at risk?

The next four items are really about how you get your gear from the truck to where you need it. This can be a problem if you don't have enough crew to manually lift heavy cases that you would normally roll.

Is the area between the loading dock and the work area suitably surfaced for moving rolling road-cases? Normally not a problem in a venue but have you ever tried pushing a mains case on grass?

Is the loading dock level with the work area? If you need to use a lift, is it big enough for your cases / flats / stage modules / etc.

If there are steps or height differences, are suitable ramps available? Pretty self explanatory but consider how else you would get your heavy stuff where you need it? Lifting may be the only alternative but then do you have enough crew and do they know how to lift?

Is suitable lifting plant available? (i.e. forklift, pallet-jack, hoists, etc.) That could be another option but is it suitable? Can you get the forklift where you need it? Do you have rated slings to use with the hoist?

The next two are about the plant and operators. Does all plant (forklifts, EWP, boomlift etc.) appear to be well maintained? It is important to understand that if plant is used for your benefit, you are responsible for it. Even if it is provided by the venue or your client, you must still be satisfied that it is suitable for the job and unlikely to cause harm in any way.

Do all operators have the appropriate tickets? That is one of those 'never assume' questions. You really don't want to find out that the operator had no valid ticket during an inquest. If they operate plant they must have their ticket on them. Quick check and off you go.

Is there an approved rigging plan and does it suit your requirements? Most of us will have to rig stuff on a regular basis. Never mind how heavy or light, if it can fall and hurt someone you have to make sure that the points where you want to hang from are approved for that load. And sometimes these points may not be where you need them or not capable of the load you need, then you'll need to make changes that can compromise your risk assessment.

Are all hazardous areas clearly marked or fenced off? Pretty obvious, but sometimes you may be on a site where the sets or structures aren't finished yet. Not a problem as long as those areas are clearly 'no go' zones.

Is all supplied crew rested and fresh? and does all crew wear suitable footwear and clothing? Fatigue is a real prob-

lem in our industry on many levels. What you have to understand is that someone who has been awake for 18 hours has the same concentration as someone with 0.05 BAC (Blood Alcohol Concentration). So do you want someone on your crew who just finished a 12 hour shift somewhere else? And don't forget that even if you book crew through a crewing service, you are still responsible for them.

Is there a suitable supply of free water for working crew? Still on crew, you have to make sure that drinking water is available, free of charge. In a venue not a problem, any drinking water tap accessible to crew meets that requirement but you have to make sure drinking water is available on outdoor gigs too.

Is all Fire Fighting Equipment accessible and within reasonable distance? If you need a fire extinguisher you have to get to it quickly. Make sure you know where they are and that they are not obscured by sets, cases, chairs or whatever. Also be wary of empty hooks where a fire extinguisher should have been, quite often an indicator that the venue doesn't take fire safety very seriously.

Are Emergency Exits clearly marked and accessible? The biggest cause of deaths in venue emergencies, people unable to leave the building because exits are locked or obstructed. Check exit doors, make sure they can be opened and that there aren't any rubbish bins on the other side. Also make sure the signs are lit, again a sign of poor maintenance if they are not. Just imagine yourself in the middle of the room in a power black-out. How will you find your way out if the signs don't work?

Is a First Aid Kit available? Every workplace must have provisions to provide First Aid to workers. Make sure you know where it is, who the First Aider is and how to contact them. Being able to provide First Aid whilst waiting for the ambulance can make the difference between life and death. Is suitable weather protection available in all work areas? Mostly for outdoor gigs where you need cover from rain or sun. But equally applicable to venue loading docks.

Are there suitable amenities available for the crew? That means toilets and changerooms. They have to be accessible for all crew at any time they are at work. And that includes all greenfield jobs too. If you are pointed to a 'nearby' public toilet, make sure it is open overnight if you work overnight. Many public toilets are locked at night.

Is there an overall feeling of a safe workplace? Look for indicators that the operators are looking after safety. Clean work areas, well maintained plant, clear signage, etc. would indicate that. Locked exit doors, missing fire extinguishers, filthy plant should be a reason for concern.

