

# CX

**MONTHLY TECH NEWS**  
For Entertainment and Broadcast

CX 63, SEPTEMBER 2011 . \$5.50

## HAIRSPRAY

How video replaced the set

## DISNEY ICED

How crew don't go Goofy

## THE BLOCK

How One80 shot the final

## STAGES FAILING

Dole queue awaits if it happens here

## ASSOCIATIONS

AES falters as EntertainmentAssist rises

### REVIEWED:

Shure Axient- new era wireless  
SSL Nucleus audio worksurface  
Martin M1 LX Console  
Robe Robin 300 LED  
HHB Clearcom DX210 Wireless Comms  
+ 3 hot APPS!

### NEWS AND VIEWS:

Fake Sennheiser warning  
Church Production News  
Broadcast Wires  
Installer (100v line series)  
Fry on mixing a cake  
AND LOTS MORE!

ISSN 1320-5595



9 771320 559004

# The first scalable line array for all occasions

However large or small your audience and the venue may be, you can put together a system suitable for every situation using just the six components of the HK Audio Elements system. Here are just a few examples of systems you can build using the six components: cf Elements.

#### Voice Two

- 2 x E435
- 1 x EA600
- 1 x EP1
- 1 x EF45

50 300w RMS

#### Acoustics Three

- 6 x E435
- 2 x EA600
- 2 x E110
- 2 x E110A

300 2,100w RMS

#### DJ Three

- 6 x E435
- 2 x EA600
- 2 x E110
- 4 x E110A

350 2,700w RMS

#### Band Four

- 8 x E435
- 2 x EA600
- 4 x E110
- 4 x E110A
- 2 x EF45

450 3,600w RMS



elements

It's elementary



Your nearest Elements dealer:

ACT: Pro Audio | NSW: Kirby Productions | NT: Tcp End Sounds  
QLD: Musiclab & Mackay Music | SA: BSS Light Audio Visual | Vic: Factory Sound  
Distributed by CMI Music & Audio. For more info visit: [www.cmi.com.au](http://www.cmi.com.au)



# IN CRITICAL PRODUCTION SITUATIONS EVERY MOMENT MATTERS.

The new addition to Shure's product portfolio not only offers unparalleled sound quality and revolutionary features, but also provides flexibility and durability for ENG, field and studio production professionals. In critical broadcast and media production situations, Shure has the total solution for you.

Learn more at [www.shure.com.au](http://www.shure.com.au)



**UR3**  
Plug-on  
Transmitter



**UR5**  
Portable Wireless  
Microphone Receiver



**VP82**  
Shotgun  
Microphone



**VP89**  
Shotgun Microphone  
(Long, Medium, Short)

Distributed by

**JANDS**

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

**SHURE**®

LEGENDARY  
PERFORMANCE™



**SPOTLIGHT**  
professional lighting for the performing arts



# Vedette 12 H CC LV

**Bright, in more ways than one**

The new Vedette 12 H CC LV followspot from Italian manufacturer Spotlight combines the power of Philips 1200w 80v fast fit lamp with a compact inbuilt electronic power supply that acts as both dimmer and transformer to deliver fingertip control and high output.

#### Features

- Built in five colour manual colour changer
- 8 - 15 degree zoom
- Insulated guide rail for precise and safe control
- Tool free access to lenses for easy cleaning
- "Fast Fit" 1200w lamp for easy and quick lamp replacement

Contributed by

**JANDS**

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

## α Editorial

- 6 EDITORIAL. Stage Safety, AES back story, more

## α News

- 8 STAGES COLLAPSE  
10 FAKE SENNHEISER WARNING  
12 ENTERTAINMENT ASSIST IS HERE

## α Broadcast Wires

- 14 VALE CHRIS WILSON, Paul Lockyer, John Bean and Gary Ticehurst. Riedel show MediorNet Compact E. Colin Brown for CED.  
14 COBALT DIGITAL and Linear Acoustic announce Loudness Partnership. SLiDE debuts on Fox 8. Creamsource Bender LED, made in Australia. Fostex AR-4i makes iPhone a pro recorder. Rent a fibre cleaver.

## α Features

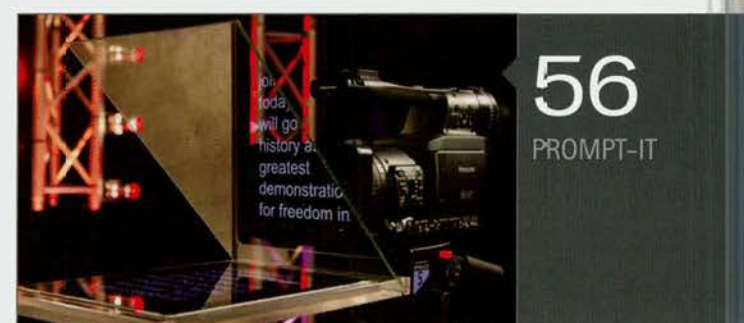
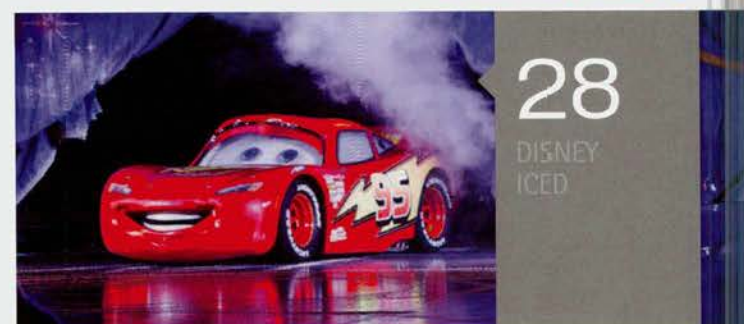
- 18 PEOPLE PICTORIAL From Perth to Sydney on show. We get around!  
20 TIME TO choose an installer. How?  
22 HAIRSPRAY: How video replaced the set  
28 DISNEY ICED: How crew don't go Goofy  
34 THE BLOCK: How One80 shot the final

## α Gearbox

- 41 CLEARCOM HME DX210 Wireless Comms  
44 ROBIN 300 LEDWash  
46 SHURE AXIENT- new era wireless  
50 SSL NUCLEUS audio worksurface  
52 MARTIN M1 LX Console  
56 PROMPT-IT Maxi Teleprompter  
58 PRESONUS SL Remote  
60 GEL SWATCH Library HD

## α Regulars

- 62 INSTALLER (100v line series)  
66 DUNCAN FRY



LIKE US ON FACEBOOK!  
Search For CX MAG

# D-MITRI



## THE BUILDING BLOCK OF DIGITAL AUDIO



Welcome D-Mitri, the next generation multichannel audio processing distribution platform from Meyer Sound. Designed for flexibility and growth, D-Mitri systems are scalable to virtually any size or configuration and provide functionality for LCS audio show control, Constellation, and more. Packed with quad-core and FPGA technologies, as well as AVB networking capabilities, D-Mitri is the future of digital audio systems from Meyer Sound.

thinking sound



Dmitri Meyer  
Son of Perrin Meyer  
John & Helen Meyer's Grandson

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

Meyer Sound: Australia toll free at 1 800 4 MEYER (AU) or 1800 3 MEYER (NZ); or at P.O. Box 595, Albion Qld 4010; 4 Gordon St., Newstead Qld 4006  
ph: +61 7 3252 4493 fax: +61 7 3252 3300 [www.meyersound.com.au](http://www.meyersound.com.au) [sales@meyersound.com.au](mailto:sales@meyersound.com.au)

## WELCOME MAIZELS

CX welcomes John Maizels, SMPTE Director of International Sections and Chair of Media Industry Technologist Certification Ltd, onboard as senior broadcast advisor. John is here to help us shape our coverage at a time when broadcast and live production is converging exponentially.

Our reportage of broadcast (we need a new name for this) is organic and natural, since many shows are now shot to video and the technical crews become more aware of each other's needs.

We're delighted we can grow our coverage, and hopefully add some pages in the future – without spinning off a new magazine (and without asking advertisers to pay to advertise in two places for one audience).

## AES IMPLODES

Our story on the accusations of financial irregularity within the Audio Engineering Society (New York) and the departure of CEO Roger Furness invites an inside view on the management of AES – a vital body doing important work.

The Australian AES ran several successful conventions in the early 1990's. When I launched the ENTECH trade show in '94, there was an immediate rift that I couldn't repair, and that first ENTECH didn't feature many AES exhibitor audio firms. Some supporters mediated and around 1997 I got a hasty phone call from AES International Vice President Laurel Cash-Jones who had flown to Sydney to sort out their future. She wanted to meet me the very next morning (Saturday) at the Hilton for breakfast.

Putting aside other things I duly arrived at 0800 and called from reception. Laurel was on the phone. Forty minutes later, I got through, and she appeared in the

# EDITORIAL

coffee shop looking nervous. She blurted out that she had been on the phone to Roger Furness and he had directed her not to meet with me. I commiserated, we had coffee, she left looking embarrassed.

A little later I was at a press reception at an AES convention in Amsterdam when Roger Furness spotted me and took careful aim with a dressing down in front of everyone in the room. I was unaffected by his bluster, and reasoned that this was an organisation with whom there would be no reason.

AES held their final convention in Australia with poor attendance and participation, and the exhibitors drifted into ENTECH. Subsequent conciliatory attempts to arrange seminars or whitepaper sessions at ENTECH (at no cost to AES) went nowhere. Most recently the new owners of ENTECH tried again and were mystified how a body like AES can score own goals instead of building membership for its important core business of education and standards.

The rift within its ranks lays bare the answer. Roger Furness.

## STAGE COLLAPSES

For years many production managers have worried about the legal and political backlash that would follow a rigging or stage failure in Australia. With three horrific collapses overseas this season, we are really living on a prayer down under. When (God forbid) we have an accident, our industry will be crippled by the furore as every two bit shire council bans outdoor events and cancels their own. State and Federal politicians will race to the bottom and enact laws that will see half our industry on the dole within a month.

Please go to [www.cx-tv.com](http://www.cx-tv.com) and watch our special report on How Stages Collapse.

- Julius



## PUBLISHERS PANEL

CX Magazine is published in Australia by Juliusmedia Group Pty Ltd.

ACN 134170460

Mail: Locked Bag 30 Epping  
NSW 1710 Australia

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

Email: [juliusmedia@me.com](mailto:juliusmedia@me.com)

Phone: +61 2 9638-5955

Publisher: Julius Grafton

Business manager: Steve James

Technical editor: Jimmy Den Ouden

Broadcast advisor: John Maizels

Video advisor: Les Bishop

Church TV: Brandon Rhoda

Senior feature writer: Brian Coleman

Codger at large: Duncan Fry

Photo journalist: Bob King

CX-K9 unit: Lucy and Billy

Layout design: NEOWerk  
Nadia Hidalgo / Karla Espinosa

Printer: Garry O'Brien,  
Focus Press, Sydney

Distribution: Fairfax

CX-TV hosts: Meg Mackintosh  
and Sophie Pearson

CX-TV camera: Dribbles

CX-TV platform: Vzaar

CX-TV channel: LiveStream

CX-TV is at [www.cx-tv.com](http://www.cx-tv.com)

Coffee: Rob Forsyth

Happy hour: Willoughby Hotel

Accountants:

Kieren Martin, Watkins Coffey Martin

Lawyers: McGlynn and Partners

## COPYRIGHT AND LEGAL NOTICES

### COPYRIGHT

CX Magazine is Copyright Juliusmedia Group Pty Ltd. All contents protected by international copyright law. All copyright breaches vigorously prosecuted in any jurisdiction. Images, concepts, writing and content cannot be reproduced or transmitted in any medium whatever without the express written consent of the publisher.

### EXEMPTIONS:

Articles, news or features in CX may be photocopied and distributed for educational use at accredited educational institutions without further consent required, provided such use is expressly for class instruction on a related topic, and where such use clearly identifies CX Magazine as the source. This exemption does not apply to electronic reproduction.

Articles from the News section of CX may be referenced under 'Fair Use' provisions in other news media, provided CX Magazine is clearly referenced as the source and any quotes are clearly attributed.

Feature articles or Gearbox reviews generally may be reproduced by stakeholders referenced within the story at no cost, provided specific written consent is sought prior to use.

### LEGAL DISCLAIMERS

All material in CX Magazine is carefully edited and vetted before publication. In the event anything herein may cause confusion or may contain inaccuracies, please contact the publisher immediately. Where an inaccuracy or confusion is found to exist, we undertake to remedy any such instance as soon as possible.

Do not rely on material contained within CX Magazine or broadcast on any CX media if making material decisions relating to safety. Always seek professional advice before implementing, or changing any safety system or procedure. While all care is taken in production of CX media and material, the occasional mistake may arise. We apologize in advance should this happen.

### SUBSCRIPTIONS

A subscriber may cancel a subscription at any time, and is entitled to a refund representing un-delivered future editions. Any such cancellation must be made in writing or email. Please allow 28 days for the refund.

The publisher will replace any missing or damaged copy at no cost, but is not responsible for editions more than three months after publication date.

# QSC™

# No. 1 SOUND REINFORCEMENT BRAND IN THE USA\*

---

## Top-selling Loudspeaker Line: K Series



---

## Top-selling Power Amplifier Line: GX Series



Visit your favorite QSC retailer to learn more.

**[www.qscaudio.com](http://www.qscaudio.com)**

In Australia [www.tag.com.au](http://www.tag.com.au)

(02)9519 0900 | [info@tag.com.au](mailto:info@tag.com.au)

\*Among all brands in retail  
Source: MI SalesTrak 2011

# NEWS



## α INDUSTRY NEWS

### Many die in stage collapses

#### Wake up call for live production industry

**T**hree stages collapsed within the last month, the peak Summer production season in the northern hemisphere. Now Australia and the region embark on a record number of outdoor

events without clear guidelines for use of outdoor stages.

"There has to be a defined emergency plan", says Roderick van Gelder from Stage Safety Pty Ltd. "Everyone has to be on the same page - tech, security - everyone. So when some-

thing happens there is no ambiguity". The Indiana collapse (pictured) has galvanized the industry. Six people died and over 40 were seriously injured when a rapid weather change hit the area. But organizers are in trouble, because across town 7,000

**LIKE WAR OF THE WORLDS**  
But not fiction. This was a James Thomas stage. (Pic: Getty)



>> More

# The Best Service The Best Quality

And now ...

# The Best Price!

# Introducing....

# *i-line*



**PROLYTE  
GROUP**



**PROLYTE  
STRUCTURES**



**LITE  
STRUCTURES**



**STAGE  
DEX**



**PRO  
LYFT**

## World Class Products - World Class Pricing

Prolyte Group has just launched a new sales initiative in the shape of aggressive, market transparent pricing. The i-line is a complete range of industry standard products, instantly available at unbelievable low prices, offering complete solutions for the end user. i-line products are available through a network of i-line partners.

### **i-price - A clear philosophy**

Prolyte Group has a clear message to the market: all trade users now have access to the same products and price level, offering world class products at very competitive price levels.

### **Prolyte's i-line range includes the following:**

*Standard range of X30, H30 and H40 trusses*

X30V-L300 3m 290mm Box truss - \$527 RRP (ex GST)

X30D-L300 3m 290mm Tri Truss - \$396 RRP (ex GST)

*StageDex decks*

SM-D-T-200100 2m x 1m Topline Dex - \$735 RRP (ex GST)

SM-DL-B-200100 2m x 1m Basicline Dex - \$531 RRP (ex GST)

*MPT Towers - 1000kg Capacity 7.5m Max Height*

Built to order - From \$3971 RRP (ex GST)

Distributed by:



**SPECIALISED STAGE  
ENGINEERING Pty Ltd**  
Ph: 1300 793 712

Web: [www.stageengineering.com](http://www.stageengineering.com)  
Email: [info@stageengineering.com](mailto:info@stageengineering.com)

people were watching the Indianapolis Symphony, but the orchestra management called a halt when the same storm cell was detected.

"Our policy says evacuations should be ordered if a storm with lightning is 10-15 miles away" ISO Vice-President and General Manager Tom Ramsey told TV news.

"The announcer went up and said the storm was approaching, it had lightning in it, and there was plenty of time to get to the cars. We stopped the concert and asked people to move to their cars". The orchestra has made the same call "many times" since establishing the policy thirty years ago.

In Belgium there was no warning as the Belgium Pukkelpop festival was hit by a freak storm that collapsed a tent and knocked over mature trees. Four people died, and many thousands panicked. A video wall was seen on video footage collapsing onto punters amid catastrophic rainfall.

In Australia the focus is on flimsy roof support systems like the Thomas Engineering stage that failed in Indiana. Originally conceived for indoor use, firms like Thomas started to offer the systems for outdoor use, with added roof tarps and guy wires. It is precisely that system that went over so quickly in Indiana, with line arrays and a lighting rig containing four doomed spot operators all smashing down onto the crowd in seconds.

"We had 4 spot ops up in the rigging when it collapsed. Nate Byrd and Steve Stover were on the front rigging spots. Kyle Covert has a broken leg and Enoch Vinegar is supposedly just banged up", said Kyle Russelburg a lighting tech on the show. Nate Byrd died in the accident.

The photo captures the moment – the six vertical 20" truss towers cannot hold the roof down as a freak wind hits. Guy wires, presumably used, can't be seen. The two line arrays produce a pendulum effect, the heavy lighting trusses contribute to pull the structure down.

But the substantive answers around this collapse are not going to arrive anytime soon, since in the USA accidents are not openly discussed due to the conga line of legal actions that follow. Cause of the Justin Timberlake rig collapse a decade ago in Atlantic City is still unknown. 3 crew were injured there but had that rig come down during the show it would have remade history.

## Sennheiser faces factory fakes

### With copy Shure flooding the parallel import market, new problems emerge



exposed a growing trade in counterfeit Shure microphones and wireless products last issue. Now we have purchased a fake Sennheiser Evolution Wireless G3 system with SKM 100 hand held microphone (pictured).

Shure fakes are starting to turn up not only on eBay, but also through grey imports, where legitimate importers buy from a third party believing the goods to be genuine, but end up with hard to detect copy product.

