



# THE BIG ISSUE!

CX MEGA TEST  
HK CONTOUR ARRAY  
ROBE DIGITAL SPOT 5000DT  
NEUMANN DIGITAL MIC  
GRASS VALLEY INDIGO  
APB SPECTRA REVIEWED!

JUNE 1 2008 - JULY 15 2008. A\$5.50 • NZ\$5.50  
AUSTRALIA & NEW ZEALAND

**CUE03** Entertainment Training Resource

**18 NON-STOP YEARS**  
SINCE 1990 WITH CHANNELS AND CONNECTIONS.

## EXPERT ON FIREWIRE



JuliusPublish.com

ISSN 1320-5595

10

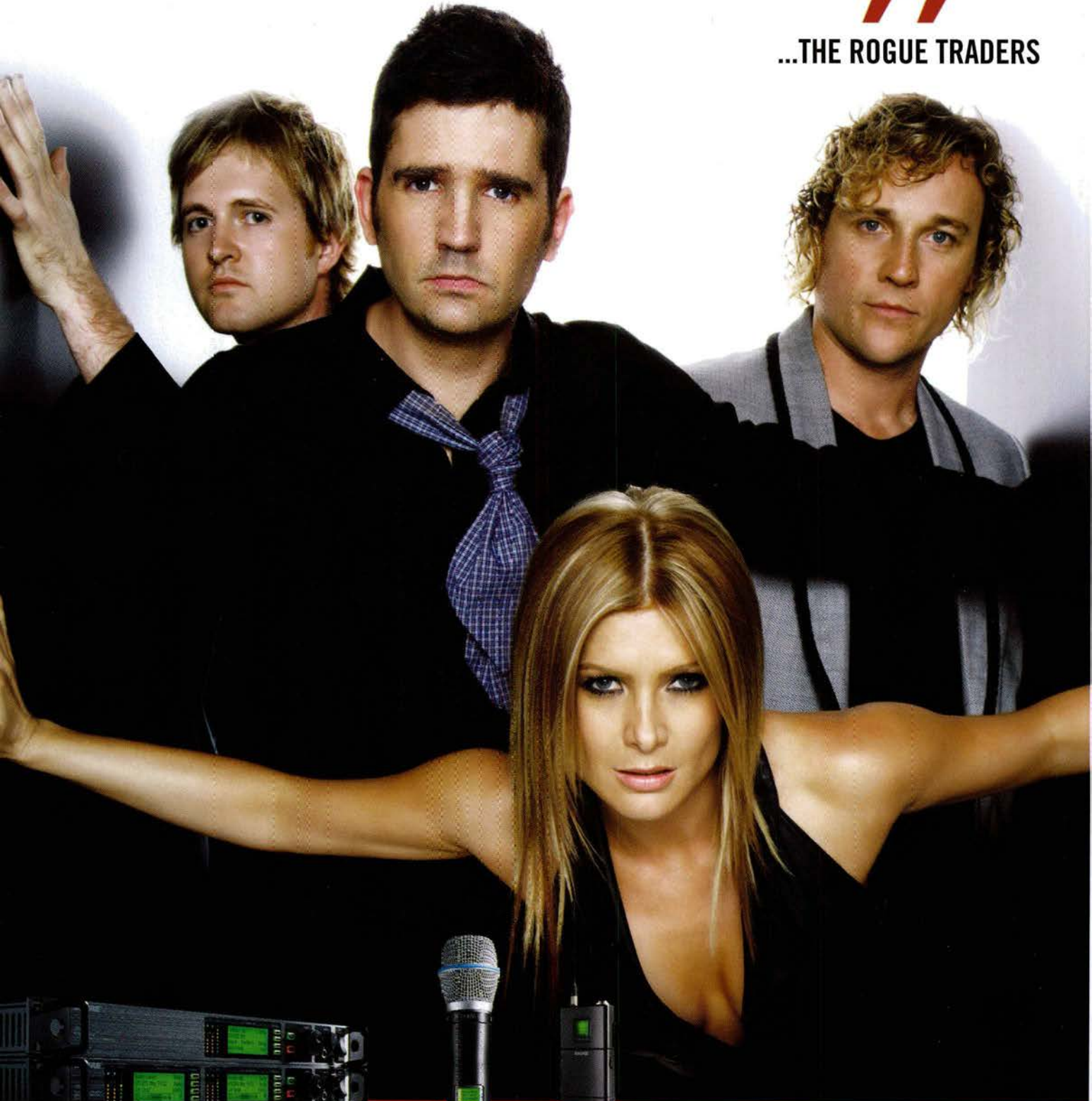
9 771320 559004

**NEWS!** All the big stories about all the big things. Big ideas, big plans, big messes and big trouble – Who's got 'em, who's working on 'em, who made 'em and who's in it.

**THE NEWS MAGAZINE FOR ENTERTAINMENT TECHNICIANS AND MANAGERS**

“ WHEN RELIABILITY AND PERFORMANCE IS EVERYTHING. ”

...THE ROGUE TRADERS



Distributed by

**JANDS**

40 Kent Rd. Mascot NSW 2020  
Ph: (02) 9582 0909 • Fax: (02) 9582 0999  
[www.jands.com.au](http://www.jands.com.au)

**SHURE**<sup>®</sup>

LEGENDARY  
PERFORMANCE™

# OPERA LIVE



## Opera Live 210

10" Woofer  
1" Compression driver  
200 Watts/RMS  
120 dB max.  
312 x 550 x 280  
Weight 13 kg

Perfect Sound



## Opera Live 402/405

300 Watts/RMS  
12" or 15" Woofer  
1" Compression driver  
128 dB max.  
406 x 650 x 350  
Weight 18kg/19 kg

Total reliability



## Sub 12

12" Bandpass Subwoofer  
400 Watts/RMS  
40 - 150 Hz  
127 dB max.  
360 x 520 x 500  
Weight 19 kg

Maximum Flexibility



## Sub 05

15" Bandpass Subwoofer  
400 Watts/RMS  
30 - 150 Hz  
129 dB max.  
430 x 600 x 550  
Weight 27 kg

Utmost handling ease



## Sub 15

15" Bandpass Subwoofer  
800 Watts/RMS  
40 - 120 Hz  
133 dB max.  
Digital audio processing  
430 x 600 x 600  
Weight 32 kg

## Opera Live Series

Active, bi-amped and housed in multifunctional polypropylene enclosures, these speakers come in 10"/1" to 15"/1" configurations with up to 300W/RMS

## Active Subwoofer

Featuring efficient band-pass circuitry and impressive power amp performance, these active subwoofer systems deliver high SPL. Available in 12" to 15" configurations with up to 800 W/RMS, all models feature an active mono/stereo x-over.

## Opera Live Systems

Comprising individually powered Opera Live and Sub enclosures, these remarkably efficient three-way active systems provide excellent audio performance and maximum flexibility to boot.

Trust the Italians to perform so well.



## Opera Live Series

- ▶ Powered loudspeakers for professional audio applications.
- ▶ Integrated audio controller - active crossover and phase correction for maximum performance.
- ▶ Bi-Amp output stage with higher acoustic pressure and bass response.
- ▶ Soft clip limiter for highest operational safety.
- ▶ Feedback resistance.
- ▶ Ease in use., 4 x MIC flying points - multifunctional housing - angled for floor or monitoring -

## 3 Year Warranty

Do yourself a favour, before you make your next commitment on a speaker cab **EXPERIENCE** the performance of an outstanding Italian at one of these following Dealers;

S.A./ P.M Sound 08 8277 3444 Cecere's Music 08 8331 9246 B.S.S Light + Sound 08 8340 3100 W.A./ Extended Play 08 9286 4433 Joondalup Music 08 9300 0033 Mindarie Music Centre 08 9407 9455 Music Park 08 9470 1020 Sound Centre Music Gallery 08 9370 1185 Uptown Music 08 9842 3423 Music Force 08 3687 9527 VIC/ Store DJ 1300 858 394 Warehouse Sound Systems 03 9417 4866 WWave 039372 5244 Global All Access 03 9525 4316 DJ City 03 9579 5991 DJ City Factory 03 9792 2357 Drumpower 03 9720 4581 Entertainment Warehouse 03 9315 1255 Five Star Music 03 9870 4143 Manny's 03 5486 8555 Music Den 03 5223 1724 Muso's Stuff 03 5441 8672 Troy House of Music 03 9689 4622 TAS/ Frontline 03 6343 1299 QLD/ Ellaways Family Music Store 07 3359 8266 I.J.S./ Audio Sales & Recording 07 3854 0577 Mackay Music Supplies 07 4957 4216 Mooloolaba Music 07 5444 8889 Mr Music Man 07 5572 1003 Sound and Lighting Queensland 07 3715 5477 N.T./ Uptown Entertainment 05 00888 909 N.S.W/ City Music 02 4965 4222 Venue Music 02 9262 9776 Bondi Intermusic 02 9369 3922 DJ Warehouse 02 9564 1791 Party Headquarters 02 9150 4557 Smithy's Music 02 9550 1177 Turrumurra Music Centre 02 9449 8487



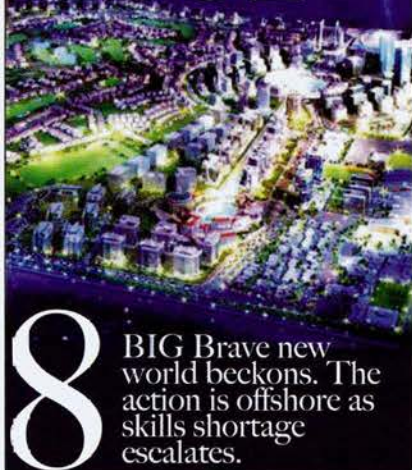
For further information visit [www.cmi.com.au](http://www.cmi.com.au)

# INSIDE THIS ISSUE

NEWS

8

## THE BIG ISSUE



8

**BIG** Brave new world beckons. The action is offshore as skills shortage escalates.

- 10 BIG: How Big is Big?
- 10 Big Trouble - Band death charges
- 10 Anc More Big Trouble
- 10 Big Union - Tag and Klotz Digital get together
- 12 Big Beatup: Glenn Wheatley's Misner connection savaged in media
- 12 Big Blockage: 15 tonnes of trouble under venue
- 12 ARX USB-DI Digital to Analogue Direct Box
- 12 Jands Holiday Comp
- 14 Big Little: Low Energy Theatre Lighting London show lit with just 5kw
- 14 LED Strobe
- 14 16 in 48 Out Transformer Microphone/Line Splitter
- 16 PA for Australian Olympic Torch Relay
- 16 Cutting Edge Upgrades to Riedel Technology
- 18 AKG release C 214 recording microphone
- 18 Big Quiet Winter Concerts Pause Just Like Yesterday
- 19 The Foo Fighters world tour
- 21 Moving soon...Novatech relocation
- 21 Martin Pro makes money
- 21 Ashton budget wireless mic systems
- 22 Robe tours with Future Music

- 22 Selecon announce winners
- 24 Billy Elliot Hits Australia with M'elodie
- 24 And now: ZED FX
- 25 Microhire turns to HK Audio
- 25 Yamaha add VCM to DM1000, 02R96 and 01V96

## MEGA TEST

**28** IT'S BIG, AND IT'S A **CX**  
**EXCLUSIVE THE JULIUS CAMPUS MEGA TEST**  
**THE BIGGEST NEW IDEA IN REVIEWS**

### Campus Mega Test Reviews:

- 30 Robe Digital Spot 5000DT
- 34 Neumann digital microphones
- 56 Grass Valley Indigo
- 68 Spectra T audio console
- 74 ConTour Array: Floor stackable line array from HK Audio

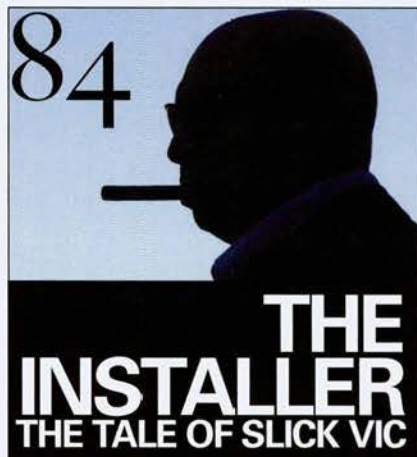
## FEATURES

**BIG SCREEN** 26

Staging Connections unveils biggest screen yet. Very wide screens are the new thing for big events.



**52**  
**MATCHBOX TWENTY LIVE IN SYDNEY**



**84**  
**THE INSTALLER**  
**THE TALE OF SLICK VIC**

## PEOPLE



Andy McIntyre

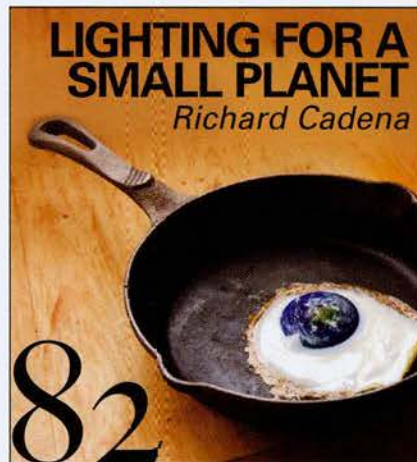
## ASK THE EXPERT



**42**

**THE EXPERT GETS FIRED UP ABOUT FIREWIRE**

## REGULARS



**82**

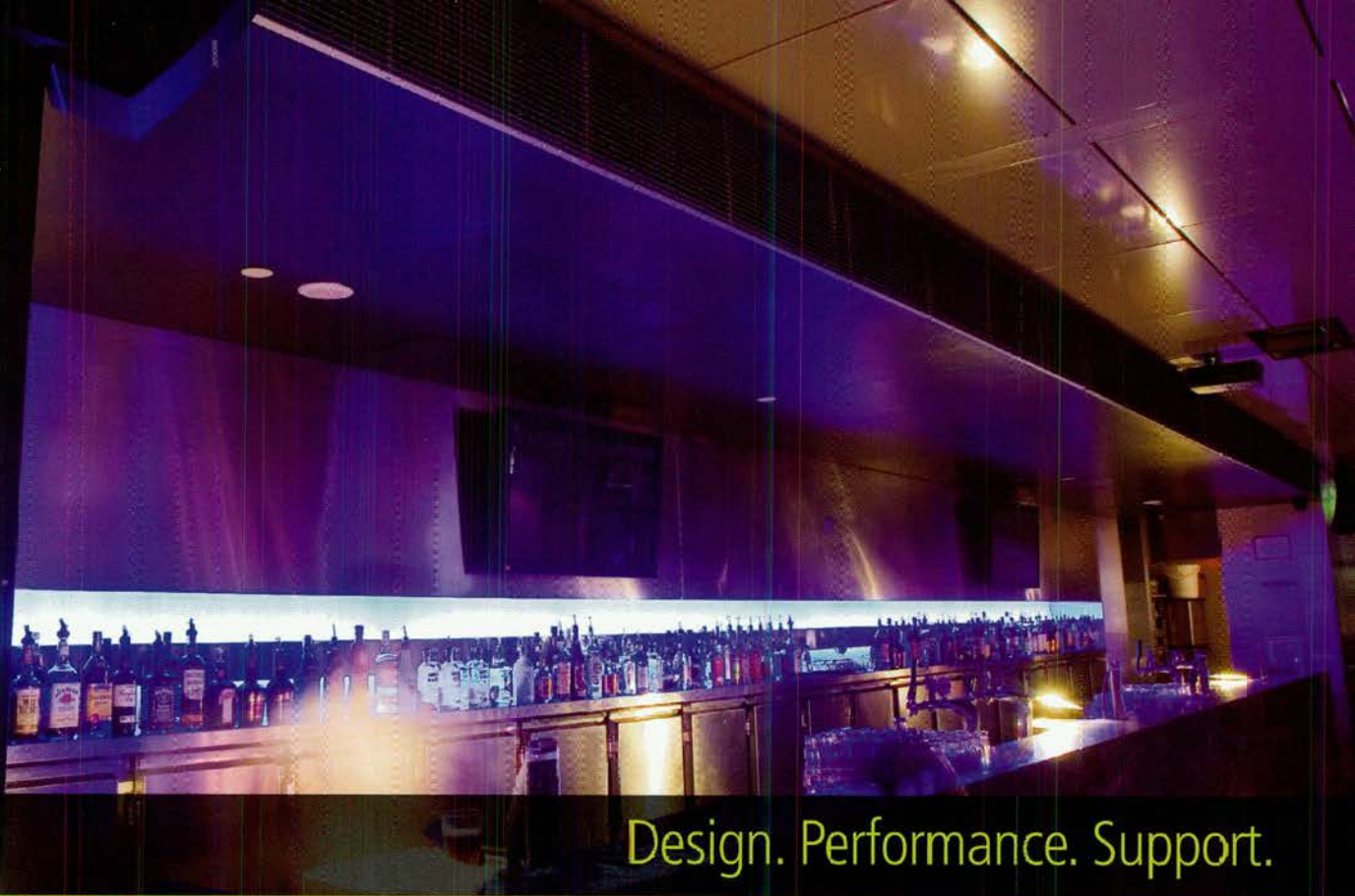
**LIGHTING FOR A SMALL PLANET**

*Richard Cadena*

- 54 History
- 77 Subscriptions page
- 86 Classifieds
- 86 Ad Index



**50**



Design. Performance. Support.

## Creating atmosphere with a competitive edge

Engineered to suit your venue, designed to blend in with your décor, a Bose® sound solution will elevate your space to a new level.

Bose Professional Systems Division have a team of specialist designers and audio industry professionals which enable them to provide a tailored sound solution specific to your business requirements.

For a premium sound solution for your next project, please call Bose on **1800 659 433** | [www.bose.com.au](http://www.bose.com.au)

FreeSpace® BMS4400



**BOSE**®  
Better sound through research®



ISSN 1448-2010

**CX Magazine is published every six weeks**

**by Julius Publishing Pty Ltd**

ACN 117 748 777

Mail: Locked Bag 30, Epping  
NSW 1710 Australia.

Call: **1-800-635 514**

**NEW EMAIL: juliusmedia@mac.com**

Web [www.juliusmedia.com](http://www.juliusmedia.com)

Publisher, Managing Editor: Julius Grafton

Editor: Andy Mackenzie

**NEW EMAIL: juliusmedia@mac.com**

call +61 2 9638-5955

Technical Advisors:

James Den-Ouden, Rob Zimola

Sales Steve James

**NEW EMAIL: juliusmedia@mac.com**

direct +61 2 9638 5955

Newsagent distributor: NDD

Publishers PA Amalia Portelli

Web by ThinkFirst

Print by Superfine

Design by Bite Communications

**JuliusPublish.ING**

## CUE03

### Entertainment Training Resource

This magazine contains much information which is a direct resource for anyone studying from the new Entertainment Training Package, named CUE03. From 2006 we will start to map certain articles direct against the relevant Unit of Competency within the package. This makes CX magazine a very cost effective resource for schools, colleges, and universities. Note that we offer a copyright release where articles in CX Magazine may be photocopied and distributed to students within an accredited course.

# EDITORIAL

## INBOUND LOVE

Publishing those rude letters last issue then uncorked some letters that defame the writers of the last lot of letters. Gee it is getting circular, huh? So we can't run the letters defending CX against (sample quote) "puerile weenies who take themselves far too seriously" and worse. We had calls from readers "disappointed we had published those negative letters."

## THE BOUQUET

Pictured is an unexpected nice gift from a reader – Robert Azzopardi, thanking us for some guidance on a project for his employer, Oracle.



## UNBOUND MINDS

Disturbing emails last month from an injured lighting worker who is unable to work and trying to survive. He says that almost nobody from his part of Australia called or visited him in hospital. The email suggested he may just give up – we were just one of many people in the email chain, and we are nowhere near the city in question. Are we all so busy or don't we care – someone gets hurt on the job, make an effort, people.

## UPSIDE-DOWN TRUCK

On the theme of loving each other, some suggestions were made that following a truck accident on a recent tour, not much interest was shown in the condition of the driver. Of course it is a major hassle when a slab of production is derailed. I chanced upon a rolled semi on tour once and after helping the driver out saw him attacked by the truck owner who didn't care about what happened.

*Julius*

## HERE WE GO AGAIN

Another issue, and we're getting stuck back into the product reviews. We haven't done a lot of reviews in recent times, for a whole lot of reasons. But we've got a new approach, and we've got plenty of people asking for it so we're doing it.

## LOOK AFTER YOURSELF...

In our capacity as a publisher and as a college, we talk to a lot of people who've been in the industry a long time. There are big similarities in what we hear from all of them, and one of the key points that keeps coming up is that you need to take care of yourself. People who get too far into the rock'n'roll lifestyle – the groupies, the dope, the drink, the pretending you're going to be nineteen forever – are the ones who don't last. Some drift out of the industry, some get so unreliable they can't get a gig, and some just die. Don't let it happen to you.

## ...AND EACH OTHER

Julius has got a couple of stories of people being forgotten in his editorial. Every time I see something like this it saddens me. There may be plenty of elements in society telling us to look after number one and that self absorption is the ideal state of being, our industry may no longer be the tiny collection of misfits it once was, but we're under no obligation to stop caring.

## EVERYTHING'S TURNING INTO EVERYTHING ELSE

Looking through the products we reviewed this time around, we see yet more blurring of the lines between lighting, sound and vision production. The similarities between live production and the recording and broadcast industries are also increasing. With all this crossover going on, surely it's time to accept that the days of monoskilling are past. It's no longer good enough to be a lighting, sound, vision, or whatever other kind of person. The people who can do all of it are the people of the future.

*Andy*

# Keeping it on the **record**: CCS800 Ulro Discussion System

**NEW**  
with MP3  
recording &  
playback

## Record and playback to-the-minute proceedings

Known for world-class solutions for congress and conferences, Bosch has recently updated its successful CCS 800 Ulro Discussion System.

Perfect for smaller meeting areas like town halls, courtrooms and local business centres, the new model lets you record and playback actual to-the-minute proceedings.

Its built-in MP3 audio recording and playback system works with removable Secure Digital Cards (SD Cards) for additional reliability and archiving possibilities.

Find out more about **CCS800 Ulro Discussion Systems** by contacting **Bosch Communications Systems** on (02) 9638 4752, send an email to [stsales@au.bosch.com](mailto:stsales@au.bosch.com) or visit [www.boschsecurity.com.au](http://www.boschsecurity.com.au).



**BOSCH**

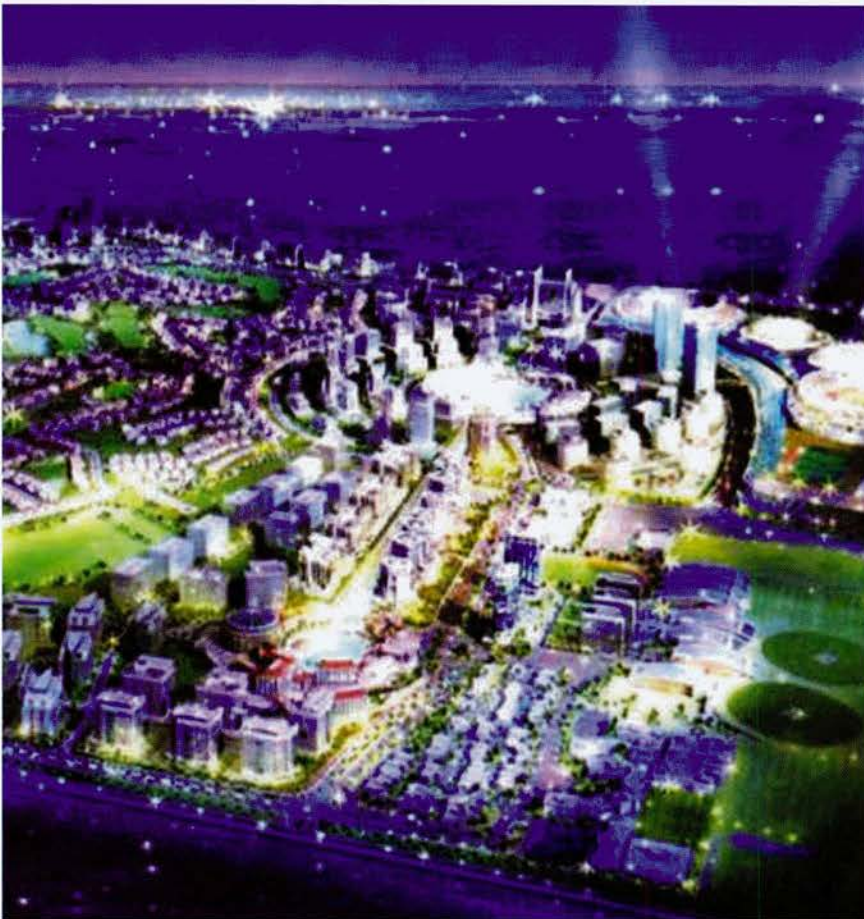
Invented for life



# CX NEWS

## DEVICES, PEOPLE AND CONCEPTS

### THE BIG ISSUE



## BIG Brave new world beckons - The action is offshore as skills shortage escalates.

Twice in one day the call came that an Australian technician was exporting their services. Senior audio engineer Trevor Cronin is off to run audio at Almoe AV in Dubai while former Julius College student Justin Worley is now operating lights on a Carnival Line cruise ship ex Miami.

Cirque Du Soleil has 49 jobs online at presstime, spread across Europe, Macau and Canada. Macau is

undertaking a building boom that will double the number of casinos in the territory, and around 400 technicians will be needed there across the next year.

But Dubai is the epicentre of action for the audio visual industry, with astonishing plans that are in the construction phase right now. Dubailand will be double the size of the largest theme park in the world,

which is currently the combined Disney spread at Orlando.

Australian company Staging Connections has invested heavily in Dubai, and have unfilled positions in that country for video and senior technicians. The number of very large hotels under construction is staggering – Dubai is claimed to have as many as 25% of the world's construction cranes in use.

World's largest airport? Building it now. Biggest shopping mall? Yep. Largest indoor snow ski slopes? Built. Biggest waterfront development ever? Unlimited plans.

While the Australian and New Zealand economies grow at around 4% annually, the resources boom and a falling American dollar have pushed the local currencies to a 25 year high, fuelling more affordable entertainment and equipment, but constraining tourism. Qantas plan to build their fleet by around 5% annually, while Emirates in Dubai will quadruple their fleet in five years. They have 58 Airbus A380 jumbo jets on order.

If you are a technician with a passport, the opportunities offshore are expanding fast. This spells trouble ahead for local productions with formal training for entertainment technical still at startup levels. Consider the metrics:

Formal workplace traineeships in Australia for Certificate courses in entertainment technical number less than 100 places this year. TAFE and college enrolments number around 200, not including music technology and studio engineer courses where around 1,500 are enrolled with poor employability at the end.

With a working full time equivalent population of around 2,500 technicians needed for the local market, normal attrition will eat four times the number of trainees and that's before we export our talent or grow the industry. In addition around 4,000 positions exist that cross over into entertainment technical, and anyone working in the field needs at least some formal training to start.

# The Professionalisation of Small Mixers

For live, studio or installation ZED14 brings a world of quality and performance to small mixers.

- 6 mono/4 stereo ins
- 4 aux sends
- 3-band EQ with one mid sweep
- 100mm long throw faders
- Individual secured vertical PCBs
- USB send and return
- Padless mic/line in
- Cakewalk's SONAR LE recording software
- \$1,295RRP



## More ZEDs



**ALLEN HEATH**

Contact your Allen & Heath dealer or TAG for more: | (02) 9519 0900 | zed@tag.com.au | www.tag.com.au



## BIG: HOW BIG IS BIG?

Consider this. Serious Stages, working with Atlantic Enterprises, saw one of their Space Roof buildings air freighted from East Midlands Airport to Saudi Arabia aboard an Antonov AN-124 heavy lift cargo plane. The full kit – totalling over 210 tonnes was amassed and supplied at very short notice, necessitating the need for the airlift.

The roof was erected in Thuwal, a small village on the Red Sea coast to the north of Jeddah, and was the setting for a foundation stone laying ceremony to launch KAUST – the SR10

billion King Abdullah University of Science and Technology

The Space Building measured 50 metres wide by 120 metres long (its size was enough to fit 3 Airbus aircraft), and featured three 12 metre Orbit stages as entrances which were fitted with electronic doors.

Inside, over 300 points of rigging were used to fly sound, lighting, laser and video equipment. Each arch of the Space Roof Building had a weight loading of 8 tonnes, and this structure comprised 20 arches in total, offering a total weight loading of 160 tonnes. CX

## BIG TROUBLE - BAND DEATH CHARGES

The bass player of Geelong band Red Shore faces court in August over the death of lead singer Andy Morris and crew member Andy Milner. Jamie Hope was driving a van which ran off the Pacific Highway around 7am near Coffs Harbour.

The band was driving overnight after a gig in Brisbane, destination Sydney.

