

# CX

**MONTHLY TECH NEWS**  
AUDIO · LIGHTS · VIDEO · STAGING · INTEGRATION

CX88, DEC/JAN 2014 \$5.50

## COSAMP

Sound & Music Production  
Benchmark industry training

## Melton Library & Learning Hub

Sustainability, Accessibility  
& Unity

### GEARBOX REVIEWS:

- QSC PLD4.5 Amplifier
- ROBE MMX Washbeam
- JBL LSR 305 Studio Monitors
- Riedel Medionet Compact
- PR Lighting XLED 1037

### CX NEWS:

- SCEC Closing, Crazy idea
- Chameleon Expands, Lab Gruppen,
- Framelock Barriers
- JANDS, The Australian Acoustical Society
- Audio identity Don McConnell & more!

## Industry suicide

Why good  
people do  
the worst thing

## DPA Microphones

Inside the DNA  
of DPA

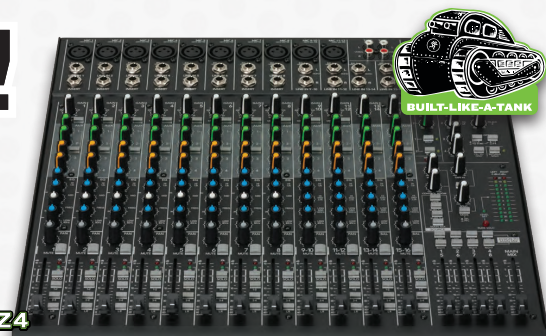
## Road Skills

Beyonce,  
Boy & Bear,  
— Ricky Martin

# BUILT LIKE A TANK!

The all-new Mackie VLZ4 line delivers proven performance, superior sound quality all housed in a "Built-Like-A-Tank" rugged steel chassis with powder-coat finish. And now, with the added performance of Mackie's acclaimed Onyx mic preamps, you have the best analog compact mixer available. More info at: [www.mackie.com/products/vlz4-series-compact-mixers](http://www.mackie.com/products/vlz4-series-compact-mixers)

1642VLZ4



Find your nearest Mackie dealer at:  
[www.cmi.com.au/mackie-dealers.html](http://www.cmi.com.au/mackie-dealers.html)

# VLZ4 SERIES

# Is Your Wireless Microphone Ready for the Digital Dividend Restack?

TRADE-IN  
SAVE  
BIG  
\$\$\$\$\$

With the Digital Dividend Restack now only 15 months away people are obviously starting to wonder what they should do with their existing wireless microphone systems. Especially after some media outlets reported recently that if you operate a wireless microphone system in the 694MHz-820MHz frequency range after 1 January 2015, you may face large fines and/or jail. So for a limited time, Shure will take your existing wireless system off your hands and offer you a great price on a new replacement Shure wireless system that you know will last you into the future.

## TAKING YOUR WIRELESS SYSTEM BACK TO AN AUTHORISED SHURE RESELLER

Trade in your existing wireless microphone systems and save BIG \$\$\$\$ on brand new Shure wireless systems that are ready for the Digital Dividend Restack:

1. Bring in any brand of wireless microphone to your participating Authorised Australian Shure Reseller and as long as it is a complete, working wireless system you can qualify for an extra discount on a new replacement Shure wireless microphone system.
2. The discount applies to a replacement channel of Shure wireless for every working channel of wireless you hand in. That is, a channel for channel trade in deal.
3. All traded in wireless systems will be returned to the Shure Distribution Centre for correct disposal and recycling.

*By acting now you can be confident for the future and you will save money.*

### Conditions:

**1.** This offer is valid for all trade in's occurring between 1st October 2013 – 31 January 2014. **2.** Access to the extra discounts applies for channel-for-channel trades of complete systems. **3.** All trade in systems must be in complete working order. Non-complete or non-working units will not be accepted.

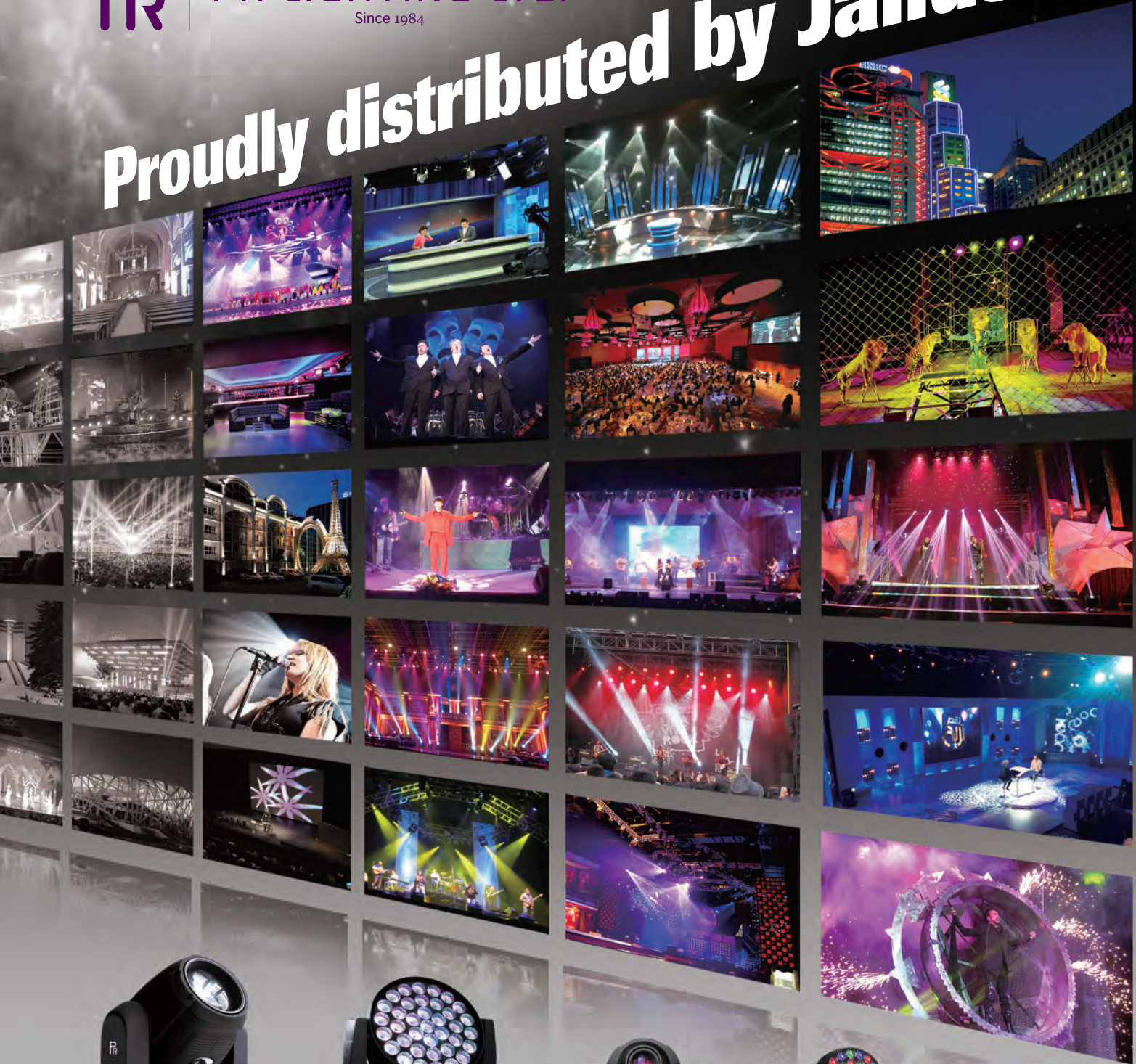
**JANDS** **SHURE**

**READY** for  
**DIGITAL**  
Dividend Restack  
readyfordigital.com.au



PR LIGHTING LTD.  
Since 1984

# Proudly distributed by Jands



XR 200/300 Beam



XLED 1037



XLED 250 SPOT



XLED 336



XPar 336

Distributed by



[www.jands.com.au](http://www.jands.com.au)



# WHAT'S ON! TOUR DATES

Monday 10 February  
Chatswood Concourse Theatre  
409 Victoria ave, Chatswood (Sydney)

Wednesday 12 February  
**NEW VENUE:** Royal International Convention Centre  
600 Gregory Terrace  
Bowen Hills, Brisbane

Friday 14 February  
National Convention Centre  
31 Constitution Avenue, Canberra

Monday 17 February  
Melbourne Convention Centre  
1 Convention Centre Place, South Wharf

Wednesday 19 February  
Adelaide Convention Centre  
North Terrace, Adelaide

Monday February 24  
Perth Hyatt Regency  
99 Adelaide Terrace, Perth

10.00am – 11.00am Sustainable Stages (Session one, Energy Efficiency Project)

TICKETS \$22 at [cxevents.com.au](http://cxevents.com.au) or at show if still available.

**11.00am – 6.00pm TRADESHOW OPEN – FREE ENTRY**

Visit 20 + exhibitors, see a truckload of new equipment, and network like it's 2014!

(Happy hour at 5pm)

12.00md – 1.00pm Sustainable Stages (Session two, Technology) TICKETS \$22

12.00md – 1.00pm Simple I.T. for AV techs - hands on! With Jason Allen TICKETS \$22

1.00pm – 1.45pm Audio Evaluation, with Jimmy Den Ouden . Compare loudspeaker systems. FREE, walk up event.

2.00pm – 2.45pm LED Lighting Evaluation, with Jimmy Den Ouden. Compare compact moving head LED wash. FREE, walk up event.

2.00pm – 3.00pm Dante and AVB – hands-on network building TICKETS \$22

2.30pm – 3.30pm Dirty Money – the 2014 Edition. With Julius TICKETS \$22

3.00pm – 3.45pm Audio Evaluation, with Jimmy Den Ouden. Compare loudspeaker systems.

FREE, walk up event.

4.00pm – 4.45pm LED Lighting Evaluation, with Jimmy Den Ouden. Compare compact moving head LED wash.

FREE, walk up event.

5.00pm – 6.00pm **HAPPY HOUR** on the Trade Show floor. Drink our lovingly selected beverages

and network like it's 2014! FREE

Program is the same all cities  
(Except Canberra – trade show and happy hour only)



A.T. Professional  
Altronic  
**Amber Technology**  
**Bosch**  
Cases.com.au  
DTS Australia  
Galactic Music  
**Jands**  
Lexair Entertainment  
Meyer Sound Australia  
**National Audio Systems**  
Philips Selecon  
PRG Australia  
**Production Audio Video Technology**  
Riedel Australia  
**Sennheiser Australia**  
**Show Technology**  
**Technical Audio Group**  
**ULA Group**

**TOURING  
EXHIBITORS**

**CX SUMMER**

*Annual industry touring one-day tradeshow*

**ROADSHOW**

**TOURING  
AUSTRALIA WIDE  
10TH - 24TH/FEB 2014**

FOR MORE DETAILS GO TO [www.cxevents.com.au](http://www.cxevents.com.au) AND GET INVOLVED...

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# VERSATILITY WITH NO EXPIRATION DATE



## **UPM-1P**

ultracompact wide  
coverage loudspeaker

## **UPA-1P**

compact wide  
coverage loudspeaker

## **UPQ-1P**

wide coverage  
loudspeaker

## **UPJ-1P**

compact VariO  
loudspeaker

## **UPJUNIOR**

ultracompact VariO  
loudspeaker

Flexible, versatile and built to last, the UltraSeries self-powered loudspeakers are the workhorses of rental companies and installations worldwide. We've built them to survive season after season of extreme weather, being dropped, picked up, and trucked to performance after performance...and still perform beautifully. *The UltraSeries loudspeakers are made by hand in Berkeley, California, USA.*



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**CX88 DEC/JAN 2014. ISSUE 88. PRINT EDITION**

EDITORIAL BY JULIUS GRAFTON

**ANNUAL REPORT**

**2013 was a growth year for CX Network**, fuelled by changes that have challenged all media especially print. News Limited and Fairfax both reported dire results earlier in 2013 and both are scrambling to restructure as advertisers shift spending online and to internet TV. They seem hamfisted compared to media outlets like Crikey and specialist publishers like mUMBRELLA. We like to see ourselves less like old fashioned print media guys and more 'surfing the wave'.

Three years ago we almost had the bad story, except then we invested heavily in **CX-TV** and moved to our HQ in Chatswood - where the studio and the coffee machine are equally important. No one really understood the power of media and internet TV back then - YouTube had only just expanded clip sizes and gone HD. Look at how different it is now.

2013 saw our digital sites quadruple visitors, our online edition of **CX** triple subscribers, and our iPad APP edition sell tenfold more - admittedly dropping the cover price to \$2.99 helped.

If you're holding this issue in your hands and it is paper then relax, we see the print edition staying around indefinitely. Many subscribers took the cheaper option for online, but a solid core of us prefer to read the perfect bound, 300 gram glossy version of **CX**. We print in Australia, and support local jobs doing so.

Our advertisers have also shifted spending towards online, which is fine for us since we have developed our various online channels and it costs us no more to serve advertising there or on **CX-TV**. All our channels are created and maintained in Australia as well, our forays to Ecuador and India are now a distant memory.

We think our audience (you) are better served by us this year, as we have more ways we reach you, on web, blog, Facebook, email, **CX-TV** and via the three editions of **CX** (print, online and Newsstand on iPad).

2014 will see our digital sites improve dramatically, we just signed off on a big new round of development and also commissioned new back end file storage to speed our workflows and protect us if the Cloud is nuked by some hacker or the web goes down. **CX** have a 'next generation media' concept in the pipeline as well. We back ourselves here by investing in ideas, many of which come from you. Thank you!

Soon we come to you with the **CX Summer Roadshow** in February, and that truck is again full of new gear from around 20 distributors. We're opening the trade show at 11am this time, and the educational program is better timed. Most of it is free, as is the trade show, so all you need to do is roll up and if you time it right, happy hour at 5pm is your chance to drink on us as well!

- Julius

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**CX Magazine is published in Australia by Juliusmedia Group Pty Ltd** (ACN 134170460) under license from **CX Network Pty Ltd** (ACN 153165167)

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**CX-TV is at [www.cx-tv.com](http://www.cx-tv.com)****Coffee Supplier:** Rob Forsyth**Happy hour:** Willoughby Hotel**Accountants:**

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# QU-16

## THE SHAPE OF THINGS TO COME

- 16** MONO INPUTS
- 3** STEREO INPUTS
- 4** STEREO FX RETURNS
- 16** BUSES
- 12.** MIX OUTPUTS
- AES** DIGITAL OUT
- USB AUDIO STREAMING**
- DAW MIDI CONTROL**
- 4** MUTE GROUPS
- 4** FX ENGINES
- 19"** RACK MOUNTABLE



RACKMOUNTABLE DIGITAL MIXER  
FOR LIVE, STUDIO AND INSTALLATION



Motorised faders provide total recall of mix levels, giving full benefit from the scene recall system and ensuring the fader is always in the right position even when swapping between the layers.



Qu-16 packs sixteen crystal clear Analogic total recall pad-less preamps, optimised for transparency and low harmonic distortion.



Qu-Drive is an integrated USB recorder, allowing multitrack recording and playback to/from an external USB drive.



Qu-16's high resolution, full colour Touchscreen and the intuitive Touch Channel interface provide easy access to channel processing, the FX racks and all setup and system management controls.



Qu-16 features a library of FX emulations taken from the iLive pro touring series, including classic reverbs, gated reverbs, delays and modulators.



Allen & Heath's proprietary dSNAKE low latency audio connection enables Cat5 connection to a remote audio rack, or to the ME personal mixing system.



Qu-16 is compatible with Allen & Heath's ME Personal Mixing System – so you can add ME-1 personal mixers to your setup to allow performers to control their own monitor mixes.



A free iPad app gives instant wireless control of the mixer, so you can tweak the PA, adjust the monitors on stage, and even mix the show from the audience.

Qu-16 takes compact digital mixing to a new level with innovative design and exceptional functionality combining to create a superb professional mixing experience. Bristling with all the features you'd expect from a top of the range digital console and incorporating technologies pioneered on our GLD and iLive digital mixing systems, Qu-16 has the power and pedigree to deliver class-leading audio performance. Whether you're switching from analogue or updating your digital desk, it's time to experience the new digital with Qu-16.



[WWW.ALLEN-HEATH.COM](http://WWW.ALLEN-HEATH.COM)

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# ALLEN & HEATH

# NEWS

## CX INDUSTRY NEWS



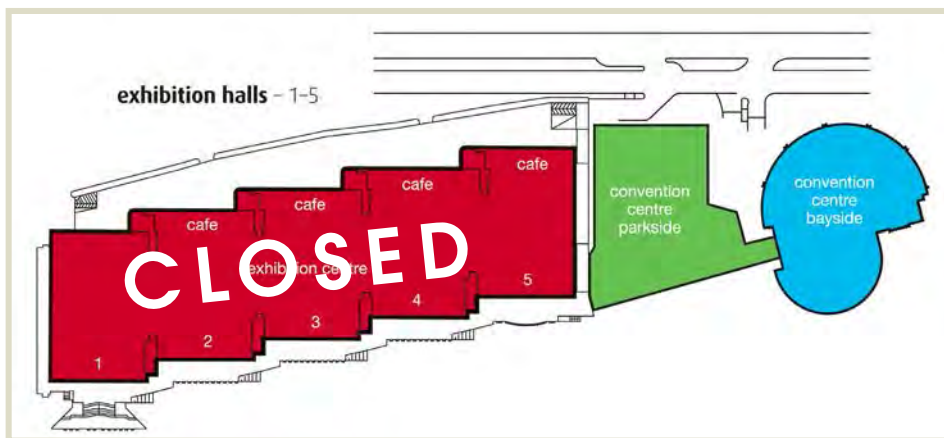
### Sydney Shuts Down Events go away as SCEC closed

**Thousands of jobs are drying up as major events, conventions and exhibitions abandon Sydney following the closure of the Sydney Exhibition and Convention Centre in December. A developer was handed the keys, and the wrecking ball will swing soon. The centre itself was 25 years old and in great condition.**

The NSW government has done a deal that includes demolishing the beloved Sydney Entertainment Centre at the end of 2014 with new facilities to be built along with apartments and a hotel. The deal delivers new facilities at no cost to the government. The site will be shut at least until 2017. The developer will undoubtedly scale down and cut costs on the replacement complex as they take huge profits from the apartments and hotel.

Losing three years of events is a heavy price to pay while the remote and temporary Glebe Island Expo facility - which has no mass transport links and hardly any parking - is not attracting trade shows either. CX commiserates with crew, staff and the events industry in general which will suffer loss of income due to this decision. The peak industry associations have been lame on this topic, politely saying little while their members bleed.

Before the developer or government spin doctors arc up, we are obliged to report that there will be a slight increase in facility size except the Entertainment Centre will shrink from 12,000 to less than 8,000 seats, and the new exhibition centre will be on two levels; one of which has dreaded pillars. So the net gain is zero, and that's before three years of nothing is costed in.



Sydney Exhibition and Convention Centre

Ironically the unloved Harbourside Shopping Centre next door has just been sold. Had the government purchased this, the precinct could have been redeveloped in stages without the massive loss of staff, knowledge and events. Large events don't stop happening, they just go to other states or overseas where the money is spent. The \$250 million for Harbourside would have been easily and quickly recouped.



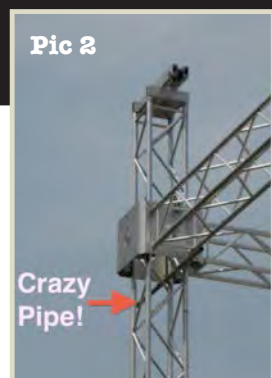
### Crazy Idea...

**Picture 1** shows a line array comparison in Vietnam. They chose to do it stereo, which is unusual.

**Picture 2** shows what happened when they ran short of chain motors. Just pin the truss using a pipe through the web and take off the motor! Any guess on the weight of the loaded truss with 14 line arrays and motors?