**As explained in the start it is all about making sure that your temporary workplace is safe and doesn't pose a risk for you or your crew. Some of the items above may not apply to your situation but use them as a template to develop your own checklist. Once you are used to them it will only take a few minutes to check everything off. And then you also have all the details for your Tool Box Talk ready too!**



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## Great Faux Pas When the backstage words backfire

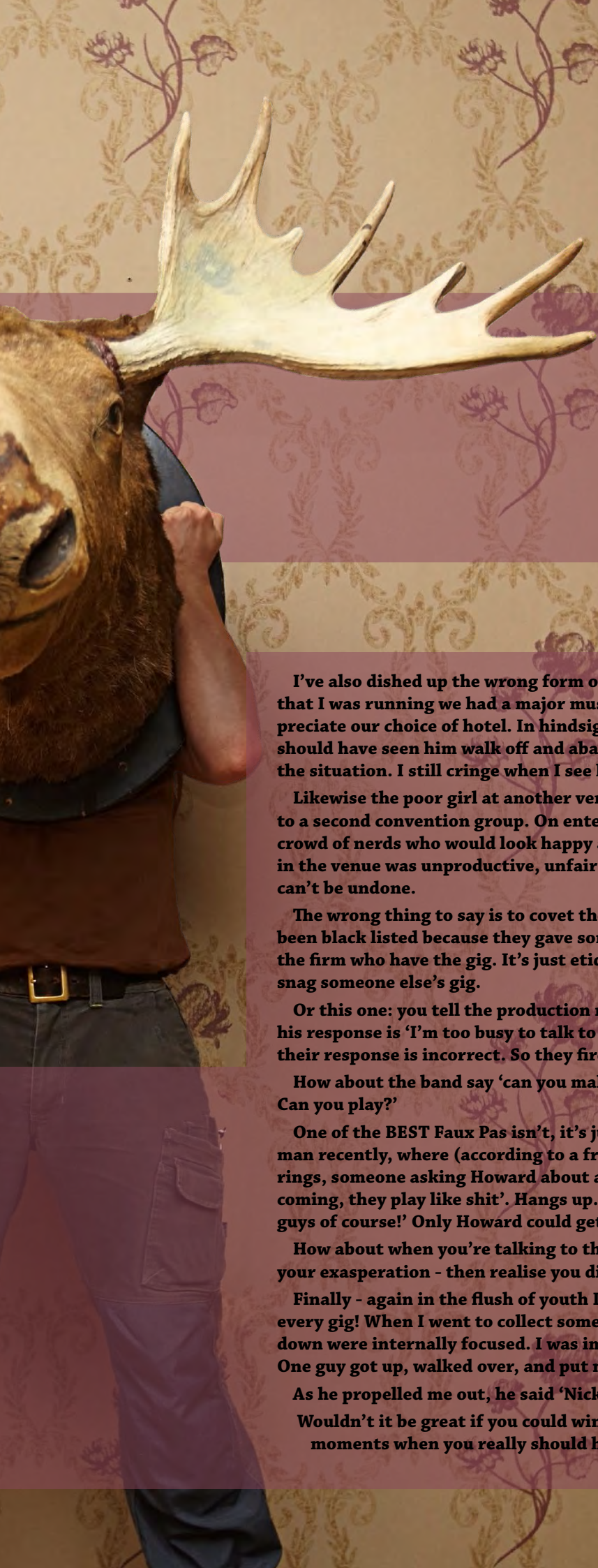
Backstage you should be careful. In a dressing room even more so. 'Well that was f—ked up, wasn't it?' The family name, Mr Nice Guy yelled at his flunky as he came off stage. Problem was, he was still wired for sound.

Talkback poses its own risks. 'Tell that porky fagot in the office to get his lard arse down here' worked a treat - the talkback loop run to a speaker in the production office. Mr. L. Arse was on the scene very quickly.

A long, long time ago the arrogance of youth coursed through my veins. Outside stage door at a rock gig, three earnest looking guys asked me where they might find Mr. Chugg, who is of course one of Australia's foremost music promoters today. Back then he was of similar stature.