The practice of overnighting is potentially exposing others to charges when an accident such as this happens. Those in the firing line could include booking agents and artist managements who have a duty of care and should understand that playing then driving all night produces an elevated risk. This sad story proves the argument. CX

## AND MORE BIG TROUBLE: DANCE PARTY IN RISING TIDE

NSW Police and Work Cover have investigated an all night outdoor dance party held at the bottom of a Sydney cliff near Clovelly Beach. Alerted by neighbors annoyed at the noise, Police discovered 300 people in various stages of disorder and disarray, with waves crashing nearby.

Party organizer Andy Gray was quoted in media as saying he had it all under control and that with the low tide he had a window. CX attempted to locate Mr. Gray for further comment. Anyone knowing his whereabouts is invited to contact us. CX

## BIG UNION - TAG AND KLOTZ DIGITAL GET TOGETHER

Klotz Digital has appointed Technical Audio Group exclusive Australian distributor for its Varizone range of products. Designed for use in audio information, background music, voice evacuation and paging installations Varizone offers totally flexible basic architecture, extensive configuration and control capabilities and the facility to individually address each speaker or zone.

Optimised for venues with extremely complex audio requirements like transport terminals, convention centres, stadiums, shopping malls, public facilities and so on Varizone is already controlling and distributing audio at, for example, Munich Airport, Bolshoi Theatre, Wembley Stadium, The European Parliament and Quin Huang Dao Olympic Stadium. In Australia Varizone

systems are installed in Star City Casino and most recently The Victorian Parliament.

'Although Varizone benefits from the core router technology of Klotz Digital's broadcast systems, from there on, the ins and outs, control, scaling, architecture, facilities, etc is all specially designed for commercial audio,' said Patrick Salloch Klotz Digital Australia's General Manager. 'Appointing TAG in Australia is part of our worldwide market strategy to align ourselves with sales channels and partners which specialise in the commercial audio market. The guys at TAG are the perfect distribution partners for us in Australia because they know the commercial market, have strong technical support and firsthand experience of high end digital systems.'

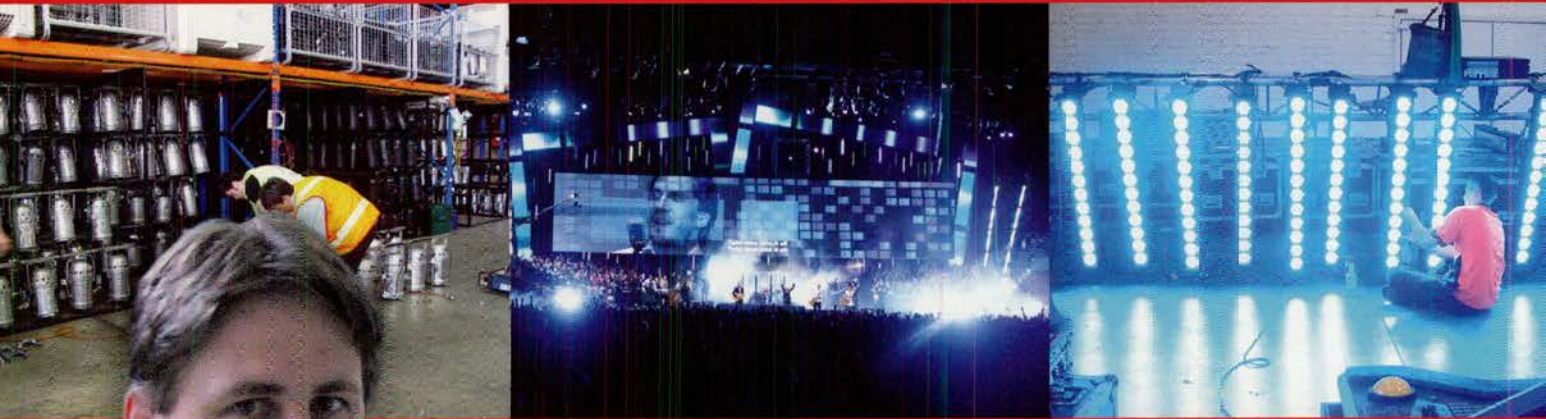
'This is a very important day in TAG's history,' commented TAG's Sales Manager Ian Woodhouse. 'We are extremely gratified to have a company of Klotz Digital's standing endorse TAG in this way. The level of technology and expertise at Klotz Digital is remarkable and we feel it will offer consultants and installation contractors alike unique solutions to the complex challenges for audio in small, medium and large scale buildings and venues. For TAG this partnership completes a commercial product offering stretching from microphones to ceiling speakers and most of the things in between and we hope to be able to assist our system integration partners and the Australian market generally with comprehensive end-to-end integrated solutions.'

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

CX

# MASSIVE LIGHTING OPEN DAYS At Chameleon Touring Systems

SYDNEY, Tuesday August 5 • Wednesday August 6  
12 midday until 8pm each day



**SEE** the latest exciting new lighting products!  
New effects! • New LED solutions!

New technologies and  
Supported by **NEW IDEAS**

leading lighting manufacturers worldwide

With product specialists on hand!

**CHAMELEON** is the mission-  
ready lighting  
company of choice for major producers  
and promoters in Australia and Asia.

**FREE** to attend : RSVP to reception@  
chameleon-touring.com.au

## CHAMELEON TOURING SYSTEMS

SYDNEY - OPEN DAY LOCATION

Building 35A, 1A Coulson St

Erskineville NSW 2043

Production/Sales: 02 8596 7222

Rentals: 02 8596 7200 Fax: 02 9557 5445

BRISBANE - NO OPEN DAY HERE

Tel: 07 3854 1511 Fax: 07 3854 1563

25 Helen Street Newstead QLD 4006

Email: cts@chameleon-touring.com.au

www.chameleon-touring.com.au



## BIG BEATUP

### GLENN WHEATLEY'S MISNER CONNECTION SAVAGED IN MEDIA

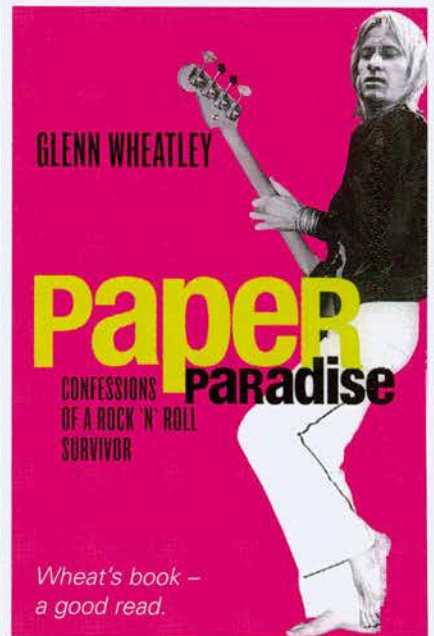
Band manager Glenn Wheatley was jailed last year over a tax issue after repaying \$300k in taxes and assisting the investigation into a tax scheme. The jail sentence was disproportionate to the crime, but he copped it on the chin and didn't complain. After doing around 9 months he was released into home detention and became the object of very intrusive media attention.

The Herald Sun then ran an item which implied Glenn Wheatley knew of allegations that SAE and Studio 301 owner Tom Misner operated a

business from a tax haven. Wheat was said to be contemplating setting up a label with Misner. The article further alleged that Misner 'admitted to failing to pay tax until audited', and that he 'denies any wrongdoing over claims he used pirated software at his audio schools'.

CX monitors many industry identities across worldwide media and we have not seen allegations of this kind against Tom Misner previously – so how could Glenn Wheatley know of them?

The Herald Sun article appeared to attempt to portray Glenn Wheatley in a bad light, as have many other media portrayals at presstime. CX can confirm that across the music industry Glenn Wheatley is held in very high regard. You wouldn't read this if it wasn't true. CX



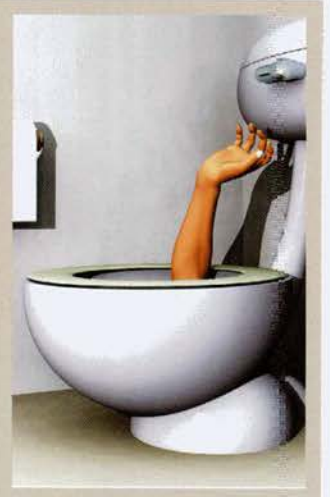
## BIG BLOCKAGE: 15 TONNES OF TROUBLE UNDER VENUE

Hordern Pavilion and RHI venue operator Playbill Venues had an almost unmentionable surprise earlier this year when the toilets backed up bigtime. Unable to remedy, the plumber called the utility. They sent a camera down to the sewer main and found it was almost totally plugged – with cement.

The blockage was a big one, and a temporary sewer main was set up to let the venues and the adjacent Sydney Cricket Ground continue to function. So where did a truckload of cement come from? No one knows. It must have been dumped in the a sewer manhole upstream of the venue, and flowed a short way before setting. Why would anyone dump cement in a sewer?

Meantime the utility is laboriously boring away at the cement by remote control. Since the sewer main runs under the venues, digging it up is not an option. At presstime Sydney Water estimated the remediation work at more than \$1 million, and this includes a bypass around the Hordern, with an electric pump system included.

Playbill Venue manager Michael Kent says that the Gig God has been kind to the venue. "We pray to Him every day here, it's a bit of a movement" he said. Very punny. CX



### ARX USB-DI DIGITAL TO ANALOGUE DIRECT BOX

In keeping with their policy of creating essential audio interfaces, ARX is pleased to announce the release of their unique new ARX USB-DI Digital to Analogue Direct Box.

The new USB-DI Transformer isolated dual channel USB audio to balanced XLR output DI Box is a true Plug and Play digital to analog pro

audio interface.

The USB-DI removes the need to use any existing sound card outputs, with their inherent noisy environment and problematic grounding. It features full transformer balanced output isolation to eliminate earth loops / ground hum and other extraneous interaction noise and distortion.

Full product details are at: [www.arx.com.au](http://www.arx.com.au) CX

### JANDS HOLIDAY COMP

This time of year we always think about heading north, and Jands have decided to help five lucky couples do just that. They offer a Whitsundays holiday for two, including 3 nights accom, flights, and a Barrier Reef cruise.

To be eligible for entry, simply purchase \$750 worth of JBL, Shure, Crown, dbx, Lexicon, Soundcraft or Stanton product, between 1 April – 30 June 2008, from an Authorised Australian Retailer. Terms and Conditions apply.

Please visit the Jands website ([www.jands.com.au](http://www.jands.com.au)) for full details or to download promotion flyers, entry forms, view the comprehensive Authorised Australian Retailers List or access the Promotion's full Terms & Conditions. CX



Yamaha PM5D-RH 1/2 Toprack (\$85,000 inc. GST)  
MONTHLY PAYMENT: \$2,481.40 inc. GST\*



Yamaha M7CL-48 with meter bridge (\$30,000 inc. GST)  
MONTHLY PAYMENT: \$874.55 inc. GST\*



Yamaha LS9-32 (\$14,500 RRP inc. GST)  
MONTHLY PAYMENT: \$427.30 inc. GST\*

Leasing your Yamaha audio equipment through Allleasing provides the most cost-effective, transparent and flexible finance solution to satisfy your business needs.



Contact Allleasing: (03) 9536 3495  
[www.allleasing.com.au](http://www.allleasing.com.au)

\* Monthly payments in advance, for a 36 month term. To approved applicants. Payments are based on current interest rates and are subject to change without notice. Renta is offered by Allleasing Pty Ltd on its terms and conditions.



**YAMAHA**

**CO**  
commercial audio

Contact us for more information

[www.yamahamusic.com.au/products/commaudio](http://www.yamahamusic.com.au/products/commaudio)

Yamaha Commercial Audio | (03) 9692 5272 | PO Box 368, South Melbourne VIC. 3205

## BIG LITTLE LOW ENERGY THEATRE LIGHTING LONDON SHOW LIT WITH JUST 5KW

Arcola Theatre in the UK demonstrated that there is no artistic compromise required to deliver low energy naturalistic lighting for classic works. Mehmet Ergen's critically acclaimed production of Ibsen's *An Enemy of the People* was lit with under 5kW.

Director Mehmet Ergen said: "I urge all directors to demand not more light and bigger set budgets but the right light and the right set".

The challenge was to light a naturalistic piece of theatre, Ibsen's *An Enemy of the People*, with a peak lighting load of just 5kW. For a previous show at Arcola Theatre *The Living Unknown Soldier*, LED and fluorescent sources were used to cut power consumption to this level,

however the colours, dimming profiles, and quality of light given from the current generation of LEDs and fluorescents makes it difficult to use them in naturalistic pieces where the lighting should go unnoticed.

Lighting designer Michael Nabarro instead used a combination of lower-wattage and lower-voltage tungsten sources provided by Selecon, ETC and White Light.

While in theory lower-power sources should give commensurately less lighting effect, in practice this is not the case: in one instance, using 300W vs. 650W lamps in Selecon Acclaim luminaires yielded the lighting effect required with nearly 35% energy savings.

The design of ETC's Source Four lamps and optics means that as well as providing the equivalent light output of a 1kW source from a 575W lamp they can be used to deliver very significant light output using just 375W lamps.

Selecon's 1200W 80V Pacific luminaires provide the equivalent light output of a 2500W source and with a 90 degree lens can provide extensive stage coverage from a single unit.

Selecon's 50W 12V Aureol luminaires, which are essentially high quality 'birdies' with lens tubes and light-shaping fittings, give a surprisingly large light output and thus just a small number of them can replace a much larger lamp.

Lighting designer Michael Nabarro: "This show has been lit on significantly less power than it might otherwise have been using traditional equipment. The quality of the finished product has not suffered and the show is in no way "under lit," proof that it is possible to provide effective theatre lighting with a low energy budget." Arcola Theatre's work feeds in to the Mayor of London's ground breaking Climate Change Action Plan for Theatres.

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



### LED STROBE

The LED Strobe is a high output strobe light that uses 192 LEDs to create stunning bursts of brilliant white light. This creates a classic slow motion effect and is a popular visual tool for live performances and dance floors.

Flash speed and dimming can be controlled via DMX or the unit can be run stand-alone, sound active or linked together. In addition the fixture offers fascinating chase patterns which when used in sequence provides a nifty visual effect that flows left to right or vice versa. With their low power consumption, long lamp life and flexibility of use, LED fixtures are enjoying a rise in popularity.

The LED strobe is sold at \$279.

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



Alex Fox, and Russell Jones at Gold Coast Arts Centre, with new Robert Juliat Super Korrigan followspots.

### 16 IN 48 OUT TRANSFORMER MICROPHONE/LINE SPLITTER

The new MSX 48 Transformer isolated Microphone/Line Splitter from ARX has been developed to deliver the performance required by the increasing complexity of today's standards of audio production.

The MSX 48 is a totally passive device requiring no power, and consists of Sixteen channels of transformer isolated ultra low noise Microphone/Line Splitter. Each of these

channels has a direct looped Main / FOH feed, and a transformer isolated Monitor split on the front panel.

On the rear panel is an Auxiliary transformer isolated split ideal for use with a remote recording truck or TV feed. Duplicates of the Monitor and Aux splits are also provided on two sets of dual 25 pin D connectors on the rear panel, wired to Tascam wiring protocol.

The MSX 48 is a high performance solution for tomorrow's multi channel signal splitting demands available today.

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



# A perfect fit - Ion<sup>®</sup>



## *BIG power - small desk.*

*Ion fits. Software designed for beginners and experts alike. Adaptable hardware that is just as flexible.*

*Pressed for space? This 19" lighting control console can go almost any place!*

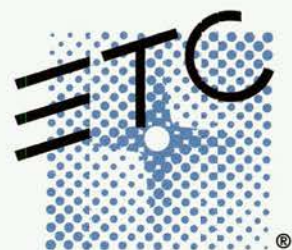
*Need more hands-on control?  
Add fader wings to either side.*

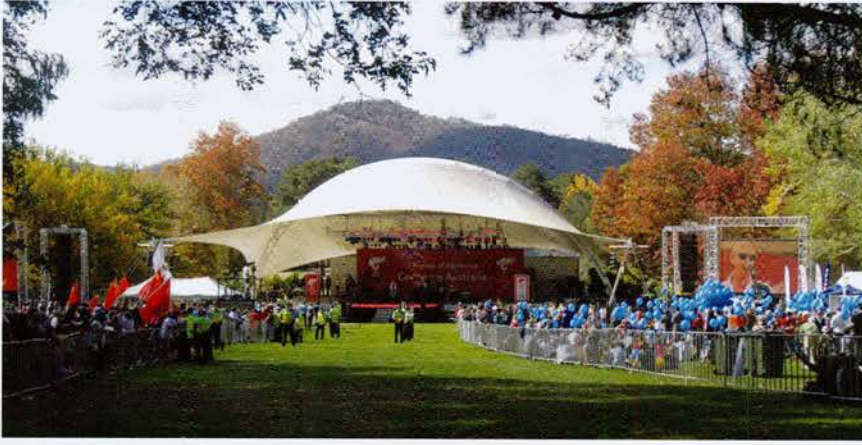
*Need more control locations? Add networked components for synchronised backup, remote video and remote programming, remote DMX and show-control interfaces.*

Distributed by

**JANDS**

40 Kent Rd. Mascot NSW 2020  
Ph: (02) 9582 0909 • Fax: (02) 9582 0999  
[www.jands.com.au](http://www.jands.com.au)





## PA FOR AUSTRALIAN OLYMPIC TORCH RELAY

The Olympic Torch Relay ran through Australia's national capital Canberra amid much fanfare and media attention.

The audio specification for the event required systems be provided at two locations, the first at the dawn torch lighting ceremony and the second for the end of relay presentation and concert. Leading Canberra company Eclipse Lighting and Sound were contracted to supply the audio design and equipment for the event. This also included a small system at Canberra airport for the torch's arrival. The whole event saw an extensive array of Electro-Voice equipment used

throughout.

The audio specification for the dawn ceremony was beefed-up close to the event to ensure that organizers were able to easily drown out any boisterous behavior from the crowd. This resulted in a 16 box per side EV XLD line array system being assembled in front of the main presentation area. This was supplemented by an eight box per side EV XLE system to cover the area behind the presentation area; additional XLC boxes were distributed to provide side fills. Foldback for the event was via T221M wedges; all power was from EV 'P' series amplifiers. Powered SxA360's were deployed at Commonwealth Place as local reinforcement for the choir performance.

The torch relay concluded at Stage 88 in Commonwealth Park, where, on the shores of the lake, Australian swimming legend Ian Thorpe was the final runner to the podium where the torch was handed over to its custodians for transport to its next location (Japan). This ceremony saw another performance from the Samsung Choir, as well as performances from Australian Rock legends Russell Morris and Brian Cadd. The concert concluded with a set from *Australian Idol* performer Shannon Noll, to an appreciative audience in excess of 10,000 people.

The audio system for the relay conclusion consisted of an eight box per side XLC DVX system supplemented by three XLD per side (utilizing EV's AGCD adapter bracket) supplemented by four Xsubs per side. All amplification was supplied by EV P, CP, and TG series amplifiers. The band foldback system consisted of 12 EV-loaded Dynacord Madras M15's. Choir foldback was via EV Sx300's and the system front fill was supplied via EV's new ZX3 cabinets.

The whole event involved a cast of thousands, with over 40 crew members involved with the audio and lighting production. Eclipse MD Chris Neal received much praise for his efforts, those of his crew, and of the performance of the gear. **CX**



## CUTTING EDGE UPGRADES TO RIEDEL TECHNOLOGY

Cutting Edge, a leading Australian broadcast services company, has announced a fleet-wide switch to Riedel Communications for all of its intercom needs. The company has purchased 4 Artist digital intercom matrix frames and over 100 intercom control panels to replace the previous intercom in its outside broadcast

vehicles and fly-away packs.

"The real motivation to switch to Riedel was the advantages of going with newer technology," explained Michael Burton, Managing Director of Cutting Edge. "Since the system uses AES audio we can employ the talkback infrastructure for other applications as well, such as on-air commentator positions. On top of that, the overall quality is much higher. For example, with our old gear we previously had a loss of audio

quality on long cable runs. But Artist's AES audio in combination with the ability to use CAT-5, coax or even fiber cabling for the control panels solves this issue."

Cutting Edge, founded in 1992, employs over 120 people and operates a fleet of five outside broadcast vehicles as well as offering a variety of fly-away options. The company's credits include sport productions such as Australian Rules football, cricket, soccer and rugby as well as entertainment shows including *Big Brother* and *Gladiators*. The organization operates the largest fleet of HD capable production vehicles in Australia. **CX**

**SUBSCRIBE TO CX MAGAZINE NOW & ENJOY IT 8 TIMES A YEAR!**

See page 77 this issue or go to [www.juliusmedia.com/cxweb/cx\\_subscribe.asp](http://www.juliusmedia.com/cxweb/cx_subscribe.asp)

# TAX SAVINGS!

## GET IN QUICK FOR END OF FINANCIAL YEAR DEALS

### LARGEST RANGE OF CASES - WHOLESALE & RETAIL



GO! CASE 4U FX RACK  
GORAK4FX  
ONLY \$179



BLUECAT Tilt & Roll  
PACKING CASE  
BNCTILTPAK  
\$449



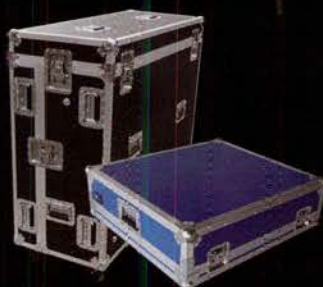
GO! CASE BRIEFCASES  
GORBRIEF  
FROM \$168  
6 sizes in stock!



GO! CASE TABLE RACK  
GORAKSTN  
JUST \$799  
Convenient rackmount solution with table top



GO! CASE PACKING CASES  
GOPAK  
GOPAK350 (pictured)  
\$499  
7 different packing cases!  
- most include drop trays  
- fully foam lined  
- 100mm castors on larger models  
- usually readily available.



BLUECAT MIXER CASES  
MOST SIZES LESS THAN  
\$999  
- Any size console  
- All brands.  
- Doghouses,  
- Side castors  
- Fully foam lined.

### FROM THE BLUECAT CUSTOM SHOP



CNC robotic routing technology  
All Bluecat custom cases can include custom CNC robotic routing cut-outs for microphones instruments and anything you need that specialised fit for.



All Bluecat custom cases are designed and manufactured in Australia in our Brisbane custom shop. Our production team can build and fit out any custom case that you dream up! Call us today for more.

CLEARANCE CENTER  
STACKS OF MIXER CASES!



we have clearance cases for  
Yamaha mixers  
Allen & Heath mixers  
Soundcraft mixers  
Mackie mixers

GET IN QUICK &  
GRAB A BARGAIN!

# 1300 85 4620

19 Leonard Crescent AU 1300 85 4620  
Brendale, Brisbane LOCAL 07 3889 7755  
4500 QLD FAX 07 3889 9744  
AUSTRALIA EMAIL sales@cases.com.au

www.cases.com.au





## AKG RELEASE C 214 RECORDING MICROPHONE

AKG announces the release of the C 214 recording microphone. Designed as a cost-effective alternative to the high-end, industry-leading C 414 microphone family, the C 214 uses the same 1-inch dual-capsule as the legendary C 414 in a single-diaphragm, cardioid-only design.

AKG's legendary C 414 microphone can be found in most recording studios and has been used on thousands of hit records; it has been onstage with artists across every musical genre and is also used by leading broadcast facilities the world over. Distributed in Australia and New Zealand by Audio Products Group, the new C 214 represents an important addition to AKG's C 414 family.

Distributed by Audio Products Group, the AKG C 214 microphone is available now for RRP AU\$1,099.00. [www.audioproducts.com.au](http://www.audioproducts.com.au)

## BIG QUIET WINTER CONCERTS PAUSE JUST LIKE YESTERDAY

Notice something missing? The record breaking bumper run of international acts has abated as punters tighten belts and retail sales flag. Winter in 2007 looks like the winter of 2002 when not much happened in the major venues.

Promoters report losses on recent tours, despite the Australian dollar strength – which in a perverse turn has made the country much more expensive to visit for the acts who are much more affordable. While the dollar has risen, concert tickets have not fallen in price – the acts are taking a higher amount per seat, which has now reduced the number of seats sold.

CX hear competition between suppliers is running hot, whereas in the leadup to last Summer there was a shortage of available production. Time to rest the crew, refurb the equipment, and do some staff training.

**CX PRODUCTION DIRECTORY COMING SOON! UPDATE YOUR PRODUCTION COMPANY LISTING. GO TO [WWW.JULIUSMEDIA.COM](http://WWW.JULIUSMEDIA.COM) AND NAVIGATE TO CX MAGAZINE, DOWNLOADS. FREE!**



# Norwest Productions



Now with over 60 channels of Shure UHF-R radio mics complete with antenna distribution systems that can solve any RF issue.

## AUDIO PRODUCTION AND RENTAL

AUSTRALIA'S MOST VERSATILE RENTAL INVENTORY

Accurate turnkey audio for important shows of any size, anywhere. Olympic Games, Commonwealth Games, Major Events, Corporate, Festivals, Concerts, Theatre and Broadcast.

### BRISBANE

Ph: +617 3854 1000  
Graeme Whitehouse

### SYDNEY

Ph: +612 9737 8522

### MELBOURNE

Ph: +613 9555 4468  
Paul Bailey

- L'Acoustics KUDO (118 cabinets)
- EAW KF760/761 Line Array
- Funktion Resolution Concert System
- EAW KF750, KF730, KF850
- EAW SB1000, BH760 subs
- Acoustic Technologies Blackbird Line Array

- Adamson Y10 Concert System
- Dolby Lake Processor
- Lake Contour, MESA
- XTA DP428, DP226, DP224
- Optocore Digital Network
- LabGruppen fp6400
- Camco Vortex 6
- Crown Macrotech VZ5002

- Yamaha PM1D, PM5d
- Yamaha M7CL, DM2000
- Yamaha O1V/96 (40 consoles)
- Digico D5 112/EX
- Midas XL4, XL3
- Midas Heritage 3000, 1000
- Midas Verona, Venice



© 2008 Jack Butler

## FOO B STAGE

The Foo Fighters are currently on a world tour in support of their album, "Echoes, Silence, Patience & Grace." Fans around the world are being introduced to a technically complex new stage show, featuring a circular auxiliary stage descending from the ceiling.

As long-time sound editor/engineer in Beveridge details, "There's a big ring at front-of-house and the B stage descends and slots into the ring. The whole backline and everything comes down on it. The band plays about forty minutes on the A stage, followed by an acoustic set on the B stage, and then they come back for a big rock finish on the main stage. That's what makes it interesting. It's unusual to do a true acoustic band show out in the middle of the hall."

The Foo Fighters are joined on the B stage — which is separated from the main stage by a 100-foot walkway — by guest musicians Pat Smear (guitar), Rami Jaffe (piano, Hammond B3 organ) and Drew Hester (percussion), who all played on the Foo's fully acoustic tour last year, plus Jessy Greene (violin, cello). There are three vocal positions set up for band frontman Dave Grohl, each featuring Sennheiser's MD 431 II microphone, a model on which he has relied since mid-2005 for its tight polar pattern and rejection characteristics. Taylor Hawkins (drums), Chris Shiflett (guitar) and Jessy Greene all provide backing vocals through evolution series e 945s.

According to Bryan Worthen, front-of-house engineer for the band, "The 431 is really, really flat at the high-end. It's crazy how much low-end is in that microphone, too. At times Dave sings really quiet, then he screams his head off, so I insert an Avalon 737 on his main vocal and spare, roll off some of the low frequencies, add a tiny boost of the high-end for a little more sparkle, then let it rip! It sounds great and we've never had major problems with feedback at any of the shows."

Due to the extremely high sound levels on the compact B stage, where six of the musicians rely on under-floor wedges for monitoring, tight microphone pick-up patterns are certainly an advantage, noted Beveridge. "So we ended up with e 904s on the guitars on the B stage. They worked best," he says. On the main stage, Grohl's guitar amps are miked using an MD 421 and an e 935 with another MD 421 on Shiflett's amp set-up.

Various evolution e 600 and e 900 series microphones are used on the drum kits on both the main and B stages, including e 902s on the respective kick drums. Shiflett and Nate Mandel (bass) are using Sennheiser G2 personal monitoring systems. "They don't need to pull anything out or swap a pack of anything, they just walk out to the B stage with the packs on," says Beveridge. **CX**

# Unlimited Sound Quality



Aerosmith's  
Steven Tyler  
using his customized  
AKG WMS 4000  
wireless with the  
D5 capsule

D5

Dynamic  
Vocal  
Microphone



**D5 – LESS FEEDBACK**  
Laminated VariMotion capsule delivers significantly more gain-before-feedback than any other mic in its class.