Pic 1



Pic 2



## Chameleon Expands

New HQ has space for audio and video



### Enormous Sydney lighting company Chameleon Touring have expanded into a large complex at Auburn in Sydney's geographic centre.

CEO Tony Davies told **CX-TV** that the 16,500 metre facility could allow room for expansion, possibly into audio and video as a one stop shop, in the future. The warehouse complex has a lot of hard stand which more than caters to the current peak of thirty trucks a day.

"We put our neck and our nuts on the line – we figured we needed to either go home or go hard for another ten years", Tony Davies told **CX**.



**Tony Davies, CEO Chameleon**



## Lab Gruppen shifts to APG

Hills SVL will farewell one of the leading amplifier agencies at the end of January when Lab Gruppen moves over to the Audio Products Group. Lab owners TC Group have decided the amplifier product should be in the same distribution hands as their loudspeaker range, Tannoy.

# LAB.GRUPPEN

Hills SVL did well with Lab Gruppen, and APG can expect to also do well. Their Biamp Systems line is building steam, while Tannoy has been a priority for several years.



## No Bolts, Safer Barrier!

**Framelock** have launched a revolutionary new crowd barrier system that assembles without bolts. The interlocking design saves setup time and is clearly safer. The firm is based in Darwin and export their barriers world wide. The new system is the subject of a patent.

# FRAMELOCK BARRIERS™



# CX Summer Roadshow

Touring Australia 10th - 24th Feb 2014

**Summer means its time for CX Summer Roadshow in February. The tour starts in Sydney on Monday February 10th at the Concourse Performing Arts Centre in Chatswood. There you'll see the latest new bright shiny things from twenty leading distributors with a very big truckload of gear.**

From Sydney the Roadshow heads to its new Brisbane Venue at the Royal International Convention Centre at the Showground (Wed 12). We stop again in Canberra on Friday

14th. Then to Melbourne (17th), Adelaide (19th) and finally Perth on Monday February 24.

The trade show opens at 11am, then at 5pm we have very happy hour. In between there are educational and business sessions. Register at [cxevents.com.au](http://cxevents.com.au)

News Briefs

• **King Kong** closes at the Regent Theatre on February 16th, after a respectable run with good reviews. The production is tipped to move to New York, possibly replacing Spider Man at the Foxwoods Theatre, one of few large enough for the leading man – the gorilla itself.



• **Jands** have acquired the PR Lighting agency, opening up a lower cost solution for moving LED and beam fixtures. Pearl River have been around almost 30 years, and now Jands offer a select range of fixtures that allow them to bundle Vari Lite and ETC with a lower cost solution.

• **The Australian Acoustical Society** have announced the preliminary program for the Inter Noise 2014 congress in Melbourne next year. The website is [www.internoise2014.org](http://www.internoise2014.org)

• **Audio firm Cadac** have appointed Entertainment Technology Australia as distributors. The CADAC name has been synonymous with top quality mixing consoles since 1968, from its earliest designs for recording studios and broadcast applications, through to the latest live sound reinforcement consoles. The firm is now owned by Sound King in Shanghai, but remains based in the UK.

• **Australian Screen Sound Guild** hosted their 2013 awards in Sydney this month. Not surprisingly *The Great Gatsby* cleaned up, winning for Best Film Sound Design, Best Film Sound Mixing and Soundtrack of the Year. Best Sound for a Television Drama Series was won for *Better Man* and Best Sound for a Documentary was *Paul Kelly: Stories Of Me*.



• **Audio identity Don McConnell** has opened shop with Audio Brands Australia, his own import and distribution company. After several decades at Audio Telex and then Hills SVL, Don now represents Italian firm FBT. They offer a wide range of loudspeakers, both powered and passive, along with accessories.



• **Latest from cases.com.au** – and possibly the first of many variations. No case tech was harmed in the making of this photo montage...



**CX FREE CLASSIFIEDS are live!**  
Now you can buy and sell equipment and pay **NOTHING.**

Visit [juliusmedia.com](http://juliusmedia.com) and list your gear or browse and buy.





Anya is the most technologically advanced sound system ever created. She is so different from every other sound system that we shouldn't call her a "sound system". In fact, she is not.

Anya is a concept – a whole new way to deliver sound reinforcement.

Anya is born from more than 15 years of research into technology that shapes and directs large-scale audio output. Anya adapts total array performance to deliver stunningly uniform high SPL coverage with such precision that the room effectively disappears. We call this Adaptive Performance™.

With Anya, you never have a reflection from a large wall because she makes it as if there are no walls. There is no ceiling, no roof, no nearby houses. With in-situ refinements, there are no balcony faces.

Nor are there any cheap seats. Anya so precisely crafts performance that virtually every location receives powerful, full frequency response. Sculpt the sound beam to reach the top of the farthest balcony, but not the wall just above it. Anya lets you be that exact.

Yet for all her capabilities, Anya is simple and intuitive. No complicated array angle, no addressing individual loudspeakers. Just tell Anya where you want the sound; she'll do the rest.

With the room eliminated, all that remains is a defined coverage area where the people that bought the tickets will experience what they came to experience – the artist.



EDITED BY JASON ALLEN

## SGM G-Spot

**SGM's new G-Spot moving head** has scooped this year's London PLASA show winning the prestigious PLASA Award for Innovation. This award recognises products that advance the industry by demonstrating a new style of thinking, improving technical practice or taking a key step forward in terms of safety.

With an IP65 rating, the G-Spot is water-, dirt- and sand-proof. This means there will be no accumulation of dust or other externally induced impact on optics, gobos or lamp unit, and so maintenance is kept to a minimum. These were all points picked up on by the adjudicating panel who noted that "The G-Spot is the first fully weatherised automated profile spot. It's an elegant and aesthetically pleasing fixture that will be able to withstand any show in any environment."



## Yamaha CL Series V1.61 upgrade and price change

**Yamaha's CL Series mixers** have been upgraded to V1.61 firmware, making it possible to perform discovery and patching operations for Shure ULX-D digital wireless system receivers such as the ULXD4D and ULXD4Q directly from CL Series digital consoles via the Dante network. The recently launched R18-D, Ro8-D input/output boxes and NXAmp with NXDT104 have also been added as Dante devices that can be detected/patched into the CL Series.

Other new features in CL V1.61 are Scene Preview functionality, and the Help function is further supported by an on-screen reference guide, which once loaded, resides in the console permanently. A CUE LEVEL knob has been added to the CUE section, allowing adjustment of the CUE level and can be assigned to a custom fader or user defined knob.

Meanwhile, Yamaha Music Australia has released an all-new retail price list with some significant changes to CL Series pricing.

The new RRP price line-up including GST is now:

- CL5 (meter bridge built-in) \$30,000
- CL3 including optional meter bridge \$25,000
- CL1 including optional meter bridge \$20,000





## Yamaha Commercial Installation Solutions Series

Yamaha Music Australia have announced that shipping has now commenced on the full line-up of their CIS Series of commercial installed sound products.

The CIS Series consists of MTX-series network audio processors, XMV-series network multi-channel amplifiers and VXS/VXC-series surface-mount and ceiling speakers. To assist with system design, Yamaha's CISSCA (Commercial Installation Solutions Speaker Calculator) simulation software is available as a free download. Each product has been developed with versatility and scalability as a primary concern whilst also making sure that the installation and setup process is as simple and efficient as possible.

## JBL HiQnet Performance Manager Version 1.6



Harman Professional has announced the latest update to its patented, award-winning live sound system configuration and control application software, JBL HiQnet Performance Manager. Version 1.6 features improved group muting controls and a new library cleanup tool, along with several other updates including the ability to save files with EQ in Line Array Calculator Tapering/Shading mode and open them in multiple arrays.

JBL HiQnet Performance Manager offers reduced design time, simplified networking, and automated control interface configuration in a true workflow-based user experience for live performance installation professionals. Offered in version 1.6 is the new I-Tech 4x3500 HD firmware version 1042, a critical update for front display operation, a new array and ground stack Auto Amplify button to help guide automatic amplification of loudspeakers, and Group Muting and Signal Generator controls are now available in Test System mode. When selecting groups within the Group list, the affected loudspeakers are now highlighted in the main workspace to aid navigation.

## True To Your Sound Wi-Fidelity

Epic digital wireless technology, now amazingly affordable.

Introducing the DWZ Series with affordable 2.4 GHz technology. You get solid-gold, 24-bit linear PCM digital audio to keep you sounding your best.

You get robust transmission and easy channel selection. Even automatic feedback reduction, encryption and battery charging are available.

And Sony has pre-assembled DWZ packages for presentation, speech and vocals, guitar/bass and wind instruments.

Sony's DWZ Series. Sound like a million bucks without spending it.

[pro.sony.com.au/audio](http://pro.sony.com.au/audio)

**SONY**  
make.believe



## RØDEGrip and RØDEGrip+ mounts for iPhone

The new **RØDEGrip** from RØDE Microphones is a versatile mounting chassis and pistol-grip for the Apple iPhone 4 and iPhone 4S that provides a wide range of integration options for iOS content creators. Users are able to mount their iPhone to a camera using the integrated shoe-mount, mount to a boom stand using the incorporated 3/8" thread, operate handheld using the ergonomics of the pistol grip, or even use the RØDEGrip as a desk stand for their device. The RØDEGrip is also the perfect companion for the iXY stereo microphone, allowing users to mount their iPhone in a fixed location while recording.

Constructed from durable ABS plastic, the RØDEGrip assembles in seconds and folds down to a compact size for transport and storage. Three mounting points are provided for the camera-shoe attachment, to allow the user to rotate and move the iPhone into a number of orientations to suit the desired application. A deluxe version, titled the RØDEGrip+ is also available, adding a set of high-quality camera lenses that screw securely into place over the iPhone's built-in camera when mounted in the cradle. The supplied macro, 180° fish-eye and 2X telephoto lenses give the user a much wider range of creativity when recording video with their iPhone.

## RØDE NT1

**RØDE Microphones** has released the new NT1 microphone, the first update to the company's flagship studio microphone since the NT1-A was introduced almost fourteen years ago. Although the body of the new NT1 closely resembles the NT1-A, the microphone has been completely redesigned from the ground up, with the only shared component being the mesh grille.

The new capsule, codenamed the HF6 features a sound signature reminiscent of the famous microphones of old while at the same time exhibiting extremely low noise. It has been developed with a focus on detailed midrange response, coupled with silky smooth high frequencies, and warm, round, bass reproduction. The transducer itself is suspended inside the microphone using Rycote's industry-leading Lyre system, minimizing external vibrations at the capsule level. The capsule is then married to high-grade electronics that have been designed to provide the lowest noise level of any studio microphone available.

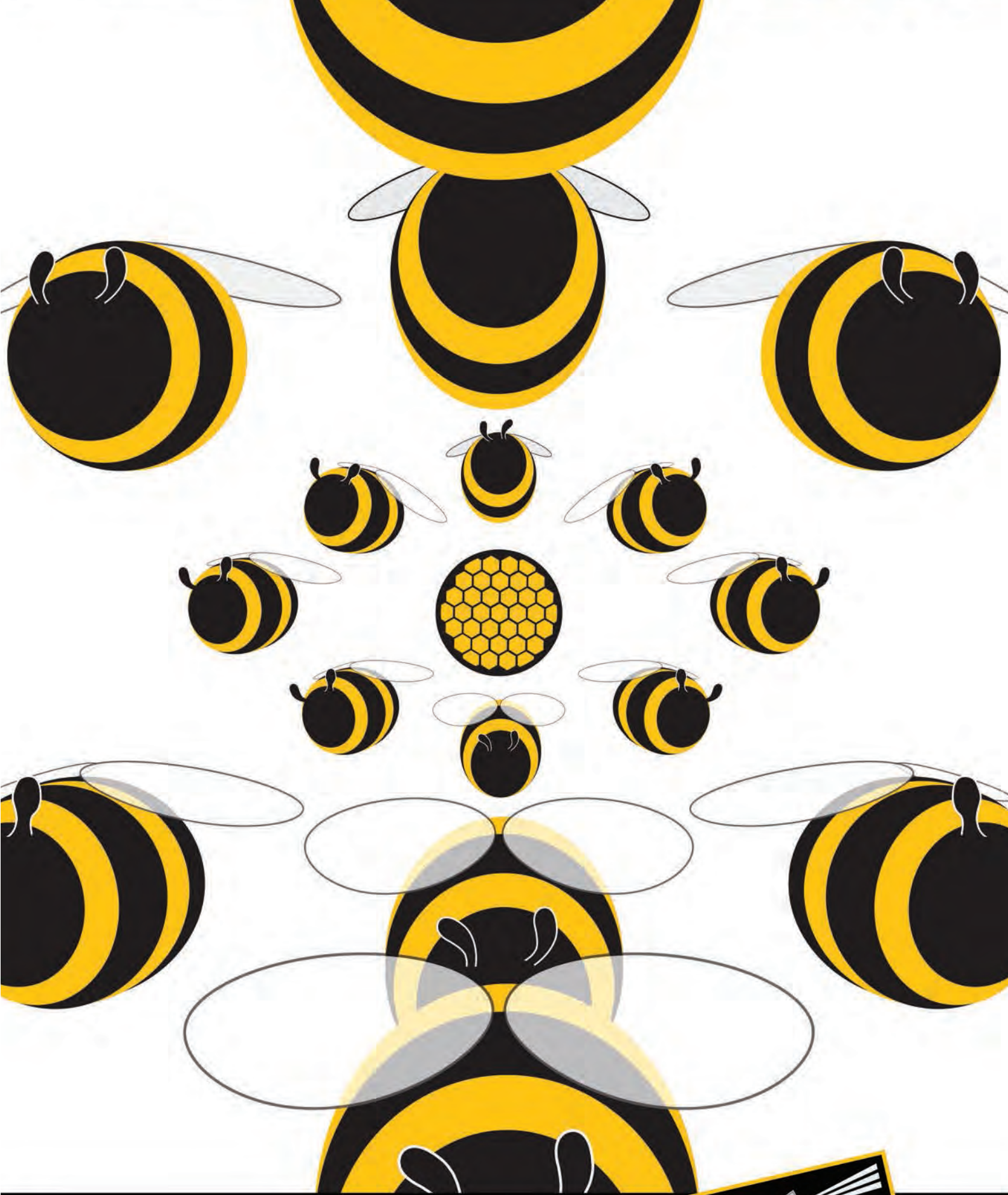
The NT1 is sold as a kit along with the RØDE SMR shock mount. Featuring a unique double-Lyre suspension system, the SMR enhances the existing superior vibration cancellation of Rycote's Lyre system by using a smaller inner Lyre to act as a tensioning element.



## dBTechnologies Sigma Series Active Loudspeakers

**dBTechnologies** has introduced the Sigma Series of loudspeakers, incorporating new custom components designed exclusively for the series by RCF, as well as the latest generation of DSP and the company's DigiPro power amplifiers. The series includes three cabinets which can be used by themselves, or stacked or pole mounted to create the size system necessary for the venue.

Models include the S115 single 15-inch, 2-way active model, S215 dual 15-inch, quasi 3-way, and the S118 single 18-inch subwoofer. The 24-bit/48 kHz DSP offers system presets (flat, boost) and limiter (dual active peak, RMS, thermal), while the DigiPro G2 power amp module is rated at more than 90 percent efficient and designed to ensure that the output of the cabinets remains even and transparent.



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## Bosch PLENA matrix Digital Sound System

The new **Bosch PLENA matrix system** is ideal for just about any small to medium installation. The system includes an 8-zone DSP matrix mixer/processor, 4-channel DSP amplifiers, call stations and wall control panels. Live or recorded music and speech can be distributed in up to eight zones with easy control via PC GUI, iPad, iPod, iPhone.

The PLENA matrix comes with a full-featured 8x8 DSP Mixer/Processor and a choice of two high-performance 4-channel, class D, DSP Power Amplifiers (125 W and 220 W per channel) with output choices of 100 V/70 V/8 ohm/4 ohm. Low THD values (0.004% DSP Mixer, 0.03% 220 W Amplifier) and wide frequency responses (20 Hz to 20 kHz DSP Mixer and 65 Hz to 20 kHz DSP Amplifiers), provide exceptional results.

DSP mixer input controls include multi-band equalizing, gain control and dynamic range compression on each input. Output controls include multi-band equalizing, filtering, dynamic range compression, delay and limiting,



plus the ability to mix several inputs for up to eight outputs in real time.

## Riedel MediorNet for Studer

The **Riedel MN-ST-AL-2** provides two ports each with redundant interfaces for connecting Studer mixing consoles via the STUDER A-Link protocol to Riedel MediorNet Modular frames. In this way the consoles become an integrated part of the entire signal distribution infrastructure. This offers up to 384 channels per connection and saves significant costs in cabling and maintenance, while still providing unparalleled flexibility and signal quality.

The routing of the audio stream is conveniently handled by the intuitive MediorWorks control and management software via drag & drop programming, thus making last minute changes easy and user friendly. Additional routings can be performed via ProBel commands or the new EMBER+ remote control protocol in MediorNet.



The new MediorNet MN-ST-AL-2 card allows compact or decentralized digital audio router applications with any network topology. It requires a card slot with two high-speed ports. One MediorNet Modular frame equipped with A-Link interface cards thus becomes a cost efficient audio router with 4,608 inputs and outputs in a 2 RU rack space. The card supports all STUDER Vista 5 and Vista 9 as well as OnAir 3000 consoles.

## Mackie Master Fader 2.0

**Mackie** has released Master Fader v2.0, the primary control app for Mackie DL Series Digital Live Sound Mixers. Master Fader v2.0, which is now available as a free download, delivers new features that are a direct result of customer feedback.

The new features of Master Fader v2.0 are wide ranging; from small performance and workflow updates to items that will truly change how people use the app. New features include input channel and aux send linking, perfect for easily controlling stereo inputs sources like keyboard or when using in-ear monitors. The addition of mute groups and view groups are for anyone that desires customisable control of their work surface. The new Quick Access Panel gives instant access to important controls without taking up precious screen real-estate. Additional navigation enhancements underline Mackie's commitment to delivering intuitive, productive workflow.





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## COSAMP

DELIVERING ACCREDITED INDUSTRY  
TRAINING, AUSTRALIA-WIDE

## COLLEGE OF SOUND AND MUSIC PRODUCTION

While our industry collectively bemoans the sad state of accredited training, one quiet achiever in Melbourne has rolled out an incredible VET compliant training resource for music technology and production to over 100 schools nationwide. Jason Allen spoke to Media & Production Manager Peter Frawley about their world-beating programme...

**"It's a common complaint in our industry" Peter said, "These kids are under-prepared for working in the industry, and that's the main gripe about post-secondary outcomes". What if there was an opportunity to work with teachers of students at lower levels, still at school, to improve the standard for when they enter the industry later?**

Wouldn't it be great if there was not only a nationally coordinated programme, but a way to start people out even younger, in high school? Impossible?

Impossible hasn't stopped Peter Frawley, Kye Thomas (General Manager) and David Santamaria (Education and Training Manager) from making it a reality. Based in Melbourne's bayside suburb of East Brighton, the College of Sound and Music Production has created an enormous online resource they call the Tech Production Network (TPN) which enables secondary schools to deliver certifications in Music, Technical Production and Creative Industries.

### REC-PAUSE-PLAY

Kye and Peter have been working together since 1996 as sound engineers. They originally went into business as a recording service, providing production in studios and live

BY JASON ALLEN



SALT STUDIOS CONTROL ROOM

captures. Peter went on to found Salt Studios, which started off specialising in live recordings and now offers a range of services from its own studios. Kye moved into the position of studio manager at Joe Camilleri's Woodstock and also worked as production manager at the St Kilda's legendary Esplanade Hotel.

During this period, Kye got involved in providing some simple audio training services. He was approached by schools who wanted him to create some resources to teach ProTools that included some files for exercises accompanied with teacher and learner guides that referenced the national system. He did just that, and they were a huge hit. "One of the teachers said "You should bottle this. It's what everyone needs because there are no quality resources out there"" recalls Peter. "The only resources that were available at the time were textbooks and videos tapes with out of date equipment and techniques".