The fake goods look like Shure, but do not function well, if at all.

The Evolution Wireless set acquired by CX was

evaluated by Australian Sennheiser agents Syntec International, who confirmed that it was indeed a counterfeit, not made by Sennheiser in Germany and was in fact subject to very poor performance in frequency response and RF.

CX has subsequently destroyed the system.



## Audio Engineering Society in turmoil

### CEO Roger Furness to stand down

**T**he A.E.S. is the pre-eminent audio education and standards society worldwide and its work is critically important to serious audio practitioners. So it came as a shock for many to learn of accusations about mismanagement of AES trade show funds, and the subsequent standing down of CEO Roger Furness.

AES LA Section Treasurer Richard Wollrich published an open letter in which he alleged misuse of as much as one million dollars, along with substantial breaches of auditing standards. Some of his accusations are highly defamatory and centre around the abrupt departure of 'a financial controller' in March 2011.

But rather than racing to court to raise a writ of defamation, the AES at first stonewalled and then released conflicting statements of clarification. Roger Furness, chief executive for almost twenty years, announced he was standing down later this year.

"Although I am accused of all kinds of financial impropriety, I can categorically state that there has been none", Furness said in a statement. "I will acknowledge having sometimes worked 'in spite of the Bylaws' which were written sixty years ago for a very different time when there were no international activities. My error was in not having fought harder to bring the Bylaws into the modern age", he said.

\* See Editorial.

“  
Incorporating  
advanced designs  
techniques  
and transducer  
technologies,  
KF740 brings  
unprecedented  
performance in a  
compact package  
to line array  
systems.

”

  
**Kenton G. Forsythe**  
Co-Founder and  
VP of Strategic Product  
Development



# KF740

An Incredible Work of Art and Science.



Production Audio Services Pty Ltd  
P. (03) 9264 8000  
info@productionaudio.com.au  
www.productionaudio.com.au



Production Audio Services (New Zealand)  
P. +64 (0) 9272 8041  
sales@productionaudio.co.nz  
www.productionaudio.co.nz

## Happy giants

### Audio-Technica announce category partnership with the Sydney Kings

**A**udio-Technica have signed a category exclusive partnership with the Sydney Kings basketball team for the 2011-2012 season. The partnership will see Audio-Technica become the 'official headphones of the Sydney Kings', and will include an array of activity both on and off the court to promote their latest range of precision technology headphones alongside Sydney Kings players.

While the financial terms of the deal remain confidential, this partnership will see all Sydney Kings players become national ambassadors for Audio-Technica, as they exclusively use their latest products to relax with music at home and while training at the gym, as well as throughout Australia and New Zealand as they travel

to games.

Audio-Technica will also play an important role at all Sydney Kings home games, as their DJs help create the right mood in the celebrity and VIP lounge before and after the game, as well as at key fan events throughout the season.

Kings fans will also benefit from this partnership, with Audio-Technica products to be provided for game night giveaways, media promotions and community events as the company looks to the substantial basketball community in Australia to further grow their business.

"Our agreement with Audio-Technica is a natural fit with the Sydney Kings and we welcome them as our latest corporate partner," said Sydney Kings General Manager, David Wolf.

## SSE introduces i-line

**S**pecialised Stage Engineering have become a Prolyte i-line partner, stocking their European range of X30, H30 and H40 trusses.

In addition the StageDex decks and MPT towers have become available direct from SSE.

SSE is a company that services the entertainment industry with sales, installation and maintenance of stage rigging equipment, including Prolyft chain motors and Prolyte Truss. They also offer safety inspections, chain motor testing and certification, installation management, consulting, rigging and safety seminars/training sessions and Workplace Health and Safety [WHSO] Compliance Audits.

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

## EntertainmentAssist is here to help

### Too many showbiz people fall over

**O**ver recent years there has been an increasing need within the entertainment industry to stage fundraising events for performing artists such as Marc Hunter (Dragon), Lobby Lloyd (Coloured Balls), Ted Mulry (Ted Mulry Gang), Max Merritt (Max Merritt & The Meteors) and roadcrew Norm Sweeney (Billy Thorpe and the Aztecs).

There has also been an increase in the incidence of self-harm and suicide as a means of escape. There are many tragic examples of this.

Entertainment Assist was established as a charitable organisation committed to providing direct benevolent relief by



Larry Ponting, Chair

way of support and services aimed at alleviating the poverty, sickness, suffering, distress, misfortune, disability and helplessness of musicians, entertainers and backstage personnel in Australia.

The organisation will host a major fundraiser at the Melbourne Sofitel on Friday October 28. CX encourages readers to log on and support this worthy cause.

> Go to [www.entertainmentassist.org.au](http://www.entertainmentassist.org.au)

# THE SKY IS THE LIMIT

## SHARPY

WINNER OF THE  
**plasa2010**  
AWARDS OF INNOVATION

**LDI**  
2010

HONORABLE MENTION  
as Best Debuting Lighting Product



### Miniature but massive

Clay Paky presents the award-winning Sharpy the light that stunned the PLASA judges who said: "We never thought we'd see a 190W light we could use in Wembley Arena!"

Why not judge for yourself? Search for 'Clay Paky Sharpy' at **YouTube** to watch the videos or phone us to arrange a demo.

[www.claypaky.it](http://www.claypaky.it)



For all support and enquiries  
contact our Australian partner on C404 898 998

# Chris Wilson

**C**hris died on 4th August 2011 following a valiant battle with Motor Neurone Disease. Chris worked in the Film and TV industry for over 15 years as a sales rep. for Gillespies Cranes and Skyreach Cranes.

During this time he worked alongside the industries' grips, gaffers, riggers, sfx, stunt and art department crew on many films including Babe, The Matrix Trilogy, Bootmen, Narnia: Voyage of the Dawn Treader, Superman Returns, Stealth, Moulin Rouge and Australia.

With his logistical prowess and his ability to problem solve, Chris transformed many of our working practices in the film industry by introducing cranes, booms and scissors. This made our general work practices safer and more cost effective.

Known for his warmth, his grin, and his quick wit, Chris will be sadly missed by his friends in the film industry.



CHRIS  
& C.K.

## Paul Lockyer, John Bean and Gary Ticehurst

**A**BC Journalist Paul Lockyer, cameraman John Bean and experienced film pilot Gary Ticehurst died when a helicopter crashed near Lake Eyre in the South Australian outback on August 18.

Weather conditions were fine and clear at the time and the helicopter, which crashed shortly after 7pm (CST), was equipped for night flying.

The investigation has recovered all the major components of the helicopter from the wreckage trail some 60 metres long.

Investigators will use both the helicopter's engines, components from the flight control system and the GPS unit to determine the cause.

## Riedel show MediorNet Compact E at IBC

**R**iedel Communications have rolled out the MediorNet Compact, the first 50 G multimedia stagebox with integrated WDM. This is the entry product into the Riedel MediorNet world of integrated media signal distribution and processing.

It provides the flexibility of a true real-time media network, including integrated signal processing, at the cost of simple multiplexing point-to-point products. With a network bandwidth of 50 Gbit/s, MediorNet Compact provides enough capacity for bi-directional transport of 12 HD-SDI signals, dozens of MADI streams or Gbit-Ethernet signals and hundreds of audio channels or intercom ports – ideal

for streamlining the infrastructure of any mobile, studio or live event application.

>>>> [www.riedel.net](http://www.riedel.net) <<<<<<



# ...or how about a smarter case?

**Workstations ...it's the case that SAVES technicians money every day. think about it!**



perfect solution for Pro Audio/Visual & Broadcast TECHNICIANS



see all our workstations online



Design Your Own Tech WorkStation

**Design Your Own !! Custom Workstations:** go online & get a price within minutes. simply pick a size, add drawers, shelves, top lids, rear lids & other options & bingo...it'll be on your doorstep in 1-3 weeks hand cut by Blue Cat

- ✦ smart designs
- ✦ lower cost
- ✦ highest quality

we know you want to save some bucks on flightcases without compromising quality & get it "tomorrow". yep, thats our gig!



## Racks ...it's called choice. like, much choice!

HUGE range with 11 styles. The LOWEST COST ready made rack stock. And the HIGHEST QUALITY hand cut custom Racks available



eleven styles, all prices online

## real manufacturers?

we're REAL case manufacturers with the BEST Case-Makers & Designers in Australia



## PRO AUDIO-VISUAL & VIDEO-BROADCAST we know you're smart!

we're pretty high-tech just like you with some fancy CNC automated machinery, proprietary database-driven system, absolute nerds in our case design team that have DIRECT hands on case-making experience and some pretty smart cookies in our Sales team that can muster up a perfect solution & perhaps suggest some low cost/ready to ship alternatives. so we know our Pro AV/Broadcast customers are pretty smart and that's how we'll treat you.



4 styles lcd, led & plasma screen cases



all packing & utility case solutions!



video production & audio mixer popup racks

Video Cam Case \$349



molded lens cases & 5 ready made video cam cases to choose from!



6 small case styles



functional table racks



penn elcom latches & ABS panels

CNC Doghouse to YOUR design!

Blue Cat

best quality in Australia & all options/prices online



TRADE & RESALER TERMS AVAILABLE  
introduceyourself@cases.com.au

# Smarter Mobility

CASES.COM.AU

Cases Com Au  
tel - 1300 85 4620

1850+ CASES ONLINE  
**Cases**  
com.au



## Colin Brown for CED

Cutting Edge Digital announce the appointment of their new Business Development Manager, Colin Brown.

With previous stints honing his craft at The Post Lounge, Big Fish Design and NZ's Sauce, Brown's expertise extends to integration across mobile apps and digital TV products like IPTV.

Peter Laird, Cutting Edge Digital's Director, mirrors the excitement of the rapidly growing team. "He's a fantastic choice to drive growth for Cutting Edge Digital; just the right person to form the kind of strategic partnerships that will keep us at the forefront."

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

## iPhone 4 must-have accessory

New from Fostex is the AR-4i - a device which turns the iPhone4 into a handheld video camera with professional stereo sound recording. Everything's included in the box, like 2 x plug in condenser microphones, a hand-grip for easy shooting, and even 2 x AAA batteries, which will power roughly 8 hours of use.

The AR-4i has 3 mic inputs, facilitating vertical or horizontal use, which feed the high quality A/D. Monitor your work using the high spec D/A through the inbuilt headphone out. An extensive amount of control is available using the dedicated iPhone APP. The AR-4i even features standard threaded mounting points and a cold shoe to integrate with your existing video equipment.

The price is right, at \$199 retail.

[www.fostexinternational.com/docs/products/AR-4i.shtml](http://www.fostexinternational.com/docs/products/AR-4i.shtml)

## Loudness Partnership

Cobalt Digital and Linear Acoustic have partnered to deliver what they say is the world's first non-destructive transport stream loudness measurement and management solution. Demonstrations of the groundbreaking technology were conducted at IBC.

The technology will provide the answer to cost-effective, multichannel loudness management.

"The technology partnership between Linear Acoustic and Cobalt Digital is resulting in a true end-to-end solution for loudness measurement and control in the transport stream domain (MPEG over IP - MPEG over ASI). Uniquely, the patent-pending technologies enable control of audio loudness to be accomplished in a completely non-destructive and selectively reversible manner," explained Tim Carroll, founder of Linear Acoustic and Kevin Moore, Cobalt Digital's VP of engineering.

"Unlike any other system or technology available today, loudness is controlled both within and between programs and interstitials, and the original content is preserved."

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

## SLiDE debuts on Fox 8



The new 10 part drama series SLiDE was graded and onlined at Cutting Edge for broadcast network Fox 8. The rite-of-passage series follows five 17-year-olds forging their way into adulthood. It's a co-production between Hoodlum and Playmaker Media.

Hoodlum and Playmaker came to Cutting Edge to grade and online all ten episodes at Cutting Edge's Sydney home. SLiDE is a 'multiplatform' television show that incorporates other digital mediums to engage viewers, allowing them to interact with each of the main characters. First of its kind, SLiDE has taken the personality of each of the characters, and built a web component

around them and the show using twitter accounts, blogs and online games. Take a look at the SLiDE online world here: [www.slide.fox8.tv/site/index.php](http://www.slide.fox8.tv/site/index.php)

With each episode taking place over a 24 hour period the story takes viewers into the adventures and misadventures of the five characters as they see their favourite bands, sneak into night clubs, generally messing around and occasionally getting to school! The colour grade matches the vibrant lifestyle of each of the teenagers with a high contrast treatment where the colours jump out of the screen and pull you in to their lives.

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

Hype your media  
with full HD digital signage

  
SPINETIX



- > 1080p full HD
- > No configuration
- > Ultra compact & durable
- > Dynamic content
- > Interactive kiosks & video walls
- > No maintenance
- > Software included
- > 7w power consumption
- > 3G modem connectivity
- > Life time warranty

#### Overview

The HMP200™ Hyper Media Player is a Full HD, high-end digital signage device. Zero config technology and compact size allow for quick installation. Set-and-leave: No-PC based, no moving parts and no maintenance.

With the HMP200, SpinetiX® offers a simplified way to publish information, audio and dynamic content to your screen. This is done through the SpinetiX Fusion Software which runs inside the HMP200.

#### Small & Robust

The HMP200 is amazingly compact so you can easily put it behind a screen. In addition the HMP200 is robust and reliable. It even comes with a lifetime warranty.

#### Green & Great ROI

The power consumption of a HMP200 in full action is only 7 watt. It's not only better for the environment, it's

better for your bottom-line. Energy cost savings mean the HMP200 pays for itself in just three years when compared to PCs.

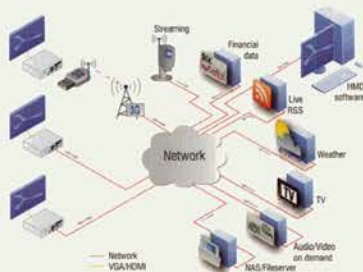
#### Amazing Features

SpinetiX HMP devices can be used to make video walls, of any size or shape. The same is true for interactive kiosks and touch screens. Everything is included. You won't believe how simple it is to create and manage your screens.

#### Open

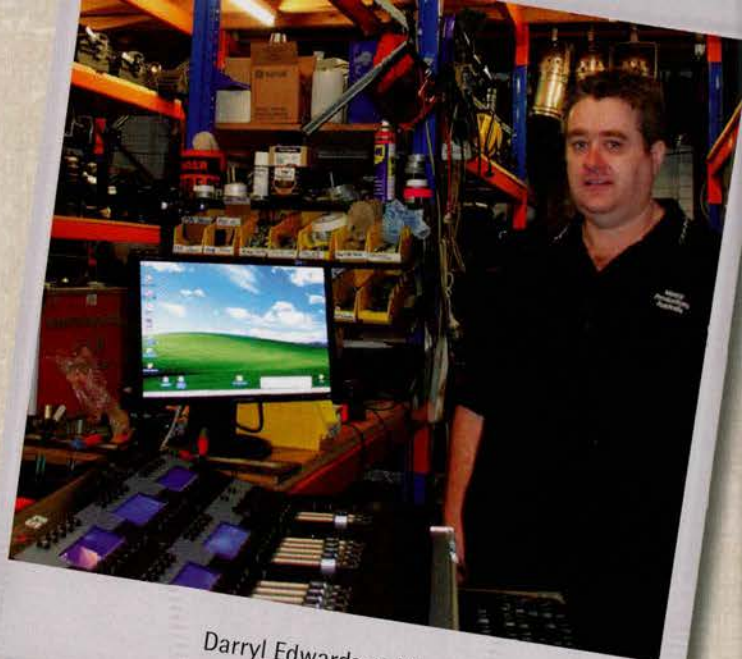
SpinetiX digital signage solutions are based on open formats and protocols. Integration is straightforward and very powerful. Users don't pay expensive recurring license fees for our software.

To download detailed product specifications for the HMP200 go to: [www.madisontech.com.au/spinetixhmp200](http://www.madisontech.com.au/spinetixhmp200)





Something for everyone at Sydney Events Showcase



Darryl Edwards at Matrix Productions, Perth

# Coast to Coast People

## CX WENT TO SYDNEY EVENTS

On Show and met up with some production folk. Plus we found more in Perth.



Jeremy Koch, Innovative Production Services, Sydney



Keith Farmer, Scott Hoy and Darryl Carter at AAA Productions, Perth



John Goldsmith, CEO of Kosmic Perth with Rick Brown from Venue Technical Services



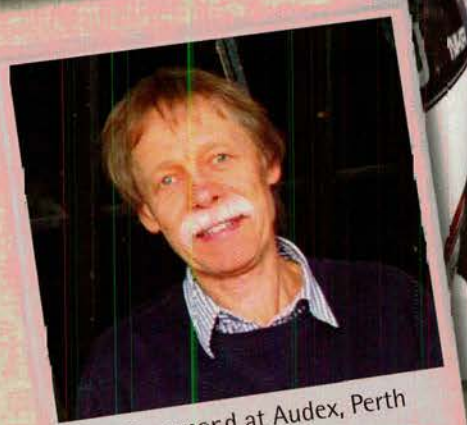
Paul Walton from Fusion Entertainment at Sydney Events Showcase



Meri Took, CEO of Staging Rentals at Sydney Event Showcase



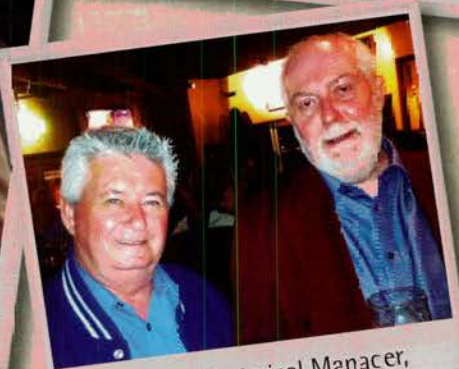
So this is an event showcase, is it?