C5

Condenser  
Vocal  
Microphone



**C5 – STUDIO-LIKE CLARITY**  
Patented condenser capsule delivers legendary AKG studio quality sound, now on stage.

WIRED & WIRELESS



audioProducts  
Group

FOR YOUR NEAREST DEALER:

AUSTRALIA: Call 1300 13 44 00  
or visit [www.audioproducts.com.au](http://www.audioproducts.com.au)

NEW ZEALAND: Call 0800 111 450  
or visit [www.audioproducts.co.nz](http://www.audioproducts.co.nz)

# FIND YOUR **PERFECT SOUND**



## rcfcustomshop.com.au

Customised models, pre-tweaked for every type of performance.


Model	Drivers	LF Amp	HF Amp	Max SPL	Weight	Dimensions (mm)	
<b>ART 310 A</b>	10" + 1"	300W	50W	127dB	12.4kg	537H 337W 315D	
<b>ART 312 A</b>	12" + 1"	300W	50W	127dB	19kg	680H 405W 345D	
<b>ART 315 A</b>	15" + 1"	300W	50W	123dB	20kg	680H 405W 345D	
<b>ART 322 A</b>	12" + 2"	350W	50W	123dB	23kg	680H 405W 345D	
<b>ART 325 A</b>	15" + 2"	350W	50W	129dB	24kg	680H 405W 345D	
<b>ART 522 A</b>	12" + 2"	500W	250W	130dB	<b>18kg</b>	680H 405W 345D	<b>*NEW</b>
<b>ART 525 A</b>	15" + 2"	500W	250W	131dB	<b>18.5kg</b>	680H 405W 345D	<b>*NEW</b>
<b>ART 705 AS</b>	15"	800W	TBC	130dB	37kg	590H 435W 600D	

*\*All power specifications measured in continuous RMS power.*

## MOVING SOON...

After three short years at William Street, Novatech Production Services are relocating to larger premises. With a consistent increase in inventory and infrastructure, the Novatech team quickly outgrew the current facility and are eagerly awaiting the completion of their new home, currently under construction at the Burbridge Business Park Adelaide Airport, five minutes from the CBD.


Managing Director Leko Novakovic said "Our commitment to the Adelaide market place and its continued growth is plain to see with Novatech moving to a facility three times the size of our current premises". The new site offers some great new assets for the company, a massive increase in warehouse capacity, dedicated manufacturing area, equipment repair workshop, showroom, training facilities, increased office space and a swanky boardroom.

It's fair to say that the team is itching for the construction to be completed and the keys to be handed over. Novatech will officially relocate in the first week of August with a launch of the new facilities in the weeks that follow. 

## MARTIN PRO MAKES MONEY

Martin Professional lifted revenue slightly to \$55.7 million in Q1 2008 from \$54.9 million in Q1 2007. Consistent with expectations, profit before tax was \$4.6 million in Q1 2008 compared with \$1.8 million in Q1 2007.

The Q1 numbers come on the heels of excellent 2007 numbers for the company. Revenue in 2007 improved by 14.1% to a record level of \$234.5 million from \$205.5 million in 2006. Profit before tax increased to \$16.2 million in 2007 from \$3.8 million in 2006.


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



## ASHTON BUDGET WIRELESS MIC SYSTEMS

Ashton's new wireless microphone systems; the AWM300 and AWM400 are rack mountable for easy integration into your PA system and come with a Channel Matching System.

The AWM300 is a dual channel receiver system whereas the AWM400 is a quad channel receiver system. AWM400 retail \$899 and AWM300 \$499.

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



## SUBSCRIBE TO CX MAGAZINE NOW!

See page 77 this issue or go to [www.juliusmedia.com/cxweb/cx\\_subscribe.asp](http://www.juliusmedia.com/cxweb/cx_subscribe.asp)



# NEUMANN.BERLIN

THE MICROPHONE COMPANY

## The Living Legend Now a Collectable

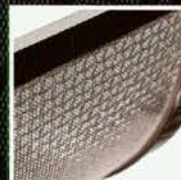
40 Years

U87 Anniversary



The Neumann U 87 is arguably the world's best known studio microphone. To mark the 40th Anniversary of this living legend we present the exclusive U87 Anniversary Set with these unique product features:

- Includes a fine, robust and classic style case
- An exclusively designed pop screen, styling reminiscent of the 60s, the early years of the U87
- The entire set shows the stylish combination of polished nickel parts with the traditional Neumann matte nickel look
- The Microphone, elastic suspension and pop screen are instantly recognizable
- The set also contains a dust cover embroidered with the anniversary logo, and a pair of white gloves for handling this valuable equipment
- A signed and framed certificate of authenticity with individual serial numbers completes this Collectors set
- All technical specs are as per the standard U87



Limited stock available, make sure you don't miss out on this Collectors Item.

U87 40 Year Anniversary Set

The Heart of a Studio in a Luxury Set

For your nearest authorised dealer in

Australia: Free Call 1800 648 628 | email [sales@syntec.com.au](mailto:sales@syntec.com.au)

New Zealand: Call 09 263 9885 | email [sales@syntec.co.nz](mailto:sales@syntec.co.nz)



## ROBE TOURS WITH FUTURE MUSIC

Arguably one of Australia's most exciting and contemporary electronic music festivals, the Future Music Festival brings together an impressive line up of the world's best DJ's including massive headline act, The Chemical Brothers. With crowds of up to 40,000+, the huge day of full blown entertainment was spread out across several stages.

The lighting Rig for all the auxiliary stages was provided by Clifton Productions, and project managed by Clifton's Production Manager Michael Parsons. For the Sydney and Brisbane legs of the tour, the Future Music Stage was operated by Parsons himself throughout the afternoon. Parsons states that "the main hurdle that the lights had to overcome was to cut through the daylight." As such the lights had to be powerful, and this was the motivation in incorporating the Robe 2500 ColorWash with PC Lens into the rig – which proved prudent – as Parsons states that the

"brightness and punch of these fixtures was outstanding". Parsons goes so far as to say that the "2500's made the strobes in the rig look like tiny blinking LEDs".

When the main act, the UK's Chemical Brothers, kicked off the last spot on the line-up, they did so with their own specific lighting design from Lighting Designer/Operator Ricardo Lorenzini. Phaseshift Productions were brought on board to provide the lighting equipment and consoles for The Chemical Brothers for a lot of their Australian shows (except Perth). The Chemical Brothers are renowned for their amazing visuals, and brought with them as a feature a Stealth LED Screen measuring a huge 12m x 7.8m, and 2 x 10K full colour lasers.

Phaseshift's Simon Aitken states that the LD asked for a 'very punchy wash fixture to project through the Stealth Screen'. This was accomplished by rigging 27 Robe 1200AT ColorWashes behind the screen on angled pods, revealing the lights only during the Chemical Brothers spot. The rest of the rig

included 10 iLed StarDrape Panels, as well as other fixtures from Phaseshift's inventory. Simon states "The Robe 1200 Washes are a great unit and we never had any fuss with them at all throughout all the shows around the country".

For the Melbourne leg of the tour, the Mischief stage was operated by John Stanley of Light and Sound Solutions with gear provided by Clifton Productions. The rig included 8 Robe ColorSpot 700E AT and 6 Robe ColorWash1200E AT. The lighting show was completely operated by E:Cue 3.8 with MM Dongle, Fader unit and Butler. On the performance of the Robe's, Stanley states "The Robes were used due to the fast CMY color mix system and proven reliability. This enables me to produce extremely fast color flicks. I would say that the Robes have the fastest CMY on the market."

Other stages on the Future Music tour that featured Robes include the Fan Klub Stage and the Famous Stage with 6 ColorSpot 1200E AT and 6 ColorWash 1200E AT on both rigs. The major Trance stage God's Kitchen featured 8 Robe Colorspot 700E AT and 8 ColorWash 700E AT, and the innovative Silent Disco featured 4 Colorspot 700E ATs. The Future Funk stage featured 4 ColorSpot 700E ATs, and the very retro Roller Disco had 4 ColorSpot 575E ATs.

Overall, Parsons was very effusive about the reliability and performance of the Robes on the Future Music Tour – "I toured the lights from the Brisbane to Sydney gigs and had no hiccups. I took 6 spare fixtures and never even had to take them out of their cases. They withstood everything - rain, heat, dust – no problems." It seems both the Future Music Festival and the Robes proved to be a huge success!

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



## SELECON ANNOUNCE WINNERS

A recent Selecon Acclaim Zoomspot promotion included the opportunity for people to enter a draw to be in to win one of four prize packs of 2 x Acclaim 650 Zoomspots to help start or complement their lighting inventory; congratulations to:

**Xavier College**, Skennars Head, NSW  
**Girton Grammar School**, Bendigo, VIC  
**Shire of Campaspe**, Echuca VIC  
**Westminster School**, Marion, SA  
[www.seleconlight.com](http://www.seleconlight.com)



# MIX WITH THE BEST.



The Yamaha M7CL digital mixing console has an interface allowing you to perform any mixing application faster and more intuitively. Visit our showroom for a demo today. Mix with the best at Soundcorp – Best Products, Best Service and Best Price.



**32-Channel M7CL: \$24,000**

**48-Channel M7CL: \$30,000**

Including optional MBM7CL Meter Bridge (as pictured). Soundcorp also stocks a huge range of input/output Mini-YGDAI expansion cards. Call us for your requirements.

## M7CL Digital Mixing Console

### The time to go digital is now...

If you're planning to build or upgrade a mid-size sound system – installed or portable – now's the time to move up to a top-performance, easy-operation digital system based on the M7CL. This is one digital mixing console that lets you concentrate on sound without being overwhelmed by the technology.

If you've been delaying a move to digital because of interface or operational issues, the wait is over. The Yamaha M7CL Digital Mixing Console offers professional digital console performance and features for live sound in a 32- or 48-channel system that can actually be easier to use than a conventional analogue console. It sounds great, too.



## Yamaha Centralogic™

Yamaha's Centralogic interface takes the most direct approach to giving you maximum operational ease and efficiency in a digital console. Rather than trying to simulate the feel and workflow of an analogue mixer, Centralogic goes straight to the heart of the matter, simplifying digital operation to the point where it is actually as intuitive as analogue.



### Find The Sweet Spot at Soundcorp

Visit our new Melbourne showroom and compare a wide range of monitors, PA speakers, and the latest Yamaha mixing consoles. The Sweet Spot is Soundcorp's purpose-built audio listening room.

# SOUNDCORP

New showroom & The Sweet Spot located:  
570 City Road South Melbourne 3205  
phone. 03 9694 2600 fax. 03 9694 2626  
email: sales@soundcorp.com.au

Sydney Branch Office:  
phone. 02 8596 5855 fax. 02 8596 5850



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

## BILLY ELLIOT HITS AUSTRALIA WITH M'ÉLODIE

Elton John's musical *Billy Elliot* is currently running at Sydney's Capitol Theatre.

The Australian production's audio works a treat. CX saw the London production, then Sydney – and had excellent audio delivery to our cut price seats in the second last row in Sydney. At that moment the thought occurred that Sydney exceeded London.

Designer Paul Arditti and sound system providers System Sound installed 26 Meyer Sound M'elodie line array loudspeakers along with 41 UPM-1P loudspeakers for rear delays. This marks the first time M'elodie is used in any *Billy Elliot* production.

"Capitol Theatre has some challenging reflections due to the curved ceiling," explains Shelly Lee, Sound Supervisor for the production. "The M'elodies' tight focus really helps to keep those reflections to a minimum."

Arditti notes that using M'elodies has effectively prevented a potential feedback disaster. "When you're attempting to amplify a thirteen-year-old Billy Elliot with a small voice, from an omnidirectional mic hidden in his hairline, while he dances and sings downstage right below the centre hang of M'elodies, against an

orchestra playing their socks off, you might expect to run out of gain before feedback," Arditti observes. "With the M'elodies, we never even got near the feedback point."

Eighteen additional UPM-1P loudspeakers on stage provide foldback for the performers. They are turned on and off to accommodate the frequently moved set pieces throughout the performance. Another ten UPM-1Ps used as frontfills are delayed individually as the front of the stage is angled.

A selection of UPJ-1P VariO loudspeakers and UPA-1P, MM-4 and CQ-1 loudspeakers provides effects throughout the hall, with eight UMS-1P subwoofers handling low end surround. A Galileo loudspeaker management system with two Galileo 616 units handles drive and processing for the M'elodie system.

"The consistency and accuracy of the M'elodies make them, without question, my favorite speakers for theatre vocals," states Arditti. "I'm truly impressed with the sound and the superb ease of use of the Galileo as well."

System Sound first used the Meyer Sound M'elodies for *Miss Saigon* in Australia and Brazil, and was so pleased with the results that it recommended them for the Australian productions of *Billy Elliot* and *Spamalot*. System Sound's director John Scandrett confessed that the



company first purchased the M'elodies based on its lengthy relationship with other Meyer Sound products and without even auditioning them. "The M1D has been a valuable part of our inventory for many years, and we have tremendous confidence in Meyer Sound's products," Scandrett explains. After using the M'elodies, Scandrett confirms he has made the right decision. "I believe the M'elodie will represent a new benchmark for the theater industry." 

## AND NOW: ZED FX

Allen & Heath's ZED range of small-format USB equipped mixers for live performance, recording and production expands again with the addition of effects. Two new models, ZED12FX (6 mono + 3 stereo channels) and ZED22FX

(16 mono + 3 stereo channels), retain the same professional ZED feature set but add a comprehensive selection of custom designed effects.

Divided into 4 types these new effects include: tap tempo delays, short reverbs, long reverbs and modulation. They are controlled by three buttons for easy navigation and editing, allowing the parameters of each effect to be quickly 'dialled-in.'

'We've designed these effects for amateur and semi-pro artists who want great quality effects for their live performance or recording but don't want another piece of outboard gear,' explained A&H R&D manager, Mike Griffin. 'They were designed



by the same team that writes algorithms for our large digital touring mixers - ZED are the only mixers on the market to have integrated custom effects of this quality.'

Like the ZED14 and 24 the new ZED FX mixers feature a responsive 3-band swept-mid EQ, the new high performance DuoPre padless pre-amp, 100mm long throw faders, 4 aux sends, a USB send and return (for PC or Mac recording or playback), a unique dual stereo input capability, advanced monitoring facilities and heavy duty construction with individual circuit boards nutted to the top panel – just like Allen & Heath's professional touring

mixers.

ZED's USB output can be configured to allow different signals to be sent to JSB, from the LR master or the aux buses, with the USB return signal available as a stereo return. Cakewalk's SONAR LE music production software is bundled with the mixers, to enable the user to perform many different tasks, for live performance, live recording, studio recording, or studio mixing.

Retail prices of ZED12FX and ZED22FX are \$1,495 and \$2,195 respectively. Allen & Heath is distributed in Australia by Technical Audio Group. [www.tag.com.au](http://www.tag.com.au) 




## MICROHIRE TURNS TO HK AUDIO

Starting off as a computer hire company back in 1987, Microhire has grown into one of Australia's leading AV solutions companies.


Late last year it became evident that the need for a large scale PA system was at hand and the search began for a line array system that can be used in many applications.

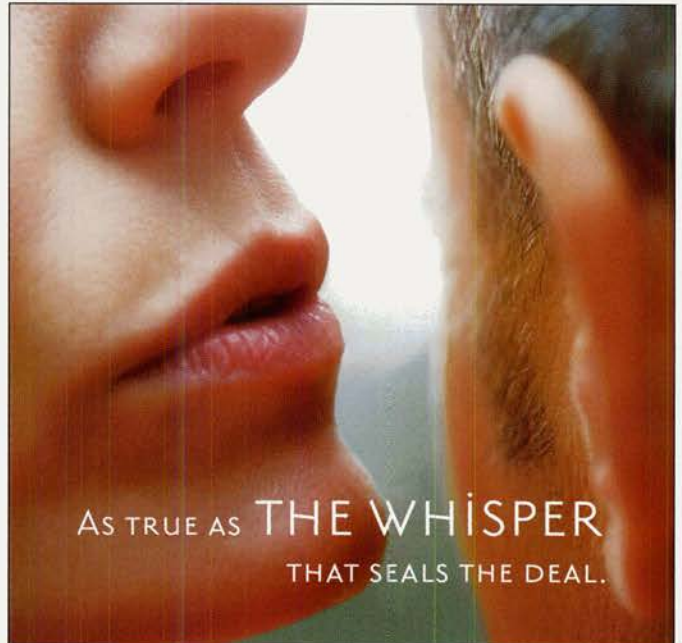
"We looked at every system available and HK Contour Array had all the answers to our questions," says Travis Hogan - Microhire's Melbourne production manager (pictured). "We are so busy - and with some of the short bump in times we quite often have - one of the most important issues was ease of use and the HK definitely has that. The quality of sound was also a leading factor in our decision and once again full credit must go to the Germans" he continued.

Microhire has purchased 2 x HK Contour Array systems as well as a Contour Series Monitor system and has big plans on expanding that inventory in the near future. Microhire have offices in Sydney, Melbourne, Gold Coast, Brisbane, Canberra and Adelaide. 

## YAMAHA ADD VCM TO DM1000, 02R96 AND 01V96

Yamaha has expanded the DM1000, 02R96 and 01V96 digital mixers to VCM functionality. Depending on the choice of console, engineers now have access to recreations of classic compression and EQ units, simulations of legendary analogue open-reel tape decks, a complete suite of unmatched REV-X reverb effects, a high-class surround post-production package and a selection of vintage stomp boxes right at their fingertips.

All five Add-On Effects packages are now pre-installed on new DM1000 VCM and 02R96 VCM arrivals at no extra cost, delivering unbeatable value with new console purchases. These packages normally carry a combined RRP of over \$4,800 if sold separately. The 01V96 VCM ships with two of the packages, with another two available as optional add-ons. 



AS TRUE AS THE WHISPER  
THAT SEALS THE DEAL.

## CONFERRING

When every nuance comes through, you get it. Biamp TrueSound™ is as real and natural as being there. Our new Biamp TrueSound™ AEC Algorithm delivers true 20Hz to 20kHz wideband acoustic echo cancellation — without compromising core DSP resources.

**CONFERRING.** Biamp's AudiaFLEX, Nexia TC and Nexia VC processors offer the most powerful hi-definition conferencing solutions ever created. Find out how you can bring TrueSound clarity and simplicity to any teleconferencing or videoconferencing challenge. Take a meeting with Biamp. For conferencing that's true — to life.

nexia<sub>tc</sub>



nexia<sub>vc</sub>



**Biamp TrueSound™**  
Pure, natural, true — to life.

**BIAMP** audio products  
SYSTEMS Group

FOR YOUR NEAREST DEALER:

Australia: Call 1300 13 44 00 or visit [www.audioproducts.com.au](http://www.audioproducts.com.au)

New Zealand: Call 0800 111 450 or visit [www.audioproducts.co.nz](http://www.audioproducts.co.nz)

# BIG SCREEN

Staging Connections unveils biggest screen yet. Very wide screens are the new thing for big events.



Andrew Holmes, Bytecraft (Lighting Manager), Daniel Quinn, SC (Technical Director), Andrew Bennett, Bytecraft (Assistant Lighting Director), Dave Marmc, SC (Production Manager), Paul Mossop, McLean Audio (Audio System Engineer), Andrew MacColl, SC, (Head of Event Technology).



Christie projectors with Barco 12k backup next to each.



Encore control, mother of all screens in background.



Just a few racks!

## By JULIUS GRAFTON

The Melbourne arm of Staging Connections has just delivered its largest video gig yet, on what is possibly the largest flat screen ever used in Australia. The screen almost covered the entire width of the Melbourne Convention and Exhibition Centre (MCEC). Staging Connections ordered the screen from Screen Technics – Australia's largest screen makers. The screen measured 46 metres

wide and 6.5 metres tall – and was stretched over a frame made from 410 metres of tri truss which Bytecraft Entertainment supplied and rigged on dozens of chain motor cases. The screen was then slowly motored vertical with the supporting cases on their wheels to allow the movement.

With this expanse of pristine white screen in position, the imagery was projected from six 20,000 lumen Christie projectors and made seamless with a Watchout and

Encore rig. A 12k Barco projector was positioned alongside each Christie as a backup.

The Amway China Leadership Seminar Program saw approximately 7,000 delegates visit Melbourne in four groups. During their visit, each group attended the business sessions with technical production and project management by Staging Connections and Gala Dinners produced by Peter Jones Special Events.

Staging supplied seven Folsom Encore VPs, hard drive video replay

and fourteen Watchout computers all running fully digital signals. Everything was backed up so the tech area was loaded with racks of PC's and processing. It was a blue wire city, with network cables and vision feeds running out in neat order.

Up on the control level of the scaffolding platform that ran the width of the back of the venue, was the Folsom Encore controller and a backup. The Amway China team sent operators who also brought the content for the show, which was wholly staged in Mandarin.

CX saw a run through of the vision and can report the system performed flawlessly, with crisp and bright video that totally changed the venue characteristics. It enabled a more intimate feel, where a wide venue mode could not normally be chosen without the availability of this technology.

The gig came about quickly, with a three way tender process completed just three weeks before loadin. In that period, Screen Technics had to actually make the screen at their Moss Vale NSW premises.

Load in and setup spanned eight

days, during which Bytecraft installed another 200 metres of truss, loadec up with Mac 700 wash and profiles, alongside conventionals.

McLean Audio Services provided an EAW KF 730 line array system, with EAW SB 730 subs and various bits to make it all work.

In addition, Staging Connections managed the event infrastructure including the construction of the custom set and stage, installation of tiered seating for a 2,000 seat theatre, setup of carpet, flat-floor

seating, room drapes, tiering drapes, power and a photo-booth area for the delegates to be photographed on arrival. The Company also provided table centrepieces for the gala dinners.

Overall this event was onsite at Melbourne Exhibition Centre for almost a whole month, and if you walked past the venue there were not many clues what was happening inside. Yet another almost invisible to the public eye but highly significant event!



## CREDITS

### Staging Connections

Andrew Maccoll – Technical Director  
 Dave Marmo – Production Manager  
 Rob Meek - Project Manager  
 Dan Quinn - Technical Director  
 Steve Cain - Vision Engineer

### Bytecraft

Andrew Holmes – Lighting Manager  
 Andrew Bennett - Moving light Engineer

Paul Mossop - Sound Engineer – McLeans

Bert Li - Associate Director of AV & Events Production, Amway Greater China Regional Office

Simon Ho - Technical Director, Sagma Technical Consultants Ltd

Andy Tse - Set Designer, Pamco Ltd

Rebecca Kalms - MCEC Event Co-Ordinator



# HME

## Digital Wireless Intercom Systems

### Sending a clear signal

The HME DX Series is the proven, future-proof digital system. With its digital encryption and frequency hopping technologies, you'll never have to worry about any unauthorized users. Licence-free and with support for single or two channel requirements, the DX Series' superior digital design and ease of operation make it the ONLY choice in wireless intercom systems.



BP200 Belt Pack

HS15 Single Muff Headset

DX200 Wireless Intercom System



DX300 Wireless Headset System



DX100 Portable Digital Wireless Intercom System

Many applications: One clear choice.

NOW OPEN IN BRISBANE!!!

Murray Tregonning Sales Pty Ltd [www.mtasales.com.au](http://www.mtasales.com.au)

Melbourne (03) 9819 6455 Sydney (02) 9310 2799 Brisbane (07) 3299 2288

# IT'S BIG, AND IT'S A CX EXCLUSIVE

The Julius Campus mega test is the biggest new idea in reviews.



Everyone who reads this magazine knows we run a college as well. The college is five years old and was recently expanded with a theatre space that we call The Barn. This is because it kind of feels like a barn, minus the livestock.

The Campus Mega Test has developed out of a reader demand for real product reviews. In recent years we've tended to avoid straight up reviews of products because it's too difficult to get a real impression of a device from what we think of as a 'coffee table' review – the ones where you set it up in the living room at home and test it without reference to reality.

Almost all reviewers face the frustration of not having a realistic environment in which to stage the review. Now we have a venue here at HQ, and we are quite proud of it. Come have a look sometime. The Barn has a lot of varied rigging facilities, two lots of three phase power, and an improvised layout with (intentionally)

challenging acoustics.

As part of our technical college training, our fulltime students produce two shows a week. This represents an excellent opportunity for everyone. Using a range of state of the art equipment in their productions helps the students to develop their versatility, while at the same time it allows us to take review products off the coffee table and into a real production environment. Better yet, we get an enthusiastic young workforce to do all the heavy lifting.

The equipment we review is integrated with other equipment, so we get to understand using it in context. This sometimes adds a new dimension, so the review is strengthened.

Some people may misunderstand what's going on, so let's clear up the misconceptions right now.

- The students are not reviewing the gear. They're working with it, under supervision, so that we can see

how effectively it drops into production. We may ask them how intuitive/user-friendly they found something, but that's it.

- The productions we stage are usually different – anything from a corporate event, fashion show, to a concert. Musical styles are wide as well, we have visiting musicians from the Australian International Conservatorium of Music.
- We're not just dumping the gear in the classroom and writing the review as an afterthought. We're still doing all the same tests we would do in any other review, and the production activity is an extra stage in the process.

If you've got something constructive to suggest – if there's a product you think we should look at, or you'd like to help out as a writer in the reviews, let us know at [Juliusmedia@mac.com](mailto:Juliusmedia@mac.com).

Thanks, and enjoy...



thinking sound



# WE HEARD

AROUND THE WORLD

POWERHOUSE MUSEUM ROYAL ALBERT HALL BILLY ELLIOT THE MUSICAL AUSTRALIA DAY CELEBRATIONS  
ZELLERBACH HALL METALLICA EU TOUR BROLGA THEATRE CARNIVAL CRUISES MONTREUX JAZZ FESTIVAL  
MARILYN MANSON EU TOUR SYDNEY FESTIVAL MOROCCAN WORLD MUSICAL FESTIVAL O2 ARENA

meyer sound can be found on the web at [www.meyersound.com.au](http://www.meyersound.com.au) or in the world's best venues

# ROBE DIGITAL SPOT 5000DT



By **ANDY MACKENZIE**

It was always going to happen. As projectors got smaller and brighter, moving lights were getting bigger and their image projection more complex. Sooner or later, the tipping point would come. High End Systems were first with the DL-1, but it was inevitable that others would follow.

The basic concept is fairly simple. Build a moving head fixture that uses a high powered video projector rather than the standard lamp and optics everyone has come to expect. There are a number of obvious benefits associated with this approach, mostly relating to the use of gobos and other projected images.

Way back in the olden days, gobos were simple metal stencils you could shine light through to create interesting beam effects. As time went on and designers demanded more from their equipment, gobo technology grew. We saw glass gobos appear, giving the options of shading and colour that we had never previously seen; we saw gobos gain the ability to be rotated or indexed to

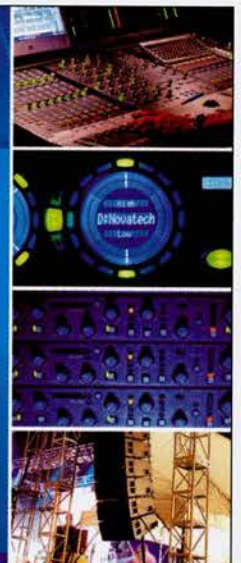
## CREATIVE EVENT TECHNOLOGY

## AUDIO

### Big or small we've got you covered!

- RCF ART self powered speakers 200, 300, 310, 325, SWA 1500
- 160+ L'Acoustics products 108a, 112XT, 115XT, 115XT-HIQ, ARCS, KUDO, DVSUB, SB118, SB218, LA48a
- Shure UHF - PSM600, PSM700 In-ear monitor systems
- Shure UHF - UT, ULX-S, ULX-P, UA, UHF-R
- Multicore systems (analogue and digital, with isolated splits) upto 96 channels
- 300+ microphones to choose from - Shure, Sennheiser, Audio Technica, Rode, Neumann, AKG, Clock, DPA
- Midas mixing consoles
- Digidesign Venue D-Show mixing consoles

- XTA C2, G2, D2, SIDD, GQ600, DP224, DP226, DP428, DP448
- LaKe Dolby LP4D12 with wireless tablet PC's
- Effects processors - Lexicon, Yamaha, TC Electronics, Eventide
- Pioneer CDJ 100, 200, 800, 1000, DVJ-DX1
- 360 systems Instant replay and Pro Tools playback systems
- Valve - TL audio, Avalon, Summit
- Comm's - Motorola Two Ways, Clearcom, Freespeak wireless systems
- Powerlok cables and distribution systems
- 'NEW' 110V 3 phase and single phase stage packages



Visit our website to download a detailed equipment list  
[www.novatechproductions.com.au](http://www.novatechproductions.com.au)

**novatech**  
 production services pty ltd



...like a moving light ate a projector

get them just where we wanted them; and we saw the growth of an industry based on the creation of custom gobos, most commonly used for corporate logos. Early moving lights had one gobo wheel with a couple of pretty basic gobos on board, later and larger fixtures got more wheels, more gobos on each wheel and more sophistication in the gobos.

Into this world sneaked digital projectors. Initially they may have been used primarily for projecting video and computer images, but they settled into a niche in the production industry generating images that were part of the show and, in a very real sense, part of the lighting.