## LIQUID GOLD

So bottle it they did. Kye and Peter started building their library of resources and the back end that drove the system. David joined the team with his classroom music background and patented system for managing student results. Then it was time to take it to the market. "Kye did our first presentation at the Ballarat Learning Exchange" Peter continued. "Five teachers came along and all five signed up. And that was the start."

By Christmas of 2009, 18 schools had signed up to the TPN programme. Another 27 joined for 2010, followed by another 40 in 2011. By 2013, over 100 schools across Australia had joined. Word of the programme spread mostly through teacher networks, driven by the quality of the resource.

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**COSAMP'S  
KYE THOMAS, DAVID SANTAMARIA & PETER FRAWLEY**

**MOO: MASSIVE, OPEN, ONLINE**

The TPN resource is totally accessible online and immensely detailed. The material seeks to cover all aspects of contemporary music performance, composition and production. The site that students access contains more than 200,000 words in an interactive textbook with quizzes, tech tips, audio samples and video links. Teachers access their own site with over 50 assessment tasks for the national vocational system, 160 lesson guides, and references to a list of over 100 formative practical exercises with DAW files across multiple platforms. There's also learner/trainer guides to help deliver the prepared exercises, and there's exam review material to help students prepare for senior studies like VCE.

COSAMP's use of the web to enrich the learning experience is assured: Two web TV channels, "Industry TV" and "Tech Tips", expand on concepts from the curriculum and provide practical demonstrations. 'Industry TV' interviews prominent industry figures like Ernie Rose about the realities of our day-to-day work while 'Tech Tips' shows hands-on illustration of technical concepts. Students can upload gigs, songs, and mixes they've made to the sub-site 'Yourspace'. 'The TPN Songbook' includes over 750 classic



songs with video, audio and chord charts. 'Access All Areas' provides a great contact list of industry groups and key sites in Australia.

Backing up the teachers is a separate Teacher's Forum and a streamlined electronic class management system that COSAMP reinforce with face-to-face support.

## MIXING IN THE BOX

Resources like the TPN are a god-send to secondary school teachers. The responsibility of teaching music recording and production in the digital age has fallen to the high school music teacher, who may or may not have received any formal training in technology. Even teachers with a production background are faced with trying to deliver an education with basically no resource to back them up. And it's pretty hard to teach a kid to use ProTools from a textbook – you need digital resources.

Computer music equipment has in many cases been thrust upon schools that don't often have the staff to deliver any meaningful training on it. Competition for students can see schools engaging in a battle to see who has the most impressive Open Days, and the music department that has the most computers looks more impressive to parents. "Music teachers are great at teaching music, but quite a lot of them struggle when technology is introduced. It's really important to us that teachers have good delivery skills" Peter stated. Acknowledging this as the biggest issue facing the delivery of music tech education in schools, COSAMP put a huge amount of effort into training the trainer. "Every Wednesday, as part of the support for the TPN and the teachers, we run a free webinar. It could be DAW basics, EQ basics, compression basics, or how to get around a mixing desk. This falls under our TPN PD – Professional Development programme". Teachers can also attend a regular monthly session at COSAMP's HQ called TPN Intensive where Peter and the team get hands-on with any subject that needs attention.

 			
Lesson guides			
PROGRAM AREA 10 – Signal flow		Relevant Assessable tasks:	
<b>OBJECTIVES:</b> <ul style="list-style-type: none"> <li>Describe signal flow as a concept</li> <li>Identify various connection types</li> <li>Differentiate in line processing and side chain processing</li> </ul>		LP220 – Where's the sound guy? SP141 – Keep the old rocker happy SP221 – Setting up and managing the mikes SP176 – Practice the core skills	
Lesson	Critical topics & suggested order	Practical context	TPN Exercise
<b>10A</b> Connections & busses 2 hours	<b>Session 1</b> Introduction to the concept of signal flow How it relates to the big picture of music production Objectives & outcomes Basic recording chain (review if already covered in lesson 6B) Basic digital studio signal flow Basic analogue studio signal flow <b>Session 2</b> <ul style="list-style-type: none"> <li>Inputs &amp; outputs</li> <li>Sends &amp; returns</li> <li>Busses</li> <li>The term "auxiliary"</li> </ul>	Working in a support role on a studio production Managing broadcast audio equipment Recording a demo of your original music Improving your audio equipment knowledge and skills Operating a PA system Record and mix a basic music	
<b>10B</b> In line processing 2 hours	<b>Session 1</b> Discuss the term "In line" Describe the signal path from a channel to a device and back again	Managing broadcast audio equipment Recording a demo of your original music Improving your audio equipment knowledge and skills	<b>TPX13A</b> Compressor functions.

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TPN STUDENT HOMEPAGE

## ON THE ROAD

As part of their obligation as a Registered Training Organisation member college, the COSAMP staff are out on the road to meet face-to-face with the educators using their material. In the first semester of the school year, every institution gets a visit. Moderation meetings are held twice a year in central locations where teachers get together and compare how they mark and assess with other teachers. These meetings are held in regional centres like Ballarat as well as in capitals like Perth and Adelaide.

For schools starting out on the path to contemporary music education, the TPN teacher's site contains a detailed equipment specification outlining the gear and performance standards that will need to be achieved. COSAMP doesn't endorse any particular brand of DAW or other equipment, but outline what kind of capabilities any tech purchase should have. Whether a school has an existing relationship with a local supplier, a direct relationship with a manufacturer or no previous experience in sourcing gear, COSAMP work with them to make sure they purchase what they need.

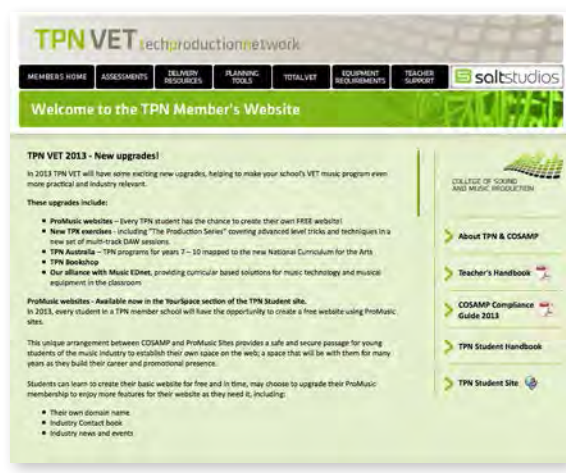
## HANDS ON

As part of signing up to the TPN, teachers are given 60 gigabytes of digital material, including DAW sessions and audio files that illustrate key concepts. There are live recordings, simulations of live broadcasts and innumerable real world examples presented to students in an interactive format. Students learn by doing; here's a dry recording, here's an EQd recording – now make the dry sound like the EQd version. It sounds simple, but there's simply nothing else like this available to schools.

A broad mix of public and private schools have signed up, with leading institutions such as Trinity Grammar, Caulfield Grammar, Wesley College, and Haileybury from Melbourne, Woodvale Secondary College and Lakeland Senior High School from Perth, St Michael's College and Fremont-Elizabeth City High School in Adelaide, and St Paul's School in Brisbane all among COSAMP's customers. It's not just secondary schools that are using the resources, Charles Darwin University has accessed the programme, and CAAMA (the Central Australian Aboriginal Media Association) has used it to run technical training in remote communities in the Northern Territory.



TPN HOMEPAGE




TPN VET HOMEPAGE



AN EQ LESSON ONLINE

All up, more than 250 music teachers are accessing the material and using it in different ways. The TPN's strength is in the way the material can be picked and chosen to suit different curricula and assessment criteria. It is used as resource to fit VET, individual school music programmes, the senior secondary certificates of education in all States, and the new

App Guide		
	The first app to download on your iPad & iPad 2: An app starter kit with all the essential apps you'll ever need.	Free <a href="#">iPad App Link</a>
	Search for an app or choose from our featured apps. We'll show you how the apps you choose are connected in a massive, never-ending map of the App Store, and give you great recommendations for other apps to download.	\$4.49 <a href="#">iPad App Link</a>
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TPN APP GUIDE

Australian Curriculum for The Arts. "This isn't a prescribed course - there's thousands of them out there" Peter elaborated "It's the flexibility that's the key. You can use it for whatever you need to do".

## THE PRICE IS RIGHT

Cannily, COSAMP chose a simple and effective pricing structure to simplify budgeting for schools – one price for every school, regardless of how many students use the resource. This is a unique proposition among third

party resource providers in education, and means school administrators always know what to budget well in advance of knowing student numbers.

Importantly, the school is always the client, not the teacher, ensuring that if there are staff changes, the students still get an uninterrupted education. If the key teacher delivering the TPN leaves a school, COSAMP will help their replacement get up to speed. "Some schools are coming into their fifth year and have had multiple teachers" said Peter. "It hasn't affected the students, so we think it's a good model."

All up, nearly 1600 students used the TPN as resource at 100 VET schools and 60 other intuitions this year. COSAMP were recently audited with flying colours by the Australian Skills Quality Authority who were intrigued by their one-of-a-kind structure and delivery methods. The TPN has attracted interest from other industries and educators in other countries. Its huge library of material continues to expand and Peter and the team are concentrating on adding more and more video.

## GIRT BY SEA

This is a country with a population spread over a huge area, and a lot of it terribly remote. It was this challenge that created the uniquely Australian School of The Air and has led us to find more and more inventive ways to defeat our geography. COSAMP is creating the next generation of education delivery in that tradition, and will likely take it not just into the Outback, but out to the world.

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# THE MILL REPORT

Hard To Take, Hard To Swallow &  
Even Harder To Accept –  
The Death Of A Hard-Drive

When a hard-drive dies, the world is one bleak, truly awful, malevolent place. That moment when you realise all your data is lost is truly sickening, and positively gut wrenching - all those mixes, all those overdubs! It's a bit like being bitten by a king brown snake or a great white shark. Actually it's worse. At least in those other circumstances you're typically put out of your misery during the incident.

If they ever invent a time machine - a real one I mean, not a modified composting DeLorean - I'm not going to use it to bet on horse races (where they shoot the athletes on the track) or other more civilised sporting fixtures. The first thing I'm going to do is travel back in time to the point where I accidentally decided to *completely f\*\*k my life up* and backup my drives! My blood is boiling all over again right now just thinking about it.

It's looking like it will cost me over 1700 bucks to salvage the data off my bucket o' crap Samsung 1 Terabyte drive! Oh, plus GST, sorry, I forgot. And all because my backup methodology was found wanting in the most improbable of circumstances... What a moron I have been, what a... Anyway, you get the picture. As you can see I'm more than a tad annoyed with myself. What's worse, at the end of this enormous pelican-like bill there's still no guarantee anything will be recovered from the drive.

BY ANDY STEWART



External hard-drives docs make large drives easy to connect and swap out.

## RUNG UP & WRUNG OUT

With a dose of good luck this untimely debacle may still only end up being a financially costly misadventure (fingers and toes crossed), rather than the more unconscionable musical disaster. In the next few weeks there's a 60/40 chance I'll be called up and informed that all the mixes and overdubs on the SAM-WRONG 1TB (Total Bulls\*\*t) drive have gone to God as well. If that happens I really don't know how I'll react... I might need a padded overdub booth.

The mind addling part of all of this is that the incident was so entirely avoidable. All I had to do was backup my data in a more methodical way. But here's the thing; all this time I thought it had been.

The circumstances that led to this cruel juncture are pretty weird - 'interventionist by a less-than-friendly Deity' even, some might say.

## THREE PLACES AT ONCE

Two weeks ago the lost information was on three drives, as per normal procedure. (My old friend Simon Leadley used to say: "If it's not in three places, it's nowhere!") One of these drives, a portable USB, travelled with me to Singapore, where I recently recorded what were effectively two albums worth of data.

Unfortunately the drive was too small to accommodate all these new songs, so to make room (cue the second Andy Stewart *from the future*, lurking in the machine room and pulling the drive from the computer just in time) I deleted two very large project folders.

When I returned to Australia I was somewhat disturbingly informed that the information on the second drive was damaged apparently beyond repair when it hit the deck whilst spinning - meanwhile I was 7,000 kilometres away. 'Right, well I'd better back this stuff up again hadn't I', I mumbled to myself.

So what happened next? The internal drive containing the information on my MacPro failed to boot-up and appear on the desktop!

'Um, this can't be happening...' I thought to myself, as the blood from my head exited stage south.

Anyway, a week later and I now have a whole new procedure in place, with a further redundancy on the way – a five-bay RAID array. The horse has certainly bolted, but as it turns out I have only lost a relatively small amount of stuff – frankly it could have been far worse. Nearly all the data, barring a few days of overdubbing and mixing was mercifully backed up on a fourth drive, so it's a slightly less disastrous situation than first thought.

I'm now in the invidious position of deciding whether or not to even go ahead with the data recovery, or wear the loss and redo some of the overdubs. But thinking about it now, I reckon I'll have to wear the loss: pay my money, take it on the chin (or elsewhere) and move on with only mild lacerations.

## NISSIMUM DOCTUS - PAINFUL THOUGH IT IS

But the lesson is learnt. My desktop is now squeaky clean, everything has been extracted from every conceivable drive in the studio and backed up on two 2TB drives; one of which is stored in the house, the other in the studio. A third is backing up as we speak.

What this incident has so painfully illustrated to me is how easily precious work housed on hard-drives can

LaCie 5-bay RAID arrays are perfectly suited to MacPro studio setups



unpredictable disappear up a drainpipe. One minute it's all there scribed somewhat miraculously inside a shiny metal house brick, the next minute it is a house brick! From miracle to missile in no time flat.

So I implore all readers of **CX**: let my pain be your wakeup call. If you've neglected to back stuff up in the last day, or week (or worse), do so now please. Put down **CX Magazine**, walk calmly and quietly over to your rig and set a backup procedure running whilst nonchalantly whistling a ragged tune. Hopefully the backup will go smoothly and you'll be sweet. I really can't stress explicitly enough, without **CX** having to censor my words, how bad you'll feel if you end up where I am today.

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# THE MILL REPORT...

continued

## ON A BRIGHTER NOTE. . .

I had a big win last week, finally cracking a song production I've been working on for a little while now. It hit iTunes and Triple J a few days ago, and is sounding pretty nice on radio. The song is called *To Forget You* by ILDIKO (Check it out on Triple J's unearthed site). The reason I mention it here is because it's been this month's most fascinating challenge; putting sounds to computer without falling into musical cliché or jumping onboard the bleeding obvious train to Dagsville.

The song is a beautiful vocal/acoustic guitar track, and originally I had in mind a string quartet for the choruses... all very tasteful and slick you understand. Then one morning recently I woke up thinking to myself: "Don't be daft, a string quartet will be schmaltz personified!" I ditched the idea in favour of BVs masquerading as strings, old mono 8-bit overdriven sampled cello and oboe, a real violin, high-strung guitar, super delayed ambient electric guitar, tambourine and xylophone. Sounds cool now... like a wonky, sepia toned version of the original idea, only far more intriguing.

I'll talk more about this subject next issue I reckon because it's fertile ground. I'm constantly amazed when people bring songs to The Mill for mixing who really haven't appreciated the complexity of the work that's gone into some of their favourite sounding records. It's a common mistake we all make along the way... thinking that what's apparent on the surface of a mix is all it's comprised of. In fact, most great sounding records have depth and detail that's mostly invisible to the untrained ear. All that's perceived by the general public are the broad strokes; that it 'sounds great': big, solid, vast, super rhythmic, intimate, punchy etc. Punters never really know why, or care, quite frankly.

Learning about good production is about understanding what underpins the instruments on the surface. Often – though not always – it's the depth of detail *behind* the skin of the sounds that really makes it shine. Beauty isn't skin deep as they say... so it is with production.

**Happy Festivus everybody!**

## TOOLBOX review

### EVENT 2030 Active Monitors

Price: \$1,199

Distributed by:

Event Electronics

Ph: (02) 9648 5855 or

email: [craig.parker@eventelectronics.com](mailto:craig.parker@eventelectronics.com)



Since Rode Microphones took over Event Electronics back in 2006, the company has gone gangbusters, producing quality speakers to suit high-end and budget studios alike. When its Australian manufactured flagship 'Opals' first hit the market in 2009 I was amazed by their quality and power – and as it happens they've been sitting on my Neve console ever since. They're amazing speakers.

More recently (2011) the two-way active next generation Event 2020 BAS speakers hit the market. These also sounded fantastic, though much more modest in their construction and price than the Opals. With my eyes shut however, it was hard to say which ones I liked better. From that moment on I pitied owners of esoteric speaker companies.

Now there's an Event 2030 rear-ported three-way active studio monitor on the market. The 2030s are of a similar construction to the 2020s, offering the same incredible bang for buck.

Handy for consoles like mine that tend to be a bit tall to comfortably accommodate vertically aligned two-ways without them firing over your head, the 2030s come configured horizontally as dedicated left and right pairs.

Compact, black-on-black, and nuggety in appearance, these new three-ways features a 180mm low-frequency polypropylene driver (that's driven by a Class AB amp), a 19mm ferrofluid-cooled aluminium dome tweeter and an 85mm *midrange* driver (also driven by a separate Class AB amp). A sculptured waveguide front panel assembly houses both the tweeter and midrange driver, contributing to the extremely low-distortion, good looks and impressively loud (111dB @ 1m) monitoring specs.

The rear panel of the MDF cabinet is a fairly simple affair, featuring a port, and three *variable* pots that adjust gain up to  $\pm 12$ dB, top-end above 2kHz ( $\pm 3$ dB) and lows below 200 or 400Hz ( $\pm 3$ dB) – depending on where you derive your specs from. The back of my speakers say 400, the paperwork disagrees. No big deal.

However, how variable pots that don't even possess centre indents find their way onto devices supposedly as precise as speakers I will never know. I can tolerate them on parametrics, but on speakers it just seems inappropriate. The only justification for it might be that the shelving filter adjustments on the 2030s are fairly small – a full crank of the pot only derives  $\pm 3$ dB. The same can't be said of the gain pot.

Sonically however, these speakers are quite remarkable for the price... or indeed any price. I've heard speakers worth 10 times as much sound no better, and often-times worse. Being three-ways their coverage down through the lower midrange and into the low end is beautifully balanced, making my vastly more expensive Questeds sound decidedly hollow. I've always wanted some great sounding three-ways for precisely this reason... finally they're here. Truly balanced, smooth and powerful, the 2030s would, without question, make a brilliant, economical, and valuable monitoring addition to any studio, large or small.

ANDY STEWART RUNS THE MILL IN VICTORIA. HE'S ALWAYS HAPPY TO ANSWER QUESTIONS ABOUT RECORDING, MIXING OR MASTERING.

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**Thorsten Sattler,**  
MD of SGM Deutschland:

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

# THE MELTON LIBRARY AND LEARNING HUB

## TECHNOLOGY IN THE SERVICE OF COMMUNITY

### THE NEW MELTON LIBRARY & LEARNING HUB

shows us what's possible when design and technology work together in the service of a common good. Embracing the values of sustainability, accessibility and unity, this public building transcends the sum of its basic functions and becomes a place where a community unites through communication.

Jason Allen hit the books...

The building was designed by award-winning architects FJMT and opened mid June 2013. It is the first 5 star Green Star library in Australia, achieving an 82% reduction in water use and 43.7% reduction in CO2 emissions when compared to similar facilities. Intelligent management of lighting and electrical systems plus strict standards of sustainability in relation to materials cement its eco credentials.

The function of the community library has shifted over the last decades from primarily a resource of printed material to a centre for accessing all forms of information and sharing it with others. As such, the centre not only houses over 68,000 titles across multiple media, but also incorporates integrated meeting spaces, an auditorium, a gaming area, youth chill-out space, interactive children's area, computer access and digital signage.

#### Keep it simple, stupid

ICT and AV specialists CHW Consulting designed the extensive AV backbone of the centre with an eye to making what can be complicated systems as simple as possible to operate for any member of the public. Multiple spaces utilise projectors, screens, loudspeakers, microphones, playback inputs, wired and wireless computer connectivity, gaming and broadcast television to address the broadest needs of the Library's community. To unify and streamline the experience for the user, AMX Modero touch screens and keypads present a graphic and tactile interface that is accessible to anybody.