Keith Crammord at Audex, Perth



Vinnie from Audex on the run



Peter Robins, Technical Manager, Perth Concert Hall with theatre consultant Graham Walne



# Norwest

### Australia's largest audio service provider

We work in partnership with our clients to make their projects come alive! Norwest Productions will work with you to deliver the best solutions to fit your budget. Visit us at [www.norwestproductions.com](http://www.norwestproductions.com)

### A tailored audio solution for events of any scale

• Concerts and Touring • Corporate functions, dinners and events • Festivals and outdoor public events • Broadcast solutions • Conferencing • Music Theatre • On-site recording • Awards nights

### Specialised Staff and Equipment

Our staff are world leaders in the industry both professionally and technically. We continually invest in the latest technology ensuring that you receive the best the market can supply. Our specialised services are available at all locations.

### Questions? Call us now

- Sydney +61 2 9737 8522
- Brisbane +61 7 3892 0900
- Melbourne +61 3 9646 9230
- Auckland +64 9 845 7801
- Wellington +64 4 472 777C
- Beijing +86 1350 025726

ON AIR

Church  
Production  
News

**W**hen your church decides to invest in their audio, video and lighting system it is a big deal, you want to get the most out of your money. It is important to know the process, and if you haven't been involved in an install before there are certain things you need to know and understand that may go against our human nature. After the decision to upgrade your systems you will have to choose an integrator, set a budget, do a design, set your timelines, and train on the new system.

### Integrator:

Most of the time, not always when dealing with new construction you work with a design company and they form a bid package that goes out to many integrators, but most of the time I recommend finding your integrator first. They will help you set a budget (you should have an idea of a budget though), figure out a design, set a timeline and so on.

When choosing an integrator there are some important things to look for. The first thing is to choose a company that is willing to work within your budget and is willing to listen to you rather than fulfill their own agendas. Companies that have an agenda spend more time convincing you to spend money than to come up with creative solutions, or to do things according to their preference rather than your preference. With that said, if you have too small of a budget or have little experience, you will run into this with any company you go through, do your homework before talking to any integrator.

Always ask for recommendations before agreeing to go with any company.

### Budget:

Usually you will have your budget

# Reality: Preparing for an install

By Brandon Rhoda



RYAN JCNES WITH LIVE-T112 AT BETHLEHEM BAPTIST CHURCH IN TAURANGA NZ

roughed in before you even select your integrator, but sometimes you need to wait until you get gear pricing and fresh ideas before you lock in your budget, in fact I would say always go in with a rough budget but be prepared for that to change once you

start to put down gear.

When dealing with the budget, there are usually some commonly missed things.

The first is, plan to have someone do the install for you. Yes, that means paying for labor. The reason I recommend this is that

unless you have experience installing AVL systems, then you don't know that there is a lot more to it than attaching some cables. Also, there are some building code requirements that integrators are aware of that you aren't.

There are lots of things that can come up at last minute, always leave a retainer for the 'just incase', you don't want a job to run out of money before it is finished, some things can only be figured out or discovered in the middle of an install. If you are re-using gear, I have seen many times when something was overlooked, broken, or just decides not to power up; again, don't leave yourself stranded.

## Design:

Don't ever start a project without a proper design. Before any piece of gear is purchased your design company or integrator should have full drawings completed or as completed as they can be. This includes line drawings, showing every cable run, path, conversion, and piece of gear in the system. This way you know exactly what you are getting. And remember: Plan way out! A month is NOT planning out!

## Training:

New gear requires training; leave room in the budget for lots and lots of training. This is a Must for all new installs, if you don't know what your gear can do and the capabilities of the system then you may as well not even do the install in the first place. If you make big jumps in technology, you may need hire specialists rather than relying on volunteers.

Be open to new ideas and processes. Most trainers have seen many facilities, and many integrators design things a certain way. Be open to changing the way you do things. This doesn't mean your overall look (although it can) it more means how you use your gear, what planning now needs to take place, and the thought process that has to be used.

If an up grade or change is over your head, do everyone a favor and move on, it will be the best thing for your ministry. And once you resign, volunteer.

Stay connected, it is a great way to humble yourself and learn.

**DON'T DO IT UNLESS:**  
You follow the rules! Too many installations fail and cost big when rules are broken



# DVA Digital Vertical Array



## DVA T4 Array

### Active 3-Way Line-Array

- 1 x 8" (RCF) Neodymium Woofer, 64mm Voice-Coil, Bass reflex configuration
- 1 x (RCF) 6.5" Mid-Drive, horn loaded with Phase-Plug
- 2 x 1" driver with constant directivity horn
- Digital Class-T 3-Way Amplifier, 420 Watt RMS
- Integrated DSP, 24-Bit/48KHz
- State of the Art 24 Bit AC converter
- Digital Power management
- 100°x15° covering angle (single speaker)
- SPL peak 128dB
- Frequency response 80-19,000 Hz
- Rigid PP housing with integrated Flyware
- weight 13.2Kg/31Lb
- Dimensions 580x240x327 incl. Flyware.

### DVA Subwoofers



**S-10**  
Active 18" Sub-Woofer



**S-20**  
Active 2 x 18"  
High Power Sub-Woofer

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

# hairspray

● THE MUSICAL ●

## HOW DO YOU TAKE

an already successful show and make it even better? How about throwing out the physical set? That's what happened here!

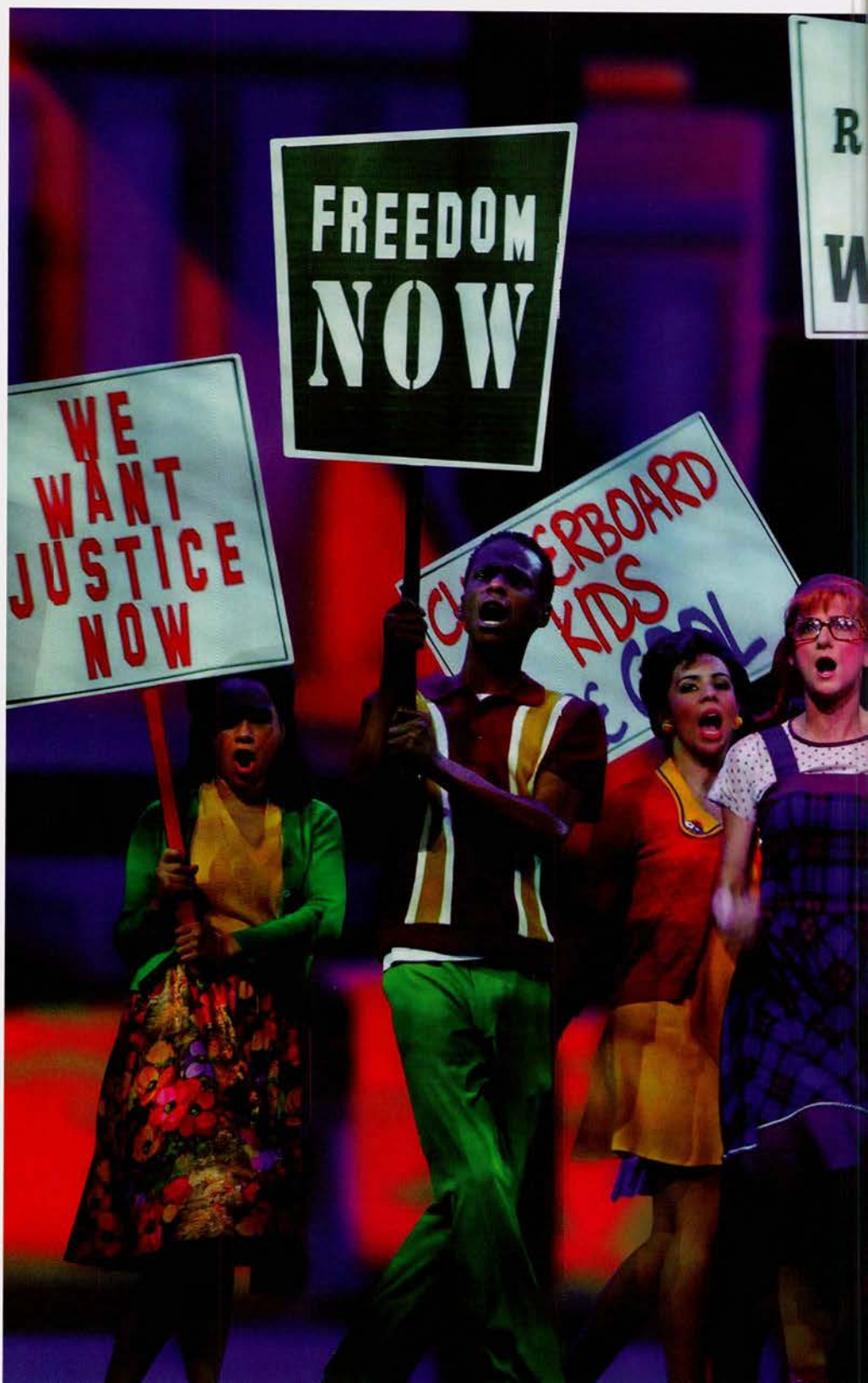
**H**airspray is an awesome show. It's a rare treat for a techie to find themselves so immersed in a show, they neither notice nor care about the technology behind it. Hairspray provided this experience.

Hairspray The Musical is based on the New Line Cinema film written by John Waters, and the stage production has enjoyed many successful Broadway seasons. Music is by Marc Shaiman who also joined forces with Scott Wittman on lyrics, with the book by Mark O'Donnell and Thomas Meehan. The Australian production is directed by David Atkins. It's big, bright, bold, and fun with a sensitive underlying message.

The show is based around Tracy Turnblad, a girl whose ambitions to make it onto the Corny Collins TV show are exceeded only by the size of her hairstyle. Much of the show is set to a TV studio background, but at other times the audience finds itself transported to a record store, a prison, and out onto the streets of Baltimore.

Ready, set, no?!

The Broadway production used physical set pieces. The Australian show doesn't. In



● By: Jimmy Den-Ouden ●  
Photos: Jeff Busby



a bold move the Australian production uses an array of large format LED screens with custom-built digital content to give context to each scene. Walking into The Lyric, you're greeted with an almost cartoon-esque depiction of a TV set showing old 60's videos. The contrast between the high resolution of the TV set itself and the low res images within it is really cool. Then the show starts, and this massive central screen glides magically upstage. Then it splits into three pieces. Which all move up and down independently of each other. The precision mechanics involved in achieving this are mind boggling, especially since none of it is ground rigged either. Adding visual support to the central screen are eight taller side screens which form the legs of the stage.

The video aspect of the show goes further than just recreating a "virtual set", it lends itself to creating emotion. Some numbers are staged to abstract backdrops, montages, and even outer space fantasy scenes. We spoke with Robbie Klaesi, Creative Director of Digital Content about the video elements of the show. Robbie has worked with David Atkins for some 6 years previously on projects such as the Ceremonies of the Sydney 2000 Olympic Games, as well as the Doha 2006 Asian Games. More recent projects include the Vancouver 2010 Olympic Opening and Closing Ceremonies as well as the 2010 Shanghai World Expo Opening Ceremony – this team represents significant "know-how".

David came up with the screen concept in conjunction with Eamon D'Arcy, Production Designer. The technical and creative realisation of the project was no mean feat, with Eamon's original designs including elements such as round screens. The final result is a happy balance between concept, and what the available technology allowed. A pre-existing work dynamic existed between this team, which really helped during the development of the show.

## Maintaining focus

The intention of the design was not to set a precedent to replace physical sets on every show ever after, this said, the LED screen model certainly affords new possibilities for set changes. There is no waiting for set pieces to fly in and out or wheel on and off – this can happen as fast as the video lets it. The transitions between scenes

## Factoids:

**Central Screen:** Vuepix P6 screen, total size 9.2m wide by 4.6m high, total weight around 1600kg plus cables and rigging frames. The screen breaks into three sections, with the two side sections being half the width of the centre section. The winches which operate these screens weigh 1.3 tonnes each.

**8x Side Screens:** Vuepix P10 screens, each 1.9m wide by 7.6m high and weighing 288kg plus cables and rigging frames. 4 LED legs are used on each side of stage.

**16 tonnes:** The video screens account for only part of the 16 tonnes of AV gear suspended in the fly tower.

**Hair:** Each of the 60 wigs used in the show is made of approximately 80m of human hair. 50 cans of hairspray each week keep them looking good. Another 30 cans of prop hairspray are used each week ON stage.



have been carefully thought out too – everything from dissolves to cartoon like slide effects where the whole backdrop seems to bounce into place. Even elements like the three blind rats could be realised in different ways – traditionally these were dragged across stage on a fishing line. The Aussie show sees them pop up in all sorts of interesting places (and suits!).

Robbie explained that the comic value of the show gave the creative team license to push the show to a more quirky level than traditional stage productions. It was important that the transitions could replicate the magical feel of traditional theatrical transitions. How one video element transitioned into the next was not the only factor that had to be considered. Equally important was how the screens moved, and how the content was positioned on them during this process. Incorporation of the screens into the story and set design was important to get right. It was really important to Robbie that the screens complemented the show rather than distracting the audiences' focus from it.

At times during the show there's more than one location depicted on stage at once. Stage right sees the cast of the Corny Collins TV show, beamed live via black and white TV into Tracy's living room at Stage Left. Several fixed cameras pick up the action on stage and this is then incorporated into screens on other parts of the stage. Given a limitless budget, Robbie would have used more cameras with operators but on long running shows these costs all add up. Instead, several locked off cameras with slightly loose focal point were used to capture these images. The bonus is that this technique matches well with video production from the era in which the show is staged, as does the WZZT logo which spins up whenever camera cuts are made. Originally this was done in live TV to cover a non-synchronous vision cut!

Other techniques used to maintain focus during these moments include adjusting the intensity of the vision on the screens in different areas. Robbie explained that it's kind of difficult to adjust screen intensity on the fly, so the brightness of each screen is instead controlled by the content which is fed to it. Different shades of blue overlay were used to adjust this. Content is delivered by an Only View playback system – a multi-timeline operated video server. If part of the system fails, it can be bypassed and a backup switched into place. About 80% of the video and many of the lighting cues are activated by time code, which allows lighting and video to marry together. For instance in one scene a beam from an overhead special narrows in and we see the video image of the beam below narrow at the same time. But not everything is automatic. The cast actually interact with the screens – be it turning off a TV or light switch, these cues are manually triggered by the operators. The nicest point about this fluid arrangement is that it allows the show to breathe – audience reactions can run on without the performers being bound by a time code.

The video aspect goes further than creating a 'virtual set'. It lends itself to creating emotion

# AKG DMS 700

The new DMS 700 is a revolutionary digital wireless solution designed for the future:

The First Professional  
Digital Wireless System



- Up to 150MHz tuning range
- 256 bit RC4 signal encryption for secure audio transmission
- 2-channel digital true-diversity receiver
- No Compaq (used in analogue systems): higher sound quality
- On-board DSP per channel (Compressor, EQ, Limiter)
- Quick setup via infrared data link to the transmitter
- Graphical spectrum analyser helps find clear channels
- Remote monitoring and control via PC



audio products  
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)

## Integration

One of the underlying messages of the *Hairspray* story is about racial integration. But the storyline isn't the only place you'll find integration. *Hairspray* is a brilliant example of human performers and musicians integrating perfectly with technology. As an actor reaches behind a screen to pull an item out of the video set, their arm appears on screen. The multiple lifts on the stage are well used during the musical numbers, and always seem to be at the right height for performers to step onto. Musical transients are timed perfectly to video footage and lighting state transitions. Screens move up and downstage naturally in relation to the people. It's nothing short of impressive, especially given there are around 1000 lighting, automation and audio visual cues in the show. The actors all know exactly where they need to be and when.

Robbie was quick to point out to us how great the entire cast has been throughout the run. He reckons they're brilliant, and from my observations of the performance I'd be inclined to agree. The leads are fantastic and carry their roles perfectly. They are supported by a great ensemble, and this combined effort makes for an incredibly tight, enthusiastic and believable show. Some amazing vocal performances feature, and it was refreshing to hear an audio mix which was sensitive, sounded phenomenally good, and wasn't sitting on 110dB the whole time. Hello dynamics! The noiseboys of live music production could stand to learn a lot from this show.

The PA design for this show is interesting. It took me until interval to notice, but there are lots of L'Acoustics badges all round the place. Ground stacked and flown LR arrays manage orchestra reinforcement, and vocals seem to predominantly route to the 12 cab centre array. There are some serious subs which get an occasional work out, and it sounded to me like a couple of effect speakers were placed on-stage too. Truthfully I didn't notice a lot about the PA, and really that's about the best thing you can say of a system. When it's transparent and nobody notices it, it's right.

Lighting design is right for the show too. From dark moments with just a couple of performers on stage, through to the huge bright finale with the entire cast there is contrast and sensitivity throughout. The design includes 90 moving lights and 300 metres of flexi neon. The edges of the stage and proscenium change colour during the show, and this effect is used to frame the stage almost like it's in a massive TV set.

## Big screens, big content

Talking of massive TV sets, the main central screen is a Vuepix 6mm dot pitch unit, with the legs being 10mm dot pitch models.