"Why the f—k would you want to see him?" I said, with the sneer that really needed a fist to fix. Naturally they did find him, and to my juvenile horror I saw them pointing me out, with that famous Chugg glare melting me into a little green sticky mess.

Sound guy Jon Fox got bashed recently in an altercation with a rap crew. Our blog is currently more specific on that one, least it was at presstime since the lawyers have not managed to tear it down. He rightly was incensed and angry that the 'performer' had incited the crowd, invited them onto the stage to dance and throw water around, and let them dance on the amp racks.



**I've also dished up the wrong form of words and lived to regret. Once at a large trade show that I was running we had a major music industry manager attend a forum and he didn't appreciate our choice of hotel. In hindsight I agree, but at the time my inappropriate response should have seen him walk off and abandon the gig. To his credit, and my shame, he handled the situation. I still cringe when I see him.**

**Likewise the poor girl at another venue, who wrongly allocated our post show drink venue to a second convention group. On entering 'our' drinking venue, I was confronted with a crowd of nerds who would look happy at a software forum. My yelling and ranting at the staff in the venue was unproductive, unfair and misdirected. Apologies followed, but the moment can't be undone.**

**The wrong thing to say is to covet the gig. We know so many young guys and girls who've been black listed because they gave someone their business card. Whilst on the employ of the firm who have the gig. It's just etiquette, one of the unwritten rules that you don't try to snag someone else's gig.**

**Or this one: you tell the production manager over the two-way there is a safety issue, and his response is 'I'm too busy to talk to you right now'. You see them in person, explain that their response is incorrect. So they fire you from the gig. Nice one.**

**How about the band say 'can you make us sound good?' Sound dude replies: 'I don't know. Can you play?'**

**One of the BEST Faux Pas isn't, it's just a great put down: from our story on Howard Freeman recently, where (according to a friend) Howard is driving a band in a Tarago. Phone rings, someone asking Howard about a band at the gig. Howard: 'Na, I wouldn't bother coming, they play like shit'. Hangs up. Band in Tarago are curious. 'Which band is that?' 'You guys of course!' Only Howard could get away with that!**

**How about when you're talking to the client on the phone, hit the mute button and vent your exasperation - then realise you didn't mute the call. They heard it all.**

**Finally - again in the flush of youth I'd been looking forward to a gig. I looked forward to every gig! When I went to collect some gear, the sombre group standing around and sitting down were internally focused. I was impatient back then, and I started to demand and yell. One guy got up, walked over, and put my arm in a vice grip.**

**As he propelled me out, he said 'Nick died last night. There is no gig. You need to go away'.**

**Wouldn't it be great if you could wind back the clock a little and make good for those moments when you really should have said nothing, or said something else?**

## Celebrating local manufacturing and innovation

**Technology and innovation. Anyone doing a SWOT (strengths, weaknesses, opportunities and threats) analysis of our industry would probably end up coming to the conclusion that technology and innovation are both an opportunity and a threat to the entertainment technologies sector.**

A strength because entertainment products have always harnessed the best and most innovative technologies of their day and enable much of entertainment experience that is offered and, a weakness in that most innovations results in a shift in industry balance. What does that mean?

We'll consider an obvious example like the impact of the phonograph on the player piano industry and two of the leading entertainment technologies of their day. The player piano was invented in the 1870's and was a mature product by around the 1890's when the Pianola brand was born. This brand was so successful it became the generic name for all player piano products. At the time this was a state-of-the-art piece of entertainment technology that would cost in today's money around \$6,000. Hundreds of thousands were being made around the world and new piano roll releases were running at more than 200 per month often featuring the leading artists and composers like Gershwin and Rachmaninoff. Fast forward 40 years and it was all over because Mr Edison had invented the gramophone (coincidentally in the same year as the Aolian player piano company, the major competitor to Pianola, was launched in 1877) and by the 1920's the gramophones packaging, consumer friendliness, versatility and sound quality had progressed to the point where the Pianola was pushed into the corner to hold Christmas cards while the gramophone reigned supreme until the early 1980's when the CD was born.

In fact you could argue that the CD was merely an extension of the phonograph and the real technology change occurred with the download.