Working with CHW's design and in consultation with the library's staff, Soundcorp's Account Manager Nick Jebson

Ground Floor from the Mezzanine

and Project Manager Nash Summers were tasked with overseeing the installation and commissioning of the building's AV. With assistance from Soundcorp's AMX programming guru Martin Smith, they took the brief and ensured the community's needs were best served by every piece of technology included in the project. "The scope was to make it as user-friendly as possible and as robust as we could", explained Nash. "It's being used by people from all walks of life, so it had to be easy to use", Nick added.

### Switch it on, lock it off

The scale of the project's AV component is impressive. Seventeen different areas contain individual systems, from meetings rooms to full auditoria, with some systems switching between up to ten sources. All vision is in full 1080p High Definition, with video, audio and data carried via HDMI throughout.

With so many active areas being used for different purposes, the challenge was to keep the facility functioning smoothly. "We came up with a system in which the librarian can either enable or lock-off areas from a central location" said Martin Smith. "All public areas can be controlled via an AMX touch screen from the main reception desk. When the job was done and the staff walked in, they said 'Great, this is exactly what we needed it to do.' That was great for us because this wasn't an explicit part of the brief."

### Convergence

The central processors of the AV system are the new AMX Enova DVX-3150HD digital Integrated Presentation Switchers. AMX's Jared Walley assisted Martin with integrating some of the new features they include, such as SmartScale™, an AMX technology that automatically responds to the display's EDID information and scales the video to the best resolution and video parameters for that display. Smaller AMX NI-700 NetLinx Integrated Controllers were distributed around the facility behind their respective display panels. A combination of RS232 and Ethernet control means all functionality is accessible via the AV network rack, which is integrated to the EWIS. Five LCD panels comprise the digital signage element of the installation, with content scheduled to media players integrated with the screens.

The converged, networked backbone of the system is its real strength. This was an all-digital installation, with no analogue cabling used to distribute signal. HDMI was converted to AMX's DXLink transport and delivered via twisted-pair cabling throughout the building, with some runs up to 60 metres. This offers great cost and environmental savings compared to the huge runs of copper that would have been required. Even the digital cabling has the green tick – halogen-free insulation was chosen to eliminate the release of toxic chemicals in the event of fire, or their slow leeching over time. Convergence with the EWIS system represents even more efficiency, eliminating the doubling up of cabling and processing that is the norm in most buildings.

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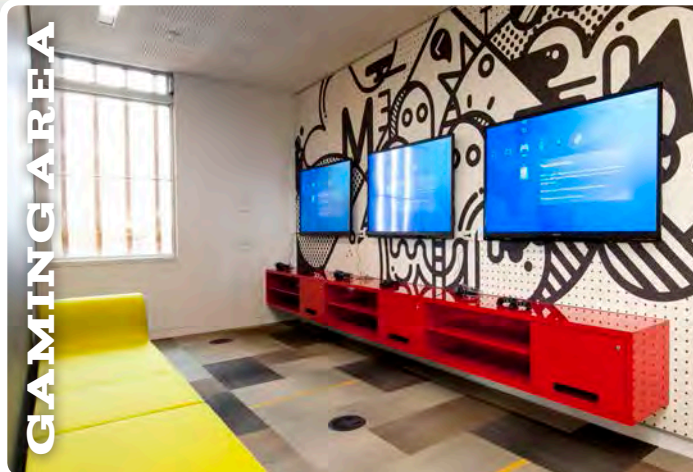
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# RECEPTION



GAMING AREA

## Game On

With 60 enthusiastic kids attending Story Time, this is not the enforced silence of the library of the past. “Libraries are changing. They’re calling them the ‘Second Lounge Room of the Community’ now” explained Sue. One of this Community Lounge Room’s most popular spots is the Gaming Area, which has three PlayStation 3’s hooked up to three LCD screens. Teens bring in their own games or can borrow from the library’s collection. Dual headphone connections at each station let them play against each other without disturbing the students at the study tables nearby.

Given the sometimes controversial reputation of video games in the community, what does Sue think of the inclusion in the new centre? “It brings the kids to the library” she said positively, “and hopefully, while they’re in here, they grab a book and realise it’s a nice, safe place to hang out. A lot of students are coming in after school sitting down at the tables and actually studying!”

## Accessible to all

Some thoughtful features have been programmed into the building’s services. Motion detectors in every room activate lighting when people enter and shut down again on exit, increasing energy efficiency. Multiple lighting presets are also available to trigger manually. Individual low-spill Hearing Induction Loops have been incorporated into all areas, most impressively into three small adjoining meeting rooms. Signal spill between the three rooms is controlled by laying an extra Induction Loop around each perimeter and running it out-of-phase to the primary Induction Loop, hence causing signal cancellation at the boundaries.

Issues of accessibility have been taken into account for all patrons. Sue Robertson, long-serving Library Technician at Melton, has been running Story Time for children for years. The new children’s area features a 70 inch LCD screen, dedicated ceiling speakers, lapel mic and DVD player. A veteran of running nursery rhyme sessions from large hand-written cardboard sheets, she’s found the new technology has enabled her to better serve her audience.

“We now call ourselves an Inclusive Story Time” said Sue. “We run everything from a PowerPoint on the screen. It has a running order of what we’re doing and all the words to the songs. It helps children with special needs who really benefit from knowing what’s next and exactly what we’re doing. Last week, we had upwards of 60 children.”



STORY TIME AREA

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WORKSPACE

## Making it personal and keeping it reliable

Programmer Martin Smith agreed. “We spent a lot of time thinking about the things like the gaming areas that made this job different”, he continued. “We talked to everybody involved, and integrated the community feel, right down to the Melton logo, into the design. It’s a true community centre and a great piece of community infrastructure. The times I’ve gone back to do follow-up work, we’ve had trouble getting into the meeting rooms because they’re so busy.”

Both the reliability and accessibility of the system are proving the keys to its success. This hasn’t been an easy thing to achieve, considering that significant amounts of legacy connections such as VGA needed to be integrated with HDMI, wired and wireless LAN, lighting and peripherals and then automated to a level where any community group could hold an AV-supported meeting with no staff present.

## Simple on the surface, smart underneath

“On the surface it appears simple, but underneath, it’s quite complicated” Martin shared. “What makes it work is simplicity and reliability of the touch screens and keypads; this is where high-end control systems leave the other options for dead. They increase system reliability in the end”

This has led to more people using the library for more purposes more often. Author events, movie nights, ESL courses and historical society presentations all run regularly without staff intervention. “It’s so straightforward and really easy” agreed Sue. “People walk in, the lights turn on, connect their laptops by wireless or HDMI and off they go.” The enhanced facilities now enable the library to offer a wider range a services to a wider range of people, further uniting the community. “Next year we’re holding more internet, iPad and eReader courses”, Sue enthused. The future of the library is integrated.

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# LISTEN HERE

## The Humble Mute Switch

THE NEVE CONSOLE AT THE MILL HAS TWO MUTE GROUPS CONTROLLED IN THE MASTER SECTION BY MASTER CUTS A AND B.

Let's face it, they're not cool, they're not flash, they're certainly not new, and I think it's safe to say everyone knows what a mute switch does. But when it comes to recording and mixing, mutes remain one of the least utilised tools in the shed.

AND IT'S EASY TO SEE WHY. THEY'RE NOT EXACTLY FUNKY, COMPLICATED TO USE OR COMPELLING LIKE DELAYS AND REVERBS, AND AS A TOPIC OF CONVERSATION MUTE SWITCHES ARE RIGHT UP THERE WITH FEDERAL POLITICS AND NAPPY RASH AS ONE OF THE MOST BORING TOPICS ON THE PLANET. HELL, I'M BORED TALKING ABOUT THEM ALREADY...

*BUT BEFORE YOU TURN THE PAGE, BEAR WITH ME A SEC.*

Mute switches fall right into that 'almost antiquated' category of controls that too many engineers overlook – either because they're deemed too simple, too boring or somehow out-of-mind/out-of-sight. But let's be blunt here: to ignore this switch is to miss out on the benefits of one of the most powerful controls on any console.

### MORE THAN A JUST PRETTY (BORING) FACE

Apart from acting as an automated protection mechanism or manual silencer for those occasions where an unexpected event takes place – a punter grabs the vocal mic at a festival or feedback flays your ears off in the control room – the humble mute switch performs countless other more creative functions. In a studio mix environment it's an epic switch, so epic I almost don't know where to begin talking about it... seriously!

But let's start anyway, not by listing off the obvious things they do – cutting single channels, groups, sends and returns etc – but by investigating how they can be used to maintain focus, and provide a deeper insight into where a recording or mix is heading. After all, most good recording sessions and mixes come supplied with healthy doses of fresh perspective at different points along the way; this method supplies it without taking a break or imbibing of caffeine.

### THE FRESH PERSPECTIVE

Particularly when you've laboured over a mix for 12 hours, let alone two or three days, mute switches are brilliant at refreshing your perspective. When your brain goes foggy, your mix has turned to pea soup with croutons, yet you still can't think of a single thing worth changing to spark it into life, mutes help rescue the situation.

Like a double shot espresso, mutes help you orchestrate new arrangements when things have lost their dramatic spark; determine which sounds seem lacklustre in a mix even when they sound great soloed; which mics on that three-mic guitar setup are adding nothing but phase artefacts to the mix; and where a sound *really* sits in the stereo image. They speak plainly and bluntly about how good, bad or indifferent instruments *really* sound in the mix, unlike the rival control – the solo switch – which generally only flatters things. (Switching a sound in and out, rather than soloing it, and discovering that it's doing three fifths of sweet F.A. can be a quite an eye-opener!)

And like no other switch on a console, mutes provide a clear perspective on a sound's volume, particularly when you've grown immune to it thanks to too many hours at the helm. By muting 'Sound X' for a brief period of time and then dropping it back into the mix, you can instantly appreciate whether it's too loud, too soft, too dull, too wet, too compressed and so on. It's essentially an A/B switch, providing the best clarification available to your tired mind.

BY ANDY STEWART

## LOOK-AWAY HANDPASS

The next time you're scratching your head about a main vocal's volume for instance, try muting it for five minutes while you work on some other aspect of the mix. By taking the vocal out altogether while your focus is elsewhere, not only do you gain a fresh perspective on countless other aspects of the mix – dominant vocals in a stereo image can often mask other problems you never knew you had – later, when the vocal is returned to the mix, its volume (amongst other things) will suddenly seem obvious. Now the vocal is *clearly* too loud, too quiet, too dull and so on. It's a fresh perspective akin to taking a break, but without the loss of precious time.

## MESS UNMASKED

The mute switch is also a past master at aiding in the cleanup of soupy mixes by helping you determine which channels of audio are contributing to the confusion. By simply muting things from the mix and then reinstating them – either two seconds or two minutes later – it becomes obvious which channels are to blame for the mess. Rather than reaching for the solo switch (which only *isolates* sounds from their context), a mute switch *removes* sounds from the mix, allowing you to easily hear if things grow clearer and more defined without them. It's amazing how often you can unwittingly tolerate a woolly, inarticulate sound in a mix while crazily adding reverbs and hacking into everything with EQ in a vain attempt to add definition. If only you'd tried muting a few things first to work out which sounds were the guilty parties.

Mutes are also brilliant at helping you determine where a sound sits inside a stereo image. Like spotting a light amongst many on a distant hill, it's easy to spot the one that's switching on and off when all the others are static. And let's face it: we all make mistakes. Panning automation anomalies, incorrectly applied aux sends and various other stuff-ups are easily revealed with a simple flick of a mute switch, often revealing that stray mic channel or extra duplicate you forgot all about in the confusion of mixing 150 others. 'So that's why my hard-panned guitar never seemed quite so wide in the mix!'

## MUTE GROUPS

One of my favourite roles for the humble mute switch is when it acts as a 'mute group'. Conspicuous on my Neve console as a row of bold red switches but rare amongst other consoles, a mute group is any combination of instruments you care to switch on and off as one. In a DAW environment a mute group is essentially no different from standard groups or VCA masters, except for the fact that in some cases they might be some other more specific combination of odd-ball bedfellows that you wouldn't normally group together.

I'll often have mute groups made up of things like 'kick drum and bass guitar', 'all the hard panned instruments' or 'everything that's side-chained'... that sort of thing. Mute groups encourage you to listen to the mix in a different way at the press of a button. It's all about clarity of perspective.

## MUTES DURING RECORDING

During a tracking session, mutes are great for determining phase coherency, as well as establishing mic choices and balancing stereo image. It's amazing what you can hear disappearing from a pair of speakers when that second or third mic you've setup in front of the electric guitar cabinet is added or removed from the group. Mutes help you quickly ascertain whether your mic positions are perfect, close or way off the mark. And the longer you can remain critical of mic placement rather than content with their combined mediocrity the better.

So, don't forget the mute switch! It's powerful and informative, and keeps you on your toes. By all means keep the subject away from dinner party conversation lest your guests drown in their soup, but that's no reason to ignore them at work.



Andy Stewart owns and operates The Mill in the hills of South Gippsland. He's happy to respond to any pleas for recording or mixing help... contact him at: [andy@themill.net.au](mailto:andy@themill.net.au)

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# LIGHTING SUICIDES CONTINUE



## WHY DO GOOD PEOPLE DO THE WORST THING?

Veteran Australian lighting guy Scotty Duhig, otherwise known as Scotty Dot from when he toured with Paul Kelly and the Dots, took his life late in 2013.

The statistical suicide rate for men aged between 55 and 64 in Australia is 19 deaths per 100,000 men. As a percentage this is a number almost too low to measure.

But the suicide rate for men who have worked as professional road crew in the golden era of Australian rock (mid 70's to end of the 1980's) is a staggering 5%, according to Ian 'piggy' Peel from the Australian Road Crew Association.

Of the 22 known deaths by suicide, out of 80 deaths across 420 crew, most were lighting guys. So why are they predisposed to suicide?

When news of Scotty's untimely death broke, an outpouring on the Australian Road Crew Association Facebook led to dozens of former crew posting their private mobile numbers online. 'Call any hour', was a common message to anyone feeling what some describe as 'the darkness'.

The question of why this is happening is possibly as simple as what Ian 'piggy' Peel from the Australian Road Crew Association describes as adjustment disorder. "He lived the dream, struggled through and he got back and nothing much happened".

Piggy has spoken up on the issue many times, and characterizes the career of a roadie from the 1970's or 1980's as a circus that ends suddenly by the roadside. "The crew sit on the curb, looking for a ride home, while the band move on".

With Scotty Dot there were stories of depression, working in the mines, a girlfriend in West Australia and then Scotty 'went to the shed', and came out in a body bag.



BY JULIUS GRAFTON

## SUICIDE

A counsellor close to this topic told **CX** that most people telegraph their intentions in some way in the earlier stages.

But most people don't know how to interpret the signals, which can include depression, negativity and more ominously people start to give their things away.

A sudden sense of calm and happiness after being extremely depressed can mean that the person has made a decision to commit suicide.

"People also don't know how to react if they suspect someone is suicidal", the counsellor (who prefers not to be identified) said.

"If someone is overt about the idea of suicide, it should be talked through at the time. Most people who commit suicide don't want to die - they just want to stop hurting."

Yet not every suicide comes with warning signs, although most do.

## LIVES WRECKED

Thirty years ago promising young lighting guy Jeffrey Merryweather was working with Misex. He killed himself in a fit of drug induced despair over a girlfriend who had just appeared with a staple through her stomach as a naked Penthouse Pet.

Jeffrey's little sister Lisa was 14 years old when he hung himself. Today she is divorced with three sons and works as an office manager. She lives in Tewantin in Queensland.

They were obviously close. "He did the lights for my 10th birthday party, with a smoke machine too. I felt very special. He doted on me, he used to call me Periwinkle. Then he left home at 16 to work with Phil Cullen."

"Not a day goes by where I do not think of Jeff - ever. I'm f\*\*ked", she told **CX**. "Every man I have known has betrayed me in some way and it started with Jeffrey".

"It's so bad. It's such a waste. It destroys everybody that's left behind. I'm destroyed from it. My parents never talk about it. It broke my family apart, my mum and dad split a few months after. They lied to me about how Jeffrey died. They said he had a heart attack. But found the death certificate."

"Mum and dad were trying to get him away from (the girl). They pleaded with him to come overseas with us. He refused. Then we tried to get him to come to Fingal Bay for a while but he refused that too."

"I've never had counselling. I'm too scared".

## PUTRID HOLE

Kate was a singer who worked the rock biz and knows its dark corners. These days she works for the Government in Sydney. Four years ago she moved in with Derek, knowing he suffered Bipolar disorder and thinking her positive influence in his life would make things work.



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"I cannot imagine living the two hemispheres of Bipolar disorder from periods of manic to the darkness of depression", Kate told **CX**. "In manic I saw the untouchable confidence, the fantastic highs, irrational behavior, anger, violence, hyperactivity and in Derek's case it was all rolled up with alcohol abuse. Then came the depression - the crash was like hitting concrete. A spiral down to a dark hole and into a pit of putrid darkness that I could not even imagine."

Over the period of a year, the alcohol took a greater hold and the medications prescribed to Derek were cut in half, taken every other day or not at all.

"The person you adore changes in front of your eyes", says Kate. "He was drinking at least a six pack of beer, bottle of red wine and straight scotch whiskey to complete the self medication. Every night. With this came a fear in the pit of my stomach that I could not articulate. I think you have to live it to understand."

"There were nights where I would say something completely innocent in the middle of a conversation and he was gone. Literally. Something I did or did not say triggered the response that would take him back down that hole. His eyes would glaze over, he would physically push me away, sometimes shove me to the ground and become completely unreachable. He would then put the ear pieces of his ipod in, pour another scotch and shut me out completely."

"It was on one of these nights that I left him downstairs and went to bed. Hoping as I did every night that he would drink one last scotch and pass out. I didn't sleep much these days."

"I got up the next morning and looked at him sleeping on the couch in the living room and found to my relief that he had indeed passed out. Upon nearing the couch my relief turned to disbelief and horror. Sitting on the coffee table was a thick piece of rope about 10ft long and a plastic bag. I could only draw one conclusion and it was unimaginable."

"I shook him awake in tears, my anger starting to overtake the fear. "What is this"? I asked fumbling through my tears. The answer was cutting. "I felt like I had no other option last night".

Kate did not call the police, the doctor or a psychiatrist.

"I did not know that I could. Over the next few days I tried to get him to go back to the doctor. I suggested a mental health plan where we would surround him with the right people, like psychologist, psychiatrist, try yoga, Pilates, meditation, get him back on medication. But nothing changed."

"I became hyper vigilant. I slept with one eye open for two years. I was exhausted. Helplessness is watching someone you love suffer right in front of you and there is f\*\*k all you can do about it. All the love in the world will only go so far. Watching them disintegrate into a monster takes its toll on you too. You live your life in unpredictability and fear. This does not happen overnight. You wake up one morning and discover that the person you were is now a pathetic excuse for the strong, happy, resilient and balanced person you used to be. It eats at you slowly, insidiously, and the pain and heartbreak become normal."

"Eventually I found the strength to run. It was in the middle of the night and it took every ounce of courage I had to go. The guilt was immeasurable but the instinct to survive was stronger. I was leaving behind a potential suicide but I could do no more. I made the decision that I will go no further into that putrid dark hole."

## AT THE STREET

George\* is close to **CX** and toured with some of the guys who's suicides inspired this story. His ex wife Amanda had all the signs, and despite people around knowing the problem, the attempt on her life was made.

This is his story, freshly told since it happened in 2013.

"I was at my new home a year after splitting with her. We had sorted everything except our co-owned house, where she stayed on. Amanda had a failed relationship after me; and he dicked her around financially and emotionally. It was in the end of winter and it was cold in that house."

"She was in an impossible place - financially rorted by him; and then strung out by his exit and his protracted lazy

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departure where he would come and take a few things, and leave open the next appointment. So his stuff was lingering while she was hitting the bottle and crying all night.”