Projectors had one blindingly obvious advantage over lights projecting gobos – the range of images available was far greater since anything that could be produced as a video or VGA signal was projectable. You could project images that did more complicated things than just rotate and strobe. You could have real moving images, you could project photographs and you were completely unrestricted by anything so mundane as the number of gobo spaces in the lamp.

On the downside, of course, was the fact that the projector was fixed in place and focused on one point. In a world where audiences have come to expect movement in the lighting rig, this just doesn't do it.

## ENTER THE DIGITAL SPOT

On first impressions, the 5000DT seems to be like a big moving light that has eaten a projector. Closer examination reveals that this is in fact the case. Inside the burly black casing of the head we found a commercially available projector, complete with Sanyo badging. No problem there – if someone else wants to do some of your R&D for you, you may as well let them. Several of the projector components, specifically the zoom and focus motors, have been beefed up to typical moving light spec which is significantly more robust than would conventionally be expected in a projector. My conclusion is that these motors are going to be doing a lot more work than the original ones were designed for.

There are several options for getting video information into this beastie. If you've got video content ready to go, you can use one of the external input connectors to introduce VGA, composite or S-Video. Alternatively you can use the onboard media server. Inside the base of the Digital Spot, alongside all the usual moving light paraphernalia (stepper motors, control circuitry, DMX decoders and such), there lives a computer. A PC, running a suitably tailored Linux platform and armed with



## The Only CD Player You'll Ever Need.



### Denon DN-C640 Network CD Player

With the ability not only to read a multitude of audio file formats from disc the new Denon professional DN-C640 will also stream audio from the network to provide even more playback possibilities. Fully equipped with professional features such as balanced, unbalanced, SP-DIF and AES outputs, an RS 232 port, IR receiver and parallel remote port, the DN-C640 will provide you with the complete operational solution under any circumstance, while an inbuilt LAN port offers complete access to network audio files and control via a web based GUI. Packaged in a 1U frame with a large fluorescent display, the DN-C640 must surely be the only CD player you'll ever need!

#### Key Features:

- Supports CDA, WAVE, MPEG, WMA File formats
- Reads CD-R/RW, DVD-R/RW, and DVD+R/RW discs
- End Monitor and User-selectable Finish Mode Features
- Cue to Music (with dedicated button)
- Slot in CD/DVD drive
- +/- 12% Pitch Control
- Program Play & Quick Replay Feature

**DENON**  
PROFESSIONAL

audioproducts  
Group

Australia:  
Call 1300 13 44 00 or visit  
[www.audioproducts.com.au](http://www.audioproducts.com.au)

New Zealand:  
Call 0800 111 450 or visit  
[www.audioproducts.co.nz](http://www.audioproducts.co.nz)



a substantial video output card and a hard drive full of exciting pre-loaded content

Some of the content that comes with the unit is simple geometric shapes in black and white or grayscale. This is the material that fills the role conventionally taken by simple gobos – beam effects through haze and so on. The number of these ‘gobos’ alone substantially exceeds the quantity available in most conventional movers, but the content box has plenty more. Still photos, video loops, groovy graphics to amaze and astound the addled nightclub crowd...there’s plenty there. And just in case you want more, the option exists to upload extra stuff from a USB stick.

One thing the base of the unit doesn’t contain is a lamp ballast of any kind (the whole lamp system being part of the projector in the head) so all this exciting stuff fits in without the base needing to be disproportionately large. On opposing sides of the fixture are the user controls and the connectivity. Connectivity is pretty much what you’d expect – the previously mentioned video inputs, an Ethernet port that allows you to control the unit via Art-Net and DMX inputs and loop outs in both three and five pin XLR



The screen and menu navigation are big, clear and friendly.

On the opposite side you are greeted by a large, friendly looking LCD screen along with two buttons and a rotary encoder. Robe are really good at this kind of user interface: the menus are intuitive, you don’t need a codebook to understand what’s on the display and you can get at everything you need easily. I’ve heard some people criticize the screen size, saying it’s too vulnerable to damage. I reckon you’d be working pretty hard to produce a suitably localized accident.

### MAKING IT GO

Step one in making it go is to get a control signal in. We used DMX from the Hog1000, but Art-Net is no less viable an option. Quite a lot of control data is needed to get things happening – 95 DMX channels in fact. The Hog library file splits this into four separate fixtures: one that controls movement, strobe, iris and so on, one for each of the gobo layers and one for other ‘global’ parameters. The split seems a bit perplexing at first glance, but is logical when you think about it. The first group deals with standard motor control stuff, the gobo layers are all about content on the media server, and the final section does image manipulation including colour and CTC control.

Once you get it started, lots of things become clearer. The idea of using two gobo layers seems odd at first, since you could set up this many effects in one folder and simplify the whole business, but in use you find that the dual layering actually works a treat. Each of the gobo layers has its own intensity control, so you can crossfade between gobos. Without crossfading, changes between gobos are extremely abrupt, but this is also an asset if you’re looking for quick

changes. Since the gobos are electronic, you don’t need to scroll through the wheel to get to the one you want. Crossfading is simple – put the new gobo in at zero intensity, then crossfade the layer intensities. Hooray!

### KEEPING IN SHAPE

It didn’t take long to get used to operating the light, and we had it moving from place to place maintaining image shape and focus (up to a point) after about ten minutes. The keystoneing capacity is awesome in comparison to what you’d typically expect to see on a projector, and good thing too. Keystoneing a projector usually comes down to fine adjustments to allow for slight misalignment – not correcting the shape of an image that is being sprayed across a wall from a thirty degree angle. Each corner can be shifted: horizontally, vertically or both. Focus becomes an issue at these kinds of angles, but physics is physics and you can only have so much depth of field.

So if you want to track the image across walls or similar, you need to get your zoom, focus and keystoneing right for the endpoints. These parameters will alter as the fade runs, presumably in the same time as the movement takes place, so it should stay pretty good throughout. Traversing round corners adds a level of complexity, but should be easy enough to manage with a couple of judiciously chosen intermediate points.

I can think of a lot of applications where this technology would be welcome, from corporate launches through to theatre or even museum installations. In these situations the external VGA or analogue video input

would be a strong selling point, though in a nightclub or dance party situation the media server would really shine through. It's comparable to products like ArKaos - there's a web interface for content management and the inbuilt content is really nice. Add in the effects, which allow you to rip, smear twist and otherwise distort the image in a host of interesting ways, and you've got enough content to stimulate the most addled of audiences for hours.

### THINGS TO GET USED TO...

It seemed weird at first to be using a light which shoots a square beam. I think most people are used to dealing with round beams and this is what they expect. If you want a round beam, the iris is a conventional round one so you can crop the image to a shape you're more comfortable with.

The colour and CTC options are nice - colour is standard CMY mixing, but achieved through unconventional means. Instead of using dichroic filters introduced to the beam, the 5000DT changes the output from the media server. This means colour

mixing is extremely even across the field, as is the light intensity. The CTC rolls through a continuously variable shift, so you should be able to match up with any light source known to humanity. The only downside I can see to the colour correction is that replicating it could be more difficult than with a conventional filter wheel system. As in most other fixtures, colour and colour correction can be overlaid on top of gobos.

### THE BIGGER PICTURE

If the image you're shooting out of your projector isn't big enough to satisfy you, you can hook up a bunch of these and do a multi-unit blend. I didn't try this, due to the limitations imposed by having only one of them, but the process doesn't seem unduly complex, though it may be rather fiddly to get right. One smart piece of advice I've heard is to do this from fixed rigging points as it doesn't take much movement to throw the alignment out.

### SCORECARD

- **WEIGHT:** At about 45kg, this is no lightweight. On the other hand, you

get a lot of function per kg.

- **COST:** About 45K. So about 1000 bucks a kilo. But...moving lights are expensive, and you do get a fair bit of bang for your buck.
- **RIGGABILITY:** 9. The test unit was supplied with a pair of trigger clamps which go on in a range of different configurations. 45kg still won't be much fun, but at least you don't need to hold it with one hand!
- **BRIGHTNESS:** 8. The spec says 5500 ANSI lumens, which is reasonably bright by projector standards, but it doesn't have the dazzling brightness of some of the big moving lights.
- **USABILITY:** 8. This device has lots of functions, and this makes it complex. Considering the array of functions available, usability is good.
- **FUNCTION:** 9. This is an effects projector par excellence. It's got more gobos and video on board than you can poke a stick at, and just as many ways to mess about with them.
- **WOW FACTOR:** 9.5. Oh yeah, this'll get their attention.



**Selecon**

“ Newcastle’s Civic Theatre may be 75 years old but it is light years ahead in energy-efficient illumination thanks to Selecon. ”

Operations manager David Grinstead comments on the decision to replace the Civic Theatre Newcastle's entire stock of ageing 2.5kW FOH profiles with Selecon Pacific 1200W 80V Zoomspots. [www.seleconlight.com/pacific80v](http://www.seleconlight.com/pacific80v)

New 80V Direct DMX Power Supply now available for the Selecon Pacific range of ellipsoidals and for the Rama 175 High Performance Fresnel. No need for a dimmer, fits into industry distribution systems for moving lights!

performance lighting | [www.seleconlight.com](http://www.seleconlight.com)

# DIGITAL MICROPHONES? IT CAN'T BE DONE....



*The TLM103D large diaphragm digital condenser microphone*

The new Solution-D family of microphones from Neumann lands squarely in a market sector that never previously existed.

By **ANDY MACKENZIE**

Microphones have always been analogue devices, and the capsules always will be but Neumann have brought the digital conversion process closer to the capsule than ever before. The Neumann company has a long and distinguished history of innovation in the recording field. The organisation lays claim to many substantial developments including the first condenser microphones, stereo microphones, phantom power and a host of others. This latest foray into R&D is intended to address what Neumann's engineers have identified as a significant weakness in current recording technology.

The idea goes something like this – analogue systems need buckets of headroom and every stage of analogue audio processing contributes its own little bit of noise and non-linear distortion. Digital transport and processing introduces neither noise nor distortion. So...if we're going to convert it to digital anyway, we may as well do it as early as possible and eliminate as much of the analogue processing as we can thus reducing the distortion levels and improving the dynamic range.

To achieve this, Neumann have eliminated the analogue processing from the equation. The signal leaves the capsule and is immediately

converted to digital. The electronics in the microphone are all digital and offer some degree of processing before the signal even leaves the mic. When the signal does leave the mic, it is coded according to the AES 42 standard – this is not the same as AES/EBU, it is a specially designed format specifically intended for use with digital microphones.

AES 42 goes both ways. It carries phantom power and control data to the microphone and digital audio away. While the cable uses standard 3 pin XLR connectors, this is no ordinary mic cable. As with all digital systems, AES 42 requires a substantially greater bandwidth than normal audio cable is designed for, so you need to use an appropriate digital cable. Consoles and other devices with AES 42 inputs aren't real common as yet, but I won't be surprised to see option cards for it appearing as the format gains support. Once this happens, the console could control all the user adjustable parameters of the mic: output level, polar pattern, limiter settings, the lot. Cool, huh?

In the meantime, you have a couple of options for getting the signal into your console or recorder. The simplest is to use a connection kit, which is a little device that will supply power to the mic and convert the output to a different format. These are available with either S/PDIF or AES/EBU outputs. The downside of the simple connection kit is that you can't take advantage of the microphone control options. If you



KM184D

use the DMI-2 controller and the RCS software you have access to all the microphone control features and you can plug in two microphones. The output of the DMI-2 is standard AES/EBU.

At this stage the digital range doesn't go as far as the analogue range from Neumann, but there is a pretty good variety in the microphones available. The KM D series is a digital version of the KM18x series and is available with a range of capsule heads for different polar responses. If you're looking for a large diaphragm condenser, you've

got two possibilities. The TLM103D is, as you would expect, a digital version of the TLM103 cardioid condenser, while the D-C1 is the flagship multi-pattern model. All the microphones can operate at any of the industry standard sample rates from 44.1 to 192kHz and produce 24-bit resolution so system compatibility shouldn't be a problem.

### WE TESTED IT

CX spent some time playing with the KM184D downstairs in the recording studio, and we were frankly impressed. The mic was set up on a

## New Australian Office!

For career opportunities please visit [www.riedel.net](http://www.riedel.net)

**RIEDEL**  
The Communications People

## WORLD-CLASS COMMUNICATIONS

RENTAL • SALES • SUPPORT



Digital Matrix Intercom



Digital Partyline Intercom



Professional Mobile Radios



## SENNHEISER, NEUMANN AND THE SYDNEY OPERA HOUSE

A new 'sound partnership' between Sennheiser, Neumann and the Sydney Opera House was announced on the 18th of April. Described as a 'partnership of excellence', the deal will see the Opera House equipped with a broad selection of microphones from the Neumann and Sennheiser range.

Sennheiser and Neumann have similar arrangements in place with a number of leading opera houses and concert halls in other parts of the world, and the benefits flow both ways. For Sennheiser and Neumann it offers both a visible marketing tool and a valuable way of keeping track of the effectiveness and reliability of their products in demanding real world environments. For the various sound partners, the benefits include ready access to the latest in equipment as well as service and support.

"Sydney Opera House has used Sennheiser and Neumann microphones since opening its doors, and is thrilled that both companies are now official corporate partners. Using their microphones is a unique opportunity for us to be aligned with the best in the industry," said Sydney Opera House Technical Director, David Claringbold, during the official announcement.

Susanne Seidel, President of Global Marketing at Sennheiser, and Wolfgang Fraissinet, Neumann's President of Marketing and Sales, were also enthusiastic about the partnership, saying that Sennheiser and Neumann are "...pleased to have the opportunity to officially provide Sydney Opera House and its artists with our products..." and "...looking forward to working together closely with our new partner..."



Wolfgang Fraissinet, Susanne Seidel and David Claringbold

stand in the studio and we did some listening tests, comparing it to a similar analogue microphone using the onboard preamp in the DM2000. The first very obvious point of difference is the noise floor – the digital mic just didn't seem to have one. Cranking every bit of gain we could get through the console and the monitors didn't show up any discernible noise, despite giving enough gain that I could hear myself tapping my fingers on the console.

At similar gain levels the analogue mic's noise floor was extremely apparent. Given that the gain levels were wildly unrealistic for any practical application, is the difference enough to be significant? I think so, especially when you consider that in most cases you would be using multiple mics, each of which adds to the noise floor.

The sound of the mic was crisp and accurate without any obvious colouration. As a cardioid capsule it shows some proximity effect, but this is not excessive or obtrusive. I can see this mic working in a wide range of applications and its strengths would show particularly well when used with quiet sources where noise often becomes an issue.

I can also see it filling a role in live environments like choir and lectern miking where the small size and low reflectivity finish would make it visually unobtrusive at the same time as the zero noise factor helped in traditionally high-gain applications.

## HOW MUCH DOES IT COST?

Well, more than the analogue versions, but perhaps not as much as you might think...

The basic starter kits, consisting of a KM184D microphone and a conversion kit is a reasonably inexpensive option at \$2099 suggested retail, but at the big end of town the D-01 with a DMI-2 controller is a shade over nine thousand. But to be fair, high end studio microphones have never been cheap and neither have the other components in the signal path. When you consider that the D-01 is a top of the line multi-pattern Neumann condenser with complete remote control and very, very impressive performance specs, it starts to look pretty reasonable. Add to that the fact that it eliminates the need for an analogue mic pre and you can see a serious market.

# new age



Be heard. © 2003 Telax Communications, Inc.



## PowerH SERIES

the new age of power

Up to 7kW, only two rack units high, and weighing a mere 14.5 kg! With the PowerH Series, Dynacord has opened a new chapter in the history of professional high-powered power amplifiers. The 3-stage grounded bridge Class H topology and an extremely stable, state-of-the-art floating switchmode power supply guarantee the ultimate in efficiency, absolute reliability, and audio performance of the very highest quality.

PowerH power amplifiers are ready for integration into IRIS-Net™-based networks. Retrofittable remote modules allow complete system supervision and remote control combined with DSP-functions that include ultra-precise FIR filters and optimized algorithms for loudspeaker protection.



IRISNet



RCM - 26  
Dual Channel Controller  
Remote Modul

 **DYNACORD®**

Bosch Security Systems  
James Ruse Business Park,  
Unit 2C, 6 Eoundary Rd, Northmead NSW 2152

For more information call  
(02) 9683 4752 or email [stsales@au.bosch.com](mailto:stsales@au.bosch.com)  
[www.boschsecurity.com.au](http://www.boschsecurity.com.au)



Robert Sloss (Syntec), Susanne Seidel and Wolfgang Fraissinet

While they were in Sydney for the launch of the sound partnership with the Opera House, I had the opportunity to chat with Susanne Seidel and Wolfgang Fraissinet. These two hold senior positions in two of the world's best known microphone companies, so I was interested to get their views on their products, their customers and a bunch of other issues...

On the links between Sennheiser and Neumann...

Neumann is part of the Sennheiser group of companies but they operate almost completely autonomously. R&D, which is critical to both companies, is undertaken separately and products are manufactured mostly in different factories. The product components which share manufacturing facilities are things like CNC machined casings which don't care where they're made.

On their products...

Sennheiser and Neumann serve slightly different markets – Neumann has historically been known for high quality studio condensers while Sennheiser's dynamic microphones have been widely known and used both in studios and in live environments. A conscious decision has been taken to stick with these markets and not cannibalise one another. Quality control is seen as fundamentally important to both companies and Wolfgang points out the 64 individual QC tests carried out by hand on each and every U87 to leave the factory.

On their relationship with their customers...

"We feel that we give our customers excellent ongoing support, which means they continue to have confidence in us. Our customers also are the main driver for our R&D. If our customers tell us they need it, we will try to make it." Susanne goes on to say that a significant part of their customer support network is the local distributor, Syntec International, who have a longstanding relationship with the Sennheiser group.

On the future of microphones...

We may see Sennheiser producing a limited range of digital mics using technology similar to that used in the Neumann Solution-D series, and there's no telling what other manufacturers are planning, but we're likely to remain in an analogue microphone world for the immediate future.

Neumann are confident enough in the future of analogue microphones to be developing their own analogue mic pre, scheduled for release at AES in October. Wolfgang promises it will be "...ideal for all Neumann microphones..." and will have a number of unspecified "unique features". We'll just have to wait and see...

Even so, the market for the D-01 is probably reasonably limited – whether it's good value or not, there are only so many people with that kind of cash to throw at a microphone. I would suggest, however, that the cheaper kits are going to present a very attractive proposition to small studio operators otherwise faced with the purchase of a mic, pre and A-D converter.

## WIRING

For those seeking to introduce digital mics to their existing studio, there may be a few teething troubles – since many studios are wired only for analogue mic signals, arrangements would need to be made for AES cables from the live room to the control room. For the purposes of our testing we ran the cables through the open doors of the airlock, but this is not a real solution. A similar issue can be raised about console inputs. Most digital consoles offer AES/EBU inputs as an option, but most have only one or two (if any) as standard. Both these issues can be rectified with a little bit of effort and some dollars and won't present an impediment to someone serious about going digital.

There is also an obvious niche for these mics in a live environment. Since the majority of digital production consoles now use remote I/O racks with interchangeable cards, optioning in some AES/EBU inputs is not difficult, and users won't need to upgrade their multicore to manage the digital format – just make sure the AES mic leads are clearly identified so you don't confuse them with the standard ones. The things would probably still work up to a point, but I can't imagine you'd get ideal performance from either analogue or digital.

The only other negative that I can see people identifying in this system is the absence of a preamp. While there are lots of people who swear that mic pres should be completely neutral and uncoloured, there are also lots of people who like to combine particular mics with particular preamps specifically because of the colouration they offer. If this is you, you may be happier staying in the analogue domain, at least for a little while. But for all those who want to hear the sound straight off the mic capsule, this is for you.



Digital vs analogue AB test

- **SEX APPEAL:** 8 The sleek finish will appeal to just about everyone
- **QUIETNESS:** 10+ This sets a new benchmark for what quietness actually means
- **SOUND:** 9 Very clean, neutral sound. I can see the KM184D being a busy all-rounder in most studios as well as live environments
- **CONSTRUCTION:** 9 Neumann's build quality has a ways been excellent, and this is no different
- **FEATURES:** 8 The RCS software offers a whole lot of user control, but some folks will wish for analogue preamp emulation
- **VALUE:** 8 Costs more than an equivalent analogue mic, but not necessarily more than an analogue mic/pre combo
- **PRACTICALITY:** 7 Not really a 'drop in' replacement for analogue mics – some adjustments will need to be made to link these into an existing system.



## RocknRoller® Multi-Cart

- Instantly transforms into 8 different configurations.
- Tough, corrosion resistant textured powder coat finish.
- Load capacities from 168 kgs to 226kgs.
- Patented US design.
- 5 models to choose from.
- Large range of accessories available.
- Stair climber rails make going up and down stairs & curbs easy
- Non-skid frame beds to prevent cargo shifting.



**pennELCOM**  
Flight Case & Speaker Cabinet Solutions

Penn Fabrication Pty Ltd  
Phone: (03)9335-6455, Fax: (03)9335-6466  
E-mail: australia@penn-elcom.com  
Web: www.penn-elcom.com



# PROFILE: ANDY MCINTYRE



## Name?

Andy McIntyre

## What do you do?

Product Specialist for CMI Music and Audio. I look after HK Audio DB Technologies and Wharfedale Pro.

## Who do you do it for?

CMI Music and Audio.

## What's your professional passion?

Delivering a great show every time and supplying state of the art service and equipment. Oh and of course The Rock!

## When did you start?

I started at CMI around 18 months ago but before that I was the General Manager at Grafton Sound and Lighting. I ran a Crewing company in Sydney and I also worked on the road touring with bands such as Nitocris, Screaming Jets, The

Whitlams and Midnight Oil just to name a few. I also use to do in-house engineering at Sydney Uni Manning Bar, The Hoey, The Kelts Bar in Blaxland NSW and many others.

## Along the way, what was your greatest learning challenge?

As an audio engineer I believe the biggest challenge you face is the relationship you have with the artist. It is always very important to make the artist comfortable with you and communication fluent. This to me counts for both Monitors and FOH. It always helps to go that little bit further for them

## Who was your mentor when you started?

That's a good question. I guess when I started I was going to gigs in Sydney seeing bands such as the Hard Ons and Massapeal. I was 15

at the time and I guess I got the gig bug then, and I have never looked back so as far as a mentor goes I would say the pioneers of rock.

## What about now?

My Wife Monique and my 3 year old daughter Willow

## Audio hero of the century?

Well, I can think of two Aussie greats in Howard Page and Bruce Jackson

## Greatest moment?

Working on the Big Day Out tour. Good money, good times and very little work.

## Worst?

Last month mixing a 16 piece band, the Rebels, at the Commercial Hotel. They had 13 singers, it was a full house and I did not have a single EQ or Compressor.

## Tour story?

What happens on the road, stays on the road...

## Funny story?

I get paid to do what I do!

## Biggest challenge for the industry moving forward?

I have to say global warming. It is great to see our industry moving down a greener path, leading the way in fact with more efficient speakers, LED lighting and artists now doing carbon offset shows. I believe no matter what the debate says about global warming, making things less fossil fuel dependent can only be a good thing.

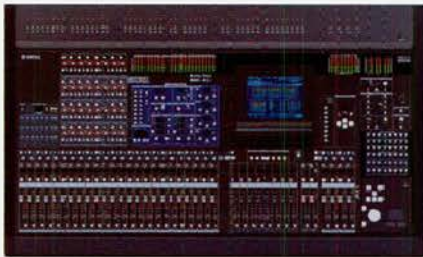
## Which professional standard would you like to see promoted better?

Well I would say safety but over the last few years I believe we have done a good job of addressing that.

## Tell us a little about your life outside of audio...

Apart from my family the only other thing in my life outside of audio is my dream of one day becoming the F1 World Champion.





### PM5D V2

FROM \$58,500 INC GST

MONTHLY PAYMENT: \$1,707.80 inc. GST\*



### Remote PM5D

\$30,000 INC GST

MONTHLY PAYMENT: \$874.55 inc. GST\*

## Simple. Reliable. Profitable.

### Simple.

The DSP5D is the remote stage box solution you've been waiting for.

Simply connect via Cat5 to expand the PM5D V2.

### Reliable.

Yamaha has gained unmatched experience through its 20-year digital mixer history. The PM5D V2 and DSP5D build on this experience to deliver world-class performance, every venue, every tour.

### Profitable.

With up to 144 channels of inputs and incredible new features including Virtual SoundCheck and Yamaha's Add-On effects on board, the PM5D V2 and DSP5D offer unbeatable return on investment.



# YAMAHA

**CO**  
commercial audio

Contact us for more information on the PM5D V2 and DSP5D:

[www.yamahamusic.com.au/products/commaudio](http://www.yamahamusic.com.au/products/commaudio)

Yamaha Commercial Audio: (03) 9693 5272 | PO Box 268, South Melbourne VIC. 3205

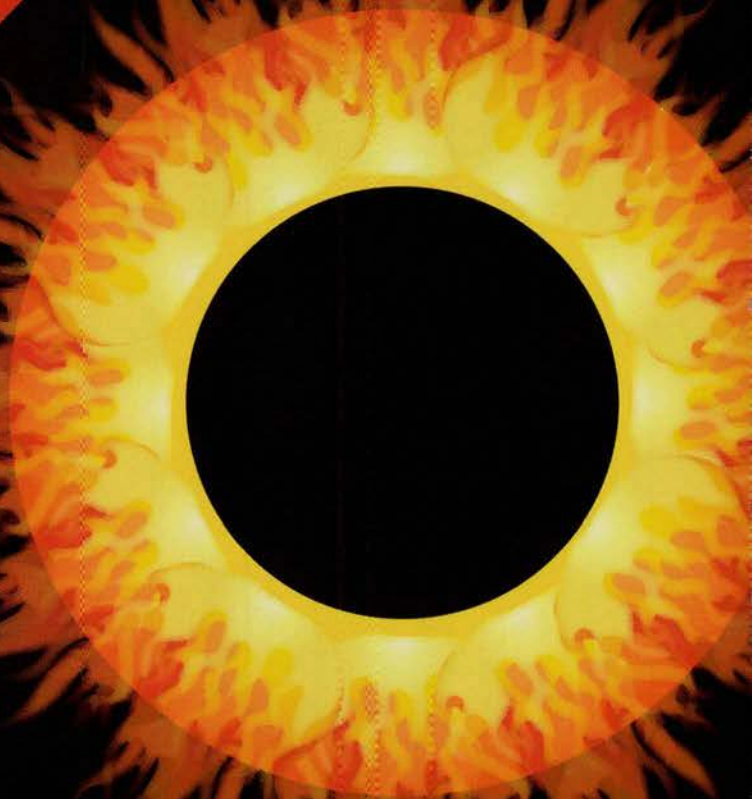


Contact Alleasing: (03) 9536 3495

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

\* Monthly payments in advance, for a 36 month term. To approved applicants. Payments are based on current interest rates and are subject to change without notice. Rental is offered by Alleasing Pty Ltd on its terms and conditions.

# THE CXPERT GETS FIRED UP ABOUT FIREWIRE





**LABOUR SOLUTION FOR EVENTS IN  
SYDNEY MELBOURNE BRISBANE/  
GOLD COAST ADELAIDE PERTH**

MIN 4 PERSON CREW METRO AREAS

FOR REGIONAL AREAS PLEASE CONTACT  
US FOR AVAILABILITY OF CREW

RATE A (0800 -2000) \$30 p/hr ex gst

RATE B (2000 - 0800) \$35 p/hr ex gst

Negotiable rates for larger crews

[info@localcrew.com.au](mailto:info@localcrew.com.au)

02 8668 9250

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

by JAMES DEN-ouden

In the throes of playing with the Indigo earlier this issue I got to thinking about FireWire and how widespread it's become as a connectivity standard. So this issue I'm taking a look at some of the things you can use it for...

What is FireWire? According to the Apple developer connection website "FireWire is a cross-platform implementation of the high-speed serial data bus — defined by the IEEE 1394-1995, IEEE 1394a-2000, and IEEE 1394b standards — that can move large amounts of data between computers and peripheral devices". Everyone feeling wiser?

As data transfer standards go, USB is pretty slow by today's standards. USB2 is useable, but FireWire is roughly 2-3 times faster. FireWire uses peer-to-peer architecture in which intelligent peripherals are able to negotiate bus conflicts and figure out which device can best control the transfer. USB2.0 relies on the computer handling all the data flow control, which ultimately results in a less efficient transfer and higher processing overheads.

FireWire is available in 400 or 800 Mbps flavours, making it one of the fastest peripheral standards ever developed. This means it's great for use with multimedia peripherals such as digital video cameras, multitrack audio and other high-speed applications. Features such as simplified cabling and hot swapping only add to its appeal as a protocol.

So now you know why FireWire is so awesome, let's take a look at some gear!

## CX PRODUCTION DIRECTORY

We list Production Companies from all over Australia and New Zealand in CX!

Find new suppliers, or find someone with equipment you need.