Technology has also changed the economics of many parts of the industry. An obvious sector is in recording. Not that long ago the recording sector was built around specialist facilities housing large consoles and multi-track recording machines. Anyone of these items may have been valued at hundreds of thousands of dollars or more. Many recordings begin life using a laptop and software with a starting price less than \$3,000. This kind of technological change has forever altered the recording sector, changed industry economics as resulted in the passing of some product types and brands and the arrival of many others.

Perhaps only two product types remain more or less true to their original conception over the past 150 years of entertainment technology development - the microphone and the speaker. This, of course, is not to say that these products have not been developed and perfected into a range of sophisticated and highly specialised products that utilise the latest in materials and electronics manufacturing techniques. But they more or less still resemble and conform to the fundamental design and purpose developed by Thomas Edison and Emile Berliner (in the case of the microphone) and Alexander Graham Bell and Ernst Siemens (the loud-speaker) both in 1876/7.

Australia and Australian's have a history of innovation within the entertainment technologies industry arguably

commencing with the creation of AWA (Australian Wireless Australasia Ltd) back in 1913. Since then world recognised innovations by brands like Fairlight and Lake Technologies have emerged while manufacturing has also been a constant for our local industry – Strauss and Nova Sound are two names from the past that demonstrate some of Australia's manufacturing pedigree.

While undeniably a technology "taker" the Australian entertainment technologies sector, while utilising the best international brands and products through a network of distributors and wholesalers, has a number of creative leading edge manufacturers of its own. Some of these are now leading brands with international distribution like Rode or Black Magic Design to name just two but there are many other emerging or less well-known companies with innovative, leading edge technologies and ideas that need support and encouragement to bring their ideas to market.

We also know that there is significant value in patents, licencing, intellectual property and manufacturing agreements that extends beyond the company or organisation that creates them. Any increase in Australian innovation benefits the sector overall through increased profile and revenue. Put simply, any increases in the awareness and size of the sector, in particular increases earned through exports, will increase the chance of support and investment in innovation and product development from universities, the research sector and Government.

The challenge for local manufacturers and product innovators is that they have often struggled to bring their products to market or have found meeting the right customers or partners difficult to achieve. Many of these manufacturers are not regular attendees of local trade shows, exhibitions or industry events, sometimes because of cost or sometimes because they are unsure of who will be attending and what they might or might not be able to offer.

So it is time to drive our local innovations and manufacturing and make Australian technology in our sector an industry strength. For these reasons ACETA is supporting Australian innovation and industry through the new Hall of Manufacturers initiative at Entech this year. ACETA in partnership with the Entech 2013 organisers ETF have created a dedicated area within the Entech event that will provide a spotlight for manufacturers to promote their high level engineering and innovations to both a national and international audience.

The bottom line for the sector is that a strong domestic manufacturing base coupled with good local research and development only strengthens the sector overall. As a sector we have been very good at exporting our creative talent with many Australian's holding down important roles in the global entertainment industry. It's time to match those exports and successes with Australian innovations in the products that make these shows possible.



Companies interested in joining the Hall of Manufacturers at Entech 2013 should contact the Event Manager, Steve Dallimore, at ETF on 02 9556 7988 or [sdallimore@etf.com.au](mailto:sdallimore@etf.com.au)