Work became hard, she wasn't eating and lost weight. The kids (aged 12 and 16) were worried. George got a text message at 2am one weekday saying she needed him to drive across town and take the kids to school that morning. He dashed over and roused her, she'd taken six Valium and a raft of pain killers on top of a lot of booze.

“I spoke to a counsellor who had experience with suicide”, he told **CX**. “I followed his advice – I confronted her and asked whether she intended to take her life. She said no. I asked her to promise me she would let me know if she felt despairing again. She promised she would.”

Three nights later she texted and seemed irrational. It was school holidays and she was home alone with the kids. George suggested they all go boating in a few days and un-usually she agreed. He was delighted he'd found some hope for her and that she had something to look forward to.

But several hours later she sent the goodbye text to George and her first ex husband John who had the kids with him. It was clearly a suicide note. They all raced to the house after calling emergency services, to find six coppers and an ambulance in attendance with gawping neighbours. The Police had kicked in the door, the dogs were going off, but they held the family at the street for an agonising twenty minutes before wheeling a semi conscious Amanda out to the ambulance.

Her frantic parents followed the ambulance to the hospital leaving George, her other ex husband John and his kids – George's step kids – to collect their sanity while inspecting the house for clues about what she had done. “I fell to the kitchen floor in tears”, George said. “I'd been the strong guy right through everything with her, and the kids had never seen me cry, let alone wailing on the floor.”

At the hospital they admitted her, and next day she was ringing George and John, demanding someone come and check her out. She hadn't yet been assessed by a psychiatrist and when he did the rounds, he scheduled her. Later they let her call George and it was a very unhappy sedated Amanda on the line.

“You've caused me to be locked up. This is like a jail”, she said of the mental unit at the public hospital. “They won't talk to me. The bed is hard. No one will tell me anything. You have to get me out. If you don't I'll never talk to you again.”

Two days later she was released into the care of her parents and promptly moved back home alone, against all advice. The kids spent two weeks away with their Nanna and cousins, but were not referred to a child psychologist. The damage to them is unknown. George had to withdraw totally from the situation, and John bore the weight of her calls and despair.

Amanda sailed close to the edge for weeks, drinking and sending hundreds of text messages through the night.

It took many worrying weeks until the darkness had passed, yet those close will now always worry. Suicide and its attempts gravely hurts the living.

“It is the ultimate selfish act”, says George. “Everyone around the person has their lives affected.”

***\*Names changed to protect Amanda's privacy as she rebuilds her life. Derek's name changed, no one knows what happened to him.***

## RESOURCES:

Lifeline 13 11 14

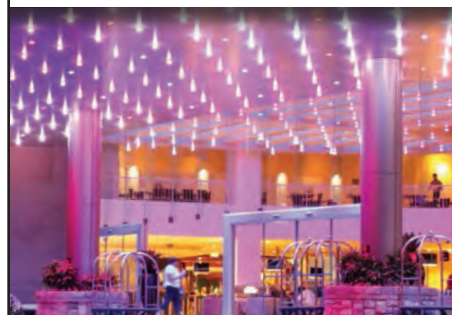
[http://www.helpguide.org/mental/suicide\\_prevention.htm](http://www.helpguide.org/mental/suicide_prevention.htm)

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# QSC PLD4.5

## LIFE IN THE F.A.S.T LANE

BY JIMMY DEN-ODEN



PEOPLE TALK A LOT ABOUT SPEAKER SYSTEMS, BUT LESS FREQUENTLY ABOUT THE AMPLIFIERS USED TO DRIVE THEM. VERSATILITY IS THE KEY TO GOOD ROI FOR AMPLIFIERS – THE MORE SYSTEMS YOU CAN USE AN AMP WITH, THE MORE OFTEN YOU CAN SEND IT OUT THE DOOR TO MAKE MONEY. MANY SPEAKERS ARE NOW SOLD WITH TURNKEY AMP SOLUTIONS TO SUIT, AND WHILE THESE GIVE GOOD RESULTS AND GOOD SYSTEM PROTECTION, IT OFTEN COMES AT THE EXPENSE OF VERSATILITY. YOU CAN'T ALWAYS USE ONE MANUFACTURER'S AMP ON ANOTHER'S SPEAKER SYSTEM. SO UNLESS THAT SPEAKER SYSTEM IS GOING OUT, NOR WILL THE AMPS THAT WORK WITH IT (AND ONLY IT).

The PLD and CXD are the latest generation of touring and installation amplifiers from QSC. They're brainy and they're versatile. We put to test the PLD4.5 - the biggest touring unit in the series.

As any system tech knows, there's no one universal way to run every PA system out there. Some systems crossover passively, some actively, and some are switchable. Each type has different processing. Being able to do this

processing inside the amp is very cool since it negates the need for external processors. Being able to switch from one configuration to another by simply recalling a different preset is even better, and a lot of amps allow this.

What's less common is being able to change how the power distribution of your amplifier channels is allocated. Normally such changes are limited to running an amp in stereo, or mono bridge mode. The PLD (and CXD) amplifier series employs a thing QSC calls FAST – flexible amplifier summing technology. This allows the amplifier channels to be used independently, or summed in a number of ways. The PLD4.5 will drive 1150W continuous per channel into an 8 ohm load, but you can sum together some or all of the channels to make up to 4200W into 1 channel at 8 ohms. You could for instance sum together the first two channels to drive subs, then use the remaining two to run mid/high boxes actively crossed over.

The channel summing is very clever, and there's a good video on the QSC website explaining it. Essentially it allows channels to work together in combinations of parallel or bridge modes depending on impedance requirements. There's an on-board wizard which can analyze the connected loads and suggest a suitable configuration. The different summing allows for all kinds of configurations (want 1 channel at 1 ohm? Sure, here's 3700W output), but the bottom line is you get more usable power (1 channel at 4 ohms yields 4200W).





JUST DIAL UP A PRESET TO RECONFIGURE YOUR AMP CHANNELS



The PLD series has just about everything you could hope to need so far as speaker processing goes. A selection of low and high pass filters, EQ, delay and phase are available on each output, so driving an entire PA stack, hang, or a whole rig off one amp is definitely possible. If you need to use the same amp to run four monitor sends the next day, that's fine too. The amplifiers have a range of protection mechanisms, including short circuit, open circuit, thermal, RF protection. On/Off muting, DC fault shutdown, active inrush limiting, input current limiting. Plus there's an output limiter on each channel too.

Having the features is one thing, but being able to get to them easily is another. The front panel interface is easy to understand and some obvious thought has gone into making it very user friendly. Operation of the menu system is so straightforward and self-explanatory that it's not really worth explaining. The rotary encoder is a little sluggish in its response, but I suppose that's better than a little twist causing you to over-shoot the mark. QSC has thoughtfully included a selection of very useful factory configurations, one of which will be a good starting point for nearly every application. Once you've tweaked the various parameters to your satisfaction the new settings can be saved as a user preset. In other words, you can make up configurations to suit whatever speaker systems you commonly use.

The back panel is all XLR and NL4, plus there's a USB port and a locking IEC connector. At 11.8kg the PLD4.5 doesn't have the absolute best power to weight ratio I've ever seen, but considering I could replace my 80kg amp rack with two of these (and have 2 channels spare) it's certainly very respectable.

There's a lot to like about the PLD series. Plenty of power, good construction, decent warranty, and perhaps most importantly the ability to pay for itself and make money quickly. Speaking of money, the price is pretty good too for what you get.

BRAND: QSC  
 MODEL: PLD4.5  
 RRP: \$5299.00 INC GST  
 PRODUCT INFO: [WWW.QSC.COM](http://WWW.QSC.COM)  
 DISTRIBUTOR: [WWW.TAG.COM.AU](http://WWW.TAG.COM.AU)



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# ROBE MMX WASHBEAM

## THE BIG HEAVY

BY JIMMY DEN-ouden



IN AN AGE WHEN EVERYTHING SEEMS TO BE GETTING SMALLER AND THERE'S MORE EMPHASIS ON EFFICIENCY, PUTTING OUT A BIG LIGHT IS A BOLD MOVE. THE MMX WASHBEAM IS UNAPOLOGETICALLY BIG, AND STAMPS OUT A 25.5KG FOOTPRINT. PRICewise IT SITS WELL NORTH OF \$10K, SO INSTANTLY YOU KNOW IT'S INTENDED FOR SERIOUS LARGE SCALE SHOWS.

The MMX WashBeam uses the Philips MSR Platinum 35 ST lamp, which is listed as "1200W equivalent". I looked up the spec and it's actually an 800W lamp, so it's more environmentally friendly than you might expect - the fixture consumes a maximum of 1020W. Lamp life is 750 hours on average.



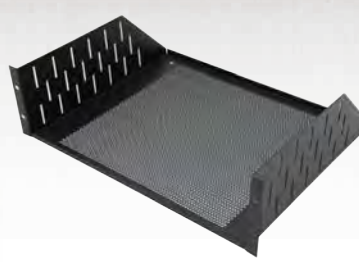
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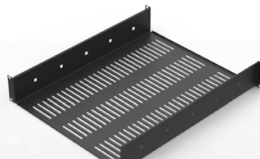
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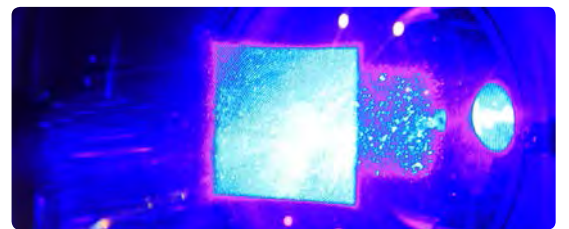


The optical path has many of the features you'd expect from such a fixture – CMY mixing, 6 filter dichroic colour wheel, variable CTO filter, rotatable indexable gobo wheel, dimmer and shutter. All these features allow for 8 or 16 bit control. There's a frost filter, plus zoom (more on this later) and remote "hot-spot" control.

The MMX WashBeam also has four beam shaping shutters each of which can be tilted side to side. The whole beam shaping assembly can also be rotated. Pan and tilt range on the fixture is 540 and 270 degrees, and perhaps due to the extremely large head on the unit it's not super fast. Full pan rotation takes about 3.5 seconds, and full end to end tilt is about a second faster.

Perhaps the really defining thing about the MMX WashBeam is what's at the very end of the optical path – an interchangeable lens assembly. A quarter turn on two screws, then pressing two release tabs is all that's needed to remove the beam lens and swap it out for the wash version. Just be sure to let the lens cool before attacking it with bare fingers, since they do get pretty warm.

With the beam lens in place you can achieve hard edge gobo looks, and 3-65 degree beam angles. The wash lens looks exactly like a Fresnel lens, and when inserted sees the beam edge definition swapped for a nice flat light field with soft edges. You can still engage any of the other optical path functions and while gobos don't really work the beam shaper kind of takes on a barn-door characteristic.



I think the MMX WashBeam is representative of two different types of fixture in the large, high output category. The interchangeable lens system allows it to do both jobs pretty well because the right lens is used for each task. The relative lamp efficiency is about what you'd expect with generational advancement.

BRAND: ROBE  
 MODEL: MMX WASHBEAM  
 RRP: \$15664.00 INC GST (OR \$17434.00  
 PER UNIT IN A DUAL ROADCASE)  
 PRODUCT INFO: [WWW.ROBE.CZ](http://WWW.ROBE.CZ)  
 DISTRIBUTOR: [WWW.ULAGROUP.COM](http://WWW.ULAGROUP.COM)



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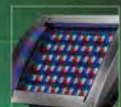
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# JBL LSR 305 STUDIO MONITORS

## SURPRISING BIG LITTLE BOXES

BY JIMMY DEN-0UDEN

WHENEVER ANYONE SAYS JBL MY MIND IMMEDIATELY JUMPS TO THOUGHTS OF VERTEC, 2226 DRIVERS, AND AN OLD SYSTEM 400 WEDGE I OWN. I DON'T THINK OF STUDIO MONITORS, SO IT WAS WITH SOME DEGREE OF SPECULATION I CRACKED OPEN THE LSR305 BOXES.



I've spent a fair bit of time listening to the LSR2328P (the larger predecessor to the bigger LSR 308), and while I liked them okay I came to the conclusion they weren't really neutral. The LSR 3 series brings some changes, the most obvious of these being the image control waveguide. The idea of the waveguide is that it widens up the "sweet spot" between the speakers – so more people can fit into it, or one person can more freely move about within the space and still accurately hear what's going on.

Unlike PA boxes, I don't really have a formalized test procedure here at CX for studio monitors. I put them up in my little acoustically treated bunker and use them for things for a while, and eventually I'll decide if I like them or not. I like these speakers a lot. The LSR305 uses a 5" woofer and 1" tweeter, each of which can be boosted or cut by up to 2dB using back panel switches. In a good room you probably won't need to touch

the switches – if you reach for anything it will probably be the HF attenuator. Also on the back panel is a +4/-10 switch, power switch and stepped input level attenuator. Input is XLR or TRS, with power supplied on IEC.

The drivers are internally bi-amplified with dual 41W class D modules. In addition to the new HF waveguide, there's a double flared port to reduce low frequency turbulence. Talking frequencies, range is specified at 43Hz – 24kHz. Pretty good for a little box, and listening to a bunch of different sources I'd believe it too (+/-3dB).

Peak SPL is specified at 108dB, although that's C-weighted which in my mind is a bit of a cop-out. For very compact and remarkably lightweight monitors, the LSR 305s go a lot louder than you'd expect. I pushed a fairly irresponsible amount of level through the boxes and up to a point they handled it with aplomb, only showing minor signs of distress at extremely high levels (and I mean high – way higher than I'd ever want to monitor at for any kind of extended period). There's no mention in the literature of any protection, nor were any clip lights evident, so I think the idea is to keep the input level relatively sane.

Completely contrary to the design intent I tried the LSR 305s in horizontal mode as well as vertical, and quite liked the results. Maybe I'm just used to a narrower listening field? Look, really to me they sound good either way. While the general top-end response sits somewhere between detailed and aggressive, nothing specifically stuck out as overly lary. They're definitely better at closer distances (around a metre is good), so I'd call them near-field monitors.

In a completely unfair comparison I went back to my normal monitors instead and did some A/B testing. The LSR 305s aren't as good, but then again they aren't \$3k a pair either. For around 20% of the price they deliver a solid 90% of the performance, and for the money I reckon they're an absolute steal.

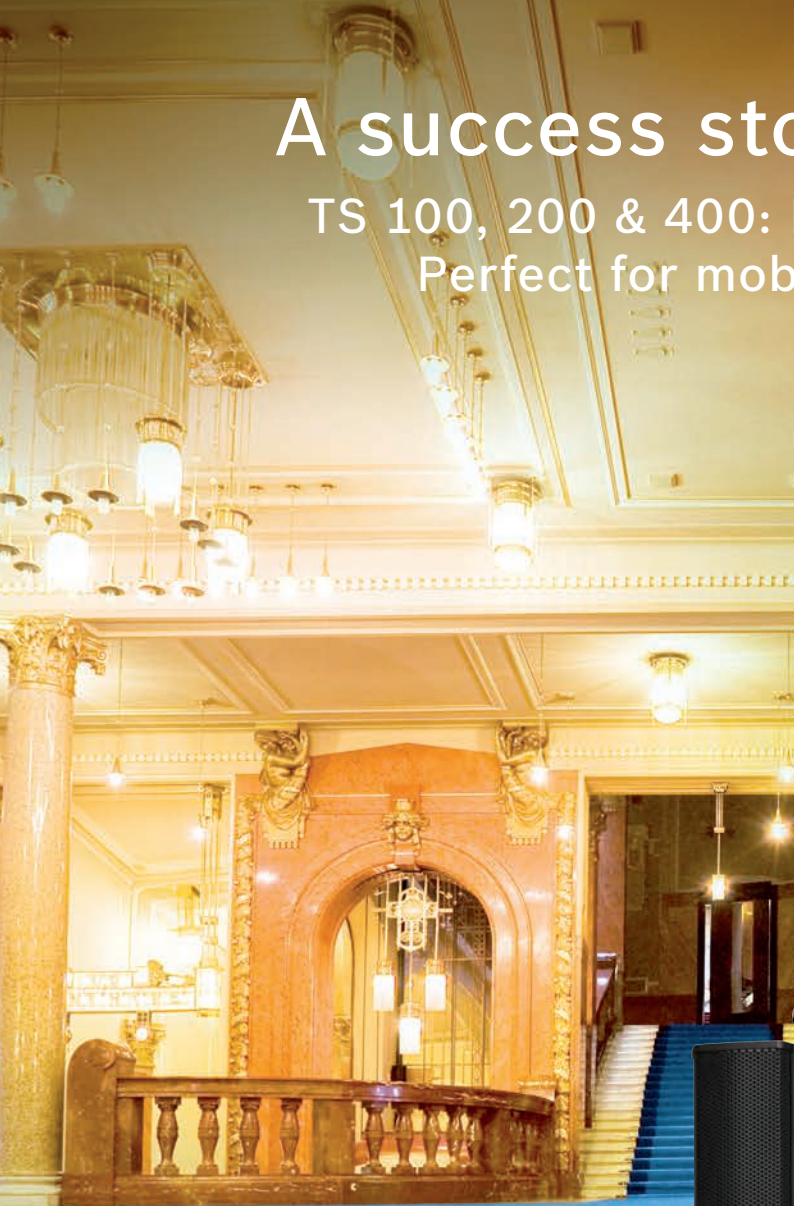


BRAND: JBL  
 MODEL: LSR 305  
 RRP: \$249.00 PER BOX INC GST.  
 PRODUCT INFO: [WWW.JBLPRO.COM](http://WWW.JBLPRO.COM)  
 DISTRIBUTOR: [WWW.JANDS.COM.AU](http://WWW.JANDS.COM.AU)



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# RIEDEL MEDIORNET COMPACT

## SENDING ALL THE RIGHT SIGNALS



BY JIMMY DEN-ODEN



LET'S SAY YOU'RE PRODUCTION MANAGING A GIG IN A STADIUM. YOU'VE GOT TO OVERSEE SOME PA, MIC INPUTS, MONITOR SENDS, SOME LIGHTING, MAYBE SOME SCREEN FEEDS AND CAMERA INPUTS, RF, PLUS OF COURSE A COMMUNICATIONS SYSTEM. FOR YEARS THE ONLY WAY TO GET THE VARIOUS AUDIO, VIDEO AND DATA SIGNALS ABOUT THE PLACE WAS ON COPPER CABLE. THIS MEANT RUNNING CABLES. LOTS AND LOTS OF CABLES.

MediorNet allows you to replace all of this and more with a single fiber optic connection. It's much tidier, line-checking it is virtually instant, and it requires only a fraction of the labour to deploy and pack up. But how does it work?

MediorNet is a distributed, point-to-point multiplexed data transmission platform from Riedel. MediorNet Compact is a pre-configured frame which allows you to get signals into and out of the optical network. Each frame is capable of supporting 50Gbit/s of data transmission via up to 6 optical ports. The easiest way to run the fiber is simply to daisy-chain from one frame to the next. The platform will automatically figure out the shortest path for each signal routed within it, and you can also manually define signal routes.

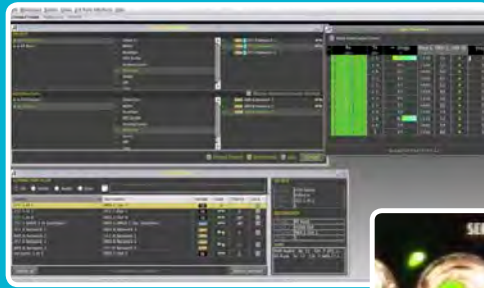
The MediorNet family includes a modular frame system which we've previously looked at, and MediorNet Compact – a pre-configured frame available in three flavours. All the frames include SDI, analogue audio, AES audio, Ethernet, serial data and sync inputs and outputs, as well as a pair of display ports. The PLUS frame adds support for Rocknet (Riedel's audio multiplexing platform), and the PRO

frame we tested includes the above connectivity in greater quantities. Two card slots allow fiber and additional video IO cards to be installed. Video cards include SDI in, SDI out, a combo SDI in/out card, and there is an HDMI card in the pipeline too. There's a Grass Valley camera card available too.