**LIST YOUR COMPANY:** Visit our website at [www.juliusmedia.com](http://www.juliusmedia.com) and navigate to the CX Magazine side, then Downloads. There you'll find the listing form which can be emailed back to us. There is no cost.

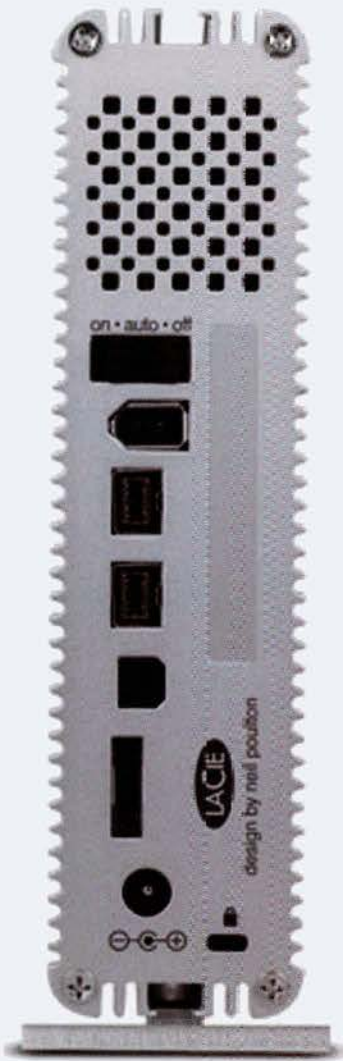
**HURRY, LISTINGS CLOSE VERY SOON!**

Advertise and make an impact: contact **Steve James** on +61 2 9638-5955 or email [stevej@juliusmedia.com](mailto:stevej@juliusmedia.com) now.



Macbook Pro

LaCie d2 Quadra Back Fence!



**MACBOOK PRO**

We'll start with a device you can connect all your new fandangled FireWire gear to – the Macbook Pro. Available in 15" or 17" widescreen models with Intel Core 2 Duo processors up to 2.6GHz in speed. Up to 4Gb RAM and 250Gb of hard drive space gives you "room for more." The audio input and output sockets run in analogue mode, unless you plug in an optical lead in which case they become digital (ridiculously clever).

The power cable has a "magsafe" magnetic connector so if you pull the cord out the whole machine won't go sliding off the desk/roadcase or

whatever it's sitting on. The external DVI monitor output supports higher resolutions than most of us could ever hope to need, and there's an internal iSight web camera built into the top edge of the display. The removable battery (with LED charge indicator) provides lots of run-time (Mine's telling me I've got 4 hours of work left right now). Under Leopard (OS 10.5), it also runs Windows – and better than most Windows machines do at that.

The very svelte Macbook Pro starts at \$2,699 for a 15" or \$3,799 for the 17". Available through Apple stores, but I'd probably use the online option at [www.apple.com.au](http://www.apple.com.au) since it's the best online shop I've ever used.

A gang of Quadras - pun intended



**LACIE D2 QUADRA**

Need more storage? No problem. LaCie are among your available choices of external hard drive manufacturers and we're looking at the d2 Quadra, since it looks nice, performs well, and has a good range of connectivity options.

The d2 Quadra has eSATA 3Gbits, FireWire 800, FireWire 400, and Hi-Speed USB 2.0 interfaces, and is available in 500Gb or 1Tb. The drive rotation speed on both is 7200RPM, which is what you'll need for media use. Double FireWire 800 ports allow you to "loop through" multiple drives.

LaCie have recently refined the design of the d2 Quadra, and it's now in a new enclosure which cools



# MESMERISING PERFORMANCE

2-Way Bi-Amplified Processed Active Monitor System  
500W Class D (LF) + 150W Class G (HF) Power Amplifiers  
Switching Mode Power Supply  
New Proprietary 12" (3" VC) B&C Neodymium Magnet Woofer  
New Custom Designed 1" (1.7" VC) B&C Compression Driver  
90° H x 60° V Constant Directivity Horn  
127dB SPL Max  
New Gas-Injection Moulded Enclosure  
2 x Input Channels (XLR/Jack, L/R Cinch RCA)  
High/Mid/Low Equalisation  
Excellent Power/Weight Ratio of 17.9Kg (HiMaxX40a)  
Also available Passive (HiMaxX40)

FBT's HiMaxX introduces a whole new class of powered, portable speakers. Designed, engineered and manufactured in Italy, with scant regard for trifles like cost or market size, FBT has packed the leading edge of everything into the HiMaxX40. It's the ultimate powered portable muscle machine.

**Strap Yourself In!**



Contact your FBT dealer or TAG for more: P: (02) 9519 0900. E: [live@tag.com.au](mailto:live@tag.com.au)

**FBT**  
Professional Audio Equipment

DESIGNED, ENGINEERED AND MANUFACTURED IN ITALY



PowerCoreX8 rear

better. \$79 extra will get you a rack mount bracket which allows 1 or 2 drives to be rack-mounted (try doing that with an ordinary drive!).

Retailing at \$279 for the 500Gb, or \$549 for the 1Tb model the d2 Quadra is available from good IT suppliers, or online at [www.lacie.com.au](http://www.lacie.com.au).

### EDIROL FA-66 AUDIO INTERFACE

The FA-66 is an audio interface offering 6-IN/6-OUT 24 bit/96 kHz simultaneous full duplex recording performance, or 4-IN/4-OUT 24 bit/192 kHz simultaneous full duplex recording performance. It's compatible with both Mac and PC.

Two XLR/TRS combo input sockets on the front of the unit allow connection of mic or line level sources. There's switchable phantom power, and input 2 has a high impedance switch to allow direct connection to instruments. There's a switchable limiter on these inputs to prevent clipping.

Further connectivity includes stereo RCA inputs and outputs, and the same in S/PDIF optical. 4 analogue outputs and a headphone socket, plus MIDI in & out complete the I/O features. The unit can be externally powered, or run from the FireWire

bus power for portable use.

A direct monitoring switch allows zero latency monitoring of inputs, and the unit is packaged in a solid metal enclosure so it's nice and rugged.

Retailing at \$695, the FA-66 is available from good music equipment retailers. There's more info to be found at [www.rolandcorp.com.au](http://www.rolandcorp.com.au) if you need it.

### TC ELECTRONIC POWERCORE X8

PowerCore X8 is a tailor-made piece of hardware designed to run high-end audio plug-ins for digital audio workstations. Whilst you can run audio plug-ins on your computer, using external hardware to do this leaves your computer's CPU free to do other stuff. The PowerCore hardware itself is simple - a 1RU enclosure with power and FireWire 400 connectors on the back and a fancy blue LED and switch on the front. Looks can be deceiving, the X8 is an 8 DSP unit with each DSP supporting up to 8 plug-in instances simultaneously.

The X8 is bundled with a load of useful plug-ins including: 24/7•C Vintage type Compressor/Limiter, Character (I like this one on vocals), Chorus•Delay Multifx which re-creates the 1210 spatial expander,

ClassicVerb Reverb, DeNoise broadcast noise removal, Dynamic EQ - dynamic driven parametric EQ, EQSat, Filtroid filter bank, MasterX3 multi-band compression, MegaReverb (based on the M5000), PowerCore01 Synth, PowerCoreCL compressor Limiter, Tubifex Amp Simulator, VoiceStrip vocal processing.

You can load up as many instances of each plug-in as you need until you run out of processing power (which on the X8 could take a while). A range of other plug-ins are available both from TC and third parties including Sony-Oxford, Access, Waldorf, Novation, D-Sound, Noveltech, and TC Helicon.

There's not too much else to tell about the PowerCore X8, other than the retail price which is \$2,895 inc. GST. See [www.ambertech.com.au](http://www.ambertech.com.au) for details on where you can lay your hands on one. Product info at [www.tcelectronic.com](http://www.tcelectronic.com).

### JVC EVERIO GZ-HD6

More and more we're hearing about HD. The GZ-HD6 is JVC's answer to putting HD camera technology into the hands of consumers. It's a camcorder capable of recording up to 10 hours of widescreen 1440CBR HDV footage on its internal 120Gb hard disk. No tape required, and you can take photos with it and store them to a MicroSD memory card.

The integral Fujinon lens has a 10x optical zoom, and there's an optical image stabiliser function too. Software is provided with the camera to allow use with Windows, or as a plug-in with Mac. Once the plug-in is installed you can transfer directly into video editing software such as Final Cut Pro over the built-in FireWire port.

There are other interface options on-board including HDMI, component output, USB2.0, and even a humble composite output. The camera can output 1080/50p and tips the scales at around 590g with battery. The flip-out LCD screen shows you what you're shooting, as well as the user-friendly menu interface. The only thing to watch out for with this



JVC GZ-HD6



Canopus ADVC55

camera is that the software isn't available on the web, and you need it to use the FireWire transfer feature. Many other cameras will work with no software installation required, but then many other cameras are not HD compatible...

Available from lots of places including [www.jvc.com.au](http://www.jvc.com.au), the GZ-HD6 retails for \$2,199. There are also some nice accessories available including a shotgun type mic and some lens adapters.

### CANOPUS ADVC55

ADVC55 is short for "Advanced DV Converter," which is suited to digitising existing standard definition analogue video. Plug composite or S-

video plus stereo audio into one end and it comes out as a FireWire 400 stream at the other. You can then capture and edit this footage in software such as Apple FinalCut or Adobe Premiere, iMovie, or Windows Movie Maker.

The unit will run in PAL or NTSC modes, and there are DIP switches to configure settings such as audio input level. I tried one of these on my Mac and it worked as soon as I plugged it in – no special software was required. Be aware that recording to FAT32 formatted drives will be limited to around 20 minutes because FAT32 imposes a maximum filesize of about 4Gb. To get around this, format your drive in NTFS (for Windows) or Mac

OS Extended (for Apple) and you should have no problems.

Canopus have some 40 dealers Australia-wide - check [www.canopus.com](http://www.canopus.com) to find one near you. The ADVC55 retails at around \$289.

### ALESIS FIREPORT 1394

The HD24 is Alesis' 24 track standalone multitrack recording system, and whilst it has Ethernet connectivity this is not the fastest way to transfer files out of it. The Fireport 1394 is a device which allows you to connect the removable hard drives from an HD24 directly to a computer using FireWire 400.

What's the big advantage here? In

Alesis Fireport 1394



## unisex | the new ConvertCon



Introducing **NC3FM-C** - world's first unisex 3-pole XLR.  
 Female or male receptacle? ConvertCon fits all!  
 Easy selectable gender - simply move the sleeve to convert.  
**NC3FM-C** the new ConvertCon from Neutrik. [www.neutrik.com](http://www.neutrik.com)



Sydney (02) 9452 8600 | Melbourne (03) 9815 2710 | Brisbane (07) 3831 8444  
 National Toll Free Customer Service 1800 25 1367  
[professional@ambertech.com.au](mailto:professional@ambertech.com.au) | [www.ambertech.com.au](http://www.ambertech.com.au)





Yamaha N8 Mixer

a nutshell, speed and file formatting. The FirePort 1394 runs in conjunction with Alesis' FST Connect software, which allows you to download the multitrack files to your computer in a number of different formats including WAV, AIFF, and SD2. You can also transfer files into the multitrack drive to use as a multitrack playback device.

The Australian distributor for Alesis is Electric Factory ([www.elfa.com.au](http://www.elfa.com.au)), and RRP on the unit is \$339.

### YAMAHA N8

You could be forgiven for thinking it's an ordinary mixer, but the FireWire ports and channel input selectors give the N8 away as more than that. It's a mixer with 4 mono inputs, 2 stereo inputs, and an in-built multi-channel FireWire interface.

The interface outputs each of the 8 input channels plus the stereo and record mixes over FireWire, and allows return of 10 channels plus Left/Right Stereo and Auxiliary channels. The routing takes a little while to get your head around, but there's a very good schematic diagram on the Yamaha website which explains it better than words can.

The four mono inputs are equipped with phantom power and individual insert points, and have XLR and TRS connectors. Channel 4 is switchable to high impedance mode for direct instrument connection. "Sweet Spot Morphing" Compressors and 3 band EC (with swappable mid) on the first four channels allow for further



N8 Mixer Connections



Mackie ONYX Card

refinement of source sound. An in-built Rev-X reverb processor offers hall, room, and plate reverbs, which can be routed to the record and stereo outputs independently.

The N8 carries some additional features usually found on larger studio consoles including dim/mute keys, comprehensive monitoring, and a digital audio workstation transport control surface. The mixer is bundled with Cubase AI, a multi-track recording software package compatible with both PC and Mac.

Retailing at \$1799, the N8 is available from a number of dealers around the country – find a local one at [www.yamahamusic.com.au](http://www.yamahamusic.com.au).

### MACKIE ONYX FIREWIRE CARD

This card is designed to introduce multi-track recording capabilities to the small format Mackie Onyx mixers. It's compatible with Onyx 1220, 1620, and 1640 consoles. The FireWire interface card slots into the back of the mixer and provides direct outputs of all 16 channels, plus the stereo mix output on a further 2 channels. There's an attenuator on the card to control the level at which the stereo mix is sent into the FireWire interface.

You can cascade two cards together to simultaneously record up to 32 channels on PC, with Mac support soon to come. Out of the box it works as a Core Audio device on the Mac with no driver installation necessary. The consoles have a button which allows you to monitor the L/R return mix from the

computer. It talks to PC software including Cakewalk, Cubase, Sonar, Nuendo, Live, and Tracktion, while the Mac software compatibility list includes GarageBand, Logic, Cubase, Sonar, Nuendo, Live, Digital Performer, and Tracktion.

Go to [www.musiclink.com.au](http://www.musiclink.com.au) to find a dealer for the Onyx card, which retails for \$795.

### BELKIN FIREWIRE CARD

Got a computer already but no FireWire ports? Got some but filled them all up with devices already? No problem – Belkin are among the many manufacturers who make a PCI FireWire expansion card. Installation is dead simple; open the computer, plug the card in, switch it on, install the driver.

The Belkin card provides 3 FireWire 400 ports which will run on a separate bus from any on-board ports your computer already has. The card is available in PC and Mac versions for around \$50, through IT retailers and a bunch of online stores. See [www.belkin.com.au](http://www.belkin.com.au) for more info.

### SO WHAT'S THE POINT?

Well, whatever you want it to be really... Some of this kit is gear you've used and like, but by no means is it all that's out there. FireWire has become a widely adopted standard and there are a heap of other manufacturers with FireWire based products. The point is to illustrate the range of things FireWire now lets you do. Now just need a FireWire to DMX converter... CX

# The power of **TWO**

## Indigo™ AV Mixer + TURBO iDDR™

They're intelligent, live-event, world class completely integrated, multi format, no sweat, single operator, media automation, awesome effects, fit right in, rock the house, get rid of that outdated tape, get another standing ovation, on the edge of your seat Professional Video Solutions.

Brought to you by the experts in designing systems you can really use at prices you can really afford.

Experience for yourself the power of the Indigo's integrated control of TURBO clip playback. Ask your reseller for "The power of TWO" and get 50% off the purchase price of a TURBO iDDR when you buy a high resolution Indigo AV Mixer at regular price.

\* Offer expires July 30, 2008. Some restrictions apply.

### Authorised resellers:

#### ACT/NSW

##### The AV Group

tel: 02 9764 5911

email: sales@avgroup.com.au

#### VIC

##### Resonant Technologies

tel: 03 9646 1022

email: sales@resonant.net.au

#### QLD

##### Provisual Australia

tel: 07 3252 5011

email: steveh@provis.com.au

#### WA

##### Vizcom Technologies

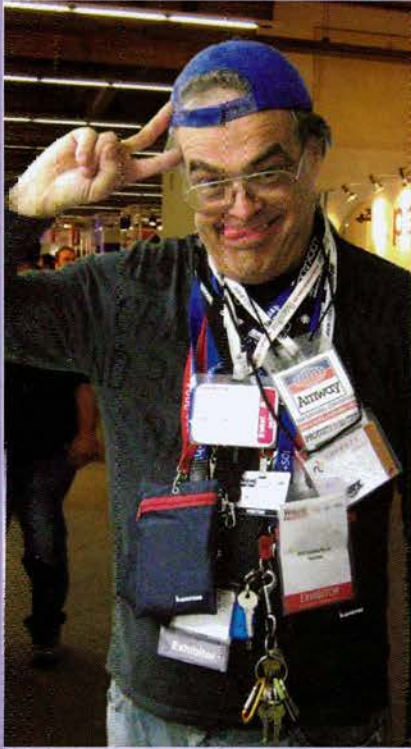
tel: 08 9242 8442

email: sales@vizcom.com.au



**Two great products**  
**With a single integrated control interface**  
**One great price.**





# LET'S TALK ABOUT LANYARDS

“Lanyards and laminates and passes and bling, These are a few of my favourite things.”

By **DUNCAN FRY**

Queen Mary Poppins whirling around the Swiss alps with a collection of lanyards, passes, laminates, badges, giveaways and other assorted dross hung around her neck. She overbalances, trips on the edge of an enormous chasm and is dragged screaming “How do you solve a problem like My rear!” over the edge from the weight of all her neckgear. Well, that would certainly make it a movie I’d want to see!

Let’s talk about lanyards. You know, those printed ribbons you hang around your neck with your laminated backstage pass or your exhibition ticket attached. Very easy to wear, and can possibly make you look a tad more hip and cool to the huddled masses queuing up to get in, as you swan past them to the VIP lounge, but only while they are current.

Once they are past their use by date, throw them away and just savour the memories or keep them at home in your diary or scrapbook where no-one can see you wallowing in a pool of your imagined self-importance.

Whatever you do, don’t put all of them around your neck next time you go out, thinking you look like king of the hip wicked dudes. Because you know what? You don’t. This basic fact

of life seems to be totally lost on those sad bastards who wander around exhibitions or concerts wearing every lanyard, badge and pass they have collected in the past ten years. Why? Do they think it makes them look cool? Hip? Wicked? No. It makes them look like dorks who ought to have capital L tattooed on their collective foreheads.

Alright, alright, I admit I keep a couple of them at home (OK, forty seven of them, but I’m not a sad loser, honest!), so they can remind me of interesting times and thus story ideas. I was once invited to see a concert by the guy doing front of house, so at showtime I wandered down to the ticket office to pick up my ticket. I gave the girl my name, and she flicked through a pile of envelopes and said, “Ah, here we are.”

She opened up the envelope, and instead of a run of the mill comp ticket, out came a laminated pass. She held it up, looked at me with envious eyes and said “Oooh - Access All Areas...you lucky bastard!”

I don’t remember exactly when lanyards came into general use, but at exhibitions they started appearing en masse about 10, maybe 12 years ago. Prior to their arrival everyone had to pin or clip their exhibition pass

to a piece of clothing. It may have involved some occasional inadvertent body piercing, but at least you could see the person’s name. Hanging the pass on a lanyard seems to tip the badge forward over some unseen point of balance, so that as soon as you move, the pass seems to miraculously flip itself around so that the back is facing forward. It doesn’t matter how many times you turn it back again so your name is readable; as soon as you move again it swings around. A very basic design flaw.

And you need all the help you can get when you’re working at an exhibition and someone you vaguely know rolls up to your stand. You go to greet them and think “Jeez, what is this guy’s name?”

Slyly you sneak a quick squint at their pass to try to read their name, and without thinking say “Hi there, Mr ‘This pass is not transferable’...” Great for business.

Almost as great as when the lanyard is so long it hangs down in front of their groin.

I don’t know about you, but if someone holds out their hand to greet you, I’m a bit reluctant to hold out my hand and grab them in the crutch just so I can turn their pass around to read their name! It may well be a good way to break the ice, but depending on the recipient and

their attitude to such things it can also be a good way to break your nose!

However, one year we hired the girlfriend of one of our staff members to act as a booth babe, meeting and greeting everyone that walked past. And she had no qualms about kneeling down and carefully studying passes that were hanging at groin level, then slowly reaching out and turning them around to read the name out in a husky Marilyn Monroe type voice. Then she would run the barcode scanner slowly over it a few times until it went beep.

For some reason these made our stand very popular, with many guys coming back for a third or fourth visit!

I have to admit that I do hang my car and apartment keys around my neck on an old Frankfurt MusicMesse lanyard when I go out. But only one of them! And that's because I hang it by the front door and slip it over my head automatically every time I go out, so I know I've got my keys. If it's hanging around my neck then I'm OK. Or so I thought, until one day I was halfway down the street and realised I had picked up the genuine Frankfurt show pass lanyard after cleaning out my travel bag, and that it was going to be absolutely no help at all in getting back inside the apartment!

And I also learned to take it off before starting the car while still wearing it. Even though it reaches the ignition slot in the rice rocket quite easily, one morning I whizzed out of the driveway, spun the steering wheel and slid around the corner, only to get my arm entangled in the lanyard strap, which pulled up tight and slammed my face into the horn button, at the same time as tightening the seat belt around my neck to the point of strangulation. Sideways in the middle of a busy street in peak hour with the horn blaring, engine revving, arms crossed and face squeezed tight against the steering wheel while I slowly lost consciousness is not something I'll easily forget!

And there I would have stayed if I hadn't been dragged out by the Balls.

So I'd like to send a cheerio to Mr and Mrs Ball for coming to my rescue! (Yes I know it's an old joke but who could resist it!)

An interesting piece of design is the fabric ribbon strap on these things. Sometimes they're embroidered (looxury) with a company logo, sometimes screen-printed, but they all have a peculiar twist in the strap, turning it into a virtual Mobius strip strap. Try saying that with a mouthful of show food! For those who can't remember this quirky little single sided object from schooldays, it is a strip of paper (usually) where the two ends are butted together, but one end is flipped over 180 degrees before being joined to the opposite end. This makes it an object with only one side. Impossible? Of course. But true.

Here endeth the lesson. But I pondered long over why the manufacturers would bother doing this – after all, it must require extra logic built into the machines that churn them out by their squillion.

And then I realised – by making them in this fashion, it doesn't matter how you hang it around your neck, one side always has the logo showing. So if it gets twisted while you're putting it on with the other forty seven and heading off for a night out with your fellow sad bastards, the printed message is always visible.

Just like the L on your forehead!



# G2 wireless audio Setting standards

## evolution

### G2 Series 300 & 500



The 300 and 500 series expand the capabilities of evolution range still further.



The 300 series systems offer the use of nine channel banks with up to 8 switchable frequencies per channel.



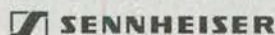
The 500 series (sold as components) offers up to 20 switchable frequencies in nine channel banks.

This allows for optimum flexibility in building a secure system for performance for all kinds of sizes of venue. It also guarantees that your performers will benefit from interference free sound.

Lapel, headset & camera systems also available.

Syntec Australia  
1800 648 628  
sales@syntec.com.au  
www.syntec.com.au

Syntec New Zealand  
(09) 263 9885  
sales@syntec.co.nz  
www.syntec.co.nz



www.sennheiser.com.au



Pic by BOB KING

# MATCHBOX TWENTY LIVE IN SYDNEY

Sydney's Entertainment Centre hosted two sellout concerts for the band, who rejoined singer and songwriter Rob Thomas for the Exile on Mainstream tour. Two hours, countless hits and almost seamless production – what more can one say?

By **JULIUS GRAFTON**

**T**he visual designer for this show is Benoit Richard, who controls his domain from a Wholehog 3 on a riser looking like a conductor. There's much to be happy with – a flipping bright 4k HMI fresnel behind the drummer is a stark solo light in total contrast with LED strips and Martin transparent LED screens that stretch the theme

all the way up to the top of the main lighting truss. Up there are another four panels of LED screen, which are mini screens of the four vertical strips of nine behind the band.

Here's the thing: the Hippotizer V3 servers spooled out some really creative visuals; and Benoit Richard put it all together like the true professional he is. But from row NN seat 7, I didn't see the facial features of any performer. Because there was

no imag. There one one camera locked off at front of house. and it produced a sort of stylized image of the group that was more effect than imag for one number.

My seat was about halfway up the house, so plenty of people saw even less of the band than I did. The Martin LC does a 40mm pixel, so it is quite capable of showing faces and details in imag mode. It's just that the overall show design doesn't

incorporate this. If imag is used, then it needs to be on separate screens outboard of the touring rig, and this wasn't the case in Australia. For a \$129.90 ticket I want imag.

Then towards the end one panel of the 36 Martin LC went on the fritz, burning stubbornly bright red until a tech pulled the power on one quarter of the panels – the left of four vertical hangs. Benoit could be seen with his hands in his hair as his show went down a small notch, three of four strips of screen left working.

Notwithstanding, all else was truly magnificent especially the audio, mixed on a Digico D5 into a V-Dosc system from Jands. Engineer Jim Ebdon had it all tight and in the pocket, drums had half plexiglas screens and nothing else was amped on stage, so the stage level was low which always makes the house mix better.

You could discern all of the 35 inputs to the console from the stage just by doing a little aural scan. Bass guitar? There it is. Keys? Lead? Rhythm? Not to mention those staggeringly great four part harmonies from the four core band, and the two backing musicians.

There was one little audio mis-start when leader Rob Thomas was at the grand piano, and he stopped because his in-ears had something untoward mixed in there. The monitor engineer got a serve, and the song started again.

Touring rock shows have come an enormous distance in a short time; and sheer talent always wins. Just give me video of the performers next time.

**LIVE ON WRISTBAND**

I bought a live recording at the gig for my girl, Matchbox 20 is a chick band, after all. For \$50 I got a symbolic white wristband with 'Matchbox Twenty Out of Exile' written on it. It came with nothing on it – there is a card with a unique code, and a website where you log on and advise your email address. Sure enough a day or so later I got an email advising the download was ready at a website. I put in my unique code and there it was – a zip file with the songs from the gig. The between songs blah sounded the same, so I assume it was what I was sold – a recording of the Sydney show.



pic by BOB KING

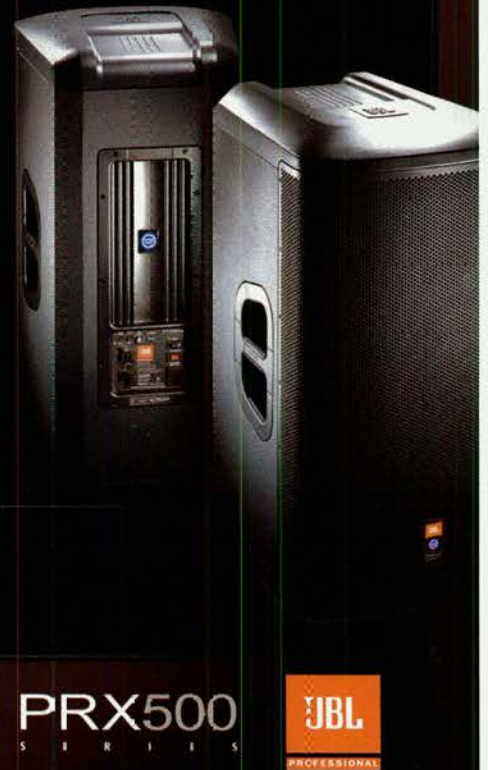
**PERFORMANCE by DESIGN**

**Power, Performance, Simplicity.** The foundation used to design the most versatile portable powered system in its class, the PRX500 Series, truly more than the sum of its parts. The fusion of world leading JBL Differential Drive™ transducers matched up with state-of-the-art Crown class D amplifiers, deliver the power and performance you need with 30% less weight than competitive products. The simplicity offered by integrated powered systems combined with the practical advantage of a lightweight compact enclosures make the PRX500 series truly portable.

Visit [JBLPRO.com](http://JBLPRO.com) to learn more.

- PRX512M
- PRX515
- PRX525
- PRX535
- PRX518S

**PRX500**  
S E R I E S



Distributed by  
**JANDS**

40 Kent Rd, Mascot NSW 2020  
Ph: (02) 9582 0909 • Fax: (02) 9582 0999  
[www.jands.com.au](http://www.jands.com.au)

**PRX500**  
S E R I E S



# HISTORY

18 YEARS OF PUBLISHING FOR YOU – SOON IT WILL BE 19

He we go again with a trip to somewhere weird as we brush the cobwebs off the archives. Interestingly we have learned that several people maintain hard copy archives of all our work – Warren at Factory Sound in Melbourne even has his professionally bound in leather. Someone send him a life...

## 15 YEARS AGO: CONNECTIONS JUNE 1993

Continuing our theme of really crap covers, we featured a murky photo of Joseph and The Amazing Technicolour Dreamcoat. The production toured with 14 semis, Vari-Lites and audio from System Sound. Richard Martin and Richard Pacholskie headed the tech team. Some things don't change very much!

The Editorial was downbeat, reflecting that we had just come out of the recession we had to have, when interest rates were at 17% and inflation more than 10%. Profit was a dirty word.

Letters included one accusing us of being sexist, and our retort was 'piss off...! Bad manners, and more than a few rude words back then. Times have changed now. Another letter started 'Very Disappointed...! – I wish we had a dollar for every one of those we've received over the years.