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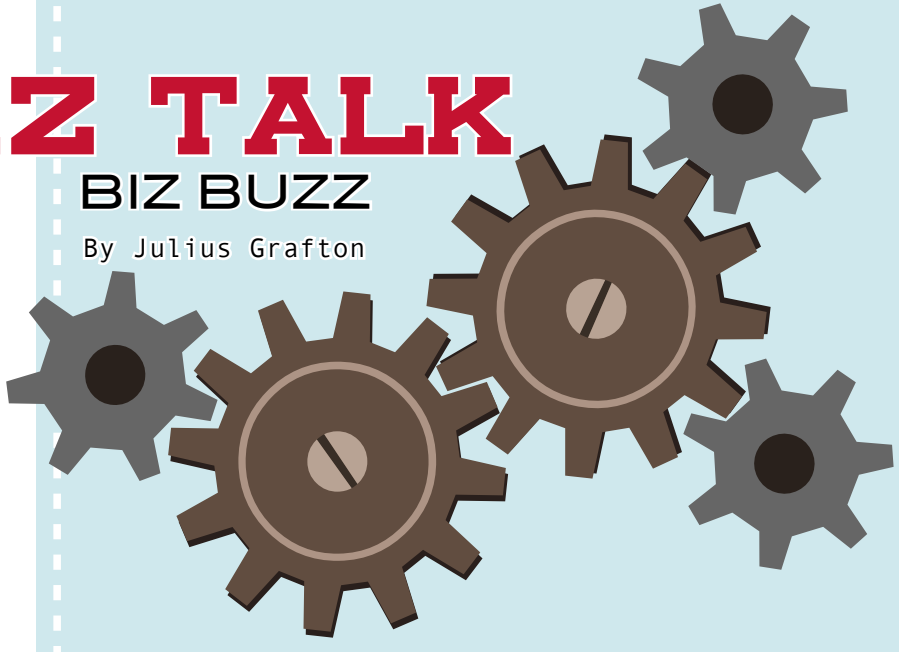




# BIZ TALK

## BIZ BUZZ

By Julius Grafton



### AT ENTECH IN JULY I'M RUNNING A SEMINAR CALLED BOOM TO BUST - SUCCESS IN AV.

**Watching from our perch the difficult trading environment for single operators through to large organisations, this has never been more topical.**

Consider the business environment. Australia is a high wage, high cost, high regulation place. One thing we don't have is an invasive union culture around our live production, unlike the USA where the Local needs to be respected.

But with skills gaps that expand to shortages, and minimum hourly rates well north of \$20, not to mention amazing on-costs like transport and insurance, we are now fighting to make money.

On the other side of the equation the suppliers are selling better devices that weigh less, go brighter and louder, and cost less. So they are grappling with the same gross profit on less revenue.

But the seminar is about the existential pressures on the small business, one person or family sized outfit which makes up most of our industry. The freelancer who invests in equipment, or is forced to incorporate into a company to retain work.

I'll talk through the legal entity and company requirements, and spend some time on the risks associated with legislation – like the munted PPSR debacle, that is currently putting anyone with rentals to venues at risk. That risk is that an insolvency professional can sell your gear, lawfully, and you get nothing back!

Then there is the enforceability of your payment regime. How do you get paid if someone decides not to pay you? I have some recently acquired insights thanks to an in depth meeting across some pub bar with a guy who has a stellar record collecting small debts. Legal and effective. Scary and worthwhile!

Finally we will glide effortlessly through the tax system and identify the trips, traps and pitfalls that we all face. CX can reveal the other side of the tax office, with some interesting anecdotes.

**It'll be an intense hour of pleasure and pain. Log on to [www.entechshow.com.au](http://www.entechshow.com.au) for more info or to book. ENTECH 2013 – July 23 – 25, Sydney Exhibition and Convention Centre.**



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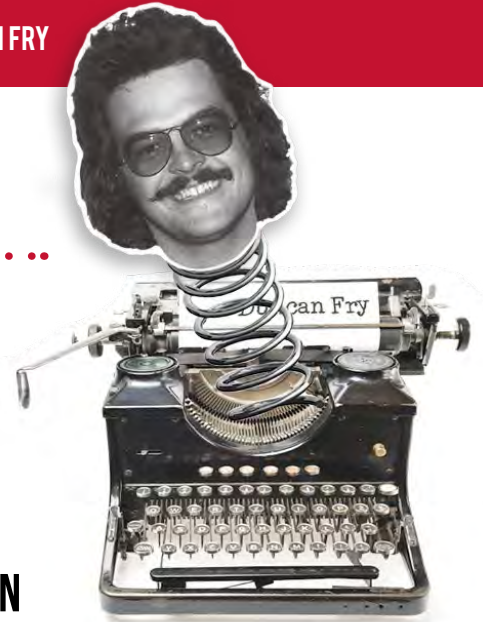
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# ANDROID WARS