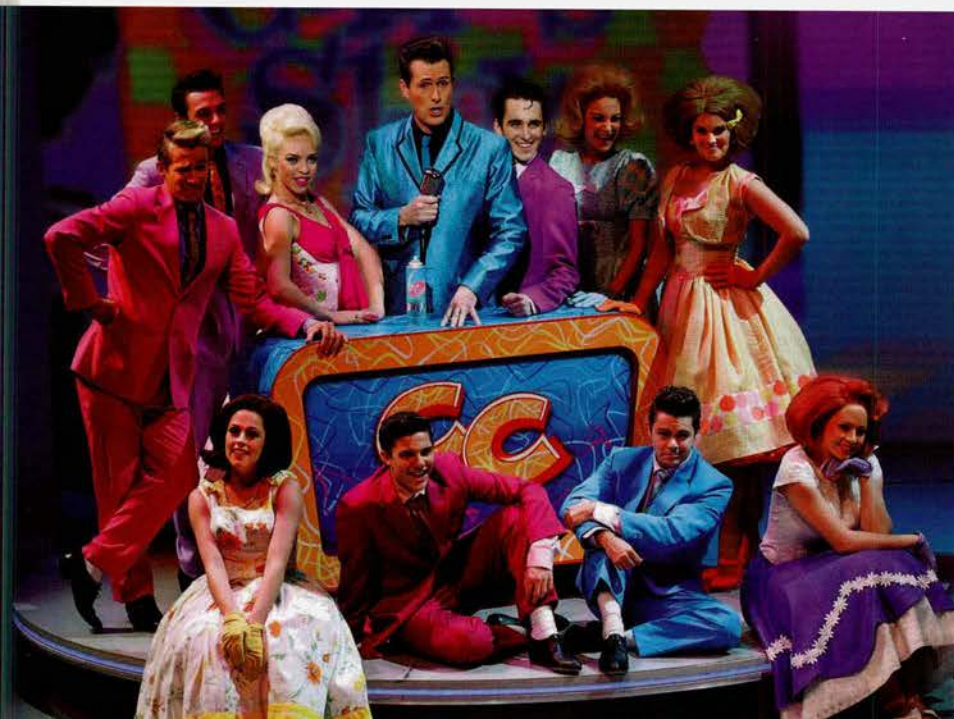


This gives the central screen extra clarity, to the point that it looks almost HD. The difference in pixel spacing was not without its own challenges. The taller leg screens actually have the same number of vertical pixels as the centre screen, so when content from the leg screens moves to the central screen it had to be resized to maintain the same physical image size. Furthermore, because not all actors are created the same, some parts of the content needed to be adjusted for the understudies. The on-screen elements with which humans interact are keyed in as alpha channels that may be repositioned within the playback system. All the content for each performer actually exists on the Only View timelines (there's more than one!), with just the relevant content being switched on for the show depending on who is playing each role on the day.

Getting the content looking right was one challenge, doing it in the available timeframe was entirely another. Content creation is not a quick process – it involves hours and hours of rendering time before you can see the result, and then when adjustments need to be made the render process must be repeated. With a relatively small team the 3 hours of non-stop content (about half a terabyte per server) came together in just a couple of months. Robbie had about 12 weeks in the theatre to get the content right, and for 6 of those he had cast on stage. On average, each of the 2874 content elements was re-worked 3.5 times to make sure they sat correctly within the performance. On occasion this required Robbie to let the content take a back seat. There's a minute long dissolve in one scene, so the background changes without you realising it's happening. You just become aware that it has changed. Similarly, 45 minutes into the show all the content drops to black and white for a number, as do the costumes. Visually it gives your eyes a break from the bold colour.

For Robbie, the most enjoyable part of this project has been working with a familiar creative team, to bring their own take to a show which was already awesome. The big cheesy grin on my face as I left the theatre after the show would tend to indicate that they got it absolutely right.

- CX thanks JP Bolton of JPPR and Robbie Klaesi for their assistance with this article.



# Credits

**Cast:**

Renee Armstrong – Amber Von Tussle  
 Trevor Ashley – Edna Turnblad  
 Tevin Campbell – Seaweed J Stubbs  
 Jack Chambers – Link Larkin  
 Nancy Denis – Inez  
 Jaz Flowers – Tracy Turnblad  
 Esther Hannaford – Penny Pingleton  
 Scott Irwin – Corny Collins  
 Marney McQueen – Velma Von Tussle  
 Cle Morgan – Motormouth  
 Maybelle Grant Piro – Wilbur Turnblad  
 Jacqui Rae – Female Authority Figure  
 Garry Scale – Male Authority Figure

**Ensemble:**

Briden-Starr Aspinall, Kirby Lee Burgess, Doug De Voot, Akina Edmonds, Samuel Gaskin, David Gaudi, Joel Benjamin Hewlett, Mitchell Hicks, Kay Hoyos, Heath Keating, Kirby Lunn, Loredo Malcolm, Hayley Martin, Scott McConnell, Karlee Misipeka, Tshire Mokou, Scott Morris, Kristina Adesuwa Okurzuwa,

Ashlea Pyke, Katherine Rodrigues, Elenoa Rokobaro, Mark Simpson, Michelle Smitheram, Michael Snell, Chloe Zuel

**Australian Creative Team:**

Directed and Conceived by David Atkins OAM  
 Choreographer: Jason Coleman  
 Production Designer: Eamon D'Arcy  
 Costume Designer: Janet Hine  
 Lighting Designer: Trudy Dalgleish  
 Sound Designer: Michael Waters  
 Musical Supervisor: Max Lambert  
 Musical Director: Stephen Amos  
 Creative Director Digital Content: Robbie Klaesi  
 Producer Digital Content: Tracey Taylor  
 Graphics Illustrator: Franz Kantor  
 Motion Graphics & Digital Effects: Digital Pulse  
 Casting: Lynne Ruthven  
 Resident Choreographer: Troy Phillips  
 Technical Direction by Richard Martin

Executive Producer: Chris Green

**Technical:**

Lighting Equipment: Production Resource Group  
 LED Screens: Production Resource Group  
 OnlyView LED Control: The Electric Canvas  
 Sound Equipment: JPJ Audio Automation System: Qmotion



Robbie Klaesi  
 Creative Director Digital Content



Innovation | not imitation



Everyone who opts for Neutrik products decides on superior quality, maximum functionality and highest reliability. Neutrik products cover a whole variety of application segments. No matter whether it is audio, video or lighting applications, data or power supply voltage connections. Neutrik is the world leading supplier of high-class products and innovative solutions.



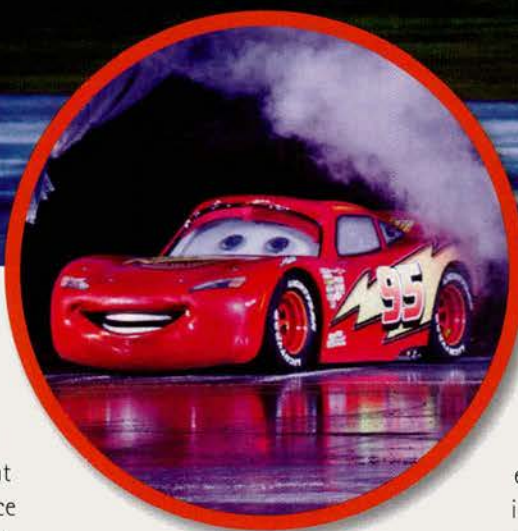
For details of your nearest Authorised Dealer, please call National Toll Free Customer Service 1800 25 1367  
 Or call Sydney (02) 9452 8600 • Melbourne (03) 9815 2710 • Brisbane (07) 3341 6487  
[www.ambertech.com.au](http://www.ambertech.com.au) • [professional@ambertech.com.au](mailto:professional@ambertech.com.au)

**NEUTRIK**



# KEEPING DISNEY ON ICE

Story and pictures  
by Brian Coleman



**H**oused inside fourteen shipping containers that transport Disney On Ice throughout some 52 countries around the world is the entire audio system including the Meyer Sound self-powered speakers, the lighting equipment, the costumes, staging and props, the Disney Pixar cars, the ice refurbishing vehicles--and the ice deck.

Feld Entertainment, which also owns the Ringling Bros. and Barnum & Bailey Circus (The Greatest Show on Earth), produces the show in association with The Walt Disney Company, and Feld is currently celebrating 30 years of touring with the Disney ice show.

## Management

Feld Company Manager Dave Browne was gracious in allowing CX a rare glimpse behind the scenes of the show's complex workings at Sydney's Acer Arena where cast and crew toiled seemingly at ease in today's zeitgeist of sophistication and safety.

Touring Stage Manager of 13 years Bryan Woiwod oversees 13 US based artisans that make up the carpenters, electricians,

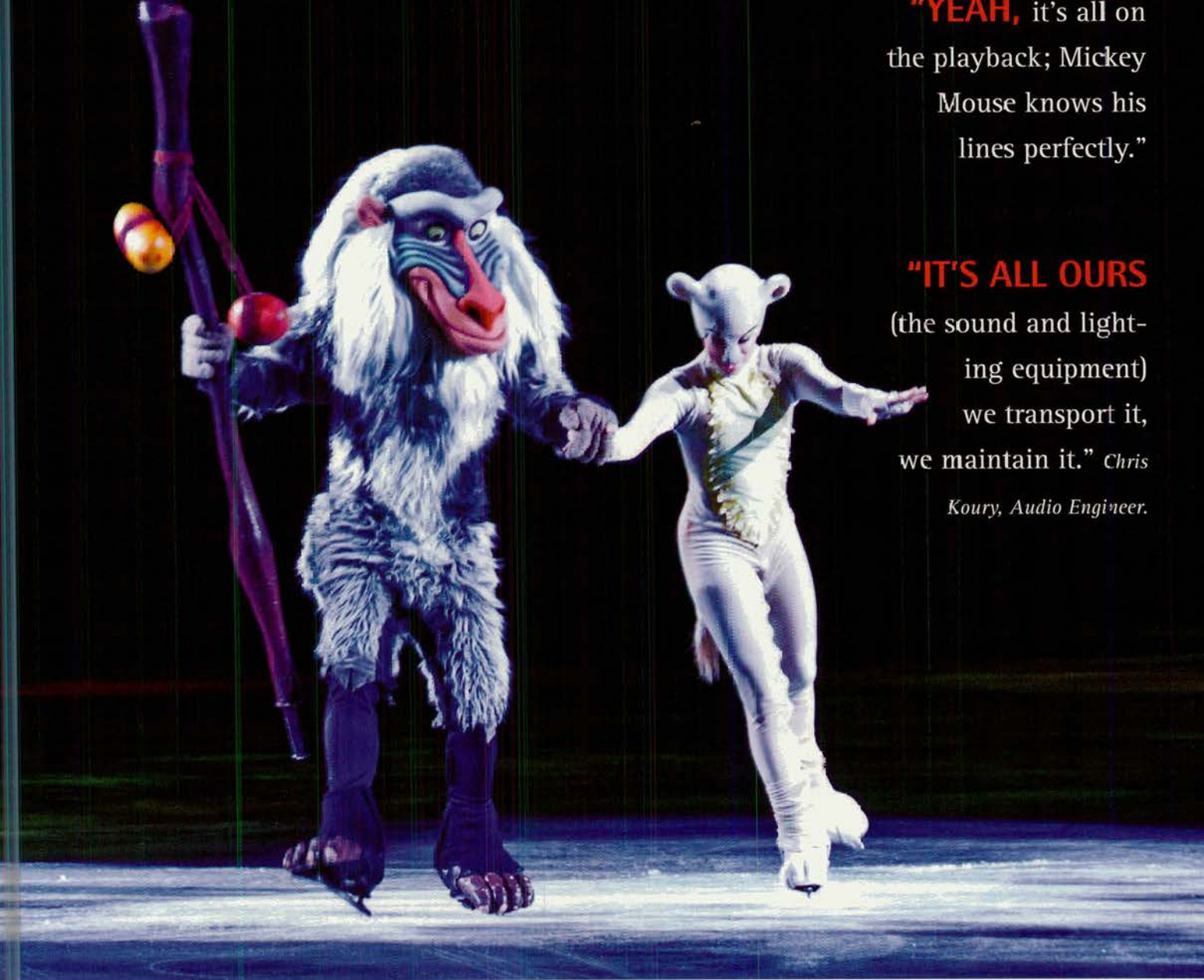
producers, managers, audio and lighting engineers, and specialists involved in staging and rigging, pyrotechnics, resetting the confetti canons, and tasks as menial as filling up the bubble machines.

Woiwod humbly explains, "Yeah, I just oversee those guys and make sure that the show goes in and out and gets from point A to point B, and I deal directly with the venues and all our accommodations," he says.

Of Acer Arena Woiwod says, "There's no two venues that are the same, so every week presents a new challenge. We've had a good run here in Australia. We hire 25 locals to help us load in and load out every week and then there are roughly 14 locals that help us run the show, like stage and spot operators.

"YEAH, it's all on the playback; Mickey Mouse knows his lines perfectly."

**"IT'S ALL OURS** (the sound and lighting equipment) we transport it, we maintain it." *Chris Koury, Audio Engineer.*



**FANE**  
50  
YEARS  
SOUND  
ENGINEERING

## The sound that started a revolution is now back in Australia

FANE was founded in 1958 at the birth of rock and roll. In the early 1960s with the advent of electronically amplified musical instruments FANE took the decision to specialise in high power loudspeaker manufacture and quickly became established as the largest UK manufacturer, supplying more than 75% of all speakers used in the UK at this time.

FANE professional audio components represent the ultimate in advanced design technology, superlative performance and outstanding durability. Every product is designed according to the most up-to-date developments in materials and built to a standard which ensures that its original performance excellence will be retained indefinitely. [www.fane-acoustics.com](http://www.fane-acoustics.com)

# FANE

**penn-elcom** Penn Fabrication Pty Ltd Phone: (03)9335-6455 Fax: (03)9335-6466 E-mail: [australia@penn-elcom.com](mailto:australia@penn-elcom.com)  
[www.penn-elcom.com](http://www.penn-elcom.com)

"We have our two sound guys that strictly do our show, but usually if we have any audio people that are on the call they just help us out lights-wise.

"We have 14 shipping containers, but that varies. In the States I believe it's ten 53-foot trailers. These containers here are 40-foot, but next year we go to Europe and we switch to 45-foot containers; so every country or region you have to adapt to whatever size it is. We just finished Japan, and Japan is only 30-foot trucks, but it's 20-plus trucks there. So every region that we play in the world varies," says Woiwod.

## Performance Crews

Assistant Carpenter Joshua Lalonde underlined some of the technicalities that make up the production.

"All of our cues and mostly what we do goes off sound cues in the soundtrack of the show, but there's a lot of communication that happens over the radios," said Lalonde.

"For example, if the Performance Director out in the audience sees one of the skaters take a tumble she'll get on the radio right away and advise the back-stage crew to ask that skater as soon as they get off the ice if they're ok. And the aerial sequences take a lot of teamwork. If it's Tinker Bell, she goes back stage where the Head Carpenter makes sure that he puts her in the harness correctly and safely. Then, one of the Assistant Electricians at stage-right on flight control is the person who actually does the flying. There are special headsets, apart from these radios (points to his radio), that only the Head Carpenter and the Flight Control Electrician have, and they're talking to each other saying, 'Alright it's safe to take her up...ok stop etcetera.' Then they do their sound cues, they open up the curtain for Tinker Bell to go out--and she's flying. Then when she lands it's another skater who unclips her from her harness. They've all been doing it for years, and if a new person, perhaps a new Tinker Bell understudy is being brought into the role they go through a lot of practice to make sure that it's done safely," says Lalonde.

## Lighting

Two Martin Maxxyz Compact lighting consoles drive the show.

"The Maxxyz' controls the movers and the grid plus the headers and the lights on the set. Everything except the spots. We have 512



Chris Koury,  
Sound  
Engineer

Dave Browne,  
Feld Company  
Manager



Tony  
Magro on  
Sound

Shane Saxon,  
Lighting  
Engineer



cues," says Shane Saxon, Lighting Operator.

Audio Engineer Chris Koury is from Morgantown, West Virginia and has been with Felc for five and a half years.

"None of the audio guys are on comm during the show. You learn your cues and you know them. Only the spots are on talkback," says Koury

"There are eight spotlights, all of which have operators during the show. These operators are all local labour each week. There we have a guy, one of the electricians, that will call the spotlights on comm," adds Koury.

## Audio

The show's audio is run off a Mackie 1604 console, and Pro Tools is used for playback.

The sound rig is a Meyer system, which is run through a Galileo Loudspeaker Management System. The Meyer Sound Sim 3 Audio Analyser is used to tune the system to each room.

"It's all ours," says Koury, "Everything is Feld Entertainment's. We transport it, we maintain it. We're one of the few companies that actually does that.

"What we have is perfect for what we're doing. The Mackie's an analogue desk but the Galileo does our EQs and our time delay and all that; and that's all digital format. We send the analogue signal out and it gets converted to digital via the Meyer and then split out to each of the various speaker systems.

"There's two of us and we alternate running the shows. So whoever's up there will

be both running the show and doing the real-time sound effects. Some of the effects are in the playback tracks, but most of them are action shots," says Koury.

The action shots are actually punched in by the audio operator in real time on a CME UF7 USB/MIDI keyboard. This is simply because the talent can't possibly sync events to sound effects on the playback alone. However, all the dialogue is on the playback.

"Yeah, it's all on the playback; Mickey Mouse knows his lines perfectly," says Koury.

"With the ice show, because it's such a big venue, and everybody's seated all around, obviously you want the imaging to come from the front, but depending on your seat--you know, you have five or six thousand seats--not every seat is going to be right on. It has to be a general sound for everybody," says Koury.

Koury points out that even though they want the sound to be of the very best quality they have to remember that they are playing predominantly to children.

"Obviously you don't set these shows up as a rock 'n' roll show. We're not here to blow people out of their seats, but you do want it clear and a good volume so you get pulled into the story. So if it's too quiet it's distant and you're not there. Then if it's too

loud...you know. When you're younger your ears are more susceptible to audio levels--the kids probably hear the show way better than we hear the show (laughs) and they don't even know that.

"Actually audio is the only department that doesn't get any local stage hands, but obviously the other departments have a little more on their plate than we do. Our job is for two people to get it set up, and we split the jobs and we have our routine so we can get it in and done quickly, and lend a hand where needed if anybody else is late. It's all adjustable routine. You've got to be on your routine but you've also got to know when something changes how to adjust your routine. Because if you don't then you get behind...it's very symbiotic. If we get behind, people are waiting on us. If somebody else gets behind, we're waiting on them. You've definitely got to work together," says Koury

Tony Magro who hails from Chicago, Il-

linois makes up the other half of the two-man audio team.

"It's just the two of us building the entire sound system. If we have a 3-show day we alternate," says Magro.


Koury adds, "We mix and also operate sound effects. We do both. And the person not mixing does some down-stage cues," he says.


## Showtime



Lights dim and Mickey and Minnie drive onto the ice to welcome the house. The narrative starts off very simple: the car breaks down in a burst of pyrotechnics, which signals Goofy's entrance with a bucket of make-believe water, which, of course he spills in a shower of glitter during one of his controlled tumbles. Then it's the Disney Pixar cars to the rescue headed by Mater the tow truck (Tow Mater--geddit?).