MediorNet Compact doesn't include a dedicated processing card, so if you want the system to do things like scaling video internally you'll still need to go to a Modular frame. The Compact frame will handle functions such as embedding / de-embedding, timecode insertion and frame synchronization. If that's all you need, then the Compact frame is a great option and represents a significant saving on price over a full modular kit.

Our test kit came with 2 fiber ports, but up to 6 can be fitted. The way Riedel uses the fiber is quite clever. MediorNet utilizes Neutrik OpticalCON QUAD connectors, each of which carries four fiber channels. This not only means that each frame can be linked to the next with just a single physical connector, but also that parts of the optical signal can be looped out to adjacent connectors. This allows the system to link out to RoF (RF over Fiber) equipment. This would for instance allow you to run your radio mic and IEM antennae on stage, and put the receivers at FOH. Imagine that – RF with no cable loss!

As mentioned you can manually define signal paths within the fiber network, including redundant paths. If the system loses a fiber connection, it's smart enough to re-route signals through the remaining paths – the process only takes a couple of seconds. There's a port to connect an optional second power supply for further redundancy too. The MediorNet Compact frame is big on diagnostic information. All the ports have indicator LEDs to show when they're active. The BNC connectors have LEDs inside



MEDIORWORKS SOFTWARE IS STRAIGHTFORWARD AND INTUITIVE

LIGHT-UP BNC CONNECTORS SHOW SIGNAL PRESENCE



them which light up when a valid signal is present. Test signals can be generated within the system and routed anywhere. The display is actually a dual actuator button with an adjacent rotary encoder, and you can set the IP address of the unit directly from the front panel.

Routing is performed via the MediorWorks configuration software – just attach a PC or Mac to the CONFIG port then browse to the IP of the frame to download the software directly from the frame. Because the frame holds the right software there are no firmware version hassles. The software runs in Java and is very easy to understand. Generating routes is a simple drag & drop operation. Multiple machines can control the configuration simultaneously.

Signals are all encoded the moment they hit the box which means flexible routing options – so for example a signal can go in as analogue audio channel 4 and come out as channel 27 on a MADI stream. Latency from end to end is typically about half a millisecond. The MediorNet platform is smart enough that if it needs to route a signal to multiple ports

on one frame, it only does it once – the signals are then distributed to the additional ports locally within the frame. This saves on bandwidth.

Really the whole platform is like a massive distributed multi-core for any type of signal you're likely to encounter in a professional production situation. It won't handle composite video, but on the scale of show it's likely to land on that's hardly likely to even be a consideration. It's very good, very smart gear and presents great options for signal distribution as well as some huge potential labour savings. The Compact frame is exactly what the entry point into such a platform should be.

BRAND: RIEDEL  
 MODEL: MEDIORNET COMPACT PRO FRAME  
 RRP: FOR SINGLE COMPACT PRO, PLUS 6X FIBRE LINKS (NO WDM, NO OPTION CARD)  
 IS \$28,116 INC GST  
 PRODUCT INFO: WWW.RIEDEL.NET  
 DISTRIBUTOR: WWW.RIEDEL.NET

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# PR LIGHTING XLED 1037

## MOVING HEAD LED WASH-LIGHT

BY JIMMY DEN-OUDEM



THE XLED 1037 IS MADE IN CHINA BY PR LIGHTING. PR HAS BEEN ESTABLISHED FOR CLOSE TO 30 YEARS, AND JANDS IS NOW THE LOCAL AUSTRALIAN DISTRIBUTOR. WEIRD? NOT REALLY – NOT EVERY BUDGET EXTENDS TO VARI\*LITE, SO WHAT THEY'RE DOING IS GIVING THEIR CUSTOMERS A MORE AFFORDABLE OPTION. SINCE CHINESE PRODUCT LIGHTING HAS ALREADY MADE IT TO AUSTRALIA IT PROBABLY WON'T GO AWAY ANY TIME SOON – WHAT JANDS HAS PRAGMATICALLY DONE IS BROUGHT IN A CHINESE PRODUCT IN WHICH THEY ARE CONFIDENT ENOUGH TO OFFER LOCAL SUPPORT.

The XLED 1037 is a moving head LED fixture comprising 37x 10W RGBW LED modules with a rated life of 50,000 hours. Pan is 540 degrees, tilt is 270 degrees, and there's a 13 to 52 degree zoom. The unit will strobe from 0 to 25 fps, there's a linear dimmer, and it can produce white light in colour temperatures ranging from 3200-10000K. DMX is 3 or 5 pin XLR in and out, with PowerCon for mains supply.

I'm sure I could get onto any number of websites and get a Chinese moving head LED shipped to me for cheaper than the XLED 1037, but chances are the first breakdown would see it costing more. Having things like local support, CE approval and some testing under Australian conditions is worth more than many people realize.

XLED 1037 boasts perhaps one of the most generic feature sets a moving head LED fixture can boast, so what dear reader is the standout feature? It's the price.

The XLED 1037 doesn't have a sexy name, nor is the case particularly elegant. It's not really compact either. It doesn't look bad, but it doesn't have the "looks cool even before you turn it on" appeal of something like a VL550. It's probably safe to say PR has invested the majority of their efforts into making it look good when it's running, and they've actually done a pretty good job of it.

The XLED 1037 did everything I asked of it competently. The movement is pretty fast for both pan and tilt as well as zoom. It's got good output and the dimming, though a little electronically noisy is quite smooth. The RGBW source is well homogenized so there are no colour artifacts in the beam. I checked the output through a camera and no flicker was evident. Full range tilt is a little noisy, but I think it's just the lens assemblies shifting a little within their individual holders. I do like the pull-out handles which are included for lifting the unit. I also like the extended DMX profile which allows individual colour control over the concentric rings of LEDs.

While I don't anticipate the XLED 1037 appearing on international riders anytime soon, with a 50,000 hour LED module rated life and a 2 year warranty it may well find a home in installations and smaller production companies who want such a fixture but can't justify the expense of a "name brand" product.



BRAND: PR LIGHTING  
 MODEL: XLED 1037  
 RRP: \$4325.00 INC GST  
 PRODUCT INFO: [WWW.PR-LIGHTING.COM](http://WWW.PR-LIGHTING.COM)  
 DISTRIBUTOR: [WWW.JANDS.COM.AU](http://WWW.JANDS.COM.AU)



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THE DNA OF

# DPA

You don't need to show anyone your ticket on the train in Copenhagen, because it's trusted that you actually bought one. The culture there is one of honesty. People are polite and largely keep to themselves – queue jumping is a most heinous cultural mistake to make. Everyone speaks Danish, but because English is also taught in school it's easy to ask for help should you get lost in the expanse of old buildings, canals and shopping malls. There are bicycles for days, everywhere you look.

**Denmark is the loveliest kind of place.**



**DPA CEO, CHRISTIAN POULSEN**

It's also the location of DPA Microphones who have offices in Allerød, and production facilities in Asnæs about 100km out of Copenhagen. Owned by CEO Christian Poulsen and CFO Christian Hoff, DPA is a boutique microphone manufacturer with around 130 employees. **CX** was invited to attend their 2013 partner conference, an event which saw distributors, dealers, and key users from all over the world in attendance.

Over two days we visited production facilities and participated in seminars covering topics such as measurement, concealed microphone placement and noise rejection in loud environments. We attended a half-day workshop held in the Nørrebro Teater, where we had the opportunity to experiment with mic selection and positioning, complete with a live band and wide array of mic choices.

Founded in 1982 DPA has significant heritage in measurement microphones with Brüel & Kjær, and much of this ethos is carried on. Not only in their product, but their whole way of thinking - the microphone shouldn't get in the way of capturing the source. I discovered this while chatting with CEO Christian Poulsen over dinner on the first night of the conference. Christian has been at the helm of the company for around four years, and he's the kind of guy you can sit down and just chat with. His charismatic manner gives away the enthusiasm he has for what the company does, and it's clear that he holds the technical knowledge to support his beliefs.

BY JIMMY DEN-OUDEM

TYPICAL SHOPPING DISTRICT OF COPENHAGEN



LEON HART - AMBER TECHNOLOGY, FRANCIS LAI - DPA, KEN KIMURA - DPA, MICHAEL LASA - SOUNDCORP



PARTNER CONFERENCE ATTENDEES OUTSIDE THE FACTORY IN ASNÆS

DPA is known to a lot of people, but perhaps not for the full scope of products they produce. Many people think of the company for headset or lapel mics and indeed this much is absolutely true, but there's more going on. While some products such as the 4006, 4007 and 4011 were inherited from B&K, DPA have plenty of milestones of their own. They include the 4060 miniature mic and 4066 omni-directional headset mics (1998), the 4088 directional headset (2004), the d:vote 4099 (2008) and the d:facto (2012).

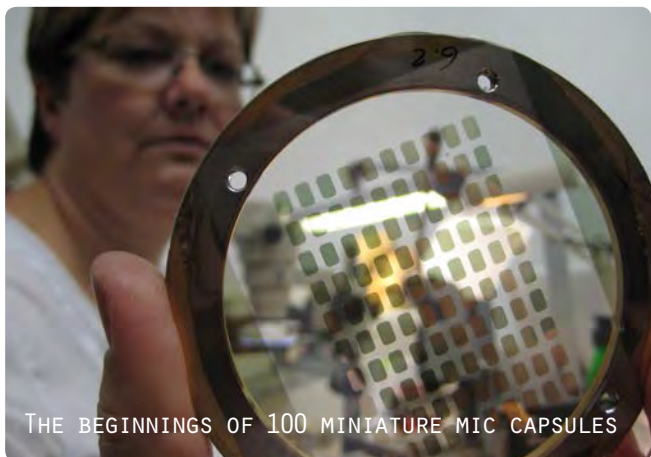
Within the pro audio arena DPA users include the New York Philharmonic, Sting, and Metallica. Beyond our industry the company services others including security (mics in bank trucks for voice recognition), and car racing, where their miniature mics are used on F1 cars to record onboard audio.

Everything DPA makes is a condenser mic, and this is perhaps one of the reasons they're so very good at it. The idea of putting a bunch of condenser mics on stage scared me until the day I tried it. I had reservations about

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feedback, lack of headroom, or killing a capsule with excess SPL. Hearing from Ole Moesmann (R&D Manager) affirmed that much of my concern was indeed, unwarranted. He's a smart guy, and points out that it's not enough just to control what goes in the front of the mic, factors such as the effects of rear lobing must also be addressed.

Outwardly the production facility seems unimposing, but what goes on inside it is quite astounding. Because the scale of so much of the DPA product line is miniaturised, the production staff generally work through microscopes. The physical dexterity required to assemble the products is on another level entirely. Some of the components installed

in the mics literally look like specks of dust in your hand. The majority of the factory staff is female, because guys just don't have steady enough hands to perform the work. I'd struggle to identify the components, let alone solder them!

You can't just go down to the local hardware store and buy the tools you need to build miniature microphones, because they simply don't exist. So not only does DPA build mics, but they also get their own tools built to make the mics. I chatted with some of the ladies in the factory and aside from the high level of knowledge, also apparent was the passion they have for their work. They take a lot of pride in what they do, and rightly so I think. You couldn't get a machine to do this work because the process is about more than just assembly – there's analysis and interaction at nearly every stage.

**Mikkel Nymand**  
Product Manager

**Francis Lai**  
Sales Manager - APAC

**Bo Brinck**  
Global Sales Support Manager

**Nils Vinding**  
Area Sales Manager





DPA CFO, CHRISTIAN HOFF



LIVE BAND FOR MIC WORKSHOP

A nice point about DPA is that when they see an opportunity to improve a product, they take it. d:facto II is a good example of this – they realised they had a great vocal capsule with d:facto I, but it would be way better if it was modular and you could fit it to a range of radio mic systems. Because the company is relatively small it makes it easy for people to work together, so things kind of just get done. The R&D department is awash with ideas on whiteboards – diagrams and formulae none of which I even pretend to comprehend.

In the modern age with so many audio tools available it's easy to get caught up with filters and plug-ins and such. DPA has a different philosophy, which is that the right mic in the right position should allow the instrument to be presented naturally. I reckon they're onto something good.

Kim Nedertorp  
Area Sales Manager

Ole Moesmann  
R&D Manager



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DECEMBER  
2013

# ROAD SKILLS

BEYONCÉ

BOY & BEAR

Ricky Martin

BY CAT STROM

Beyoncé - PHOTOS courtesy of Parkwood Entertainment  
Boy & Bear PHOTOGRAPHY - Ashley Marr, Alex McCoy, Bazz Barrett  
Ricky Martin PHOTOGRAPHY - Daniel Mercer, Chino Lemus

## BEYONCÉ MRS. CARTER WORLD TOUR

There had been a bit of a fuss on social media regarding the audio quality of the Australian Beyoncé dates with rants about the concert being way too loud, too much distortion and rumours of lip synching. Yes it was loud and my internal organs were shook up a bit but was it too loud? Not in my opinion, you soon got used to it and the quality was fine where I was seated but as we all know that may not be the case for everyone.

I asked Beyoncé's sound engineer Stephen Curtin why the show was so loud and he simply replied 'because that is how the boss wants it' and really who is he to argue with the Queen B?

"She likes her show loud," he said. "She has a very powerful voice but compared to the volume of the show, sometimes it's difficult to get her out in front of the mix. It's a challenge to keep her right on top and clear so everyone can understand her. After the Auckland show, people were complaining it was too loud so we did make adjustments. We'll try bring it down wherever we can as long as she's comfortable with it.



"I think it's a little bit different in Australia than in the US; some markets you could turn it up but every time I have been to Australia it seems people are a bit more sensitive to volume. I was talking about this with one of my techs and we came to the conclusion that it probably has a lot to do with the environment – it's not nearly as loud in the general static environment here. Your cities are very quiet compared to Chicago or New York."

Another challenge for Stephen on the tour has been the actual venues, particularly the older venues that were not really built for this caliber of concert.

"Acoustically they are really horrible and it can be hard keeping the sound consistent from day to day," he noted.



At least Stephen has exactly the same gear at every show, choosing a d&b audiotechnik PA which he knows he can get anywhere in the world giving him the same speaker box, and same amplifier with the same processing.

“On top of that, it’s a really good, clean and powerful box,” he added. “The main hangs are twenty deep of d&b J8 boxes left and right, with a sub hang of eight deep J-subs slightly upstage of that. Our side hangs are sixteen deep of J8’s and we have a rear hang, depending on the building, which over here consists of twelve d&b Q1 boxes although sometimes we use d&b V8’s.”

Twenty-four d&b B2 subs are located on the stage floor and there are eight d&b Q10’s for front fill. Monitor engineer Daniel Gonzalas utilizes six d&b M4 wedges although they don’t really do much just supporting the dancers. Sidefills are d&b V-subs and V8’s, all flown with two V-Subs over five V8’s per side.



An Avid Profile is used to mix Beyoncé's vocals whilst a DiGiCo SD7 takes care of the band.

System tech uses Rational Acoustic's Smaart and Morset Sound's WinMLS software to tune the PA, Smaart for the low-end timeline and WinMLS for everything else.

Everyone uses Sensaphonics in ears with Beyoncé wearing the 2Max model alongside her backing vocalists and the band and techs wear the 3Max. Shure PSM1000's are used for the transmitters.

Beyoncé uses a custom-made chrome-finish Sennheiser SKM 5200-II handheld wireless microphone with an MD 5235 dynamic capsule, whilst the backing singers also use Sennheiser but with 5005e capsules.

The famous Bey Stage located directly in front of the FOH position doesn't cause Stephen too many problems as long as the room doesn't have too many reflections.

"I have a couple of filters on the console that I dial in to punch when she comes onto the Bey Stage," he remarked. "My system tech also monitors what's going on just to make sure we're as clean as possible."

The aforementioned console; a DiGiCo SD7, runs 80 channels at 96kHz, which means the signal goes straight out of the console into the Dolby processors and amplifiers at the front end of the PA without any sample rate converting required.

"I chose the SD7 primarily because I like the way they sound and I like their flexibility," commented Stephen. "There's a lot of stuff I can do on a SD7 that I can't do on any other consoles. I've been using DiGiCo for a long time now so really it is second nature to me. I use a lot more of

the internal effects on this tour than any others I have done; they're nothing extra special just a few reverbs and delays as well as a few pitch things. I split between the DiGiCo effects and Waves which I am running with the console."

There are a few outboard effects: two Yamaha SPX2000, an Eventide H3000, a TC Electronics TC 6000 and a DBX 120 Sub Harmonic Synth. Outboard inserts include two Smaart Research C2 stereo compressors and two Avalon 737 compressor / EQ's.

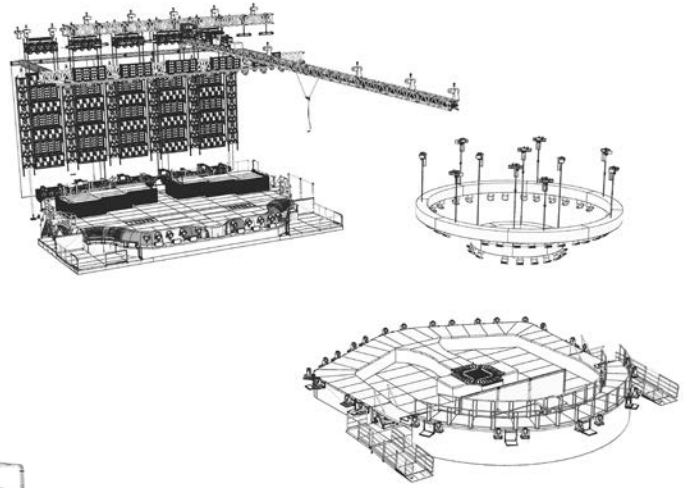
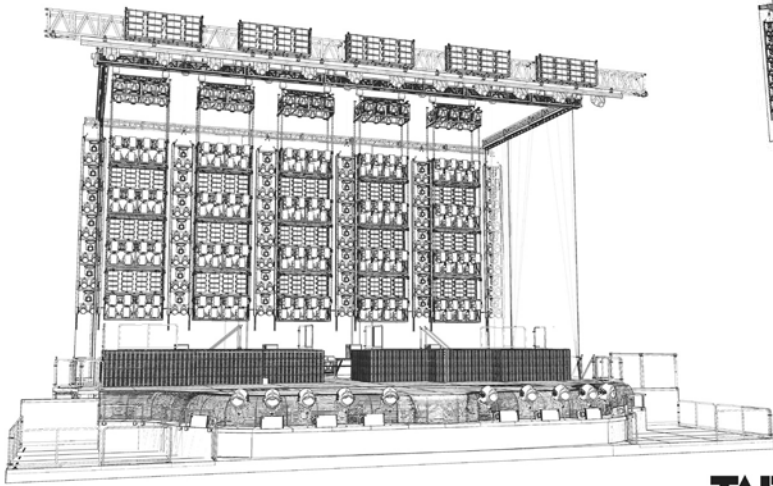
Unfortunately for local audio production companies, all of the gear was shipped out from 8th Day Sound in the US.

## LIGHTING

The Mrs Carter Show is reportedly the brightest show ever measured (in lux output) on a concert stage – thanks to the inclusion of hundreds of SGM X-5 LED strobes by Production Designer, LeRoy Bennett. It was Mrs Carter herself that requested a blazing light show dominate the stage rather than video or LED and so LeRoy set about designing his 'Wall of Inferno'.

The said lighting wall, fabricated by Tait Towers, uses an amazing 426 SGM X-5 strobes, 196 MAC700 custom mirror fixtures, and 204 Clay Paky Sharpys. It allows for one of the most retina-burning finales ever seen; as Beyoncé reaches the end of the song Halo, all lighting fixtures on the wall blast the audience with light.