## APPLE VS THE GOOGLE MACHINE

I HAD A PHONE CALL THE OTHER DAY FROM DAUGHTER FIFI TRIXIBELLE BRITNEY LOURDES (HEY, DON'T BLAME ME - BLAME SOCIETY). "HI SWEETIE; HOW WAS THE BIG DAY OUT?" I ASKED "SOMEONE STOLE MY IPHONE WHILE I WAS IN THE QUEUE TO SEE THE RED HOT CHILLI PEPPERS," SHE SOBBED DOWN THE LINE. "IT WAS SUCH A TIGHT SQUEEZE GOING THROUGH SECURITY, AND THEY MUST HAVE JUST REACHED INTO MY BAG AND TAKEN IT. NOW I'LL HAVE TO USE THIS OLD MOTOROLA RAZR. IT'S HORRIBLE".

Poor thing. Imagine the ignominy of being seen with a ten-year-old phone. Oh the horror! It occurred to me that what mobile phones need is a small metal loop built in to the edge, just like digital cameras have, that you can attach a lanyard or strap handle, to hold on to or put around your neck.

But there are some hard lessons to learn about rock festivals: never take a bag to one, never take anything you can't physically wear or hold, and always keep your valuables like phone, money, ID etc in your bra or pants. That's what I do. Well, except for the bra part.

Still, that advice wasn't going to be much help now. There was only one thing a good father could do. "Never mind," I said magnanimously, "You can have mine." "What? Really?" she yelled. Ouch. Say what you like about the old Motorolas, but they had plenty of volume. "But yours is brand new, isn't it?" she asked.

Indeed it was. After a plane flight at Christmas, its predecessor had suddenly refused to make any calls the minute I turned it back on, then would keep trying to hang up all day until I turned it off.

The phone company's brain dead minions could give me no advice except to take it to Apple when I got home in 10 days time. So I was involuntarily incommunicado throughout the festive season, probably much to everyone's relief.

Upon my return I made the Apple megastore my first stop, and I have to say, they were extremely friendly, well organised and efficient; they saw it was obviously not working properly, checked to see if it was still under warranty, and gave me a brand new replacement. All of which took about five minutes, while the Mensa club (sarcasm alert!) at the phone company were probably still trying to work out what day it was!

So Fifi etc got my new phone and was happy again, while I got the old Razr.

The only thing I really liked about the iPhone was the easy texting. Going back to jabbing each button three or four times until the right letter came up was a pain. But sadly that was all I liked about it. It was a slick little package that would happily give all my money to the phone company with its endless data checking and downloading, even when I wasn't using it. Apps that I never ever used I couldn't remove, and yet always seemed to be running when I went to use the phone.



In fact after I picked up the replacement phone, before I had the chance to switch data off, it had downloaded a couple of megabytes of stuff by the time I walked from the megastore down one level to the phone shop to give them the new phone's serial number!

I also very much resented having to install and use iTunes to put anything from the outside world on to the phone. It's a large, oppressive and clunky program on a PC; the sort of bloatware program that Mac people used to criticise Microsoft for. Ah how the (click) wheel has turned! (A little i-pod joke there)

The iPhone had a lot of good points – easy to phone, or text, or use the camera, the world time clock and other stuff, but in true contrarian fashion I felt the whole thing was way too controlling.

Fifi on the other hand, having finished a three-year Graphic Design diploma, was well used to Apple's way of doing things, since her uni had a swag of Macs for the students to use.

I bought her a G5 so she could have a Mac to work on at home, only to find that she couldn't lift it! At 30 kilos, neither could I. So I bought her an iMac, and the G5 is now holding my office door open on hot days.

Texting on the Razr rapidly became a chore, so I had to think about a more modern replacement. And when the going gets tough, the tough go online shopping!

I had already bought myself the cheapest Android 10" tablet I could find. Famous NoNamo brand, with every connector possible along the edge, 16 gig of RAM, and only a hundred and fifty bucks with free postage. Works perfectly. If only it had a phone built in I would happily walk down the street holding the tablet up to my ear, like a high tech ghetto blaster.