The cars employ studs embedded into the tyres for traction. These virtually destroy the pristine 'show cut', which the ice





# PROFILE THE FUTURE WITH LED TECHNOLOGY

With LEDko you reduce maintenance, installation costs, and power consumption by at least 70%, and you can print your own gobos on standard transparent sheets with traditional printers while completely eliminating costs related to lamps, dimmerpacks and scrollers.

Available versions: VariWhite 3000/7000 K, FullSpectrum, VariWhite 3200 K. Apart from a standard profile lens, a variable Fresnel, or a variable PC optics system is available for these units.

**FOR MORE INFORMATION, PLEASE CONTACT PRG SALES**

**coemar**  
LIGHT EMOTION

**REFLECTION  
LEDKO™**

**PRODUCTION RESOURCE GROUP AUSTRALIA**

**Melbourne**  
88 Nathan Road  
Dandenong South VIC 3175  
Phone +61 3 8710 2555

**Sydney**  
66 Euston Road  
Alexandria NSW 2015  
Phone +61 2 8568 4400

**Adelaide**  
15-16 Deacon Avenue  
Richmond SA 5033  
Phone +61 8 8159 3144

[www.prg.com](http://www.prg.com)  
Email [info.au@prg.com](mailto:info.au@prg.com)

# CX SUMMER ROADSHOW

The truck is **FULL**  
and coming to **YOU!**



## BRISBANE

**Monday Feb 20**  
12 midday - 7pm  
Brisbane  
Exhibition Centre

## SYDNEY

**Wed Feb 22**  
12 midday - 7pm  
SMC Convention  
Centre, CBD

## MELBOURNE

**Monday Feb 27**  
12 midday - 7pm  
Melbourne  
Exhibition Centre

## ADELAIDE

**Wed Feb 29**  
12 midday - 7pm  
Adelaide  
Exhibition Centre

## PERTH

**Tues March 6**  
12 midday - 7pm  
Hyatt Regency Con-  
vention Centre

Free Entry • Seminars • Win an iPad each city • Free drinks at 6pm



**BOSCH**  
Invented for life





Bryan Woiwod, Touring Stage Manager



Joshua Lamonde, Assistant Carpenter

resurfacing vehicle has just created--and there's the whole of the first half to follow without any resurfacing.

The Little Mermaid and The Lion King go through their paces, and Scar, the antagonist lion impacts the ice in a spectacular fall. The crews engage their radios, but Scar skates on unscathed. After the half-time break the ice is resurfaced and Tinker Bell virtually occupies the entire second half, delighting the children with her aerial manoeuvres courtesy of the flight control crew.

### Touring

"The show usually works 9 or 10 months out of the year, depending on what area of the world we're in. Obviously getting here (Australia) it takes a little while to ship things--and the cities are limited," says Koury.

Magro says, "This year we've been off more than we've been on the road, but after this little stint in Australia we're going to Europe for a good chunk of time--probably 10 months. And then a month off and then Africa after that, so we're going to be on the road for the better part of a year," he says.

"A lot of times in the States we're using buildings that have their own ice. But when you come internationally--like these

venues don't have it, or if they have it they might charge you more to use theirs than it costs to put ours together," says Koury who explains that even though Disney On Ice is mostly catering to audiences of five to seven thousand at a time there are some considerably smaller venues.

"You go to somewhere like Jakarta, and it's a small building; a little bit smaller than Newcastle," he says.

Magro says, "We've actually played bull-fighting rings in South America where we've had to put an ice floor on a humpy, dirt ground. Yeah, like there's no floor, it's literally dirt on the ground," he says.

It's places such as South America's outdoor venues where the ice department has to constantly monitor the temperature of the ice and change the flow of the glycol regularly to keep the ice even.

"You'd be surprised, wind is one of the biggest detriments to the ice. If the wind is blowing and the air handlers are blowing and it hits the ice it'll actually start creating puddles on the ice.

"It's good that we're doing this at a young age, you know, I've been doing this for five and a half years, and I've now been on every continent in the world apart from Antarctica--and we'd probably even have to take our own ice deck if we went there," says Koury.



## MediorNet Compact

Real-Time Network for Video, Audio, Data & Communications

**NEW OFFICE!**  
19/17-21 Bowler Street  
Alexandria NSW 2015  
+61 2 9639 5579



- Synchronized 50G real-time network for 3G/HD/SD-SDI video, audio, data & intercom at the price of multiplexing point-to-point fiber products
- Flexible signal routing incl. point-to-multipoint
- Integrated Frame Store Synchronizer, Embedder/De-Embedder, Test Pattern Generator, On-Screen Display & Timecode Insert on at every port
- Fully compatible with Artist, RockNet and other MediorNet systems

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

# Inside the outside broadcast world



**Pushing reality TV** to a live broadcast was never on the agenda when One80 Digital Post took its HD Outside Broadcast truck to Melbourne to record *The Block* for Channel 9. But the NBN Newcastle based facility revealed to CX that along with its live HD OB capability it has a number of solutions for delivering different media down different paths in a world of rapidly converging technologies.

By  
Brian Coleman



**O**ne80 shot The Block's auction segment on Saturday August 20 using seven Thomson 1080i broadcast cameras fitted with Fujinon lenses. The cameras recorded directly into seven Sony XDCAM disc recorders sitting in the OB truck. The auction was recorded in sections, and after each section the XDCAM discs were taken to a post production company in Melbourne where they put it together for airing on the following Sunday night.

One80 did the recce in Melbourne the previous week. They worked out camera spots, cable runs, audio requirements, lenses needed, and the amount of disc recorders needed to capture the event.



**Roadster HD18K 3-chip DLP®19,800 centre lumens (18.000 ANSI)**



*Enabling Innovative Professional Visualisation*

Contact VR Solutions to discuss our wide product range today:  
**P:** +61 07 3844 9514  
**E:** info@vrs.com.au



**www.vrs.com.au**

## Quality Stage Rigging.

- Chain Blocks
- Electric Chain Motors - GIS, Lodestar, Hitachi, Kito
- Wire & Polyester Slings
- Sisal, Manila, Synthetic Rope & Cords
- Fatchet Straps and Load Restraints
- Trolleys & Clamps
- Height Safety Equipment - Fetzl, Spanset
- Wire Rope Ladders



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

**Sydney (02) 9531 8033**  
 Melbourne Adelaide Perth  
 Email: sales@hesnsw.com.au [www.hesnsw.com.au](http://www.hesnsw.com.au)



Kelly Rickard  
in Audio  
Suite



Bill Emerson  
NBN  
Television



Tod Davies in  
Avid Edit  
Suite

Channel 9 provided a director who sat in the OB truck and made the cuts between the cameras, talked to the camera operators, and generally followed the action to make sure everything was captured intact.

The cameras recorded in ISO (isolation) -- every camera was recorded individually, plus there was the master switch of the event, which was done as live--and could have been delivered live via satellite if required--but was later put together in post.

"If something is missed, like a reaction shot or a cut is made live that is just a bit late it can be fixed in post by using the ISO discs," explained Laurence Schuberth, Head of Digital Media / Creative Integration at NBN Television.

## Niche markets

One80's General Manager Graeme Armstrong told CX that their operation is targeted more towards niche markets, and even though Nine Entertainment bought the facility along with NBN Television in 2007, One80 still operates as a separate business unit that works for a range of clients.

One80 beamed onto the HD scene in 2004, launching as Australia's first and only high definition OB van--and were still the only such unit for the following two years. And being equipped at the time with a wealth of Avid HD editing equipment they were well positioned in the market. And as early as November 2004 One80 was recording The Eagles Farewell 1 tour, live from Melbourne. They shot the master record with live switching and the ISOs, which were then given to The Eagles production team.

"You marry your vision, you do your edit from the vision, you do your mixing from the audio and you bring the two together and produce a glass master, and then the DVDs are produced off that glass master. We're there to record the event purely from a visual perspective, and then we have a separate audio facility that records every track individually. And then those drives are taken back to a mixing facility where they remix it all," said Armstrong.

"The Eagles brought in Elliot Scheiner (music mixer) from the States, said Schuberth," adding, "They recorded--I think it was 48 tracks--they had Pro Tools, they had DA-88s, they had every possible recording format you could think of. And because it was all time-code locked to everything we were doing in

the truck, they were able to take all that back to the States and mix the album how they wanted it to be," said Schuberth.

Armstrong said, "Since The Eagles Farewell 1 concert we've done The Black Eyed Peas, which was a fantastic concert...I stood way up the back, and the roof sheeting was lifting off the building. It was absolutely amazing. It was all shot in interlaced (1080i) and tweaked in the edit suite back in London to make it look progressive, which gives it a filmic look," he said.

## The Cure

One80 Post also project managed this year's recording of The Cure's May 31 and June 1 concerts at the Sydney Opera House for a London production company.

"The Cure had 80 hours of recording material, because we recorded it over two nights, which is not unusual...you can do it in the one run but preferably you do it over two nights. The artists have to wear the same clothes on both nights etcetera, but then you can reposition the cameras so you're getting different angles--and you're really getting

**"CONCERTS ARE  
A NICE niche market.  
And we're perfectly set up  
for that."**

*Graeme Armstrong, General Manager*

*One80*



more bang for your buck," said Armstrong.

"Concerts are a nice niche market. And we're perfectly set up for that. We've got the opportunity to cover a concert. We can record it, cut it all together, make a DVD out of it, and we can also webcast it. And now we can go to the next step where we're covering something live and we can take clips out of that live event and people can watch them on their iPads etcetera," said Armstrong.

## Emerging tech

Laurence Schuberth has had a long-held interest in how media companies could adapt to emerging technologies. Streaming seemed to fit, as One80 already had access to live feeds via their OB van, and the post production facilities in their Avid suites. And they are ideally placed under Nine Entertainment's umbrella whilst operating out of the NBN Television facility at Newcastle where the television industry is looking for more ways to offer value to clients.

Schuberth has developed a unit inside the business network that chases down integration opportunities for the traditional broadcaster. And it's one that offers new platform opportunities for One80 so they can take events and stream them live on the Internet whilst having tools like instant replay that are available to any number of platforms.

"We might be doing a sporting event, and there's something in particular that happens within a short space of time, and we can actually punch that to a server, and people at the game can watch that event on an iPad or similar," said Schuberth.



**Ef-fi-cien-cy n.**

1. The ratio of useful output to total input in any system.
2. The ratio of energy delivered by a machine to energy supplied for its operation.
3. The ratio of performance return based on financial investment.
4. Defining characteristic of Tannoy VQ Series.



TANNOY

Why use a sledgehammer to crack a nut?

With the addition of six new products (available in passive or powered VNET variants) the expanded VQ Series offers unrivalled performance in a compact, modular and versatile range of enclosures giving you the freedom to configure and build point-source systems for a wide variety of venue applications at any scale.

**It's time to simplify your toolbox.**

- Class leading directivity characteristics
- Extremely high sensitivity and efficiency
- Exceptional transient response
- Perfect time alignment and phase coherence

audio products Group

To learn more about Tannoy call 1300 13 44 00 or visit [www.audioproducts.com.au](http://www.audioproducts.com.au)

Schuberth takes a lot of advertisers and specifically creates events for them so those events can be promoted on the various Nine channels and then also posted on microsites and web portals. These can range from advertisements to small shows. The resulting effect is that it pushes consumers to sites that have been specifically developed, and on those sites information can be captured about the users, who can watch online videos, enter competitions or simply learn more about what their client of interest is doing. And the sites are linked to the client's main websites.

"We are still in the broadcast industry from a facilities perspective, like with the HD OB truck and the edit and audio suites and graphics capabilities. So within that broadcast industry we do all the on-lining for the GEM (Nine's third digital channel) promos. We also do the GEM play-out for the network. We do all of Australia out of this building; we version all the promos for that channel and we also make all the promos for a government channel called the Australia Network," said Armstrong.

"When we do something like Surf Fest where we roll out our traditional broadcast facilities and cover and record the event we also have the opportunity to stream it live onto the client's website. And this is what

**"YOU READ  
MAGAZINES or blogs  
and there's a whisper of  
something new, and within  
six months it's become  
standard...it goes that fast."**

*Laurence Schuberth,  
Head of Digital Media /  
Creative Integration at NBN Television.*

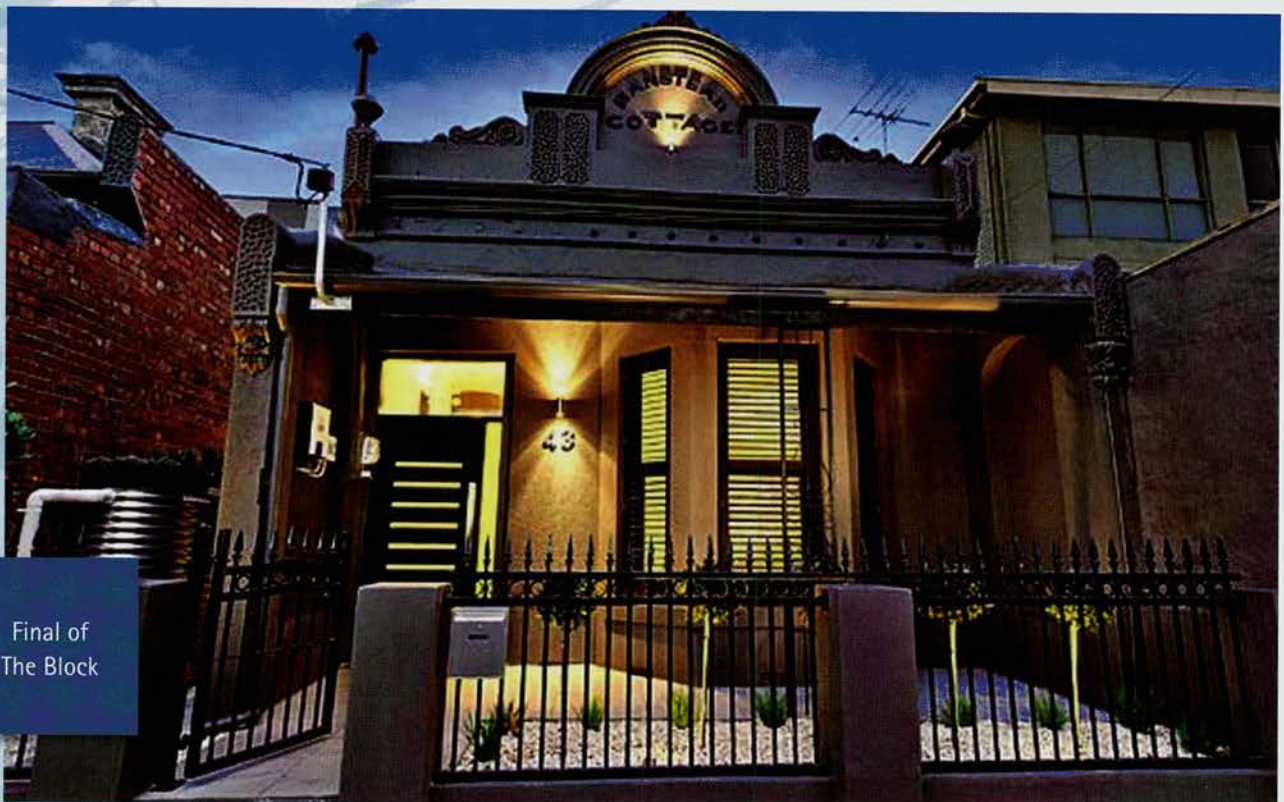


we did for Surf Fest, including producing a one-hour documentary for Australia and the world," said Armstrong.

"We used three big HD Fujinon 87:1 lenses to shoot Surf Fest, and then a camera down on the beach. We also had a couple of cameras floating around the precinct picking up shots. Sometimes we'd have a cameraman up to his knees in water just following the surfer as he's coming out of the water-- but we prefer not to do those (laughs). Water in cameras is never a good thing. Water on triacs, water on cables--never good. Just the general corrosion on your cameras; you've got to keep them up to spec.

"So we were both web streaming over the seven days of Surf Fest and recording it, and we were pushing out news feeds every day. And after the event we produced the doco," said Armstrong.

"The scenario is that the truck is there for seven days. So we stream it live for 7 days to one site that's specifically set up for Surf Fest," said Schuberth. "And then we supply the ASPs (active server pages). That's all done through Akami servers, so it's fantastic quality. And as well as being able to watch the action on the screen they also get real-time scoring. So you can see the judges' decisions as the waves are progressing. They get full commentary; they get the lot," he said.



Final of  
The Block

## It goes that fast!

"Last year the web streaming numbers built quite dramatically and they were looking at a few hundred thousand," said Armstrong. "Next year we're looking at introducing the iPad technology where we'll cover the event (Surf Fest 2012) live on Fuel TV, and the people at home can say, 'Oh that was a good wave, lets get the iPads out and see it from a different camera angle'", he said.

Schuberth sums up the pace of today's broadcast industry:

"I look at all those years ago (2004), where we're talking about delivering video to devices and video across the Internet and everyone was like, 'Geez Dude, really? You're talking about some massive files there!' And now it's in practice. You read magazines or blogs and there's a whisper of someone doing something new, and within six months it's become standard and everybody's doing it and you've got to keep up. It goes that fast," said Schuberth.

Graeme Armstrong



Laurence Schuberth



## 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



For more information contact

**Eventquip Pty Ltd**

COLIN WEST - SALES

Phone 0411 473 347

Fax 08 3981 7525

sales@eventquip.com.au

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

JuliusMedia Lifestyle Division  
presents:



# LIVE THE DREAM

Join the **CX Roadie Bootcamp**<sup>®</sup> and  
**Live The Dream**<sup>™</sup> for one weekend!  
This is **Augmented Reality**<sup>©</sup> at its best!

## Your package includes:

- Pickup at 5pm from your work in A Tarago
- Unlimited beer and cigarettes included
- Stagedoor access to The Gig. 1 x hamburger
- Loud rock and roll, hang backstage
- After gig bar until daylight. Bacon/onion burger
- Free Red Bull or No Doze, drive to factory
- Load 8 tonner with crew. 1 x hamburger + fries
- Setup lights and PA at Another Gig
- Soundcheck with The Band
- Mix the show (we show you how!)
- Packup The Gig after. 1 x Hotdog and thickshake
- Tatoon parlour voucher and bottle of vodka. Fistfight
- **Optional: Groupie experience**<sup>™</sup> (you choose gender!)