The Idiot's Guide To Sound appeared to be written by our resident idiot, aka Julius. It looks strangely like some course notes he wrote a decade later. Funny how the brain works, kind of.

A full page advert for Australian Monitor boasted it was exported to over 30 countries and invited dealer prospects to call Iain Everington. Where is he these days?

Freedman Electronics announced a \$500,000 auction of sound and lighting, mostly unreserved, due to recent re-location. They were doing it hard, and it is difficult to compare those days with today. Now Rode Microphones (same firm, renamed

and reborn) is an international colossus of the audio trade, with an enormous and impressive manufacturing complex in Sydney and export markets everywhere.

Music Technology Supplement – what is MIDI and how does it work? Indeed, we asked and answered. The minidisk got some space, it was touted as The Answer, but what was the question? We advertised for a freelance writer: must have a fax machine and a basic modem.

Bose revealed the Panaray, with expat David Bell flown back to do the honors.

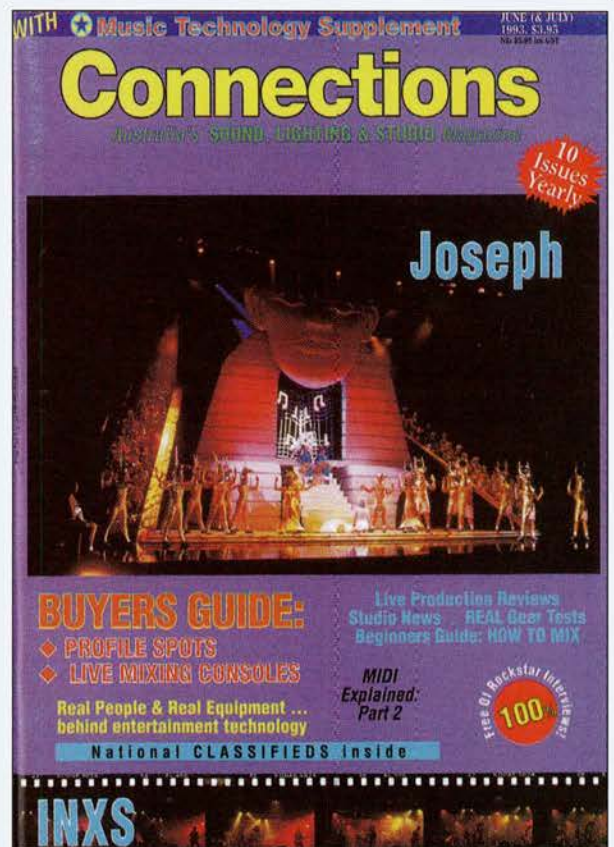
We did a story on What is DMX 512? It still is. this stuff in 2008! How times change.

### WHAT THINGS COST:

- Soundcraft Live 4, 28 channel mixer: **\$9,995.**
- Soundtracs SPA series 48 channel mixer: **\$194,000.** Yes, you read this right.
- Selecon 650w zoom spot: **\$422.**

## 10 YEARS AGO: CONNECTIONS JUNE 1998

2006 seminar tickets sold at ENTECH



1998, but the facilities were 'poor'. Our story explained that the show suffered from makeshift seminar theatres we built under a mezzanine, and we still remember to this day the unspeakable noise that the temporary air conditioning system made. Plus the smoke haze from the adjacent effects lighting exhibit.

Digidesign introduced the Pro Control work surface, and the nails went into the coffin for everyone else. Today the market is totally dominated by Pro Tools.

ShowSafe was off and running as a

peak industry body representing the entertainment industry. It started well, and ended a few years later like so many other associations – no quorum, no interest. Australians don't associate particularly well.

Audio Products Group acquired representation of audio products from AWA.

Full page advert for the EAW KF860 Virtual Line Array; followed by a full page for the Meyer UPA-1P. Two audio speakers that impacted the world in the decade that followed.

The Boy From Oz was running in Sydney's now demolished Her Majesty's Theatre. System Sound did the audio with a PM 4000 console. This was the start of a very successful production, starring Todd McKenney.

The Staging of Grease was detailed, this was a Sports and Entertainment Limited production, and what can you say about Grease? It made a lot of money. It was set in the round. Is the population over Grease yet?

Public Auction, this time a multi-million dollar clearance of lighting and sound for Tech Scape. By now the auctioneers were routinely adding a 'buyer's premium' of 10% to every item knocked down. This probably signaled the end of the line for the big industry auction – punters don't like it. Jands were first with a large auction back in 1991 and plenty of amusement was had at what some people would pay for things.

**WHAT THINGS COST:**

- Yamaha PM4000 console: **\$190,000.**
- Allen and Heath GL 4000/40 console: **\$29,995.**
- ETC Source Four **\$897.**
- Selecon Zoomspot 1200: **\$835.**



DIGITAL MIXERS: CLAIM & COUNTERCLAIM • NEW AV SECTION

# Connections

THE ENTERTAINMENT TECHNOLOGY MAGAZINE

JUNE 1998 \$4.95  
 Vol. 11, No. 6  
 Editor: [unreadable]  
 Publisher: [unreadable]  
 Distribution: [unreadable]  
 Circulation: [unreadable]

The STAGING of GREASE

~REVIEWS~  
 • WAVELAB  
 • SHAKESPEARE  
 • ROSCO HORIZON

The Boy from Oz: AUDIO

ON TOUR WITH THE WHITLAMs  
 BUYERS GUIDES: LIVE MIXERS & PROFILE SPOTS  
 Feature: Cables & Connectors.

Inside: LAB GRUPPEN AMP • CLAY PAKY STAGE • PRO CONTROL

ISSN 1320-8555 07  
 07 13 2085 5555

Printed and printed in Australia



can you handle the truth?

not your 'next generation line-array', just the way it was meant to be in the first place...

Do terms like "stereo imaging", "in-the-face experience", "throw" and "digital dynamics" sound to you like the typical hollow marketing claims? They aren't. Not if you're working with an Alcons pro-ribbon line-array system.

Only Alcons' proprietary pro-ribbon technology enables a non-compressed "one-on-one" reproduction of the original, from the largest to the smallest application, from classical, jazz, rock to delicate vocal reinforcement.

Hollow marketing claims? Yours to find out, but be warned: It may be more than you can handle...



For more information visit [www.alconsaudio.com](http://www.alconsaudio.com) or contact Loud And Clear Audio: (02) 9439 9723 or 0418 295 086 or [www.loudandclear.com.au](http://www.loudandclear.com.au)

evolutionary audio solutions™



# GRASS VALLEY INDIGO

Indigo is an integrated vision and audio mixer from Grass Valley. While Grass Valley has traditionally had a firm foothold in the broadcast market with large format switchers, Indigo sees a foray into the professional video forum.

By James Den-Ouden

## THE INS AND OUTS

Interfacing options on the Indigo are plentiful and varied. Starting at a standard definition level, 6 composite and 4 YC (S-Video to the un-initiated) inputs let you feed up to 12 standard definition analogue sources into the unit. Add to this 6 standard definition SDI (Serial Digital) inputs, plus the ability to re-designate the composite inputs as SDI and you'll find yourself with 12 SDI inputs. There are also 2 6-pin DV25 Firewire inputs, which can

be used instead of SDI inputs 11 & 12 (the Firewire ports can also be used as outputs). The inputs are automatically frame synchronised so there is no requirement to genlock the input devices together.

Main program outputs include 2 SDI, 2 Composite, and an S-Video. Preview output is available on one of each of these formats. Three auxiliary busses are available as SDI and Composite. All the outputs are simultaneously active so you don't have to choose one format, which makes the unit more compatible with more things.

Our test machine had the high resolution card option fitted, which added on 2 high definition SDI inputs, 2 DVI computer video inputs and DVI preview and program outputs. Downscaled versions of these outputs are available and can be internally routed to the SDI inputs on the SD side.

Analogue reference inputs and outputs allow the unit to run from an external sync source, or to output sync from its own internal black burst generator.

8 stereo analogue audio inputs are available across a mix of connectors

# The 'A' to 'T' of Large Diaphragm Microphones

From the silky smooth valve sound of the AT4060 to the surprisingly priced AT2020 there's a remarkable line up of large diaphragm studio microphones between A and T.

AT4060, AT4050, AT4047, AT4040, AT4033, AT3060, AT3035 and AT2020 are the numbers. Their ability to

capture the moment with detail, with clarity, with warmth and with dynamics is the real story.

Nothing delivers like large diaphragm microphones and nobody delivers more than Audio-Technica.

Try one.

**AT4060**



- Unbeatable for strings and vocals
- Vintage vacuum tube condenser
- Cardioid pattern
- High SPL capable
- Large transformer
- External power supply
- \$2,995 RRP

**AT4050**



- Unbeatable for piano and brass and a regular on riders for guitar amps
- Multi-pattern condenser
- High SPL capable
- Transformerless
- HPF and pad
- \$1,345 RRP

**AT4047**



- Unbeatable for guitar amp, acoustic instruments, vocals and voice overs
- Cardioid condenser with rich early FET sound
- Transformer-coupled output
- HPF and pad
- \$995 RRP

**AT4040**



- Unbeatable for woodwind, exceptional all round performer
- Cardioid condenser
- Transformerless with low distortion output
- Transformerless, HPF and pad
- \$845 RRP

**AT4033**



- Exceptional general purpose for studio and live
- Electret cardioid condenser
- Transformerless
- HPF and pad
- \$695 RRP

**AT3060**



- Perfect for vocals, voice overs, guitar amp and strings
- Cardioid tube condenser
- Phantom powered
- Large transformer for superior low frequency linearity
- \$995 RRP

**AT3035**



- Perfect for spoken voice, brass, woodwind
- Cardioid electret condenser
- HPF and pad
- \$495 RRP

**AT2020**



- Ideal for vocals and general purpose
- Cardioid electret condenser
- High SPL capable
- HPF and pad
- \$195 RRP



See your Audio-Technica dealer or contact TAG for more:  
info@tag.com.au Ph. (02) 9519 0900

**audio-technica**  
always listening™



The onboard audio mixer is well-featured.

including 2 RCA, 4 TRS, and 2 XLR pairs. The XLR inputs even have switchable phantom power, and are combo sockets also able to accept a TRS line input. 6 AES/EBU inputs on a D25 connector begin the digital audio input story, and de-embedding the audio from 3 SDI inputs rounds it up.

Main program audio is output in

analogue on XLR connectors as well as an RCA pair. The submix output (main output with adjustable delay) is available on RCA and TRS. 2 AES/EBU outputs on the D25 replicate main and submix outputs in digital. Audio is also embedded onto the SDI outputs. Two headphone outputs complete the audio story.

Other inputs and outputs include 16

general purpose outputs (GPO – also useable as tally outputs) and 8 general purpose inputs (GPI). Functions on the mixer such as turning on and off audio channels and recalling E-MEM settings (more on this later) may be activated by GPI.

A pair of USB ports on the main surface finish the picture.

## THE CONTROL SURFACE

The biggest buttons of the control surface are found on the 3 rows of 10 crossbar keys. These allow instant access to up to 10 different sources across each row, with another 10 available by holding a shift key. The buttons are big and well illuminated – even when we were photographing the unit with a pair of 800W redheads lighting it up it was still easy to see which keys were illuminated. Yay LED technology!

Smaller keys control elements such as delegation of SD or HR (hi res) outputs, selection of Aux and Key busses, which row your next transition will be on, as well as 2 User Definable page access hot keys. Setting these up is as simple as getting to the page you want and holding down the user key for 2

# Chroma-Q Color Web

Shape your designs with

## unlimited flexibility

The revolutionary Chroma-Q™ Color Web provides unlimited flexibility and new creative possibilities for designers when it comes to displaying low resolution visual effects



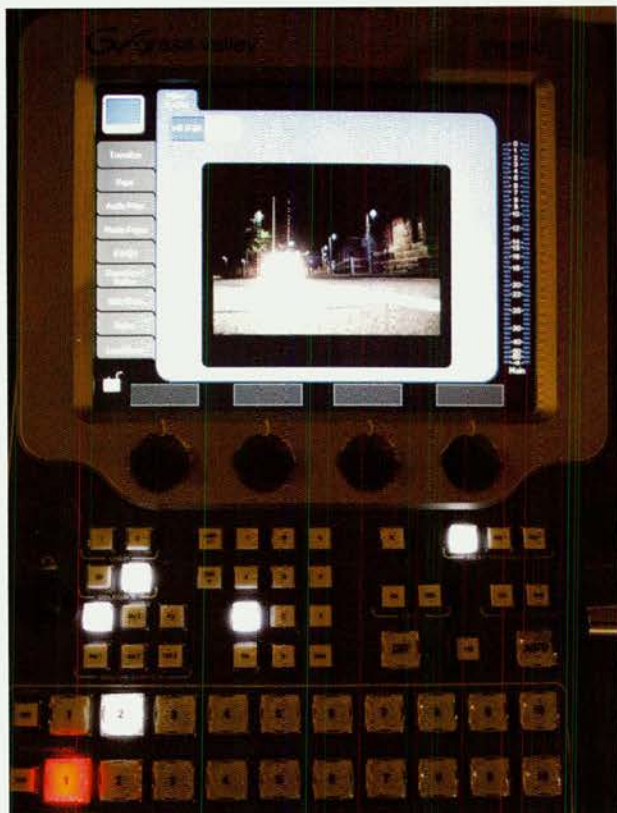
- Modular 3ft 3" (1m) Square Panels
- Re-Configurable Display Area
- Pliable Webbing Material
- 125 or 250mm PITCH
- Compact and Lightweight System
- Flexible DMX Control
- IP65 Rated
- Low Cost



Distributed by

**JANDS**

40 Kent Rd. Mascot NSW 2020  
Ph: (02) 9582 0909 • Fax: (02) 9582 0999  
www.jands.com.au



The control surface is well lit up. The touchscreen in monitor mode is a cute feature.

seconds. Cut, Auto, and Fade to Black buttons are next to the fader bar, and the FTB button has a high surround to prevent you accidentally going to black at an inopportune time.

Audio on the surface is controlled by 6 motorised faders, with channel on and PFL keys immediately above. A joystick resides on the upper right side of the surface with plenty of room around to allow you to place your palm down for better control over the stick. Channel metering is shown above each fader, with more accurate L/R metering on the right side of the touchscreen.

## OUT OF TOUCH

The focus of the control surface if you're not me is the rather large touchscreen which occupies the upper left quarter of the Indigo. It's not ordinarily a fan of touchscreens since I've used a lot of very inadequate ones, and on initial use the Indigo's wasn't great. It wasn't bad but I thought it could be better. I performed a touchscreen calibration (touch the crosshair in the four corners type deal) and this improved it to a level I'd consider very acceptable. Navigation of the touchscreen is simple, with a hierarchical menu structure allowing you to get to any page inside 2 or 3 presses (though more commonly 1 press). I do think the setup section was designed by an engineer rather than a human, since delegating the sources to the keys/faders is something I expected to find under "Inputs" rather than "Control Panel," but save for this minor blemish it works well.

The screen itself is very nice to look at – bright, clear, everything you want really. One of the best features is that touching the picture of the monitor in the upper left corner instantly turns the touchscreen into a preview or program monitor. You can select what you want to look at from a row of keys above the video window. You could

# Versatile Sound

## F1000/F2000 speakers



The latest additions to the rapidly expanding TOA speaker lineup, the new **F-1000 Series and F-2000 Series speaker systems** are designed to provide high quality sound and reliable performance for restaurants, retail and audio/visual applications.

Features include two-way bass-reflex design, high impact polystyrene enclosure with a 4" or 8" low frequency driver and dome tweeter. For challenging acoustic environments, users can easily reduce the high frequency coverage angle of F-2000 models by simply installing an included horn adapter. Model options include 100V transformer or low impedance, black or white enclosures and indoor or weather-resistant versions. All models include a versatile wall/ceiling-mount bracket for easy installation.

The new F Series box speakers are backed by a three-year warranty.



audioproducts  
Group

FOR YOUR NEAREST DEALER:

AUSTRALIA: Call 1300 13 44 00 or visit [www.audioproducts.com.au](http://www.audioproducts.com.au)  
NEW ZEALAND: Call 0800 111 450 or visit [www.audioproducts.co.nz](http://www.audioproducts.co.nz)



We like the touchscreen interface - good functionality in a small footprint.



Note the nice little protector around the FTB switch - good attention to detail!

rock up to a gig with no monitors and still know basically what was going on – which is rather a good feature considering the weight of video monitors.

## WHAT CAN IT DO

Indigo can't make coffee, but it's pretty good with everything else. The feature list is long, and includes things some of which I suspect are more relevant to live events than others. Several different types of video keying, 3D effects, external device triggering, audio processing (including parametric EQ, delay, and dynamics), audio embedding and de-embedding, up-scaling, down-scaling. The list could indeed fill a few pages in itself. For now though, let's have a look at real-world applications.

At the most basic level you can connect a bunch of different analogue

and digital video and audio sources to it, preview them, mix them, and output them in every useful format around.

Indigo is configured to work straight out of the box – all you need to do is plug it in and choose PAL or NTSC. Inputs are patched to the keys as they are numbered on the back of the machine. We used it in a college rally to see how it went. Our student vision team was able to get the unit up and running with no special configuration required, so I'd consider that pretty successful.

You can configure the input sockets and which buttons they map to on the main row in any order you like, and all the settings on the mixer can be saved as an 'E-MEM' for later recall. Kind of the same thing as storing scenes on a digital audio mixer. The entire configuration

including all E-MEMs can be stored to a USB key for backup, and this process only takes a few seconds.

The Indigo has a still store built in. In fact it has several of them, and you can delegate each of them to a key on the crossbar rows. Images can be acquired by freezing from the high res inputs, or they may be uploaded as .JPG files on a USB key. Any still store can be assigned to any of the crossbar row keys – perfect for holding slides at corporate events.

The audio facilities are sufficiently comprehensive that to call the Indigo a vision mixer would be selling it short. It's an AV mixer. Mic and line inputs with configurable AFV (audio follows video) options actually make the audio section useful and the control surface makes it useable. You can run in 8 stereo, 7 stereo/2 mic, or 6 stereo/4 mic modes and while you don't have faders on the surface for all these, you can get to them all on the audio page of the touchscreen. Move the fader on the screen and the one on the surface tracks with it.

Video facilities offer transitions ranging from basic dissolves right through to 3D effects, as well as the standard range of wipes and such. Certainly star wipes and the like have a place in the world, and that place is called the eighties. Most likely used will be the dissolve and cut functions, which it performs just as admirably as the eighties flashback stuff.

## BUSSES AND KEYS

Indigo has 3 rows of crossbars for bus and source selection. The top row is the "bus" crossbar. Above this are delegation keys for Aux and Key outputs – think of it like layers on a digital console. Choose an aux or key output on the delegation panel, then whatever source you select on the "bus" crossbar will be sent there. The next row of crossbars is the "background" row. Whatever is selected on this row is what goes out the main "program" output. Pressing source keys on this row performs hard cuts between the sources. The final row is "background preset" – think of this like the second preset on a 2 preset lighting desk. Whatever you choose on this row is what will go to the program output when you crossfade (using either the fader bar or the auto/cut buttons). When you complete the crossfade, the selections on the background and background preset rows will swap with each other (flip-

# Amplifiers for every application.



**T5n** 2 x 3400W at 2 Ohms - certified.  
World-class touring, networkable.  
\$6,000 RRP INC. GST



**PC9501N** High power, high quality, networkable.  
\$3,995 RRP NC. GST



**P7000S** Simple, reliable, affordable power.  
\$1,695 RRP INC. GST



**XM4180** 4 x 180W at 8 Ohms or 70V Line.  
\$1,999 RRP INC. GST



**XH200** 100V or 70V Line, 2 x 200W.  
\$1,299 RRP INC. GST



For more information on Yamaha power amplifiers, go to:

<http://www.yamahamusic.com.au/products/commaudio>

Or contact us: (03) 9693 5272 | [jason\\_allen@gmx.yamaha.com](mailto:jason_allen@gmx.yamaha.com) | PO Bcx 268, South Melbourne VIC. 3205



flop).

You can setup and preview effects (via the preview output or on the touchscreen) such as keys on the background preset row. Keying is when you cut a hole in one video image and fill it with another to create a composite image. You need three signals to do this, a background image, a key image (showing where to cut the hole), and a fill image (what goes in the hole). There are several methods for keying images, the Indigo supports Luminance, Chroma, and PiP keying. An instance when this could be useful in a live environment would be for instance superimposing a company logo on screen while video of a presenter was being shown.

### SUMMARY

It's probably apparent by now I'm pleased to have had a chance to use the Indigo. Having scratched the surface I'm keen to see what else it can do - there's an integrated media player controller which talks to Grass Valley's Turbo iDDR. I think the next project for us will be to get the two talking and see how they relate to each other. I'm expecting more good things.

### SCORECARD

**Ease of use** - 6/10 for the first 10 minutes, then 8/10 - only because it takes some time to get accustomed to the setup section of the touchscreen interface.

**Versatility** - 9/10 - This would be 10 if

it had some component video inputs to accommodate DVD playback. You could get around this with a component to SDI converter, but it would be a shame to ruin the "integratedness" of the thing by hanging dongle boxes off the back. Lots of outputs all simultaneously available push this score well up.

**Capability** - 10/10 - Grass Valley have jammed a veritable gamut of features into something which is really small and easy to shift around. The Indigo is capable of more than most of us will ever need it to do.

**Robustitude** - 8/10 - The build quality seems pretty good. All the connectors are solidly anchored into the backplane, and while the surface is made of plastic the unit does have M5 mounting holes in the base to allow it to be bolted into a rack shelf. Properly transported in a case you'd have no problems.

**Sex appeal** - 7/10 - glowy buttons push this score up, but the tiny footprint of the unit means there probably aren't enough of them to pull chicks (though you'll be in with the video dudes if that's any help?).

**Documentation** - 8/10 - the user manual is available online which is always good, and it's easy to read while still getting across all the important info. Not that I read it of course...

**Weight** - 10/10 - At around 9.5kg with the hi res card I don't know how they fit it all in.

**How it feels to use** - 10/10 - it feels great. Solid buttons with positive actions, nice dissolve lever, good touchscreen response (once calibrated).

**Price** - 10/10 - When you add up the cost of a seamless HD switcher, an SD vision mixer with 2 ME rows, a bunch of framestores, SDI converters, audio embedders and de-embedders, digital audio mixer, A2D and D2A converters, and an LCD monitor I'm pretty certain the Indigo would work out a lot more affordable (not to mention much easier to carry). So you get an awful lot of capability for the price. How valuable this will be on the other hand depends on your needs. For mixing 2 cameras there are probably better options, while for a complete AV control solution for large events the Indigo is probably the way to go.

**Overall** - 9/10 - I'd say very good things to my colleagues about it.

**Retail Price** - HR (hi-res) as reviewed: \$21 989.00

**SD version:** \$18 689.00



Roland  
Systems Group  
**RSS**  
by Roland

**REAC**  
CAT5e Cable

*Digital Snake*  
Multi Channel  
Digital Audio  
Transfer System



**NEW**  
**V-Mixer**  
Live Mixing Console M-400

- 48IN/16AUX +MAIN L,R with GEQs & Effects
- USB Memory Recorder
- DCA Group/Mute Group
- Scene Recall with HA Gain

RRP \$12,995

# A Breakthrough Digital Mixing Solution

**REAC**

RSS by Roland is continuing to evolve digital audio and live audio mixing. The V-Mixing System is fully digital using Roland's REAC (Roland Ethernet Audio Communication) technology to transfer audio from the high quality mic pre-amps on stage to the mixing console. V-Mixing System is the next generation in live audio mixing technology.

# V-Mixing System

Digital Audio Transfer & Mixing System

[www.rolandsystemsgroup.net](http://www.rolandsystemsgroup.net)





**integrate**<sup>09</sup>  
scund.light.vision

6<sup>th</sup>– 8<sup>th</sup> July 2009  
Hordern Pavilion & Royal Hall of Industries,  
Moore Park, Sydney

At last, Australia and New Zealand will  
have an event we've all talked about and  
hoped for:

**AV Installation, Concert  
Production, Lighting  
& Entertainment  
Technology, Recording,  
Multimedia, Broadcast,  
Staging, Post Production,  
MI and DJ Technologies.**

*come together*

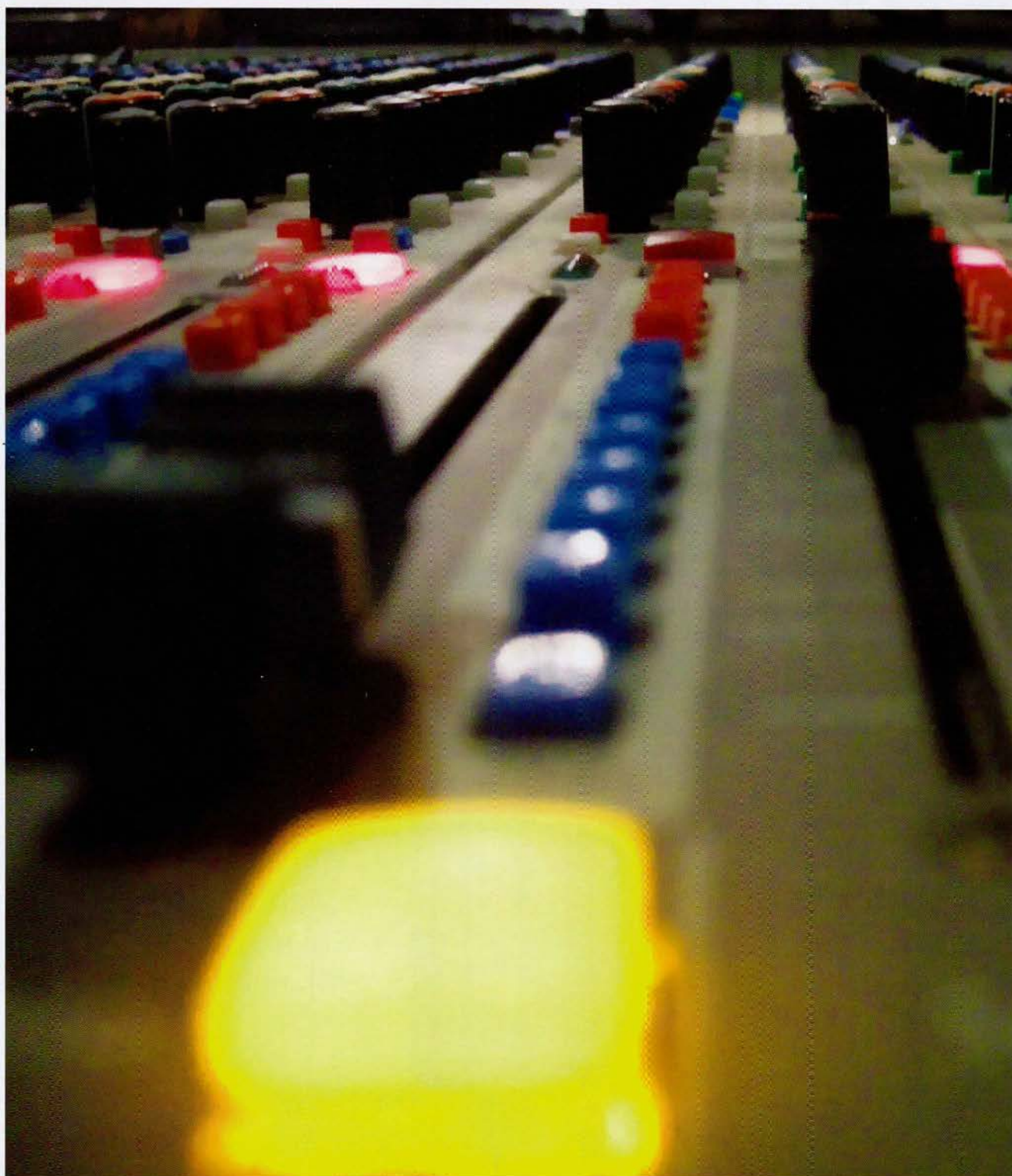
[www.integrate-expo.com](http://www.integrate-expo.com)

for more information please contact Louise Brooks  
• [louise@integrate-expo.com](mailto:louise@integrate-expo.com) • +61 (0)402 206942

*from the creators of*

**venue AudioTechnology**  
THE MAGAZINE FOR SOUND ENGINEERS & PROFESSIONALS

**GUERRILLA GUIDE AV**



# SPECTRA T AUDIO CONSOLE

Newish analogue mixer from APB DynaSonics



# The Variant Installation Array

Big surprises come in small packages

The Variant Installation Array is our ultra-compact, powered line array system designed for use in a wide range of sound reinforcement applications.

Small in size and light in weight, the Variant's practical rigging system and accessories make it a snap to fly or permanently install on walls or ceilings. Exceptional performance, amazing flexibility and a pleasingly affordable price—it's no surprise that the Variant is one of the world's best ultra-compact line array systems.