"B definitely has a distinct idea of what she wants," remarked LeRoy. "We discussed having a big wall of lights and I ended up designing just that! She's a mega-star and



**TAIT**

she wanted a big, in your face type of show. The Sharpys are the only fixture that can cut through the strobes and compete with them.”

Of the SGM X-5 Strobes, LeRoy said, “I was impressed by the combination of power consumption, brightness and rugged design. But I was particularly impressed by the fact that each strobe breaks down to three individual cells, enabling me to project very low res graphics as well as bright blasts of light and strobing”.

The lighting wall situated upstage consists of columns of stacked frames intermixed with six light ladders. The vertical

frames alternate between a frame of SGM X-5 LED strobes and a frame of the customised MAC700 moving mirror heads fabricated by Upstaging.

“I told John Huddleston at Upstaging that I wanted a moving mirror fixture so he ripped a MAC700 apart and put a mirror in it,” began LeRoy. “It’s funny because in the past when I wanted a moving LED fixture before they came out, he gutted a MAC300 and put an LED panel in it. That was for Paul McCartney and it was really the first moving LED wash fixture!”

“I’ve always liked the idea of lights bouncing off of mirrors

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LIGHTING DESIGNER -  
LEROY BENNETT



FOH AUDIO ENGINEER -  
STEPHEN CURTIN

but the main reason for the fixtures in the wall of light is to get four times as much light out of the amount of lamps I have. It allows for a lot more variations of where the light source comes from.”

The effect is particularly stunning on the Bey Stage where Clay Paky Sharpys hugging the edges of the stage shoot up towards the mirror fixtures hung from a circular truss, thus bouncing light around the arena.

As well as the wall of light the rig includes 94 Martin MAC Auras, 71 Martin MAC Viper Profiles, 28 Philips Vari-Lite

VL3500 Wash FXs, seven Syncrolite SXB5, and 16 Color Kinetics Color Blast.

Whilst many lighting designers waffle on about integrating video with their lighting, not that many achieve it really well. LeRoy is an exception, spending a lot of time cueing to the video. In fact in the song ‘Baby Boy’ the lighting is pretty much cued to each frame of the video.

LeRoy jokes that he tells his crew ‘make this happen and tell me what I want, but don’t tell me what it is’ to which his programmer Cory Fitzgerald has a good chuckle.

“It was a fairly tricky show to program with all the mirrors and bouncing light but once it was dialed in, it was just about creating different looks for every song and using the rig to its full potential,” added Cory. “It certainly took some time to set up. There were a couple of different ways we approached the mirrors and focusing them versus the fixtures – our lighting director Whitney Hoversten has a ton of stuff to focus every day so making that as efficient and streamlined as possible was a must. There are so many different looks and so many different beams and focusses for the Sharpys that are very specific. You have to touch every light, every time.”

Cory programs on a MA Lighting MA2, saying that there is always a way to make it do what you want it to do and Whitney agrees.

“MA2 is definitely my favourite console and I’m sure we could not have achieved this show on any other console,” he concurred. “I think it is far superior to anything else on the market.”

Whitney admits it’s a hard task making sure the show runs smoothly each and every time.



LIGHTING DIRECTOR -  
WHITNEY HOVERSTEN



LIGHTING PROGRAMMER -  
CORY FITZGERALD

“I’ve definitely been thrown in the fire!” he laughed. “There are many challenges particularly the rig itself – it’s an enormous challenge for the guys getting it in and out of the doors and then for me to get the time required to make it look as good as it needs to night after night. I take a lot of pride in the overall look of the show and making sure everything is pointing at the right place at the right time. That’s easy to do with a fixture like a MAC Viper but not with a Sharpys as they are not very forgiving. As they have such a tight beam, if it’s slightly off it’s very noticeable. I really need about four hours at every show to focus the lights – not only do you have to focus the Sharpys onto all of the mirrors, you then have to go back and focus the mirrors. It’s a two-step focus that is very challenging but rewarding.”

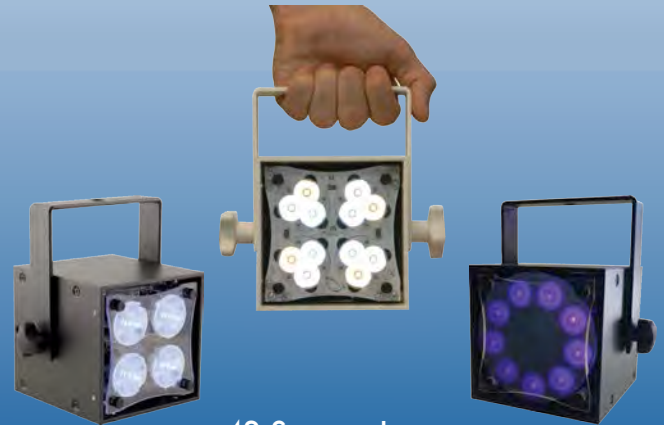
Whitney also finds the follow spots to be a constant concern; not only the calling of them but making sure Beyoncé looks beautiful in all of her shots and ensuring the twelve dancers all have enough light. The placement of the follow spots in the venue can also be contentious.

“The follow spots need to hit the main stage as normal but also they need to hit the Bey Stage,” he said. “The first thing I do when I arrive at a venue is have a meeting with our production manager and someone from the building to discuss follow spot placement. They need to be very specific and Beyoncé cares a lot about how she looks in them. Often they need to go where there are seats and so people have to be relocated which can cause a problem with the venue people. But ultimately, when the artist wants what they want, you’re going to win.”

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# BOY & BEAR



Australian indie rock-folk band Boy & Bear have been on tour in support of their second album titled Harlequin Dream which topped the ARIA charts.

In true Australian touring style, Greg Weaver was acting as both Tour Manager and Front of House engineer and having done this manner of tour many times before, he knew what to expect at every venue. Handy knowledge for a FOH person limited to using in-house PA systems. “Fortunately we played some great venues such as The Tivoli in Brisbane, The Forum in Melbourne and Sydney’s Enmore Theatre,” he commented. “I wouldn’t go so far as to say I have done every gig in Australia but I have certainly done a large number of them multiple times. So I am mentally prepared as to what is involved and what additional equipment, if any, I need to arrange.”

An Avid Profile digital console was toured for FOH which helped provide a level of audio consistency whilst a Yamaha PM5D was used for monitors. “I bought a bunch of new plugins for this tour including SSL compressors which I haven’t used previously,” commented Greg. “They’ve really helped contour the sound in a more positive way.”

crew



I got introduced to the Waves plugins on the last Paul Kelly & Neil Finn tour and I've just taken it to the next step and I'm glad I did. I do worry about becoming too reliant on digital consoles and their plugins because, for example, next year Boy & Bear will be touring Europe playing small club shows where that technology will not be available. Hopefully I won't have forgotten the fundamentals of basic sound engineering!"

Greg describes the band as fantastic which certainly helps to make his job easier especially as they have grown as a band and evolved their sound since the first album. "They've just got a new bass player and he's amazing," he said. "It's great to have him onboard and he really adds to the rhythm section. There are no particular tricks to making them sound good – have them well-rehearsed, have a great monitor engineer that can let them hear what they need to hear to play together as a band, make it a bit louder and add some reverb!"

Lighting designer Anthony "Bazz" Barrett used a variety of lighting suppliers on the tour, most notably Chameleon Touring Systems, Entertainment Installations, Novatech and Frontier Lighting in Perth, but carried his own control system with him: a ChamSys MagicQ PC plus a maxi wing and an extra wing, with an Arkaos media master 3.1.1. "I bought my own ChamSys MagicQ PC a couple of years ago when I was in the UK," Bazz remarked. "My favourite console at the time basically got turned into a useless house brick and I found out about the ChamSys. Three days after using the ChamSys I knew I wanted to buy my own. I've since added wings so that I have twenty-two playbacks plus twelve executor buttons."

Bazz reports that the ChamSys has been 100% reliable since he acquired it despite being lugged around the world several times. In fact he recently had to scrape the stickers off of its' case as they were making it overweight!

The stage design is based on the interior of a circus tent with six x three metre vertical panels upstage stretching up to seven metre vertical panels that hangs over the band out to near the front of the stage.

"It's like standing inside of half a circus tent and better than just a back wall for projection," explained Bazz. "Using the ArKaos, I've broken the video mapper down so that the projector shoots onto the white cyc in the background as well as the six panels making seven different surfaces. That way I can actually project an image on each surface and that's adds real dimension to the show. The panels have had square windows cut out of them through which the lightshow sitting above them can shine through."

The projection images were inspired by the album artwork. Content was conceived and made by Ben Hay of Honey Rogue Designs in conjunction with the band.

"Ben has done work for me with You Am I and he's great," commented Bazz. "He's sourced some really cool stuff. I also added some of my own video content from my own libraries. The ChamSys has full control of all of the media and the lighting, which is all put into lighting cues. In fact the ChamSys set up is amazing for controlling media."

The lighting rig at the Enmore consisted of five Martin MAC Vipers, ten Clay Paky Alpha Spot 1500's, twenty-four Martin MAC101, six Colour Blaze 48 inch, eighteen, LED Par cans, ten Sunstrips and a couple of hazers.

"The MAC101's are my favourite fixture, they remind me of an old very narrow Par can that changes colours and moves around plus they're very reliable – in fact I've never had one fail me," added Bazz. "I wanted fourteen MAC Vipers for the Enmore but couldn't get them so substituted the Clay Paky fixtures but to morph those fixtures from one to the other in the ChamSys is simple. The ChamSys has 7000 fixtures in its fixture library – it's insane!"

TDC supplied the Barco 14K Flex (upgraded to 18K) projection gear which Bazz loves and describes as having a super bright output.

CREW SHOT  
 ANTHONY "BAZZ" BARRETT – LD  
 MATHEW "DICKIE" DEBIEN – MONITORS  
 GREG WEAVER – FOH/TM  
 STEVE VARGA – BACKLINE

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# RICKY MARTIN



LIVE

**THE PUERTO RICAN MUSIC SENSATION, TALENT SHOW JUDGE, HIP-GYRATING HEART-THROB AND ALL ROUND GOOD GUY RICKY MARTIN TOURED AUSTRALIA FOR THE FIRST TIME IN 10 YEARS, WITH A SHOW THAT FEATURED ENOUGH COSTUME CHANGES TO RIVAL CHER. HIS ENTHUSIASM AND LATIN DANCE MOVES SAW THE ENTIRE ARENA UP ON THEIR FEET SHAKING THEIR BON BONS TO THE INFECTIOUS BEAT.**

**In the past, Sydney-based Mandylights has worked for Ricky's production team with various other artists and thus became the logical choice for the new tour. The brief was for a very clean design extending to the lighting, rigging, and staging.**

"We didn't want a stage where you could see the usual peripheral equipment such as dimmers off to one side and monitor world on the other side," explained Richard Neville,



a director of Mandylights. "The idea was to create a clean look that went as far as including the outside IMAG screens which always tend to end up as separate projection surfaces - we wanted to integrate every part of the production into one big seamless stage. We worked very closely with Veikko Fuhrmann's staging design and ended up with a clean looking production."

The large, wide stage and the rigging that surrounds it, has everything built into it from the LED for the IMAG to the monitor world underneath the risers.

"It's a big show with an eight piece band that creates a massive sound and the lighting has to respond to every beat and every little flourish," commented Richard. "It was a very tight show programming wise."

Mandylights began the design process with the stage and video configuration and the lighting grew from that with six vertical trusses extending into the roof to connect to two 'horse shoe' shaped trusses. Richard was very keen to have automation in the show eventually settling on four Kinesys operated pods that add a crucial dimension to the show.

"They really create a point of difference," he said. "I'm a big fan of Svoboda battens and it was cool to add them to the pods along with Clay Paky Sharpys and Martin Atomic strobes. They're a really old fixture but they prove that you don't have to always have the latest LED gear in order to make a show look cool. Svobodas look like no other fixture and they produce a fantastic beam that no other fixture can replicate."

Each pod held two Svoboda battens, six Sharpys and one Atomic strobe and they were put to their best use during the couple of slow songs that Ricky sings. The pods could fly in low behind Ricky to create an intimate space.

Richard describes the PRG Best Boy as close to the perfect fixture as you can get. High praise indeed and so it was no surprise to see forty-four Best Boy 400 in the rig.

"I think it's got the highest lamp efficiency of any moving light," he said. "You get a lot of light for not a huge amount

of power. It look great on camera especially front on as its face is almost the size of a dinner plate. The stock gobos are great, it's fast, the colours are fantastic and it's got an insanely fast framing and zoom."

Sixteen Vari-Lite VL3500 Wash were chosen for front and stage wash as they are 'big, reliable and have great lenses' making them a rather obvious choice. The main wash was supplied by thirty-seven GLP Impression X4 Wash which Richard describes as the perfect mix of practical washlight and usable effects.

"They have a very intelligent way of managing their internal effects so you can change all of the individual pixels to get a great range of features but it doesn't chew up hundreds of DMX channels. One thing I particularly like about them is that they if you are at 5 or 6% zoom range, you get this incredible hard edge and you can almost use them as a spot fixture. I don't think you can do that with any other LED washlight plus they are small, fast and very punchy."

A total of twenty-four Sharpys were utilized with the Mandylights guys determined not to produce a big Sharpy beam show as seems to be the current trend in concert lighting. As well as being in the pods, the Sharpys were mainly used to define the direction the pods were pointing in with very little beam work in the show.

"With twenty or more people on stage, huge video content and lights all over the place, we didn't want to add heaps and heaps of beams to it," explained Richard. "The Sharpys are only used in half of the songs and then only in relation to

the songs, not for eye-candy looks."

With so many accents to be highlighted in the show a large number of molefays to flash worked just fine especially as the Impression X4's could be almost perfectly matched to their tungsten look. In one song the video content displays a tungsten look to for a seamless coloured look that stretches the entire stage.

Over sixty ProShop LED PAR were situated underneath the acrylic decks to up light through the stage, an extra dimension for those in the nose-bleed seats.

Ricky has his own lighting operator Churry LaFeunte, who has been with him for fifteen years, and he has an impeccable sense of timing for Ricky's music so Mandylights modified how they programed the show to suit him and to keep the show responsive.

"We ended up with 2500 cues in the MA2 console and all of those cues are programmed and sitting on time-code," begun Richard. "Then for each song we made a series of flash buttons and different effects that could then be overlaid over the top to get all of the little hits and flourishes, or continue an entire song if the band kept playing after the song's code ended"

Video content design and programming was by Mandylights, using PRG MBox Extreme Media Servers, with input from Ricky's touring video director Omar Montez and Big Picture supplying the screens.

The tour played a sell-out series of shows across Australia in October, and continues touring through Central and South America in the coming months.

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Australian Commercial & Entertainment  
Technologies Association

## The ACETA End of Year Report – 2013

There is no doubt that 2013 has been a difficult year for many. The industry confronts numerous challenges including reduced budgets and consumption, a changing acquisition process, increasing misuse/theft of intellectual property, direct impact government legislation (the digital dividend), skill shortages, an unsustainable trade event calendar, no industry statistical data base and an under-resourced manufacturing sector to name a few. Industry challenges can be successfully overcome as a collective, and many now realise our 'peak body' ACETA is critical to the well being of the industry moving forward. Aside from normal day to day activity, ACETA is currently working on 8 issues via a sub-committee system, and as the year draws to an end it is timely to overview progress to date.

### INDUSTRY EVENT REFORM-THE ACETA POSITION

In response to members, non-members and many who visit events in Australia, ACETA has developed a position on the current calendar. But first let's re-cap, two years ago we published a White Paper (available on the ACETA web site), consequent feedback indicated we had accurately distilled industry sentiment, and presented a solution that would see 'no casualties'. However, most event owners did not engage with us (their customers) on the proposal. This year we experienced a co-located ENTECH & SMPTE in Sydney in July, AMAC on the Gold Coast in August and a co-located Integrate & CEDIA in Sydney also in August. Many industry participants and visitor have reason to attend several or all of these events. Turning to 2014, we have ENTECH CONNECT in July in Melbourne, AMAC in August on the Gold Coast and co-located Integrate & CEDIA once again in Sydney. We see many of the same faces at these events and the current schedule is sapping resources at an unsustainable level, regardless of the hype you hear from event owners, "record attendances", "next year is 91% sold out" etc. Aside from the industry run AMAC event, the other trade event brands are operated by private enterprise, an unusual fact given that most successful and compelling international events are run by and for the industry with a vested interest in its well-being.

**Note: We did not include several broadcast events which are small, low cost and very niche in nature. Nor have we included the CX Roadshow as it is seen as a different form of industry engagement and appears to have been well received by participants and visitors alike.**

The dilution and gouge of our industry is rarely experienced in other industries as most usually have one sustainable event per annum, some have even abandoned the traditional static trade show, i.e the motor industry.

Why then do we participate and perpetuate the current schedule when we don't want or can't afford to; quite simply it is 'fear' yes 'fear of missing out' and trade event sales personnel exploit this, which is why we see many organisations at several or all events. If we could overcome this irrational fear and take control, decision making would be based on reality rather than perception.

Now to the ACETA position; following industry wide sentiment ACETA endorses the need for one annual platform for the industry and all its sectors. At its July meeting the ACETA board quickly and unanimously made two determinations on the subject of trade events, these being;

- ACETA does not endorse or associate with any current trade event for the foreseeable future.

- as attractive to the industry as it may be, ACETA is not in a position at present to consider establishing an all encompassing 'by the industry for the industry' event. The reason is twofold; we don't currently have the resources for such an undertaking, and there are a number of other pressing issues that require address in the short term.

**However the ACETA board of management will maintain a standing sub-committee to monitor, receive ideas and make recommendations to the board if and when relevant.**

### MANUFACTURERS MANIFESTO

A draft manufacturer's manifesto was presented to the Board of Management in October which was accepted in principle. Amendments are currently being made and will be re-presented to the Board for final approval by the end of November; it will then be published and distributed to the industry. The document has been tested in various forums both local and international to elicit advice and ascertain relevance; the end result is a document that should bring about increased commercial activity and employment in our industry, a real game-changer.

### SKILLS SHORTAGE

We are addressing two streams, education and careers. Relationships have been developed with industry educational institutions that could ultimately offer ACETA (elective) courses, and a source of industry skill. The on-line ACETA career guide has been well received and hard copy will be available in the New Year. In the meantime we are engaged in identifying specific skills shortage areas and soon, a questionnaire will be circulated for your input on the subject.

## INDUSTRY GUIDELINES

The Industry Guidelines have been completed and we are now seeking legal approval. Once we have clearance all members will be required to comply with them. There are many benefits including the enhanced status and probity of an ACETA member, assisting clients and suppliers in identifying suitable partners.

## INDUSTRY STATISTICS

The format for gathering industry statistical data has been agreed and we are now seeking quotation from independent entities that will receive and collate the information submitted. In the formative stage it is not possible to include every industry category; however this will be dealt with in the passage of time to ensure all sectors statistical needs are met. Soon ACETA members will have access to information never available historically, which will assist in understanding market size and trends.

## PRODUCT SAFETY & COMPLIANCE

This is a broad subject and our initial focus was to gain some understanding of the nature and amount of knock-off/forged product coming into the Australian market place. It became obvious the misuse/stealing of Intellectual Property was greater than anyone anticipated, bringing with it alarming consequences such as non-compliance to legislated product standards and suspect safety, for example dodgy rigging and dangerous electrical wiring. A common denominator with knock-off/forged product is its poor performance standards, rarely if ever meeting anywhere near the characteristics of the product it pretends to be. Suffice to say we have identified a number of episodes which are being dealt with in the appropriate lawful manner. In protecting the industry and its clients any breaches will be brought to the attention of the appropriate authority.

## MEMBERSHIP

For the industry to achieve its potential and continually address and eliminate impediments to its well being, we need to increase membership. The more challenged we are the more we need to experience inclusion and the strength it delivers, we are all in the same boat. ACETA now has the programmes in place to benefit every participant whether they realise it or not.