**One weekend! No sleep!**  
**Free T SHIRT included!**

Just **\$699\*** (cash) - HURRY!

Email [nosleep@cx.com](mailto:nosleep@cx.com)



\*Groupie experience \$30 extra



By Jimmy Den-Ouden

## ▶ ClearCom HME DX210 Wireless Comms

This is what you get when two comms manufacturers put their heads together to create a new wireless kit.



For video of this GEARBOX review, click here in the interactive CX-E version of the magazine. If reading print, please visit [juli.usmedia.com](http://juli.usmedia.com) to find this review.



**H**ME bought ClearCom in April 2010, and this has been an interesting marriage. HME has been doing wireless comms for some time, and ClearCom has always been strong on the DSP technology associated with comms systems. The DX210 reflects both these respective strengths combined into one system.

The DX210 is a wireless communication system which operates in the 2.4GHz band. It's supplied as a full turnkey kit which is designed to work straight out of the box, with very minimal setup required.

As a default, the system includes a base station with antennae, four wireless belt packs and 5 single sided headsets. There are additional headset options too – the first of these includes head-

sets with the TX/RX hardware integrated. Okay, so they look a bit like the headsets in the drive through at your local take away, but they're still functional enough. The BYO headset option includes just the base and packs, plus cables which adapt the DIN connector to a standardized 4 pin XLR. Appealing to users who have already invested in headsets of their own, this choice also reduces the price a bit.

The system runs on rechargeable batteries which are good for about 14 hours runtime. Included are 2 sets of batteries and a charger which indicates status of each battery and also has slots in which spares can be stowed. It's a neat system. Removing the batteries from the packs is a bit fiddly – they're kind of a tight fit but it's by no means impossible. At least you know they won't self-remove mid-show!

## Turn the key and go

The DX210 is a complete system. Pull it out of the box, register the packs with the base, and go. Registering the packs is very easy, just hold down a button while you turn it on then push the register button on the base. The belt packs generate spoken confirmations within the headset that the registration has been successful. They also tell you when you have reached minimum or maximum volume, and the firmware version is announced at power up.

There are 2 talk channels, and each pack can listen and speak on either channel. Channels can be locked out of on a pack by pack basis too, with listen only as an option too. You'll need to do a little bit of reading the manual to find out how to do this. Not because it's a difficult process – it's just the only thing which isn't instantly apparent by looking at the front panel.

The front panel does include very simple controls for interfacing the DX210 to other systems. As a stand-alone system the DX210 is very good, but what makes it better is its ability to interface to other things. Each talk channel can link independently to a 2 wire loop or 4 wire system. Add to this an auxiliary input which you can use to feed program into the system, and an auxiliary output as well. Belt packs talk to the AUX output by pressing the ISO key so this output could be used for paging or backstage PA calls. The AUX output is linked to a relay which can be

used to trigger flashing lights, DPS presets in house systems, or whatever else you imagine.

The rubber holders for the belt packs look a bit strange but they definitely do the job. It's a little easy to knock the pack off your belt because the clip is part of the rubber housing, but all the construction seems quite nice so the system would likely fare well in educational and worship environments. Plus it's in the right kind of price bracket to suit these markets.

## Verdict

All up the DX210 is a solid unit. Switching it into two channel mode allows you to connect up to 15 belt packs, of which any 3 can talk and listen at the same time while the rest will be just listen only. Up to

4 systems can be co-located in the same facility too. The system is likely to suit small production houses too who need quick deployment of radio comms with very little hassle. Frequency response of the system seems to be around 300Hz – 3kHz. Not exactly hi-fi, but it's clean and it covers the frequency range of speech, and really that's what's important in a comms system.

Effective range is about 200m depending on the density of Wi-Fi devices in the area. The DX210 has Spectrum Friendly frequency hopping so it's pretty robust even in congested areas. All up the system works very well. In spite of their toy like appearance, the belt packs are actually pretty serious pieces of kit. For our money it's good value, and portability and no licensing required make it a winner.



**Brand:** ClearCom  
**Model:** DX210  
**RRP:** \$16,855 inc GST, or less for BYO headset options  
**Product Info:** [www.clearcom.com](http://www.clearcom.com)  
**Distributor:** [www.jands.com.au](http://www.jands.com.au)



**If you can find a better equipped, better sounding, better quality, better priced wireless microphone – please buy it!**

With superb audio quality, optimum channel scanning and rock solid reliability Audio-Technica wireless is the choice of many mission critical, single take events around the world.

They're the microphones you'll see at the Olympics, GRAMMY Awards, Country Music Awards, Network Sevens' Sunrise and many, many more.

Audio-Technica's 2000a Series shares the same technology platform but delivers it so affordably that you can benefit from mission critical wireless without breaking the budget.



**Handheld \$595**



**Lapel \$590**



**Headset Pro8 \$690**



**Headset Pro92 \$790**



**Guitar \$530**



**Your 2000a Series Solution features:**

- True diversity UHF
- Easy push button set up
- Auto frequency scanning
- 10 mic simultaneous operation
- Half rack receiver with all-metal housing
- Rack-mount ears
- Battery indicator LEDs
- Detachable antennas
- Optional battery recharger



## Robin 300 LEDWash

Reviewed  
by Julius Grafton

Reliability

Optics

I unpacked it, turned it on, and shook it after it had started up. Clearly there's a revolution afoot, and the Robin 300 LED wash is one of the new foot-soldiers on the digital warfront.

Some context. I sat with Joseph Valchar, the urbane head of Robe, at ENTECH 2011. I think he almost lives in Australia, but he says he has only been to Adelaide and Perth maybe once – so he was looking forward to some winery action in and around the forthcoming CX Summer Roadshow.

"Martin leads by revenue, then us and Vari-Lite", he estimated. I was probing, because the new lighting world order is kind of centred around Philips (owners of Vari-Lite, Selecon and Strand). Newly resurgent are Clay Paky, whose Sharpie has seen a three-fold increase in manufacture capability to keep up with demand, and Coemar with the LEDko. The one debutante left without a dancecard at the moving light ball is High End Systems, who have submerged into the Barco conglomerate where sales in Australia are limited to (excellent) projectors and (brilliant) LED screens.

I'm reviewing the Robin 300 LED wash because CX has been inundated with entertainment specific LED movers and fixed luminaires, and we are starting to think there is some change in the air.

How you drive your LED engine is one thing, getting efficiency is no longer the design challenge. Example: hot lamp, sucks 650 watts, generates so much heat half the theatre air conditioning is tasked with sorting out the lights.

Until now Philips, Osram, Sylvania or GE designed a compact filament tungsten halogen lamp source, or a discharge lamp for a ballasted power supply, and the scientists at Strand, Selecon, ETC and anywhere else tried to marry up reflector lens and heat management system to get optical efficiency.

But that little LED changed everything, and now the designers are free to chase concepts. Which probably means most LED based devices will fall into camps, the devices in the camps will be very similar, and the winners will be those with the best sales and marketing.

"The Robin 300 LEDWash is equipped with auto-switching power supply that automatically adjusts to any 50/60Hz AC power source from 100-240 Volts". That's a straight quote from the user manual, and it should be MANDATORY that any digital lighting system you buy can autodetect power. Why? Brownouts.

CX recently had an off the record discussion with a venue whose fleet of lights were struck dead by a brownout. Their devices were repaired without quibble by the supplier – BUT the episode highlights (no pun intended) the risk of sagging power. In this case the grid flipped itself for barely a second or two, but those of us who know, will know, that some stuff dies when the juice goes on strike. Or from the surge when it comes back.

No one in digital lighting is game to give a straight up five year warranty on the LED engine just yet, but watch for this – it will come.

The assumption is: the light will make light for five to seven years under average use, and we will only have to deal with common issues such as motors and electronic circuits in the meantime.

Robin 300 LED

What can I say? It is bright. We can't



measure lumens because Jimmy and Andy MacKenzie and Richard Cadena keep telling me the CX light metre will give spurious and useless readings due to something about blah blah yakkedy yak. But our visual subjective test (watch the video review of this on CX-TV.COM) shows the little Robe cutting nicely through the 800 watt RedHead. Which is about how scientific we can be.

3 pin and 5 pin DMX in and out? I like that. Artnet connection via Ethernet? Should be mandatory. 37 channels of DMX – routine. Power in: 200 watts. I keep slapping my head everytime I look at a LED fixture. 200 watts? Are you KIDDING me? Our PAR 56 all purpose combo-light sucks 300 watts and it hardly does ANYTHING while getting hot. ALL these LED guys eat a Par 56, plus they make their own colours. Get real!

### The rest

The light source is 19 Cree MC-E RGBW LED multi-chips with a stated minimum life expectancy of 60k hours. The zoom goes 15–30°, and you get RGBW, 8-bit or 16-bit colour mixing with a CTO filter shown in.

It is nicely built and presented. Like I said, I shook it, it took it, and the temperature was a reassuring cool. Gotta love these devices!

For video of this GEARBOX review, click here in the interactive CX-E version of the magazine. If reading print, please visit [juliusmedia.com](http://juliusmedia.com) to find this review.



# Power Tools for Live Sound!



power tools for power players™



### JDI Duplex™ stereo direct box

*"The Swiss Army Knife DI"*

Hit it hard and the JDI Duplex smoothes out the digital edge to deliver a smooth natural tone. Ideal for digital piano, drum machines and just about anything else you can toss at it.



### JDX™ amp & cabinet DI

*"Perfect guitar tone every night"*

The JDX Reactor captures the signal from the head and the back impulse from the cabinet for consistent guitar tone night after night. The perfect solution for in-ear monitors!



### Phazer Phase Adjustment Tool

*Time align two signals for fat rich tones!*

The Radial Phazer™ is a line level phase alignment tool that lets you bring two sound sources together so that the fundamentals play in sync. The Phazer is designed from the ground up for optimum sound quality.



### SGI™ studio guitar interface

*"Happy Artist = Happy Crew"*

The Radial SGI studio guitar interface allows a guitar signal to travel 100 meters (328 feet) over a standard balanced XLR mic cable. On large stages, the SGI allows a guitar signal to travel from the wireless system to a pedal board and amplifier.



### J+4™ balanced line driver

*"Like power steering on your car"*

The Radial J+4 takes consumer level devices and kicks out enough gain to drive your power amp into clipping. Clean, transformer isolated circuit with 100dB of dynamic range.



### SW8 8-channel Auto-Switcher

*For when the show must go on!*

The Radial SW8 auto-switcher provides redundant backup by automatically switching between two 8-channel sources such as a pair of digital recorders. Designed primarily for live concerts and stage shows where backing tracks are used for orchestration, backing chorals and sound effects.

Official name: Robe Robin 300 LEDwash  
 (Joins many Robin models, LED and otherwise)  
 Made by Robe in the Czech Republic: [www.robe.cz](http://www.robe.cz)  
 Represented in Australia by ULA: [www.ulagroup.com](http://www.ulagroup.com)  
 Price: \$5,226 inc GST



[www.radial-engineering.com.au](http://www.radial-engineering.com.au)

Proudly Distributed in Australia by Amber Technnology  
 PHONE 1800 251 367 [professional@ambertech.com.au](mailto:professional@ambertech.com.au)

By Jimmy Den-Ouden

## ▶ Shure Axient

CX was lucky enough to be among the first in the country to see Axient, and just quietly it's more than a bit exciting...



**R**adio mics have long been a mixed bag. Abandon the inconvenience of a wire, and you abandon the reliability – or at least this is how it's been in the past. Let's start by taking a look at some of the problems we have with current systems.

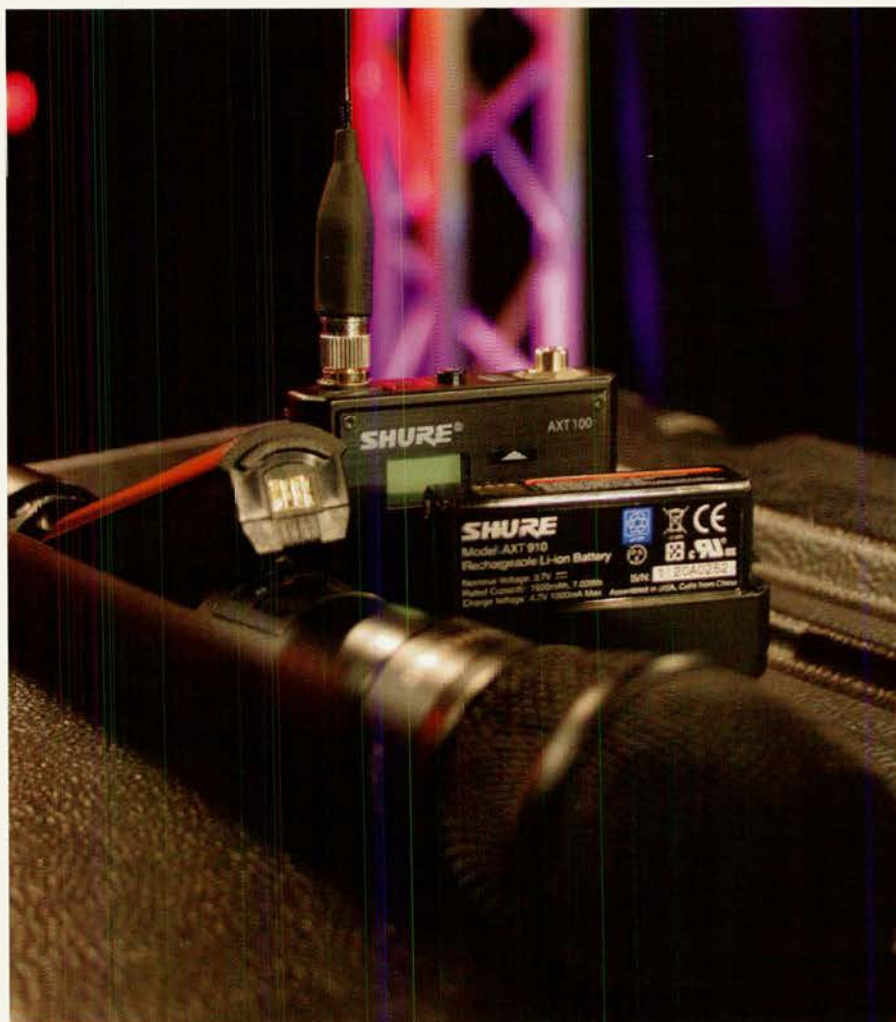
Frequency or busyfrequency? Without doing some serious research into the RF spectrum in your area, you can never know for certain if the frequencies you select for your radio systems will work. Plus, what works for rehearsal might not work for the show in 4 hours, or 4 days, or 4 weeks. Putting a dedicated RF tech into your production has been a great way to avoid these kind of problems – someone who is expert in RF frequency selection and management. But even the radio police have a hard time dealing with the rogue ENG crew and their random radio mics, or the dude with the venue radio, or indeed any RF device that starts transmitting unexpectedly mid-show. It's a very bad look in live theatre, and even worse in live TV... Plus, an RF tech is kind of a pricy addition to the budget, especially on a long running show.

### Axient – the concept

The idea of Axient seems to have been to make a better, brainier, faster and more electronic replacement for the RF tech. Axient practically applies a few simple principles to make radio mics work better:

- 1 • Choose the most compatible and interference free frequencies for your RF system. Not only free from external interference, but also intermod which occurs when transmitters on adjacent frequencies interact with each other
- 2 • Carry a spare or 40. If a frequency becomes unusable, you need to jump to

For video of this GEARBOX review, click here in the interactive CX-E version of the magazine. If reading print, please visit [juliusmedia.com](http://juliusmedia.com) to find this review.



another. Far better to make it an educated jump to a usable channel rather than one which is as bad as or worse than the problem one you're already on

- 3 • React fast. When a problem happens, deal with it immediately. Waiting for an actor to leave the stage to change a mic takes time, as does extracting a belt-pack from beneath a complicated costume. Doing this by remote avoids all these problems.
- 4 • Have a backup. Some people like to use dual mics, dual packs, dual receivers. A good idea but not without its own problems.

### How does it work?

Axient isn't just a collection of parts. It's a collection of parts that piece together to form an integrated RF system. Of course there are transmitters and receivers – these

closely resemble the Shure UR series units many readers will already know. The receivers have AES outputs in addition to analogue, and in general are very nice and quite intuitive to operate. Each receiver has a pair

of Ethernet ports in the back, so you can cascade a common data link to all units. It's just normal Ethernet, but that's all it needs to be (plus you can use normal Ethernet cables). Now the interesting part.



**chameleon**  
TOURING SYSTEMS

LUMINAIRES  
CONTROL SYSTEMS  
MOVING LIGHTS  
SEARCH LIGHTS

SYDNEY:  
Building 35A, 1A Coulson Street  
Erskineville NSW 2043  
Production/Sales: 02 8596 7222  
Rentals: 02 8596 7200

BRISBANE:  
25 Helen Street  
Newstead QLD 4006  
Phone: 07 3854 1511

[www.chameleon-touring.com.au](http://www.chameleon-touring.com.au)

## NOW AVAILABLE FOR HIRE

grandMA - total control



SHOWLED  
LED Curtains




The receivers all link via a data hub into the AXT600 Spectrum Manager. The spectrum manager is essentially 8 receivers in one box, capable of scanning the RF spectrum and selecting the best frequencies. Not just enough to run your receivers, but a whole pile of spare ones for Justin (Justin Case). The AXT600 uses RF delivered via an antenna splitter, which also feeds the receivers. Each receiver has cascade ports, and using these and all ports on the splitter you can feed something like 40 dual receivers from one set of antennae. Cool yeah? Last up is the ShowLink access port. This device is a power over Ethernet device, and links into the rest of the system via a Shure POE Ethernet switch. It allows the receivers to issue control commands back to the transmitters. Channel changes, TX mute, and even remote gain of the transmitter itself. Way freaking cool. Audio still runs as analogue to keep latency down, while the ShowLink commands run digital.