## Variant Installation Array

Theaters · Corporate Events · Worship Centers · Auditoriums

Flexible Mounting Options:



Truss or Ceiling

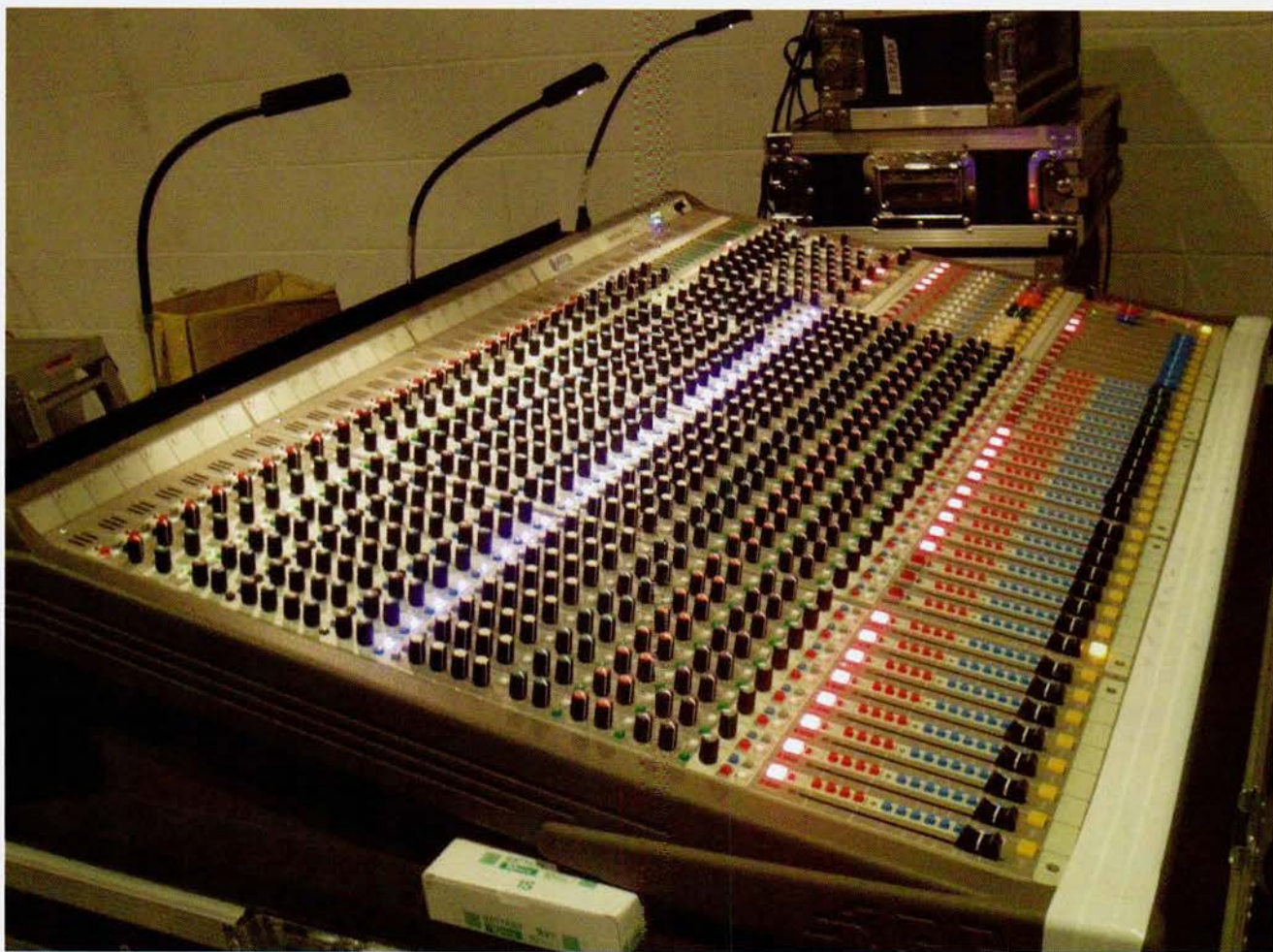


Wall



Stand

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



By **JULIUS GRAFTON**

While I have been using and reviewing this sturdy and attractive conventional analogue console, I've also been mixing on a Yamaha M7CL digital system. The day before I wrote this review, I had a mind bending voyage of frustration, trying to get signal from an auxiliary bus on the Yamaha for frontfill. It wouldn't have happened on the Spectra T – or any other conventional mixer. See the side box for more.

These days there are not too many new medium level professional audio consoles hitting the market that are conventional. By conventional I mean analogue, where there is a control for every function, and the controls are hard wired into the signal chain. Digital is the way to go very often, with benefits never imagined in the hey day of mixing last century.

APB DynaSonics entered the market in 2004 – so they reasoned that they would occupy a niche where some people who know what they want will buy a tailored product. They set about specifying and building consoles to meet that market.

It is distributed in Australia by Production Audio Services, who have a long history in audio in Australia. Founder Colin Stevenson is a broadcast audio legend, while son Graeme has built a solid live sound foundation across installations and production companies. They know a thing or two about audio, which is why they decided to represent APB.

### A VERSES D

Analogue consoles occupy more floor space than digital, because there is more surface area required for all the controls. If you get too squeeze with the space between the controls then people find it hard to operate the console – let alone read the little graduations and descriptors.

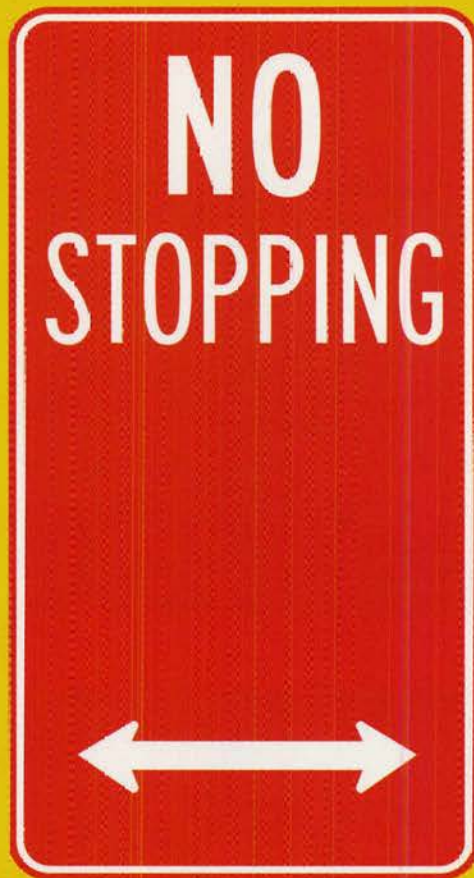
The other factor with console format is connections, and of late some digital consoles have been built with all connectors on board, as opposed to remote rack approach. The remote stage rack approach is the one that will ultimately prevail, since the whole idea of a multicore taking 16 or 32 mic lines out to FOH and then returning the mixed outputs all the way back to the stage is illogical if there is another way.

One place where analogue wins is operator training, as there is no middle ground with a conventional console – ultimately you need to learn what every control does, since every control is right there in front of you. With digital, you can 'user mode' the thing and lock out pesky things like EQ and head amp gain. I see people pushing digital faders who have no knowledge of anything happening on the screen in front of them, let alone inside!

### ENTER THE SPECTRA

As is our way, we got the console and pressed it into immediate use in the Barn. At time of writing, it had done many mixdowns – where we feed live multitrack in; and have students put under the clock to make sense and get a mix. There have been around five rally events, where all manner of live inputs arrive. Then there was one smoking loud rock afternoon, when I got one of our college bands to serve it up to the console.

Our test console had 24 inputs plus four stereo channels. Spectra offer a C or a T version, we had the T which has more comprehensive EQ.



**9am  
Wednesday  
June 11th**

**9pm  
Thursday  
June 12th**

# **At Lots of Watts there'll be 'No Stopping' for 36 hours.**

Yes, it's that time again when Lots of Watts' Rydalmere store holds their huge 36 Hour Sale.

From 9am Wednesday June 11th, right through to 9pm Thursday June 12th, come and grab a bargain on ex-demo stock, ex-hire equipment, and traded equipment.

And while they're in the spirit of things, they'll even have some new stock on sale!

The Lots of Watts 36 Hour Sale. From 9am June 11th to 9pm June 12th.

**AUDIO • VIDEO • LIGHTING**

2 Bridge Street, Rydalmere NSW 2116 Tel: 02 9638 0302 Fax: 02 9638 0331

Unit 3/6 Dell Road, Gosford West 2250 Tel: 02 4325 0055 Fax: 02 4325 0800

sales@lotsofwatts.com.au hire@lotsofwatts.com.au www.lotsofwatts.com.au

**Lots  
of  
Watts**



Siobhan and Simon at mix position.



The EQ section is well featured and sounds good.

controls. Spectra comes with eight VCA masters, so any channel can be switched over to one or more of these. This makes submixing way easy. The other significant feature is ten auxiliary busses, of which the final six can be paired for stereo in ear monitors.

The console has its own unique appearance and isn't a clone of something else. It has a solid feel – push on the front panel and it doesn't flex like some so you'd expect less grief down the track.

### CHANNEL STRIPS

The console has a lot of switchgear for each channel – a line, pad and polarity switch join the  $\pm 8v$  phantom switch and red warning LED that you expect at the top of the input strip. There is a direct out pre switch, insert

on switch with LED, and a green LED for the high pass filter on switch. Like all serious consoles, you can dial up the frequency beneath which all is extinguished – anything from 0Hz to 400Hz.

At the EQ stage are four sweeps, plus switchgear to allow narrow Q for either of the two mid sweeps. The top and bottom EQ each have a shelf or bell curve switch. The EQ on switch is mated to a blue LED so it is obvious if EQ is in line.

Slightly cryptic is the Aux Pre-Source Select switch duo. These let you switch aux 1 – 4 pre or post EQ, likewise aux 5 – 10. This shouldn't be confused with the pre/post fader switch for aux 1 – 4 or those for each pair of further auxiliaries. Aux 5 and 6 can be paired for stereo in-ears, as can 7 and 8, and finally 9 and 10.

## THE HUNT FOR THE (DIGITAL) AUXILIARY SEND

Like I said in the story, some things don't happen on conventional consoles – you can see everything in front of you. This sidebar story is about Lucifer at work.....

The Yamaha M7CL is a very desirable work surface, and I've really enjoyed getting to know it. What happened this day was part of the get-to-know process.

I decided I needed front fill, because the flown PA array is high above the stage and the first five rows don't really get coverage. I placed a couple of compact speakers, one on the keyboard riser and one in front of the kit. They would let me send main vocals direct to those front rows. Those vocals I would send from Auxiliary bus 10, since it was hard patched back to the stage.

Getting Auxiliary 10 to work was another matter. On the M7CL each channel can be selected onto the channel view, and there is a rotary control for all 16 possible auxiliary and matrix sends. I thought I had some 'send' happening, but no sound. Then I checked the output for the auxiliary send by dialing up a 'mix' mode with the faders. I could then see that I had master output from auxiliary 10.

But there was no audio going down there to the stage. After a short confusion I realised I needed prefade switching on the aux 10 sends – since I had the channel faders off and I didn't want my front fill to follow my FOH levels. Anyone else would do it postfade, and that was how it was set. But not me. It took a while to find the pre/post switching function – available by pressing down on the auxiliary 10 encoder to reveal the screen with the option. Sigh.

Around about now someone unplugged the signal chain down at the stage, so I was chasing my tail for another period of time until I did what they teach you in college: trace the signal by physically checking every connection right through to the speakers.



# Active

in the pursuit of audio excellence

# Driven

by the endless possibilities of audio perfection

Whether you're a soloist playing to 100 people or a high profile production company covering thousands of screaming fans - KV2 Audio has the solutions to a vast range of both live and playback applications.

Have you taken the KV2 challenge yet?

Step up and you'll hear the difference, contact:

**KV2 AUSTRALIA** • PO BOX 9204 • WYOMING • NSW 2250

PHONE [02] 4329 0062 / 4388 4152 • FAX [02] 4388 6579 • MOBILE 0422 385 940 • EMAIL [davew@kv2audio.com](mailto:davew@kv2audio.com)



#### KV2 Audio Specialist Dealers:

**WA** Kosmic Light & Sound (08) 9470 1558  
Venue Technical Services (08) 9285 0539  
**SA** Derringers Music (08) 8371 5268  
**VIC** Hitek Audio Video (03) 9482 1744

Pony Music (03) 9702 3244  
Pro Light & Sound (03) 9579 2332  
**NSW** Lots Of Watts (02) 9638 0302  
Turrumurra Music Centre (02) 9449 8487

**QLD** AudioVision 0419 758 650  
Dominica Sound (07) 5593 8193  
Pacific Music (07) 4051 1499  
**NT** Top End Sounds (08) 8980 8222

get the complete story [www.kv2audio.com](http://www.kv2audio.com)



Inputs...



...and outputs.

You want to be able to isolate EQ from the auxiliaries (or include it) when setting a mission for the console – front of house OR stage monitors. It's nice you can use this console for either, without compromise.

Under the pan control are routing switches for everything. The red LCF switch is a show stopper if there is no centre speaker connected to the C output, because like all the left-centre-right consoles I've met, pan centre means send sound to centre only. So it goes away from the main mix. Pan left or right, and the mix appears.

You need to choose to send a channel somewhere, or it isn't connected to anything. The regular choice is left and right, denoted by a white switch. There is also a C switch alone, and a mono switch as well.

A big red mute switch is next to the 6 element LED ramp, and then there are 4 mute group, and 8 vca switches. A bright yellow Solo (PFL) button is at the bottom of the strip.

The four stereo channels follow the same general idea, with less EQ controls so as to accommodate more input gain controls for two (stereo) instead of one (normal) input.

## OUTPUT SECTION

At the output area are four matrix sends which can accept a mix of any auxiliary or left, centre, right and mono. A nice feature: a switch enables a matrix to be controlled by the house master fader.

The ten auxiliary masters are full 100mm faders, and they can be sent to any house output buss.

Output monitoring: there are 12 segment LED ramps for aux 1 to 10; Matrix 1 to 4, and main output busses left, right. Mono and centre.

There are assorted inputs and switchgear for alternate outs, stereo returns, talkback and monitoring.

The all important house fader is located hard right.

## USING IT

The things we like are EQ and VCA control. It has an EQ characteristic which is not particularly English in character, but razor sharp and understated. The cut and boost control says 15dB – and we think it gives you more.

There is no intrusive meter bridge to get in the way of sightlines. The rake and ergonomics are good.

Out back and it has insert on a single RTS jack – but there is also an 'I' model variant with a separate in and out jack for inserts. There are enough in's and out's for anyone. The solo / PFL buss can be switched AFL (after fade listen) as well. The headphone amp had more than enough hormones.

The general vibe here was very positive – this is a quiet, precise console with a heavy duty build.

The weird things: the input chassis female XLR's occasionally won't release a male – we had one locked in there, and had to do a disassemble to get it off. The master output had a bleed from open channel faders – even when down, in the 'off' zone. This wasn't a problem since we were using VCA masters, and the channels went through these to get out. We suspect something slightly amiss – BUT the console performed perfectly in every other way.

It sells for around 20k in the frame size we review here.

CX

## MEGATEST SCORECARD

SEX APPEAL: 7.5  
 QUIETNESS: 8.5  
 CONSTRUCTION: 7  
 FEATURES: 9  
 VALUE: 9

- OzBlok products. The new "Loadsafe" Chain Hoists with overload protection, Girder clamps, Trolleys and quick action Trolley clamps.
- GIS, C.M. Lodestar, Kito and Hitachi chain motors.
- Standard wire, Gripples, Superflex steels, Gacflex and custom made bridles.
- Manual and electric winches.
- Black polyester round slings.
- C.M. Stac chain.
- Height safety equipment and fall arrest systems.
- Disto pocket laser levels.
- Endless webbing ratchet straps and load restraint systems.
- Sisal and Manila rope.



**HES**  
**HOISTING  
 EQUIPMENT  
 SPECIALISTS**  
 Quality Lifting & Rigging Solutions

Sydney: (02) 9531 8033  
 Melbourne: (03) 9480 5577  
 Adelaide: (08) 8244 7611  
 Perth: (08) 9355 4218  
 Email: sales@hesnsw.com.au  
 www.thehesgroup.com.au



**Your 'One Stop' Rigging Shop.**

## THE NEXT GENERATION IN CROWD CONTROL MANAGEMENT

### FRAMELOCK BARRIERS®

FrameLock is a lightweight modular system of hi-tensile aluminium crowd control barriers and temporary fencing manufactured to meet or exceed Australian and international standards.

Featuring a modern aluminium finish that looks good in any application.

Combine barrier fence units with corner sections and service gates to erect a cost-effective, free standing integrated crowd control solution.

#### ASSEMBLY & TRANSPORT

- Unique side-pin design allows rapid assembly
- Packs flat for easy storage and transport
- Lightweight
- Complete modular system for venue or touring

#### EXTRA SAFETY FEATURES

- Wider step provides better footing
- Front anti-trip platform edging
- Provisions for ground pins for superior stability on any surface
- Interlocking panel system

#### ADD-ONS & ACCESSORIES

- Gates
- Corner Sections
- Detachable counter tops



FrameLock Crowd Barriers



FrameLock Fence Barriers



For more information contact

**Eventquip Pty Ltd**

COLIN WEST - SALES

Phone 0411 473 347

Fax 08 8981 7525

sales@eventquip.com.au

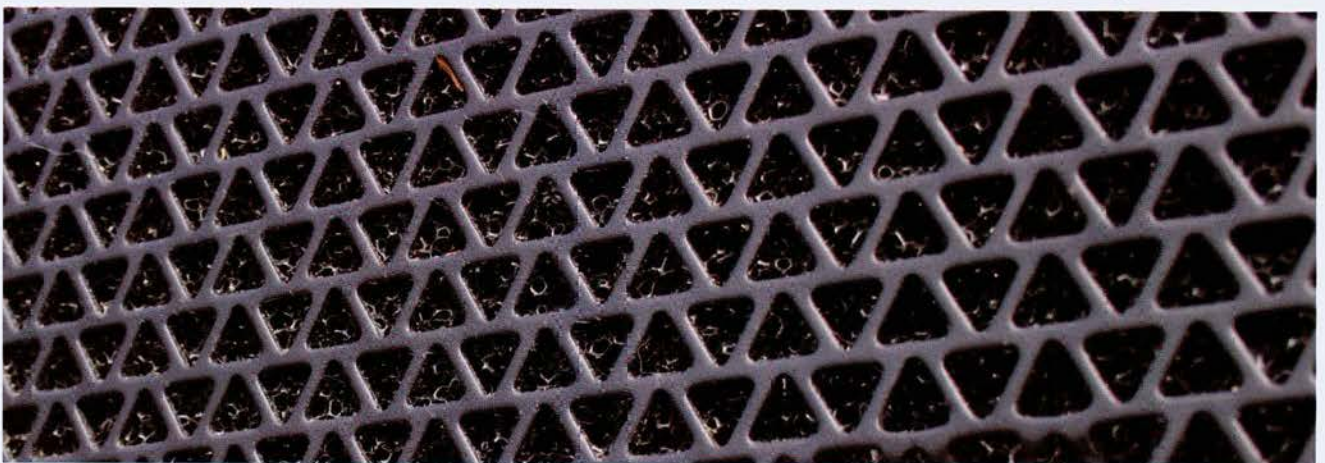
PATENT PENDING. REGISTERED DESIGN PENDING.  
 2007 © ALL RIGHTS RESERVED. FRAMELOCK STRUCTURES PTY LTD



# CONTOUR ARRAY

## FLOOR STACKABLE LINE ARRAY FROM HK AUDIO

HK Audio originate in Germany, where they are a significantly large and long established maker of pro audio systems. They started in 1979, ironically the same time this writer adopted live audio as a preference over lighting. Before some lightie gets all out of joint, I said 'preference'. Memo to moaning lightie: learn to do audio AND lights, like we all do here.



# FACTORY SOUND.

## SPEAKS VOLUMES

CONSISTENTLY RECOGNISED AS THE  
BEST PROFESSIONAL AUDIO TRADE  
OUTLET IN AUSTRALIA.

- 5,000 sq ft of space, crammed with stock
- Knowledgeable staff on hand to help you choose from our vast range
- The ability to get the right deal done, to ensure you get the gear you need at the price you are happy with
- Factory Sound is well-known for our year-round best pricing

That's why people in the know say  
"go to Factory Sound, you'll get looked after"

### END OF FINANCIAL YEAR JUNE CLEARANCE SALE

If you haven't experienced 'June at Factory Sound', then you don't know how low we can really go on the best range in Australia.

COME IN JUNE 2008 TO SEE FOR YOURSELF!



**PHONE 1800 816 244**

NO HIRE DEPT. NO MUSICAL INSTRUMENTS. AUSTRALIA'S FAVOURITE PROFESSIONAL  
AUDIO SUPPLIER TO THE TRADE.

75 - 85 York Street, South Melbourne VIC. 3205 Australia Freecall: 1800 816 244

Phone: (03) 9690 8344 Fax: (03) 9690 7077 Email: sales@factorysound.com

Trading Hours: 9:30am - 6:00pm Weekdays / 10:00am - 4:00pm Saturday



**FACTORY  
SOUND**

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



The ground stacking system: is simple and obvious.



All held together by captive pins.

**By JULIUS GRAFTON**

Several years ago the HK brand acquired representation in Australia through CMI, where one of the partners is Peter Trojkovic, himself a live audio veteran in Australia – having built and toured major audio for many legendary Australian bands. CMI hit the ground running with HK, at a time when some industry leaders were quite vocal: “Just what we need. ANOTHER brand of audio....”

At the time, many of us attended a demo day at CMI’s Melbourne HQ, where we were introduced to the Cohedra line array. The packaging, sound and factory spokesmen quickly convinced many that HK were indeed

a contender at the serious end of the market

That sets the scene for our review – when the Co-Tour Array arrived at our facility we expected a certain level of performance. It was to be our frontline PA system for several weeks, during which time we would throw everything we had through it – including a live rock afternoon with a band; and our regular college rally program. This covers off all kinds of live audio, from a lectern, wireless microphones, DVD material, multitrack mixouts, and solo or duo musicians who come to our place for testing and training purposes.

**OUT OF THE TRUCK**

We got four sub-bass elements, and

four mid-high elements. The sub bass units contain amplification and processing for the sub bass, and for one top element. You could use one sub bass, and one top element as a smaller system, we had a pair of each.

The system comes pre-disposed towards ground stacking, with a stacking plate that connects the mid-high units to the pair of subs. A rigging frame allows up to four mid-high units to be flown, if required. This appears to set the largest configuration as four elements, each mid-high element is actually a pair of compact line array elements contained within one cabinet. So four equals eight, since four cabinets contain two elements each.

The sub bass unit, officially known as the CTA 118 Sub, is loaded with a single 18” woofer and a 1,000 watt amplifier to drive it. A second 1,000 watt amplifier is loaded in there to drive the mid-high box, officially known as the CTA 208 Mid/High Unit. One sub weighs 59kg, and comes in a neat almost cube form, with neat handles cut in the sides.

That top box is loaded with 2 x 8” drivers and 4 x 1” highs on a tricky waveguide. It doesn’t read like much, but you’ll see.

If you stack a sub on top, they mate – in an innocent but safe manner, via little recessed bits. On top of each sub is a screw thread which accepts the floor stacking plate or a little extension stand-pole thing if you want to do the one sub and one top box combo. The extension pole puts the top box at the correct height.

**STACK IT UP**

We did, without grief. Because the entertainment biz is male dominated at the technical end, we got some of our not male technical students to do the stacking. They pulled it off in a routine manner. We are pleased to be training a growing number of non males at our college.

Two subs sit just under 1.5 metres high, then you bolt the floor mount plate on top. This gives the first top box a proper base on which to use the quick release pins to secure to the sub. Each top box has an adjustable arm on the back which is cunningly held out of the way using a magnet. Snap it down, and it allows vertical angle of the box to be set. This way the first box can point up to 9 degrees down, to cover a seated audience.





All the processing and amplification for the system gets done in the sub.



The tower of power - simple rigging and cabling mean it goes in and out fast.



Neat idea - the magnet stops the arm swinging about.

The next box goes on top and similarly can be angled up to 9 degrees different to the first. So if the first box is angled down, the second can be angled up. Each box has 4.5 degree vertical horn dispersion from the acoustic lens, and a fancy 100 degrees horizontal coverage. Between two housings you can achieve 9° curvature.

While the first top box can be lifted from ground level, the final box needs to go 2 metres up, so you need a couple of proper platforms to do the task. The boxes weigh 29kg, so it is

no real effort.

### CONNECT THEM

On back of each sub is the amp and controller module, which powers through a Powercon connector. Two subs can be juiced from one mains circuit. They connect one XLR cable from the FOH. Loop another short XLR cable to the sub above so they both get the same signal. Now use a short NL4 Speakon cable to connect each top box to each sub's amplifier output. It's almost student proof.

Once energized the sub controller

module glows a rewarding and mesmerizing blue colour, with a little display window showing menu items, like delay settings and sub level. You should just use the factory default, unless you need to dial up a time delay for the whole combo, because you are out and about, away from your main stage and sound source.

There is a signal present LED and a OOPS LED which goes red when the input has been overloaded. This is a few dB after the Digital Clip?! Check Input! message arrives on the window.

More about the controller: you tell it whether there be one or more top boxes in use, so the correct EQ is applied. One controller can enslave others and direct them, if you connect an optional DDO-Pro Net Port cable from master to slave(s). This doesn't do anything other than what we are saying - the DDO-Pro Net does not carry audio, just commands. If only a marriage could be run this way.....

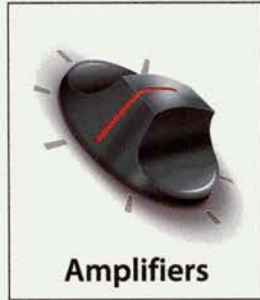
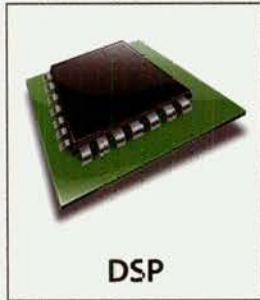
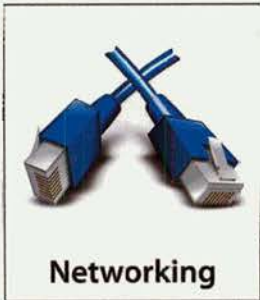
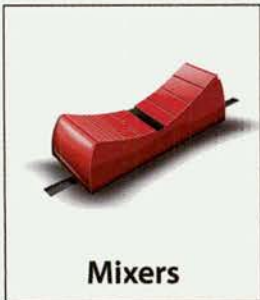
### NOW MAKE AUDIO

We did the usual array of listening tests. CD, iPod, and multitrack playback of live bands were all pumped in there. Then we did the 'how loud' test which involves shutting all the doors, inserting ear protection, and turning it up until the lights say STOP. This produced a staggering 115dB (A) at 5 metres. Roof shaking, snowing dust, trouser leg blowing each time the kick is hit.



From input to output,  
play your best hand.

Total system solutions from Yamaha.



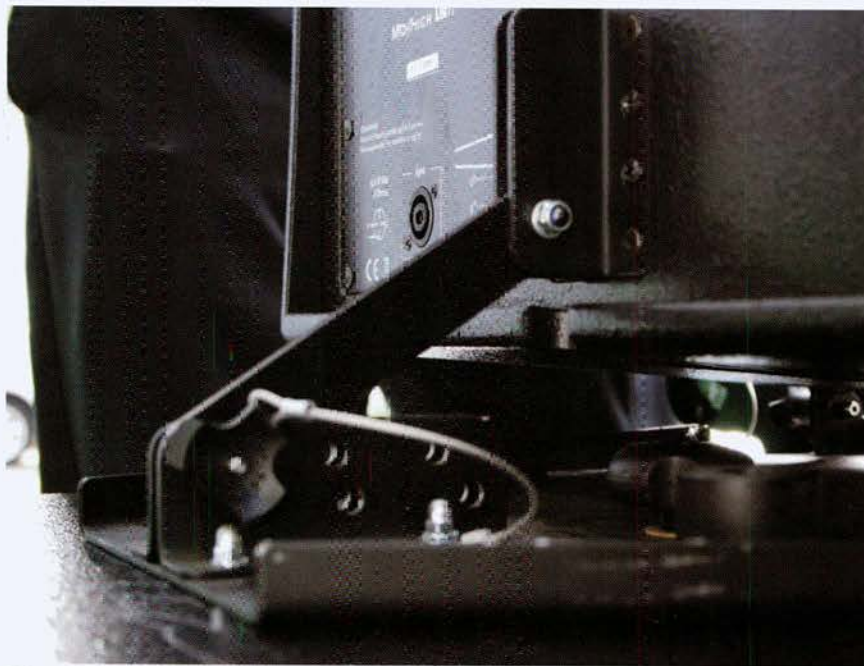
Contact us for more information

[www.yamahamusic.com.au/products/commaudio](http://www.yamahamusic.com.au/products/commaudio)

[jason\\_allen@gmx.yamaha.com](mailto:jason_allen@gmx.yamaha.com) | (03) 9693 5272

Yamaha Commercial Audio, PO Box 268, South Melbourne VIC, 3205

CONNECT WITH EXPERIENCE



The whole mid/high array is angled off the stacking plate.