I bought it specifically for a musical application. I wanted to have all the words and chords to the songs that the fabulous Harris Tweed band play loaded on to it. It's impossible to remember them all, but I found an Android app that would do just that, and scroll through the songs like a teleprompter. All for the princely sum of eight dollars! It runs on .txt files and it really works.

The tablet had made me quite comfortable with the Android operating system (OS), so I started to look at Android phones. Well-known branded ones had well-known brand prices, but there were a lot of NoNamo ones for a hundred dollars or thereabouts. That's more my kind of price!

I finally settled on one that bore a striking external resemblance to an i-phone 5, but with some major internal differences, all of them good.

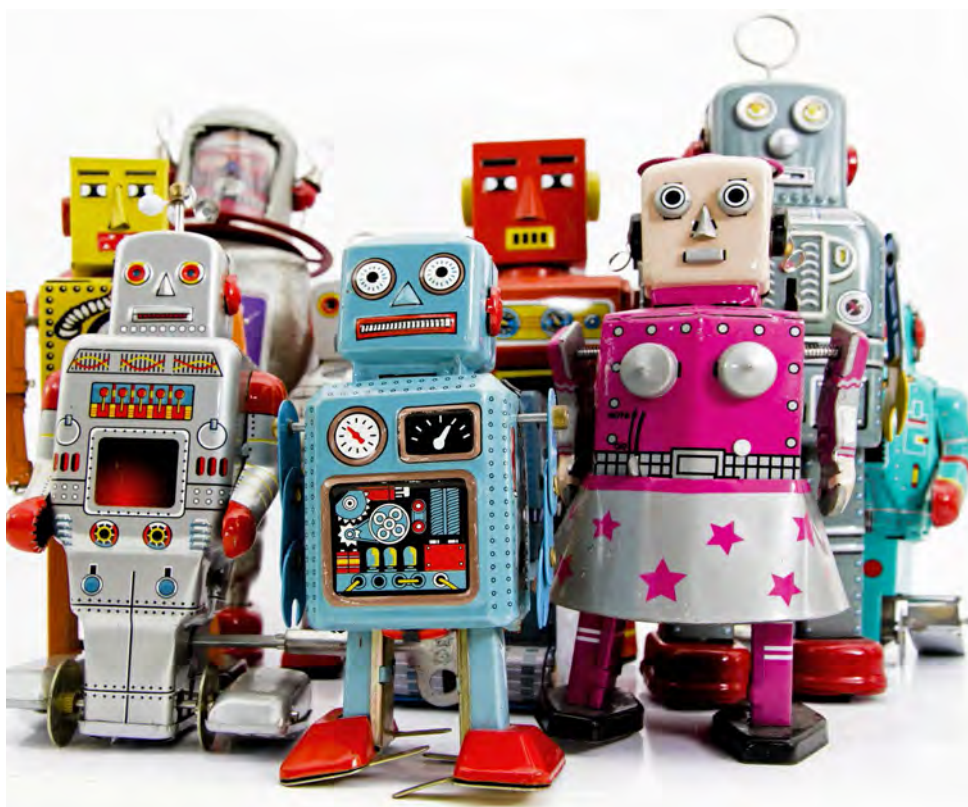
It can take two SIM cards – one for home and one for overseas, two batteries – just click off the back of the phone and swap them, upgradeable memory using a standard mini SD card, 8 megapixel cameras front and rear, plus protective case and free screen protector, all for under \$200 delivered. And one more thing – it has a standard mini-USB connector that fits lots of other things around the house!

Everything, in fact, that the real thing doesn't have.

I spoke to some of my friends' offspring, who were iPhone early adopters, and who had raved about them. Did they still have one, I asked.

They all said no, which would appear to be a bit of a problem, since these cashed up 20 and 30-somethings are the iPhone's target market. When I asked why, they all said the same thing as I did – too controlling. What did they have? Samsung, LG and HTC – all Android phones, and all not requiring iTunes.

That's a real problem for the folks in Infinite Loop, Cupertino, because when that particular age group worldwide starts that kind of paradigm shift, well, there goes the share price!



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