Transmitters for Axient are powered by rechargeable "brainy" Li-Ion batteries. Each battery knows how many times it has been charged, and the rack-mount charger also links into the system to report the status and health of units while they are on charge. Transmitters also report battery status to the receivers. Initially this is a more expensive option but once you factor in the replacement alkalines you won't be buying any more, the actual value starts to become apparent.

## Software

The Axient system works in conjunction with Shure Wireless Workbench Software, which can be downloaded from Shure's website. WWB interfaces to the Axient system and allows you to configure just about everything from your PC. Setup is simple – link all the units, run the software, do an RF scan, propagate relevant channels to re-

ceivers, then sync transmitters via IR. Then forget about your RF problems forever.

In the event interference is detected on a frequency you're using, the receiver will request a backup frequency from the spectrum manager, and then send it to the transmitter via the Show Link unit. You'll lose audio for less than half a second. Backup frequencies are continually monitored and ranked in order of quality, so the backup frequency you get is the best one that's available.

If this is unacceptably high, you can run "frequency diversity mode", where each transmitter simultaneously transmits on two frequencies and the dual receiver uses both its receive channels to provide a mixed

output of these. The only way you can lose the signal due to interference is if you somehow get a problem on both channels within a second or so of each other. It's basically bulletproof.

Other niceties are things like remote gain. If you've done as many hip-hop shows as I have you'll know that sometimes it would be really nice to be able to remotely attenuate radio mic transmitter gain. Axient lets you do this, in real time, and it's great. So is the compatibility with existing Shure capsules.

In a time of RF uncertainty, frequency agility is of paramount importance. Axient has this and way more, and as such the system represents a safe path through the minefield that is RF transmission.

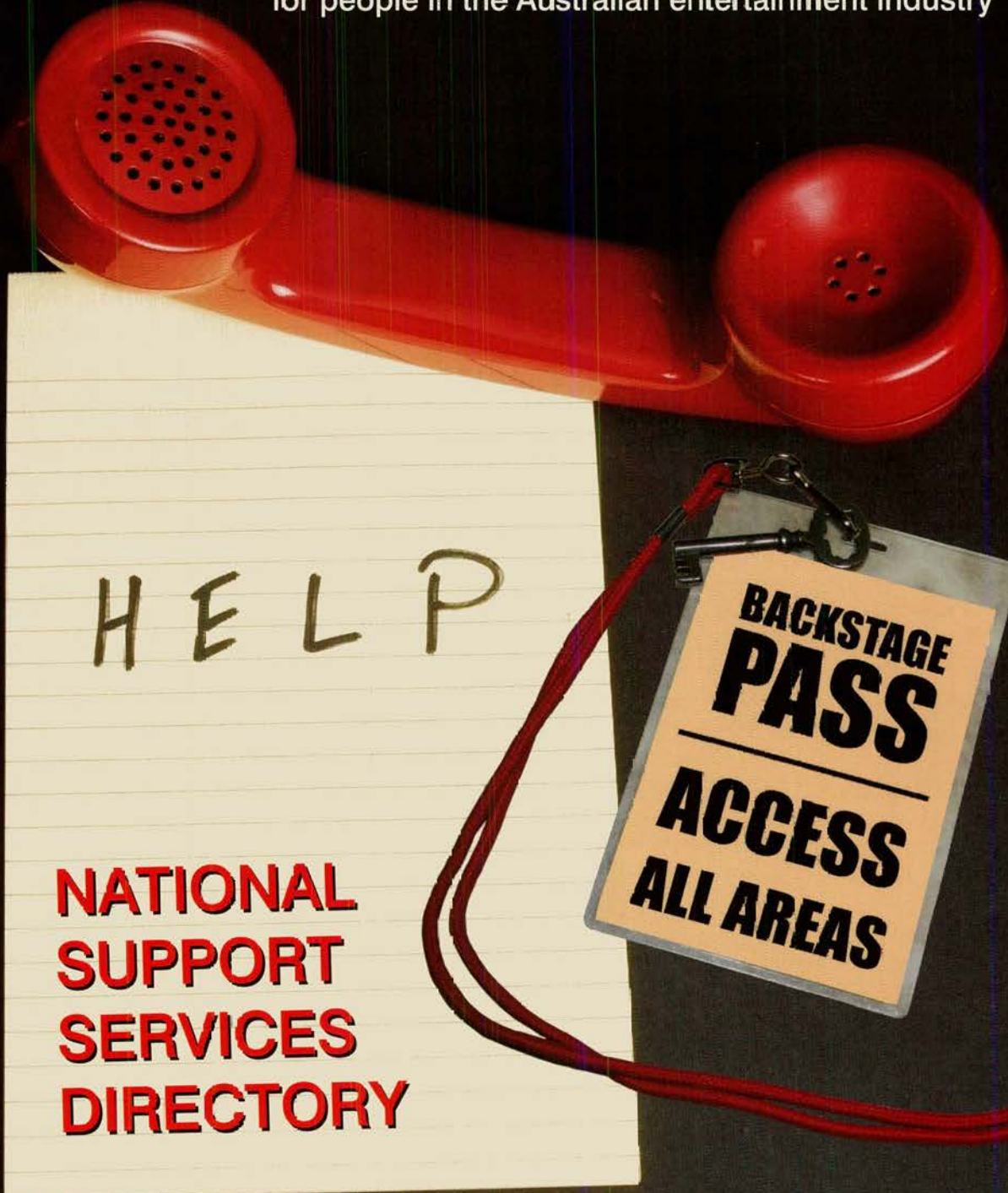


Brand: Shure  
 Model: Axient  
 RRP: Due for release late 2011  
 Product Info: [www.axient.net](http://www.axient.net)  
 Distributor: [www.jands.com.au](http://www.jands.com.au)



# ENTERTAINMENT ASSIST

Preventative assistance, crisis support & education  
for people in the Australian entertainment industry



HELP

**NATIONAL  
SUPPORT  
SERVICES  
DIRECTORY**



**BACKSTAGE  
PASS**  
**ACCESS  
ALL AREAS**

Before times get tough,  
it's OK to talk and ask for help

[www.entertainmentassist.org.au](http://www.entertainmentassist.org.au)

Follow us on  
Facebook & Twitter



Solid State Logic Nucleus  
Software: V1.0.3 Firmware: V2.01



For video of this GEARBOX review, click here in the interactive CX-E version of the magazine. If reading print, please visit [juliusmedia.com](http://juliusmedia.com) to find this review.

## ▶ SSL Nucleus

The nucleus traditionally forms the core of the atom. Now you can have one in your studio too...

By Jimmy Den-Ouden

**S**SL make nice kit - they have for a long time. The Nucleus is no exception to this rule; however unlike a lot of SSL kit it won't set you back tens or hundreds of thousands of dollars. It's sort of the SSL box for everyone - or at least everyone who wants to edit some audio...

The Nucleus is two devices in one box. First up, it's a DAW controller that interfaces to your workstation via Ethernet. Secondly, it's a USB audio interface, which sounds like SSL product. You can almost identify on the surface where one device ends and the next begins - it's around the WET/DRY mix knob area.

### Under control

The most immediately obvious thing about the Nucleus is size. It's quite big, but then it kind of needs to be to accommodate the 16 100mm flying faders, big chunky transport control, and encoders. There are also buttons - lots and lots of buttons. It's not as big as a Control 24,



but it's bigger than a Euphonix MC Mix or a Mackie HUI. This said, it's still relatively lightweight. Apparently generational advancement within the SSL range has led to a lighter and more efficient set of electronic guts.

The DAW control can run either HUI or MCU modes, and will serve up to 3 separate DAWs with just a button push to switch between them. It relies on Ethernet to MIDI mapping which is done within the DAW - a small software program is

required to do this and SSL thoughtfully provide links to a suitable one. Configuration of the MIDI mapping is easy, as is setting up the Nucleus within the DAW software. Config of the Nucleus itself is a little more challenging - I had some difficulties running the Nucleus Remote software but managed regardless to get the device up and running with out DAW eventually. On a Mac you can't simultaneously run Internet and the Nucleus, but setting up two network locations is the quick workaround to switch between. Pulling the network cable from the Nucleus you lose control, but it only takes a short moment to re-acquire this once you re-connect it.

Loading up a project in the DAW, the Nucleus springs to life and reads across track names, levels, pan info and such. There are Solo, Cut and Select functions for each channel. The rotaries have a push function as well which sets them to centre or zero - a nice touch. You can bump through channels or banks of 8 channels on the surface, so it's quick to get to everything even with more than 16 channels happen-

ing. Depending on the level of configuration you get into, the Nucleus can control EQ, dynamic, and other plug-in functionality too. Included with the Nucleus is a selection of SSL Duende plug-ins. My favourite of these is the mix bus compressor – it's effective and yet smooth. You can even try out the Duende Native version of the plug-ins for free at the SSL website.

## USB Audio

For us, the audio interface is really what makes the Nucleus worthwhile. First up, it sounds great. The monitor output has a nice big SSL style knob for level – something you need. You can plug in external sources to the stereo XLRs or the 3.5mm "i Jack". No prizes for guessing what connects to that... The on-board twin SuperAnalogue mic pre-amps sound clean and transparent. They also have line level outputs on XLR, plus all the right controls including HPF, +48v and phase reverse.

The USB driver installed easily and our Mac found the Nucleus as an available audio interface straight away. Pull the USB lead and re-connect it and it all starts working again. Just don't pull the power on the Nucleus with your monitors still on – some interesting noises appear on its monitor outputs during power down. Dual headphone outputs are supplied and while the front panel might seem like a more logical location for these, in a studio situation you're likely to plug these in and leave them so the back panel location is not really a worry. Independent headphone level control is included. A lot of flexibility is included in the monitoring stage too – you can listen to the computer or just the sources directly.

I spent quite a lot of time listening back to recordings via the Nucleus and playing with the plug-ins. Whilst I can't quantify exactly what it does, it definitely adds something good to the sound. It makes things better.

## Add it up

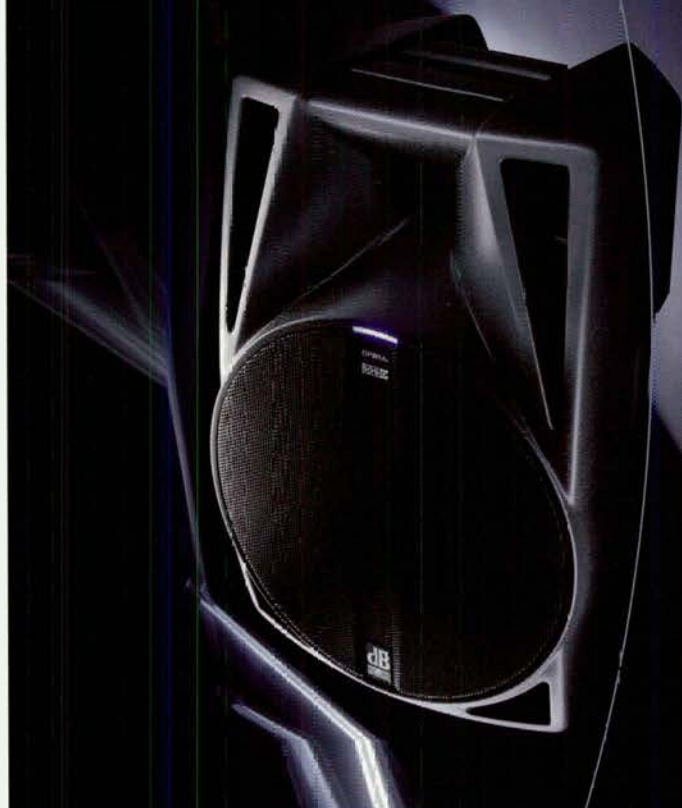
You don't really get a strong feeling that the two parts of the Nucleus are highly integrated with each other – but we're good with that. In some ways it's actually nice to be able to configure the individual parts for what they are.

As individual components (DAW controller, audio interface, plug-in bundle), you could definitely find some cheaper components to do the same job. But would they be as good? Perhaps not. Equally, you could find some more expensive components. We've seen interfaces which alone cost more than the Nucleus, yet we found it hard to pick the difference.

As a package deal the Nucleus answers the questions of control, interface, and plug-ins for many users, and it does so for a middle of the road price.

Brand: Solid State Logic  
 Model: Nucleus  
 RRP: \$5,999.00  
 Product Info: [www.solidstatelogic.com](http://www.solidstatelogic.com)  
 Distributor: [www.ambertech.com.au](http://www.ambertech.com.au)

# The driving force.



## The new OPERA DIGITAL Series

Ten years after the first Opera Series, db Technologies presents a totally new generation with features never seen before. Three different power classes, ranging from 200W-600W RMS, equipped with 8", 10", 12" or 15" loudspeakers, can be combined with our powerful active subwoofers, to be able to build highly flexible systems with a performance of up to 3200W RMS.



The new OPERA DIGITAL offers, thanks to latest technology, 33% more power at a reduced weight of 35%, compared to the predecessor. [www.dbtechnologies.com](http://www.dbtechnologies.com)

Digital BiAmp	24-Bit-DSP	Asymmetric Horn	Reduced weight	Multifunctional
				
More power	Perfect sound	Perfect dispersion	Easy handling	FOH & monitor

**CMI**  
 music & audio

**db** TECHNOLOGIES  
 THE SOUND OF EXPERIENCE

A company of RCF

CMI Music & Audio  
 Ph: +61 3 9315 2244 • Email: [cmi@cmi.com.au](mailto:cmi@cmi.com.au) • [www.cmi.com.au](http://www.cmi.com.au)



By Jimmy Den-Ouden

## ▶ Martin M1 Console

It's been a while since we looked at a lighting console, and the recent release of the M1 gave us the perfect opportunity to do some catching up.

I'm something of a dinosaur when it comes to lighting consoles. I'm very good on what I know, but what I know still saves shows to 3.5" floppy disk or a PC-MCIA card. The M1 might be what's needed to bring people like myself into present day of USB and network ports. It's not a complicated console – it doesn't do a bajillion channels or anything outlandishly crazy. What it does do is provide a good entry level option for small-medium hire companies, venues and the like.

It has 4 DMX outputs on-board and this number can be expanded up to 16 universes. There's also a Midi option available. Included is a DMX input port as well, which can simply map values across to output universes or be used to trigger events within the M1. Also now included is a network port – this allows you to interface the M1 to a computer running scheduling software



as well as custom GUIs. In other words, you can build a user interface that the RSL club duty manager will understand yet is powerful enough to trigger cues within the M1. Add in an iPhone remote and the M1 becomes even cleverer.

### Hands on

The M1 weighs less than 15kg, which means one person can lift it easily, even when it's in the case. This is a big selling point to start with – there's even a lightweight case option so you can fly with it. It weighs very little but it feels very heavy duty. Build quality feels absolutely excellent. Buttons, faders and wheels all feel rock solid, which is a good thing for a desk which is likely to find itself on rock shows. There's a nice rubber bit at the front to lean on while you're admiring the construction quality. The console feels good even before

NOW MONTHLY



# SUBSCRIBE to the NEW CX!

Can you afford not to be updated on industry news and views?

➤ Now available in two flavours:

**PRINT**

Delivered to you direct from the printing press every month (except January).

**E-ZINE**

An interactive soft copy with internet links emailed to you BeFoRe the print press rolls!

\*You can have BOTH these, or just the E-Zine.



## Subscription form

### PRINT AND EZINE

- 1 year:** \$49.  
Save \$11.50 off the newsstand price.
- 2 years:** \$79.  
Save \$42 off the newsstand price.
- 3 years:** \$99.  
Save \$82.50 off the newsstand price.

### JUST EZINE

- 1 year:** \$26
- 2 years:** \$39
- 3 years:** \$53

### BE A CX GOLD CLASS SPONSOR!

- Support our cause**  
\$99 buys you the E-Zine FOREVER!



Subscribe on line:  
[www.juliusmedia.com](http://www.juliusmedia.com)

Name \_\_\_\_\_  
 Company \_\_\_\_\_  
 Address 1 \_\_\_\_\_  
 Address 2 \_\_\_\_\_  
 Suburb \_\_\_\_\_  
 State \_\_\_\_\_ Postcode \_\_\_\_\_  
 Email \_\_\_\_\_ Phone \_\_\_\_\_

#### Payment method:

Visa  Mastercard  
 Card name \_\_\_\_\_  
 Card number \_\_\_\_\_  
 CSV number \_\_\_\_\_  
 (3 digit security number on rear of card)

Expiry Date \_\_\_\_ / \_\_\_\_

#### Direct debit:

Deposit funds into our account and put your name on the deposit:  
 Juliusmedia Group Pty Ltd  
 Westpac  
 BSB 032 088  
 A/C 232784

#### Cheque:

Make cheque payable to Juliusmedia Group Pty Ltd

**Fax: 02 9417-5146**

Mail: Locked Bag 30, Epping NSW 1710

you've switched it on.

Physically this console looks like a Hog 1k which someone re-arranged a bit and added a screen onto. Much of the button layout will be familiar to users – playback faders to the left and at centre, with the programmer section on the right. There are no palettes on the console surface itself unless you count the 12 user assignable function keys. Much of the functionality of palettes has been replaced with the touch screen. Navigating around this with the in-built trackball is pretty easy too – so if you love touch screens as much as I don't that's okay, Martin haven't forgotten you. Fixture grouping now relates to number of fixtures more than which type. Lots of advanced grouping patterns exist so if you're using a lot of the same light then it's easy to grab a bunch of them, then invert your selection, or whatever. Likewise the fanning options in this console are excellent, including

choices for modifying the curve over which the parameter is fanned.

There are several playback areas – the main central one and another off to the left side. The central area has 10 faders, while the side has 12 plus another 12 button only playbacks. Both areas operate in independent banks, and each can hold up to 1000 cuelists. The page holdover system is a bit tricky to suss out, but it does exist.

### Own it like a boss

The good news is you don't need to own the M1 to make it your own. The screen layout includes a bunch of default options, but a second bank allows you to generate your own custom screen layouts and then save these to a USB key. You can include cuelists, playback info, parameter choices, and a bunch of other useful stuff. Like a clock. Page changes can be triggered from

the screen or from the user keys.