Simon and James stack it up. At 29 kilos a box, it's not a huge effort.

We took it outside, and did some tests in the free space that is Bridge street, until the neighboring businesses could take no more.

The coverage pattern was as advertised, you could walk in and out of the high frequency pattern. The students did a long march outside when James had the system set up in the street, to learn about this. Passing motorists would have been perplexed at the serious expressions and heads turned towards the college, as the youth walked up and down, lemming like.

The final connection was with a real live event, which we host here several times each week. We had a band for one, and a musical mixture of things for the other. The ConTour delivered pleasing response and only needed EQ for our notorious barn acoustics which are rough because we want them that way.

Did we like it? Yes we did.


Drawbacks are few, the M20 bolt for the floor stacking plate needs to be made captive and get a tether like you have on a petrol cap, so it doesn't wander away like it can. The bass-to-



Power loop through makes it easier to keep the back of the stack neat.

top ratio is not massive, but you sure do get enough bottoms.

There's some other ConTour speaker models that can stand alone with the sub, so it has a family vibe and presumably is voiced similar to the larger Cohedra siblings.

A respectable combo for any audio visual company, venue, or production outfit needing fast and loud fullrange PA from a small footprint. 

### JULIUS CAMPUS METRICS

**POWER TO WEIGHT:**

115dB (A) at 5m from 352kg

**COST AREA:**

Around 15 grand retail\* per sub/top box combo (There were 4)

**FAT FACTOR:**

(Staff balls to wall ratio) 75 out of 100

**SETUP EASE:**

8 out of 10

**EASE OF USE:**

9 out of 10

**APPEARANCE:**

Sexy. A corporate power dresser that rocks out

\*Retail? What's that?

Accredited and industry endorsed

# Technical Training

## TRAINEESHIPS: NSW, VIC, QLD with government funding

Unlock \$4,000 in government support for your trainees, plus have them trained by Julius College in Sydney, Brisbane or Melbourne. Traineeship funding for entertainment technical now available in NSW, Victoria and Queensland.

- Visit [www.juliusmedia.com](http://www.juliusmedia.com)
- Email [reception@juliusmedia.com](mailto:reception@juliusmedia.com)
- Call Julius College on 1-800-635-514

## SHORT COURSES & CERTIFICATE THREE: NOW in NSW, VIC, QLD

Our Short Courses have grown since 2002! Now get the training you need, when and where you need it!

### Stage OH&S

A one day accredited course that is essential for anyone working in entertainment. Covers electrical safety, heights, manual handling, equipment and practical aspects all tailored specifically to our industry. • Accredited Course • Updated  
**"I thought it would be boring, but it was excellent".**  
- Typical comment!

### Lighting Basics

This 3 day course covers all essential lighting equipment, with hands-on training in proper use. Learn the basics of DMX and control, what to use, and how to use it! • Accredited Course. • Updated

### Sound Basics (3 days)

Live sound is done everywhere, now you can learn signal flow, basic operation and EQ. Get results without feedback! Covers all typical equipment. • Accredited Course. • Updated

### Video Basics

Getting video and data onto a screen is not easy, our 3 day course covers formats, projector setup, cabling, interfaces and you get your hands on. It delivers! • Accredited Course. • Updated

### Certificate Three

This is the entry level qualification for people working and volunteering in entertainment. It contains the four short courses (above) and is all brought together with a completion production day where you work as a team to set up a production. • Accredited Course. • Updated • Also fun!

## FULL TIME COURSES IN 2009. SYDNEY ONLY

**EVENT AND MUSIC MANAGEMENT.** Advanced Diploma of Venues and Events. CUE60403. 1 year fulltime. Start date February 2009.

**ENTERTAINMENT TECHNICIAN.** Advanced Diploma of Live Production, Theatre and Events (Technical Production). CUE60203. 1 year fulltime. JOB PLACEMENT ON GRADUATION. Start Feb 2009.

## PART TIME COURSES IN 2009. SYDNEY ONLY

**ENTERTAINMENT TECHNICIAN.** Certificate IV of Live Production, Theatre and Events (Technical Production). CUE40203. 1 year part time. JOB PLACEMENT ON GRADUATION. Start Feb 2009.

**ENTERTAINMENT TECHNICIAN.** Advanced Diploma of Live Production, Theatre and Events (Technical Production). CUE60203. 2 years part time. JOB PLACEMENT ON GRADUATION. Start Feb 2009.

## SYDNEY

Julius Events College  
Campus, 10 Bridge  
street, Rydalmere

**Stage OH&S:** (1 day) July 7.  
Sept 29.

**Lighting Basics:** (3 days)  
July 17, 18, 19. Sept 30, Oct  
1, 2.

**Sound Basics:** (3 days)  
July 8, 9, 10.  
Oct 6, 7, 8.

**Video Basics:** (3 days)  
July 14, 15, 16. Oct 3, 4, 6.

**Certificate Three:** (2 weeks)  
July 7 - 20.  
Sept 29 - Oct 10

**Advanced Moving Lights:**  
(5 days) Oct 6 - 10.

**Advanced Mixing:** (5 days)  
July 14 - 18.

Phone 1 800 635 514  
or book online at  
[www.juliusmedia.com](http://www.juliusmedia.com)

## MELBOURNE

St. Martin's Youth Arts  
Centre, St. Martins Lane,  
South Yarra.

**Stage OH&S:** (1 day)  
Monday 30 June

**Sound Basics:** (3 days)  
July 1, 2, 3

**Lighting Basics:** (3 days)  
July 4, 5, 7.

**Video Basics:** (3 days)  
July 8, 9, 10.

**Certificate Three:** (2 weeks)  
June 30 - July 11

## BRISBANE

Entertainment Services  
Theatrical, 36 Kremzow Rd,  
Brendale.

**Stage OH&S:** (1 day)  
Monday Sept 22

**Sound Basics:** (3 days)  
Sept 23, 24, 25

**Video Basics:** (3 days)  
Sept 26, 27, 29.

**Lighting Basics:** (3 days)  
Sept 30, Oct 1, 2.

**Certificate Three:** (2 weeks)  
Sept 22 - Oct 3.



## Julius Events College

Pty Ltd ACN 098850036

Registered Training Organisation 90888

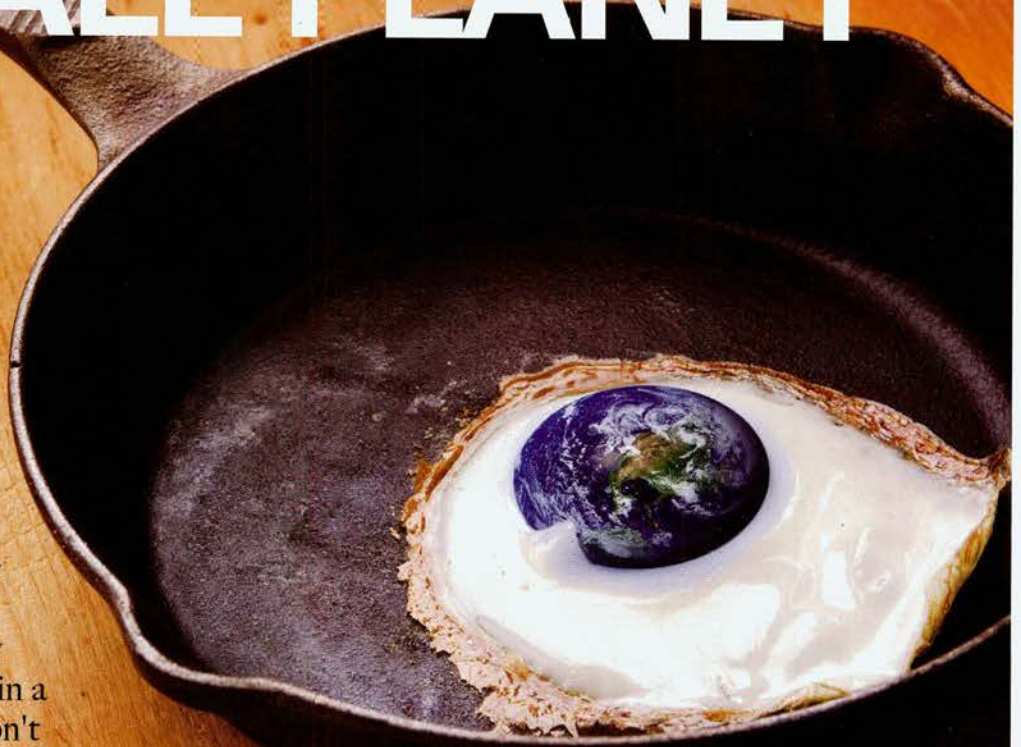
Phone 1 800 635 514

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

email [reception@juliusmedia.com](mailto:reception@juliusmedia.com)

# LIGHTING FOR A SMALL PLANET

“People usually consider walking on water or in thin air a miracle. But I think the real miracle is not to walk either on water or in thin air, but to walk on earth. Every day we are engaged in a miracle which we don't even recognize: a blue sky, white clouds, green leaves, the black, curious eyes of a child – our own two eyes. All is a miracle.” – Thich Nhat Hanh



By RICHARD CADENA

Suppose you owned a construction company and, along with it, some big, shiny lorries in which to haul materials. Now suppose you're constructing a building, starting from the foundation up. So you hire some drivers to haul sand from the sandfactory (you know, the place where they manufacture sand) to the construction site so it can be mixed with some cement to pour the foundation.

Back at the sandfactory, the lorry is filled with 100 tonnes of sand (I told you it was a big lorry) and the driver happily heads over to the construction site. But when he gets there, there's only 3-1/2 tonnes of sand in the back. And behind him is a very long, thin line of sand stretching for kilometers all the way back to the sandfactory. It turns out that those big, shiny lorries have a leak and only about 3.5% of the sand

LIGHT SOURCE	EFFICACY
HPL 750/115	29.2 lumens per watt
HPL 575/115/LL	21.5 lumens per watt
HPL 575/115/SL	28.7 lumens per watt
MSC 575	78.3 lumens per watt
MSR 575/2	85.2 lumens per watt
MSR 1200 Short Arc	91.7 lumens per watt
CDM150SA	86 lumens per watt
Compact Fluorescent Lamps (CFL)	45-60 lumens per watt
Red LEDs	Up to 46 lumens per watt
Red-Orange LEDs	Up to 53 lumens per watt
Orange LEDs	18-22 lumens per watt
Yellow and amber LEDs	34-35 lumens per watt
Green LEDs	58-79 lumens per watt
Blue-Green LEDs	50-75 lumens per watt
Blue LEDs	17-26 lumens per watt
White LEDs	As high as 98 lumens per watt
Low Pressure Sodium	Up to 200 lumens per watt

makes it to the construction site. It's enough to drive you to the sanditorium.

This scenario may sound ridiculous to you but you witness it every day.

Except it's not sand we're talking about, but electricity.

Every time you turn on an incandescent lamp you're seeing about

3.5% percent of the energy you're paying for to power it up. The other 96.5% is the long, thin line going back to the power plant, except you can't see it. You can, however, feel it. It can be felt in the heat emanating from the back of the fixture, as well as the heat in the lamp socket, connectors, wires, dimmer, feeder transformer, transmission lines, and the power plant.

Most of the energy is lost at the point where the current passing through the filament is converted to light and heat. It seems that Edison's lamp (at least some of which can be attributed to Joseph Swan) makes a better heater than it does a light. But it's hard to beat the beauty of the warm glow of an incandescent source, so we continue to use the lorry with the hole in the bed.

Still, we have a duty to be responsible with our resources, whether that means being economically responsible and/or ecologically responsible. And while we have a desire to create the best possible look, we owe it to our customers to make judicious choices based the needs of the client fueled by our knowledge of light, electricity, and energy.

How, you might ask, can we make better choices when it comes to light sources? Glad you asked.

Today, a lighting designer has the widest range of options ever available, and those options are growing. When we have an area to illuminate, we can now choose between incandescent, discharge, fluorescent, electroluminescence, and LED sources. Each has their own unique characteristics, applications, assets and drawbacks. One of those characteristics is the efficacy or the lumens per watt. It's basically a measure of how much visible light it produces for a given amount of electricity. Here is a comparison chart that shows the lumens per watt for several types of light sources.

Before we all run out and start specifying low pressure sodium lamps for the stage, we might want to take into consideration that their color rendering index (CRI) is zero! That's not a typo and it's not a joke. The CRI is 0. These babies are typically used where energy efficiency is important but color rendering is not, like for street lighting.

But the lamp efficacy only tells part of the story. The luminaire efficacy should also be taken into account. The luminaire efficacy is the percentage of visible light coming out of the fixture compared to the visible light produced by the source. In the most basic terms, it's a measure of how much light from the source can be gathered and redirected to the output of the luminaire. Luminaires can vary wildly in terms of efficacy, from as little as about 10% in a Fresnel in a spot focus to about 65% in an ellipsoidal reflector spotlight with a wide lens.

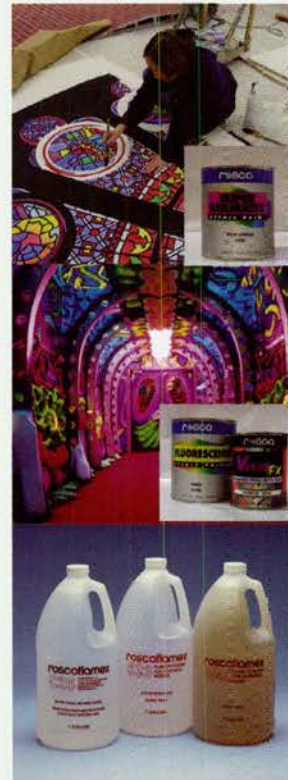
Of course, we might want to consider all the other characteristics, those little things like cost, size, weight, color temperature, and CRI. In many cases, these other factors outweigh the efficiency considerations simply because they are immediately observable while the efficiency is hidden and the impact is delayed. By the time the first electric bill arrives the lighting team is usually long gone.

Look closely and you'll find that the line of sand leading back to the electric plant also trails back to the designer. We can't completely plug the energy leaks, but in many instances we can make them smaller.

*E-mail the author at the sanditorium by addressing your comments to [rcadena@austin.rr.com](mailto:rcadena@austin.rr.com).*

CX

ROSCO



Using Rosco scenic paints is as easy as 1,2,3, flame retardants, paints for all applications and exciting materials to ensure your production looks great. Call for information or to find your nearest dealer (02) 9906-6262 [www.rosco.com](http://www.rosco.com)

**We just raised  
the bar on  
quality  
hand  
made  
custom  
cable  
assemblies**

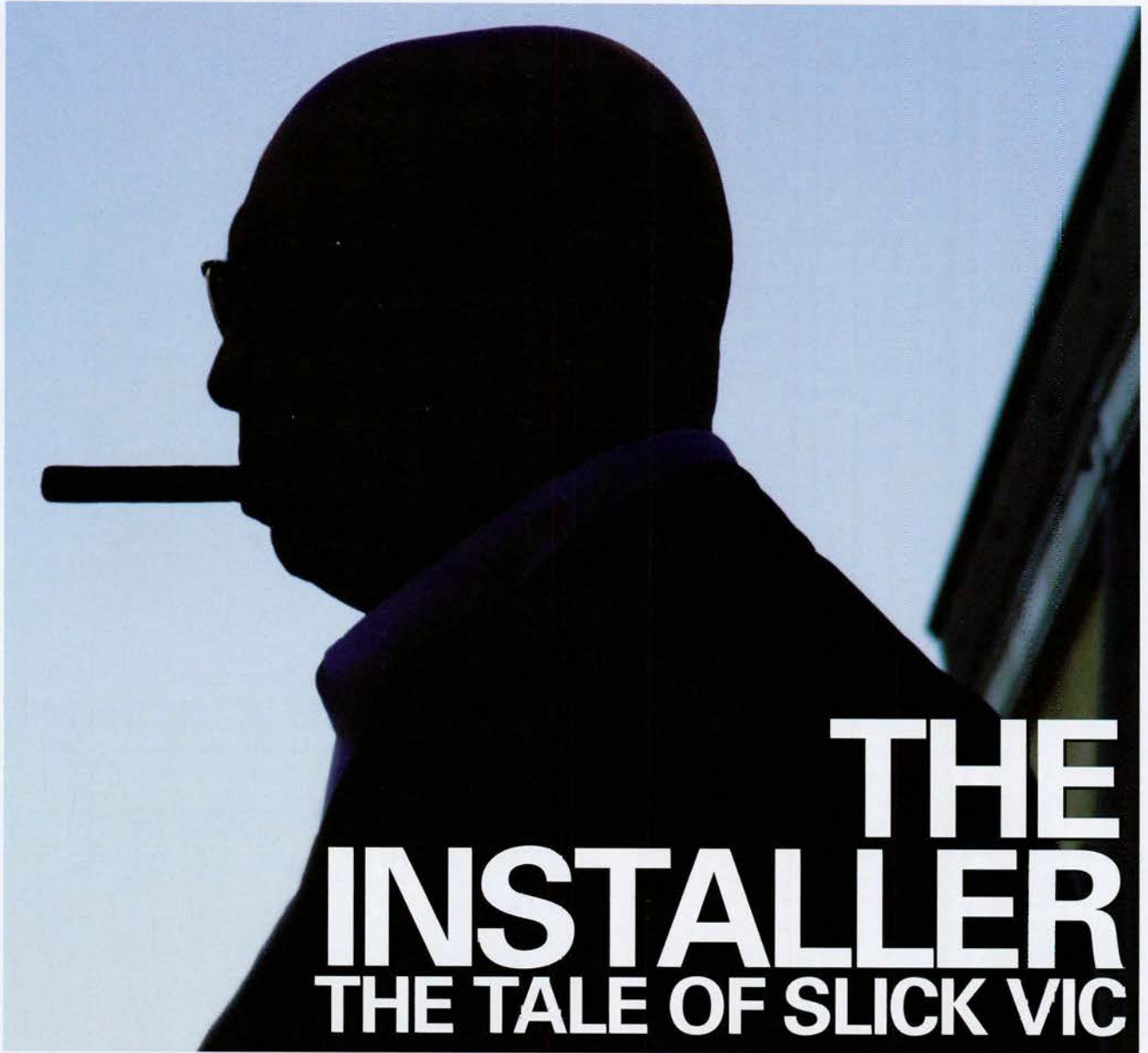


**Ask for the best by name**



**trc**

The Resource Corporation Pty Ltd  
Unit 15 / 173 - 181 Rooks Road, Vermont, VIC 3133  
tel: 51 (0) 3 9874 5988 fax: 61 (0) 3 9874 0977 e.mail: [sales@trc.com.au](mailto:sales@trc.com.au)



# THE INSTALLER

THE TALE OF SLICK VIC

**R and R Recordings Studio** Est. 1982

10 Bridge Street Rydalmere, NSW 2116  
Phone - 02 9684 2103 Email - robz@rstudios.com.au Web - rstudios.com.au

Our guru of new things spends his days on the job somewhere in Australia trying to get brand A to talk to brand B. Strange things happen, but even stranger are the people he knows.

**D**on't rush to identify Vic, even though he sounds like an amalgam of many club owners out there today. We've done several fitouts for Vic, and generally do OK provided we pander to his whims.

He had a concept after a study trip through nightclubs in Russia and Denmark, and his most recent club had what I imagine is a politburo brothel theme. Somewhere in Europe he was converted into a believer by a moving light salesman with a bag of coke, so we were faced with the unhappy reality of installing a brand that we do not usually support.

The brand itself is OK, but the local distributor – painful. Too grindingly ineptly unreliable. There would be troubles ahead when we needed inevitable after sales support, something these guys were adept at avoiding. They also knew Vic was coming, since cokeboy had emailed and boasted of his conquest.

Rather than treat the episode as a chance to win us over, the distributor did all they could to swing Vic onto our competition, then gave us minimum discounts (cash on delivery) when they realised Vic was loyal to us.

Meantime we did the fitout, and months later managed to prove to Vic that his desired brand was not the best choice because he actually believed us when we reported delays with warranty repairs and stonewalling over replacement parts. His calls to the distributor got explanations that basically libelled us, claiming we had breached warranty by field replacing parts that they were under no obligation to obtain under warranty.

Vic has friends too, and of course he apprised them of his experiences with the distributor.

Meanwhile we were working on audio problems at another of Vic's clubs where the subwoofer drivers were frying but the limiters were working. Seems there was a batch of 15" name brand professional woofers that were not up to tolerance and of course the importer claimed we were overloading. Problem fixed via the world wide web, where a Blog nailed all drivers as faulty with serial numbers above 9800 and under 9900.

Around this time we marvelled at the complete lack of accountability in the pro audio trade where we have not received a recall notice in living memory. There appears to be a gap in the consumer laws where the device is intended for 'professional use'.

With a total of eight 15" drivers replaced. Vic refused to pay for labor which is possibly fair from his viewpoint but a total loss from ours. The importer had very reluctantly reconed the drivers, which meant we did 16 replacements since they would not and do not supply exchange drivers. Each sub needed to be carefully unbolted from the floor, up-ended and attacked with a power screwdriver and a spare battery since there are a lot of long screws.

We ate about 18 hours, not counting freight and the cheesy smile fast faded off the rep's face when we specified a different brand of loudspeakers for the next club job we did.

CX

**GOBOTECH**

Tel: 07 5529 0505

Fax: 07 5529 2226

**Gobo Manufacture & Design**



Huge Stock Gobo Collection  
*browse online - [www.gobotech.com.au](http://www.gobotech.com.au)*



Custom gobos **FAST!**  
*Full colour, spot colour, B&W, steel.*

- Hire Theme Gobos
- DMX Tester /LED Torch
- Digigobos & MIG Clips
- Dichroic Filters
- Effect Filters
- Catalogue #06, get your copy now!**



Digigobos



DMX/LED torch

**[www.gobotech.com.au](http://www.gobotech.com.au)**

**[sales@gobotech.com.au](mailto:sales@gobotech.com.au)**

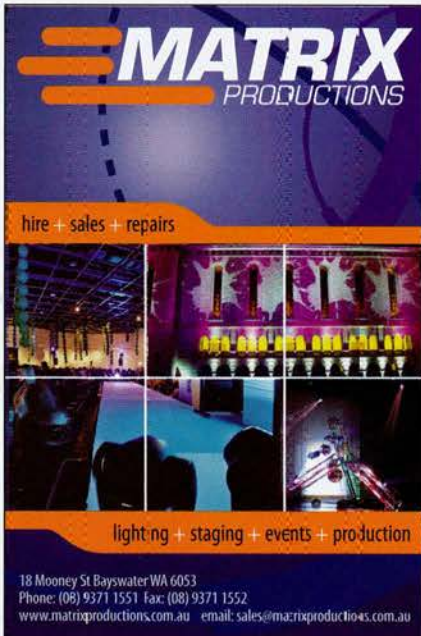
## Mobile Image Co TV OUTSIDE BROADCAST VAN



***We provide live-switched video coverage***

with our mid-sized SDI digital OB Van, fully kitted out with 6 triaxial D35 wide screen cameras, 9 digital VTRs, 4 long lenses, comms, commentary and audio facilities. Ideal for live events, corporates, broadcast or pay TV, sports, downsteaming, screen-feeding & DVD origination. Economical dry-hire with OB engineer, or with full broadcast TV crew. More info: [www.mobileimage.com.au](http://www.mobileimage.com.au)

**Phone 02 9953 3833**



**MATRIX PRODUCTIONS**

hire + sales + repairs

lighting + staging + events + production

18 Mooney St Bayswater WA 6053  
Phone: (08) 9371 1551 Fax: (08) 9371 1552  
www.matrixproductions.com.au email: sales@matrixproductions.com.au

**Gloves & Accessories for the Entertainment Industry**  
www.setwear.com.au  
Free catalogue!



Now available from:  
QLD: Pacific Enterprises 07 5596 3595  
NSW: Crew On Call Australia 02 9318 2581  
VIC: Big Shot Film Services 03 9318 0184

**B.S.Sound PA Hire**

3k PA with separate F/3, LX & crew. Driveway, Vocal PA systems & LX, mics and components also available. Contact Mark Barry for free quote on 03 9808 0388 or 0419 993 966.  
www.bsound.com.au mark@bsound.com.au

**STAGING RENTALS**  
& CONSTRUCTION SERVICES  
Sydney • Melbourne • Brisbane

Australia's award winning provider of event products & services, rental & custom solutions



Set construction, exhibition stands, stages, drapes & bars, linens, & more

www.stagingrentals.com.au  
mail@stagingrentals.com.au  
Sydney: 02 9519 6300  
Melbourne: 03 9681 8462  
Brisbane: 07 3854 0699

**Better Faster Bigger Rebuilt!**

MS SQL Database Superior Performance Full Featured!

If you haven't seen RentalPoint Software lately, it's time to look at Version 9. The rebuilt new release Better - Faster - Bigger.

**Almost Bionic**

Six Million Dollars Worth Yours! For a lot Less!

**RentalPoint SOFTWARE** visit: www.rentp.com

**ADVERTISING INDEX CX36 15 JULY 2008**

Integrate 09 .....	64 & 65	Mobile Image .....	85
Amber Technology .....	47	Murray Tregonning .....	27
Audio Products Group ..	19, 25, 31, 59	Norwest Productions .....	18
Bosch .....	7, 37	Novatech .....	30
Bose .....	5	Penn Elcom .....	39
BS Sound .....	86	Production Audio Systems .....	ibc
Cases.com .....	17, 86	Production Directory .....	43
Chameleon Touring Co. ....	11	R & R Recordings.....	84
Classifieds & ad index .....	86	Rentalpoint.....	86
CMI .....	3	Reidel .....	35
Eventquip .....	73	Roland .....	63
Factory Sound .....	75	Rosco .....	83
Gobotech.....	85	Selecon .....	33
Group Technologies .....	20	Setwear .....	86
HES .....	73	Soundcorp .....	23
Jands.....	ifc, 15, 53, 58	Staging Rentals .....	86
Julius Events College.....	81	Subscriptions .....	77
KV2.....	71	Syntec International .....	21, 51
Local Crew Nationwide.....	43	Technical Audio Group.....	9, 45, 57
Lots Of Warts .....	69	The AV Group.....	49
Loud And Clear .....	55	The Resource Corp. ....	83
Magna .....	67	ULA .....	back cover
Matrix Productions.....	86	Yamaha .....	13, 41, 61, 79
Meyer Sound .....	29		



**ADVERTISING MANAGER:**  
**STEVE JAMES**  
Call 1800 462 739  
**EMAIL:**  
juliusmedia@mac.com  
FAX +61 2 9638 7181  
www.juliusmedia.com  
& go to CX Mag

**α NEEDS YOU!**

**Are YOU the Secret Listener?**  
Have YOU got the scoop on the big news?  
Do YOU know how to?  
Could YOU be the contributor we're looking for?  
Send your submissions to  
juliusmedia@mac.com





### MicroWedge Features:

- Increased fidelity, power handling and efficiency
- Highly coherent coaxial design
- Enhanced LF output
- Switchable passive and active modes
- Upgraded transducers and crossover design
- Convenient input connector location
- Balanced carrying and cleaner look
- Reduced weight (less than 55 lbs)
- Bottom-mounted rubber feet and integral flyware

# MACRO IMPACT. *Micro Wedge*

(We wanted to call them "Ball Rattlers" but Legal wouldn't let us.)

Wanna make friends  
with MicroWedge?  
Sign up at  
[http://www.myspace.com/  
microwedge](http://www.myspace.com/microwedge)

# EAW

Check it out at [www.eaw.com/products/MicroWedge](http://www.eaw.com/products/MicroWedge)



Australian Distributor:  
Production Audio Services  
Ph. (03) 9264 8000 Fax: (03) 9874 1599  
[www.productionaudio.com.au](http://www.productionaudio.com.au)

# ColorWash 750 AT Tungsten

## Featuring

Philips Hi-Brite 750 FastFit halogen lamp

Exceptionally quiet

Colour Temperature 3200 – 6500K

Ultra smooth CMY + Variable CTB

Smooth beam path – no hot spots

High speed colour mixing

Beam angle 8–45°

Warm colour tones

Smooth electronic dimming

Motorized zoom

Ethernet functionality

1-12 FPS Strobe effect

Support of RDM



## When performance matters

# ROBE

www.robe.cz

Free Call  
1300 ULA GROUP  
1300 852 476

www.ulagroup.com

ULA  
group

**BRISBANE**

Ph: (07) 5509 4633

Fax: (07) 5509 4677

**SYDNEY**

Ph: (02) 9112 4533

Fax: (02) 9112 4577

**MELBOURNE**

Ph: (03) 9900 4433

Fax: (03) 9900 4477