At its October Meeting in Brisbane the Board looked favourably on the introduction of Associate Membership to the Association. A proposal is being authored at the moment which will be debated by the Board and if approved will be presented to ACETA members at the Annual General Meeting in Sydney in May 2014 for acceptance or rejection.

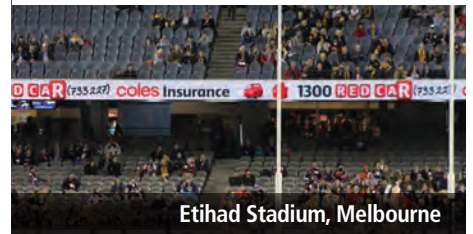
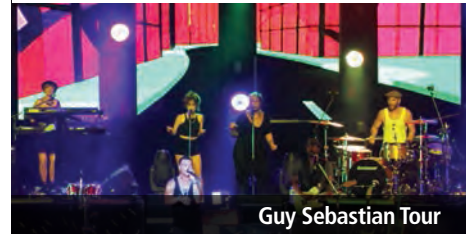
## AWAG

It is fair to say the recent change of government has seen a marked improvement in understanding between ACETAs and the new communications ministry. We can also advise that our petition has broken through 3,000 signatories making it a document to be taken seriously at government level. There is still much to be done and we will keep you informed as we continue to represent the interests of our industry in the digital dividend debate.

*We take the opportunity of wishing you all a safe and happy festive season and may the New Year bring prosperity to all...*

**Frank Hinton**  
President ACETA

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# WHAT-IF?

## What If we don't pay attention to the Human Factor?

Here at The Ranch for the last few weeks we have been busy with the all too necessary task of reviewing Risk Assessments and Safe Work Method Statements (SWMS) for a couple of machines. As is the case with a lot of Stage Machinery, they are large and powerful and require great care and diligence to operate with an acceptable degree of safety.

BY ANDREW MATHIESON

**As part of this review process, I found myself on site with the operating staff, observing how they follow their current SWMS and trying to identify any risks that these procedures do not adequately deal with – either because these risks are new, because the original assessed risk level needs re-evaluating, or because the way the venue and/or the machine is being used has changed.**

We started by walking through the setup, operation and shutdown processes in an empty venue on a “dark day”, and with the exception of the odd “tweak”, the SWMS seemed to be robust, closely followed and didn't place too many “nuisance” requirements on the operating staff - you know, the ones that seem good on paper but are only ever really followed when the process is being audited.

After we had finished a run-through of the operation, I was brave enough to suggest that things seem to be fairly robust and that we had the basis for a SWMS that was, indeed, “Safe”.

At this point I was informed that the dry-run operation we had just carried out was missing one significant factor, one that regularly caused our staff difficulties and compromised the safe operation of the system.

At the same time that our staff are operating the machine (a motorised stage platform), at least 3 other groups of contractors are doing their respective “things”- moving cases in and out of trucks and onto the platforms, setting up set pieces or control gear on the platforms or in the immediate vicinity of the platforms and generally running around in the chaos of load-ins and load-outs that we all know so well.

A call had already been booked for the following morning for a machinery move, which presented a perfect opportunity to watch the process in action “live” as it were and to have any problems demonstrated to me.

So the following morning I accompanied our crew as they picked up the works order and signed into the venue. A review of the work order and a well executed toolbox meeting and off we went.

Now, part of the SWMS calls for “area to be cleared of all personnel...” between step “X” and step “Y” and it was at the completion of step “X” that I witnessed just how easily a perfectly robust method of work can be turned into an exercise in Herding Cats (to quote an observant colleague).

It’s very easy to write in a SWMS “clear the area of personnel”, but if those personnel you are trying to “clear the area of” are attempting to do their own thing under the same sort of time and performance pressure as you are, and, most importantly, none of those personnel work for you or have been told by those they do work for to follow your safety instructions, then, when you politely ask people to leave an area, you get responses such as “certainly – I’ll get right on to that soon...” or “gee, I’d love to help, but I’m a little busy right now”.

The problem was, nobody was in charge – each of the various crews of people were well run but there was no overall co-ordination, so nobody paid attention to the poor guys trying to clear people out of the way to make sure everything and everyone stayed safe.

The SWMS may look good on paper, but unless you equip the people doing the work with the right tools to do the work then it’s doomed to failure. In this case, the tool that was missing was as simple as giving the right people the authority to get others to vacate an area so the work could be carried out safely.

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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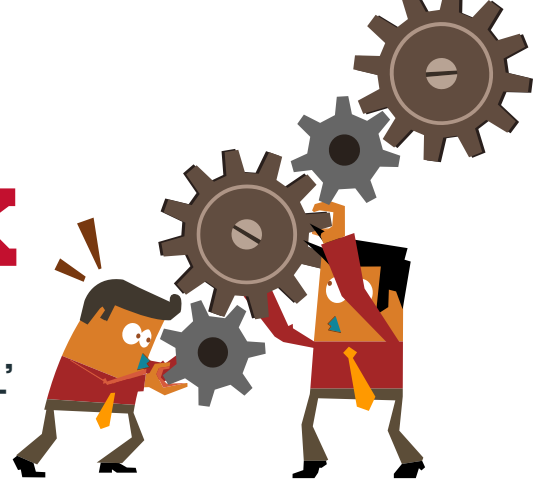
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# BIZ TALK

DIRTY MONEY 2014  
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with Julius Grafton

THE INSTALLATION WAS COMPLETE AND THE CABARET STYLED CLUB WOULD OPEN THE VERY NEXT DAY. ALL THAT REMAINED WAS FOR THE LAWYER CLUB OWNER TO PAY THE 50% BALANCE DUE. IT WAS NOT FORTHCOMING, NOR WERE THE CALLS ANSWERED. SO THE INSTALLER CRASHED THROUGH THE DOORS, STOPPED THE REHEARSALS, AND WITH FOUR OTHER MEN QUICKLY REMOVED EVERYTHING THAT COULD BE TAKEN.

The lawyer was on the phone inside of three minutes. ‘You are trespassing. You have no right to take anything from the premises. Cease and desist now or I will call the police.’

The installer suggested that the lawyer commit a sexual act upon himself, and hung up to continue the fast and furious stripdown of fixtures, speakers, and devices.

The van pulled out from the curb without the police anywhere in sight. Two hours later, the lawyer met the installer outside a bank branch at 5.20pm – well after closing time – and the bank manager let them in and cut a bank cheque for all but \$2,000 of the remaining amount.

The \$2,000 was taken in cash by the lawyer, to be paid when all the equipment was reinstalled. The job was thus finished at 10pm, and the venue opened the next day.

While this was thirty years ago and bank managers have long ceased to have majestic powers, the story may as well be today. I was the installer, and that was one of dozens of near calls I’ve endured in my life working in the entertainment biz. These days I hear these stories all the time, here at the **CX** news desk.

Would the police attend today and stop the installer? The situation is just as grey now as it was then, and this is the theme of my Dirty Money 2014 seminar at **CX Roadshow** in February. (All states except ACT).

I’ll dish up the latest round of duplicitous, double crossing yet legal ripoffs as formerly respectable promoters and business owners go rogue on their creditors and suppliers, sometimes driving some of them bankrupt along the way.

If you’re in business and extending credit, or have one major client, you can’t afford to miss this. Thanks to the hard work from the **CX** Legal Team, we will be able to skirt as close to the edge as anyone can, and where necessary we will allude to the corrupt, conniving and culpable so you’ll know who we mean.

So many good honest contractors and business operators get caught in the crap trap of greedy grasping gluttonous glib and usually garrulous shysters who’ve often fallen on hard times and been delightedly advised by professional insolvency advisors that they can actually walk away from their obligations.

I’m going to show you how they do it, and hopefully you’ll avoid the pain of losing more than you can afford, which often includes losing your spouse as well, when they glaze over and stop listening and just blame you for your inadequacy.

I hope you’ll join me, the last time we did this (in 2012) it was a big hit, and that was before PPSR or Jacksons Rare Guitars or Allens Billy Hyde and the deadbeat suits that bilked a decade’s profit from the music instrument trade. As usual we’ll try to catch the paranoid spy in the room recording what we say, but rest assured, the seminar is all my handy work and the buck stops right here.

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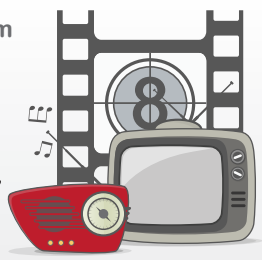
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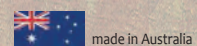
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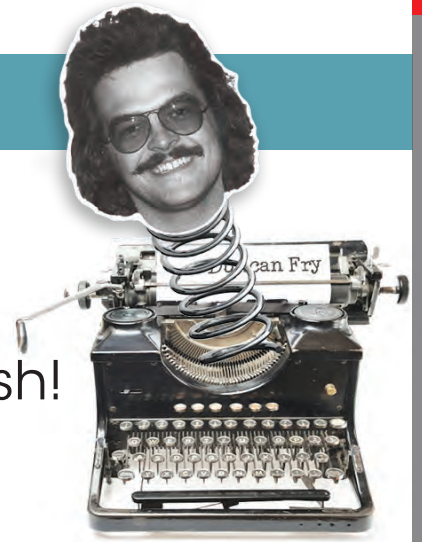
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GENERAL SERVICES	CRISIS SUPPORT	ENTERTAINMENT ASSIST	HEALTH SERVICES	LEGAL & FINANCIAL	RELATIONSHIPS
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Discover ways you can donate to Entertainment Assist by visiting: <a href="http://www.entertainmentassist.org.au">www.entertainmentassist.org.au</a></p>	<p><b>Emergency *</b> <b>Police Fire and Ambulance</b> T: 000 (24/7)</p> <p><b>Kids Helpline *</b> T: 1800 55 1800 (24/7) W: <a href="http://www.kidshelp.com.au">www.kidshelp.com.au</a></p> <p><b>Lifeline *</b> T: 13 11 14 (24/7) W: <a href="http://www.lifeline.org.au">www.lifeline.org.au</a></p> <p><b>MensLine Australia *</b> T: 1300 78 99 78 (24/7) W: <a href="http://www.mensline.org.au">www.mensline.org.au</a></p> <p><b>Salvo Crisis Line *</b> T: 1300 36 36 22 (24/7)</p> <p><b>Suicide Call Back Service *</b> T: 1300 659 467 (24/7) W: <a href="http://www.suicidecallbackservice.org.au">www.suicidecallbackservice.org.au</a></p> <p><b>ENTERTAINMENT ASSIST</b> <a href="http://www.entertainmentassist.org.au">www.entertainmentassist.org.au</a></p>	<p><b>ENTERTAINMENT ASSIST</b> 16-25 Year Olds</p> <p><b>NATIONAL SUPPORT SERVICES DIRECTORY</b></p> <p>Before times get tough, talk to someone or ask for help</p>	<p><b>Headspace National</b> ☎ W: <a href="http://www.lawstuff.org.au/lawstuff">www.lawstuff.org.au/lawstuff</a></p> <p><b>Reach Out</b> ☎ W: <a href="http://www.reachout.com.au">www.reachout.com.au</a></p> <p><b>Beyond Blue</b> ☎ The National Depression Initiative W: <a href="http://www.beyondblue.org.au">www.beyondblue.org.au</a></p> <p><b>Carers Australia</b> ☎ Carer Advisory &amp; Counselling Service T: 1800 242 636 (8.30am-4.30pm) W: <a href="http://www.counsellingonline.org.au">www.counsellingonline.org.au</a></p> <p><b>Counselling Online</b> ☎☎ Alcohol &amp; Drug related concerns T: 1800 888 236 (24/7) W: <a href="http://www.counsellingonline.org.au">www.counsellingonline.org.au</a></p> <p><b>Life Circle Australia</b> ☎ People diagnosed with serious illness &amp; their carers T: 1300 364 673 (24/7)</p> <p><b>Sane Helpline</b> ☎ T: 1800 18 SANE (7263) (8am-5pm Mon-Fri) W: <a href="http://www.sane.org">www.sane.org</a></p>	<p><b>National Children's &amp; Youth Law Centre</b> ☎ W: <a href="http://www.lawstuff.org.au/lawstuff">www.lawstuff.org.au/lawstuff</a></p> <p><b>Centrelink</b> ☎ (8am-5pm) Employment Services T: 13 2850 Youth &amp; Student Services T: 13 24 90 W: <a href="http://www.centrelink.gov.au">www.centrelink.gov.au</a></p> <p><b>Centrelink</b> ☎ (8am-5pm) Disability, Sickness &amp; Carers T: 13 2717 Employment Services T: 13 2850 Family Assistance Office T: 13 6150 (8am-8pm) Seniors T: 13 2300 W: <a href="http://www.centrelink.gov.au">www.centrelink.gov.au</a></p> <p><b>National Gambling Helpline</b> ☎☎ T: 1800 858 858 (24/7) W: <a href="http://www.gamblinghelponline.org.au">www.gamblinghelponline.org.au</a></p> <p><b>National Legal Aid</b> ☎ W: <a href="http://www.nla.aust.net.au">www.nla.aust.net.au</a></p> <p><b>LEGEND</b> ☎ Crisis Support &amp; Suicide Prevention ☎ Telephone Counselling ☎ Information &amp; Referral service ☎ Online Counselling ☎ Face to Face Counselling</p>	<p><b>Kids Helpline *</b> T: 1800 55 1800 (24/7) W: <a href="http://www.kidshelp.com.au">www.kidshelp.com.au</a></p> <p><b>The Line</b> ☎ T: 1800 200 526 (24/7) W: <a href="http://www.theline.gov.au">www.theline.gov.au</a></p> <p><b>1800 RESPECT</b> ☎ Sexual assault, domestic &amp; family violence T: 1800 RESPECT (1800 737 732) (24/7) W: <a href="http://www.1800respect.org.au">www.1800respect.org.au</a></p> <p><b>Al-Anon Family Groups Aust</b> ☎ Hope &amp; help for families &amp; friends of alcoholics T: 1300 252 666 (8am-5pm) W: <a href="http://www.al-anon.alteon.org/australia">www.al-anon.alteon.org/australia</a></p> <p><b>Alcoholics Anonymous</b> ☎ W: <a href="http://www.aa.org.au">www.aa.org.au</a></p> <p><b>Relationships Australia</b> ☎☎ T: 1300 364 277 (8am-5pm) W: <a href="http://www.relationships.com.au">www.relationships.com.au</a></p> <p><b>Family Relationships Advice Line</b> ☎ T: 1800 050 321 8am-8pm Mon-Fri, 10am-4pm Sat except Public Holidays W: <a href="http://www.familyrelationships.gov.au">www.familyrelationships.gov.au</a></p>



# Roses are red, violets are bluish, if it wasn't for Christmas, we'd all be Jewish!

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I've never been particularly fond of going out on a Christmas Eve, because I always felt fairly vulnerable driving home. But when I started doing PA gigs and driving around in a 7 tonne truck with a PA system inside, I felt a lot safer.

My Toyota F series truck was a heavy-duty vehicle from the word go. Its enormous 20" semi-trailer wheels needed two people to carry them, it had a great long bonnet, a steering wheel the size of a hula hoop and it never even came close to being overloaded. In fact, I drove it from Melbourne to Mount Gambier and back again with a full load and one flat tyre at the back without any problems at all!

So when Col at work dangled the carrot of easy money in front of me for a Christmas Eve gig not far from home, I gave the matter some serious thought. I had nothing else to do that night anyway, and had planned on spending the evening watching Christmas Eve TV – a saccharine sweet evening that should be avoided by anyone with a weak stomach!

"All you have to do is a walk-in mix for the band," he said encouragingly. "It'll be money for nothing. I'll set everything up in the afternoon; all you'll have to do is mic up the band and let it rip."

"Who's the band?" I asked.

Col consulted the work diary.

"It's Dicky Moron and the Rude Boys!" he said (No kidding - that was their name. I still have a souvenir poster somewhere to prove it!). "They play ska, funk and reggae. You'll love it."

Actually I loved the thought of the easy money better, and since I only lived in the next suburb a couple of clicks down the road from the gig, like the warm hearted, believing fool that I am, I said OK.

The gig was due to start at 9.30pm Christmas Eve, but I decided to get there about 8.30 just to be on the safe side. As I drove down the road I could hear the noise from about a kilometre away. Pulling up in the truck (I had no car) I could see that the place was jammed and people were spilling out into the street. At least there's a good crowd, I thought.

I squeezed through the door and made my way inside. It was absolute chaos, and what's more, as far as I could see, it was chaos without a PA system!

Pushing and shoving my way through the well-oiled crowd to the stage, I found the PA stacked up in the far corner of the room, still packed in its road cases! What made it worse was that the band had set themselves up on stage already.

As anyone who has done live sound will surely agree, there's nothing worse than trying to put the system together with the band on the stage. Everything possible is in the way. Bloody guitar pedals, amps, drums, leads etc all set up where you least want them, and all the players tuning up and loosening up. A real s\*\*t-fight, in fact. The sort of thing that you may get away with on a large stage, without the audience, but this was a tiny club stage totally filled with a seven or eight piece band, and a sea of expectant faces jammed up to the stage waiting for the band to start.

Well, I had to leave the boxes where they were, since there was nowhere else to put them, plugged them up, and set up the rest of the system like a man possessed. Bitter experience had taught me that audiences could turn pretty nasty if nothing comes out of the PA when the band starts!

Amazingly everything managed to get put together in time. There was no time for anything fancy like EQing the system, we had a very basic monitor setup, but at least there was a microphone in front of everything that was supposed to have one. When the band started, the place went wild and any thoughts of fine tuning the sound went out the window. I just kept it as loud as I could and left it at that.

The gig turned out well. The band was happy, the crowd was happier, the pub was happiest because everyone was totally pissed rotten. Apart from me; I never drank at gigs, but there had been so much alcohol (and the earthy aroma of giggle cigarettes) that had I been breath tested on the way home I would have pleaded 'passive inhaling' as the cause!

After I had packed up everything and loaded it into the truck, I was starting to feel a bit hungry. All that work and no time for food of any kind had left a gnawing hole where my stomach ought to have been, and I felt like I could eat a horse and chase the rider!

Trouble was, it was 2.30 am on Christmas Eve, everything was closed, and all good Christians were in bed waiting for Father Christmas and the Three Wise Men to arrive. But all was not lost; as I slowly drove the truck up the

street I could see some winking lights beckoning me in the distance, and as I got closer the sign on the window said it was 'Abdullah's Halal Takeaway – open 24 hours'. I took a wild guess and figured that as a good Muslim Abdullah had nothing much to celebrate on Christmas Eve and was happily picking up all the late night hungry customers like myself.

As I climbed down from the truck, a guy came running down the middle of the street pushing an empty shopping trolley.

"Hey mate," he yelled, "can you give me a ride into the city?"

"No, sorry mate," I said, "I'm not going that way."

"Yeah, well stuff you, ya bastard," he replied and kept pushing his trolley.

I ran inside and ordered one with the lot, some chips, a chocolate milkshake and a coffee.

"Sugar in the coffee?" asked Abdullah.

"No thanks mate, I'm trying to diet!" I told him.

Ten minutes later I crossed the road back to the truck with my arms full of takeaway and my mouth full of burger, oblivious to the sauce dripping down my t-shirt.

I carefully laid the food within grabbing distance next to me on the bench seat, started the truck and slowly moved forwards.

"Kerlunk - screeeech," came a thump and a horrible grinding noise from underneath the front of the truck.

"Holy crap" I said to myself, "What the hell is that?"

I jumped out and had a look. There, jammed sideways under the engine sump and the front suspension, was my mate's shopping trolley!

A burst of crazy laughter from across the street made me look up, and I saw him jumping up and down with glee.

"Gotcha ya bastard. Merry Christmas!" and he ran off down the street, cackling his head off as I started the slow process of jacking up the front of the truck to pull the trolley out. Christmas Eve gigs? Never again, I told myself. A promise I've managed to keep to this day!



Hope everyone has a happy and safe time with family and friends over the holiday period. See you next year with more.  
(Dunk – is that a threat or a promise. Ed)



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