Some more cleverness exists in the form of the fixture editor. Let's say you have your M1 at a show and the lighting truck arrives with a bunch of fixtures you don't recognize. The M1 software we tested had an in-built fixture editor which was kind of like following a "wizard" in windows (on that note, the console runs on XP). Tell the console about the fixture's DMX channel functions and it will generate a new fixture library file. It doesn't require any special knowledge either – the process is fairly self-explanatory. Lots of things about the M1 are – even the RDM section of the patch makes sense.

The M1 has a lot going for it. I think a good measure of a console's "usability" is how quickly you can get it doing stuff without a manual. For us it all happened very quickly. This said, having some underlying knowledge of existing consoles really helps the process.

### The logical conclusion

Martin released a console many years ago called the Case Logic. Not their finest hour – the Case Logic was extremely capable if only you could figure out how to work the sodding thing. Very few could.

The M1 is a significant deviation from this path in that it is very easy to use. It is an extremely capable and well-built console, carrying a price tag lower than half that of previous generation consoles. Physically, it feels exceptionally good to use. Perhaps most importantly, it offers an upgrade path to users of now aging consoles, who need better reliability but can't justify spending big dollars on a new system or training users in its operation.



Brand: Martin  
 Model: M1  
 RRP: \$15,999 inc gst  
 Product Info:  
[www.martinpro.com](http://www.martinpro.com)  
 Distributor:  
[www.showtech.com.au](http://www.showtech.com.au)



For video of this GEARBOX review, click here in the interactive CX-E version of the magazine. If reading print, please visit [juliusmedia.com](http://juliusmedia.com) to find this review.



# Welcome to industry TV!

## Watch **CX-TV NEWS** here!



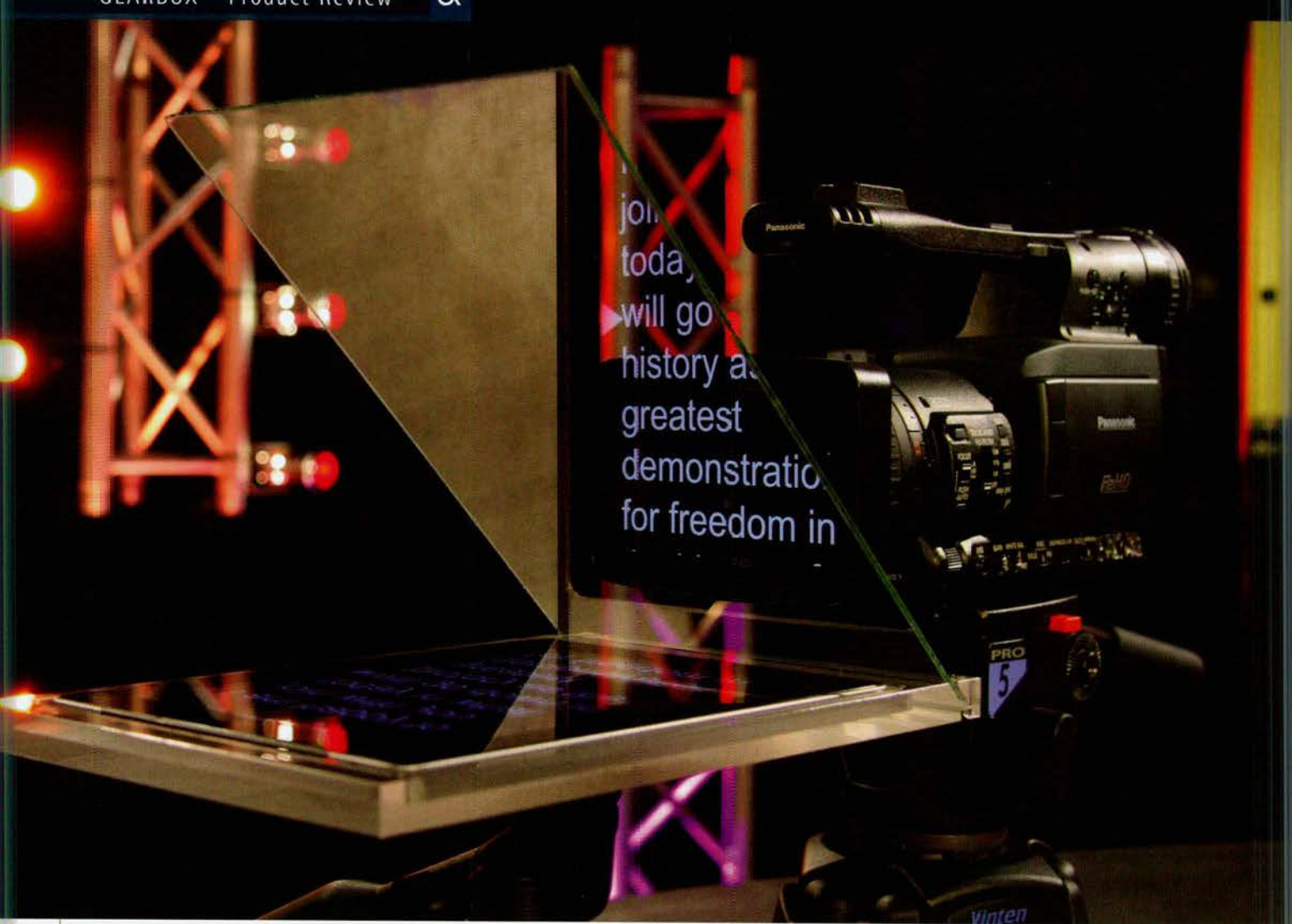
Announcing the **NEW CX-TV**  
library, online and on demand at  
**[www.cx-tv.com](http://www.cx-tv.com)**

Three channels:

CX-TV NEWS, with reports and special programs

GEARBOX, with every product review in CX magazine and more!

SHOPPING CHANNEL, with advertorials and sales specials



## ▶ Prompt-it Maxi Teleprompter

Add teleprompting to the list of things you can now use your iPad for...

By Jimmy Den-Ouden



For videos of this GEARBOX review, click here in the interactive CX-E version of the magazine. If reading print, please visit [juliusmedia.com](http://juliusmedia.com) to find this review.



**T**eleprompters can be really expensive – we're talking in the thousands of dollars. Yet they all do pretty much the same thing. Richard and Recky are the guys behind Prompt-It. Frustrated by the high price of available teleprompters, they set out to change this. With a little help from the iPad, they've succeeded.

The basic principle of a teleprompter is simple – a screen with scrolling text sits horizontally beneath your camera lens, and the image is reflected via one-way glass so the on-camera talent can read while looking directly at the lens.

Why does it need to be expensive? Turns out it doesn't.

Prompt-It Maxi is a simple system which makes use of an Apple iPad to provide an affordable and effective solution. The system comprises a milled Perspex tray in which your iPad lies flat. Carved into this tray is a slot, into which a sheet of silvered glass slides. A fabric hood hooks over the top of the glass, and anchors to grooves in the base via elastic tabs. You put your camera in behind the glass and flip the

hood over it. And that's it. Set up takes about a minute. Once you're done, pack up is just as simple. The guys at Prompt-It even have a custom carry bag available.

We used our test kit on a little \$50 tripod from Officeworks, which was actually pretty stable and folded up nice and compact. The Prompt-It kit weighs next to nothing so you can get away with a really lightweight support. Alternatively, you can get a rail system which affixes to your existing tripod and then mount your camera on top and the prompter in front. This will cost a

bit extra, but for users who need portability it is likely to be a worthwhile investment.

## What about software?

The guys at Prompt-It assure me that most of the iPad teleprompter apps are really good, though their preferred one is called Teleprompt+. For around \$16, it's very easy to use and you can get a free iPhone app which allows you to remotely start, stop and re-cue the iPad app as well as adjust speed and text size.

We tried the app and it works really well. The Bluetooth iPhone control linking worked first go and gave us exactly the right level of control over the iPad. Available functions are text speed/size, go/stop and ability to scroll back or restart the script. The new desktop version promises to allow script editing on your laptop too.

We think the Prompt-It system is absolutely great, and something the industry has been waiting for. Save for the glass, it's built in Australia too, which means this piece of great Aussie innovation also supports local industry.

**Brand:** Prompt-It  
**Model:** Maxi  
**RRP:** \$249.00. BYO iPad, tripod and Teleprompter App. iPhone remote optional.  
**Product Info:**  
[www.prompt-it.com.au](http://www.prompt-it.com.au)  
**Distributor:**  
[www.prompt-it.com.au](http://www.prompt-it.com.au) or  
[www.dragonimage.com.au](http://www.dragonimage.com.au)

**XT2**

**ROCK THEIR WORLD. SIMPLIFY YOURS.**

Power and control are all yours with the all-new XT2 Series amplifiers from Crown.

Peak, Plus™ Limiters provide the ultimate in system performance and protection, and the Advanced Thermal control now provides the ability to match cooling performance to specific applications. The XT2 Series also has a brand-new Advanced Monitoring section which provides visibility of AC line voltage and power supply temperature, along with completely updated HiQnet Band Manager™ and System Architect™ control panels to keep setup and configuration simple and lightning fast.

Distributed by  
**JANDS**  
[www.jands.com.au](http://www.jands.com.au)

**CROWN**  
 by HARMAN

1002 XT2 SERIES  
 2002 XT2 SERIES

# ▶ PreSonus SL Remote



For video of this GEARBOX review, click here in the interactive CX-E version of the magazine. If reading print, please visit [juliusmedia.com](http://juliusmedia.com) to find this review.

The ubiquitous tablet remote has gained popularity in recent times, but no longer is it confined to the high end of the console market

**SL** Remote is a free iPad app which allows you to remotely control a wide array of the functions on a PreSonus StudioLive console. There are a couple of prerequisites to making it work. First up you need a console – both the 16 and 24 channel models are suitable. Next you'll require a laptop running PreSonus Universal Control software (also a free download), linked to the console via Firewire 400. We had to update the console firmware when we first did this and seemed to lose some saved scenes in the process – so do be a bit aware of that. Finally the laptop and your iPad need to be on the same WiFi network as each other. We've tried a few wireless access points and found some better than others, so if you're planning to use this in a show situation make sure you pick a decent one and test it extensively for range and dropouts.

Once that's all sorted out, run the app. Your console will appear from a list of available ones to connect to. We suspect you can use more than one console – presumably with a separate laptop for each one. Hit the Connect button and (assuming your iPad is in portrait mode) you're into the channel mix screen. From here you can assign the channel to busses, control compression and gating, adjust EQ and HPF, mute the channel, flip phase, pan, and of course control send level to the main and aux busses. A little bar down the right side of the screen lets you quickly jump to any channel as well as the output busses and effect returns. Everything you commonly need to get to is easy to find and adjust. But it gets better.

## Sideways action

Most of us are used to having more than one fader available at a time. Flip the iPad into landscape orientation and the whole layout changes. You're presented with an overview screen which shows you up to 12 channel faders at a time, along with dynamic, pan, bussing and EQ parameters for these channels. Swipe left or right to access the remaining channels. Drag faders up and down to adjust your main mix. Because the channel faders on the StudioLive consoles are not motorized, once you return to the desk you'll need to press Locate then adjust them to reflect mix changes made with SL Remote.

A nice part of the implementation of the virtual faders is that you don't need to be super accurate when grabbing them. As long as your finger lands somewhere in the track, the fader will move up and down relative to your finger. It won't jump instantly to where your finger lands. Thanks to the multi touch iPad screen you can grab multiple faders with multiple fingers at once. You can even be panning one channel and fading several others at the same time.

From the same orientation, you have an aux mixer screen. Choose the aux bus you want, and then mix in the same way as on the overview screen. The mix faders in this mode mimic the LED ramps you'll see on the physical console when performing the same task. The subgroup and master fader section is accessible from both the overview and aux mixer pages – just press the masters button and they pop up.

The last page in the landscape mode is the Graphic EQ page. From here, you can assign all your available 31 band GEQs to outputs. Assignment is done in pairs. The graphics

start with all bands showing, and some users will find that they're a bit tightly packed in to accurately grab the right one. Pressing the + button widens the faders out and resolves this. Each GEQ can be bypassed and flattened with a button push, and they have +15.8db / -16db gain and cut.

## Summary

The ability to name channels would have been a good inclusion, since putting desk tape all over your iPad makes it look ugly (and as soon as you swipe sideways none of the labels line up). But really, it's a pretty small grievance. On the plus side multiple iPads can simultaneously control the same console too. This opens up some new possibilities for musicians to control their own monitor mixes without needing a dedicated personal monitoring system.

All in all SL Remote is quite an elegant demonstration of app programming, which serves a useful purpose beyond just looking pretty. Besides the extremely good usability of the app itself, perhaps the nicest thing about it is that all this cool functionality has been included free for existing owners of the consoles.



**Brand:** PreSonus  
**Model:** SL Remote  
**RRP:** FREE! BYO iPad, Laptop and Wireless Access Point  
**Distributor:** iTunes Store for the app, [www.presonus.com](http://www.presonus.com) for Universal Control.

# VUEPIX<sup>®</sup>

**LEADERS IN LED  
SCREEN TECHNOLOGY**

## C SERIES



Versatile Horizontal or Vertical  
Curve Shaped Displays

## M SERIES



Lightweight & Compact

- High brightness & color uniformity
- Easy installation & maintenance
- Low power consumption
- IP65 rated

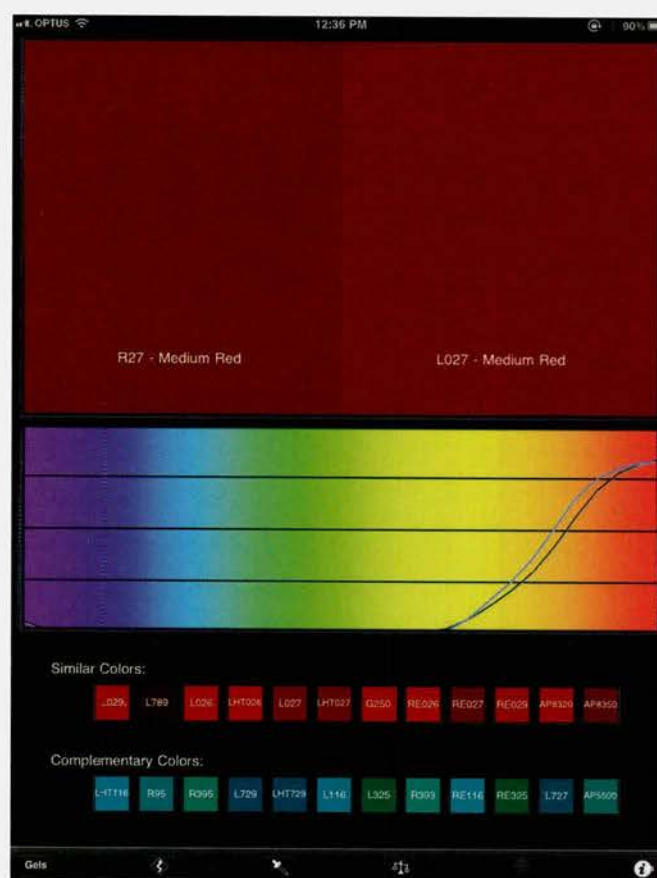
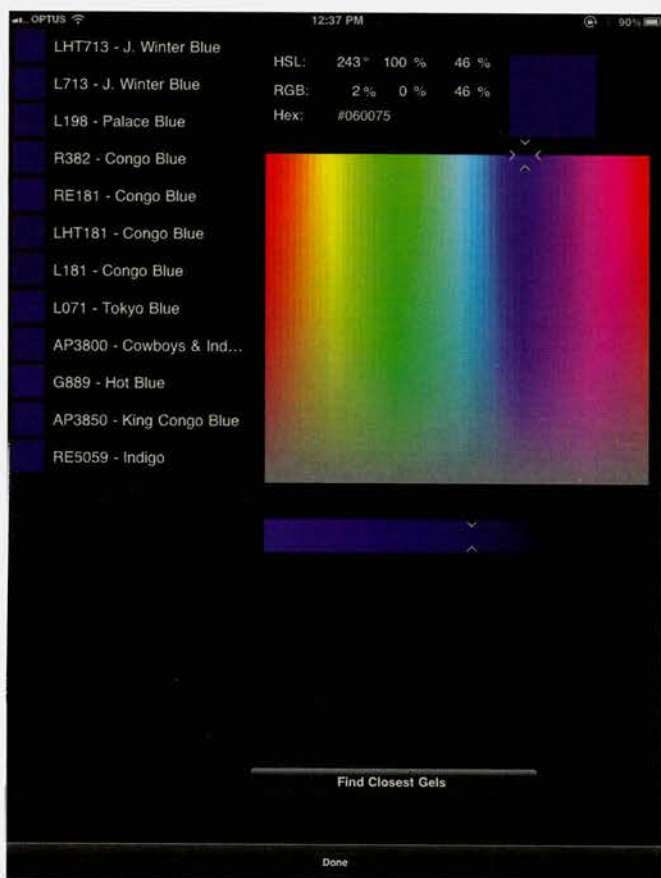
[WWW.VUEPIX.TV](http://WWW.VUEPIX.TV)

ULA  
group

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

1300 ULA GROUP  
1300 852 476

BRISBANE | SYDNEY | MELBOURNE



## Gel Swatch Library HD

Are the days of the gel swatch book limited?

By Jimmy Den-Ouden

**G**el swatch books have always been a bit of a love hate thing for me. I love being able to hold a gel up and look through it at a light source, but sometimes finding the right colour is difficult. You wind up with 7 things hanging out the side of the book, trying to compare them and going cross-eyed. Well, I do! Then there's the trauma of trying to find a particular colour, then the nearest substitute you have in stock and so on...

Swatch HD is a cute way to get around at least some of this. It's an iPad app which takes advantage of the brilliant screen on the iPad screen to create a virtual gel library. Included are colours from Apollo, GAM, Lee, and Rosco.

You can pick colours in several ways. First option is to navigate through fold-

ers arranged by manufacturer, and subsequently by collection. You can re-order the list in several different ways. Next choice is to search – you can do this by gel name or number (ie; L201 or Full CT blue). You can look at all the colours you've viewed recently – like the page history in a web browser.

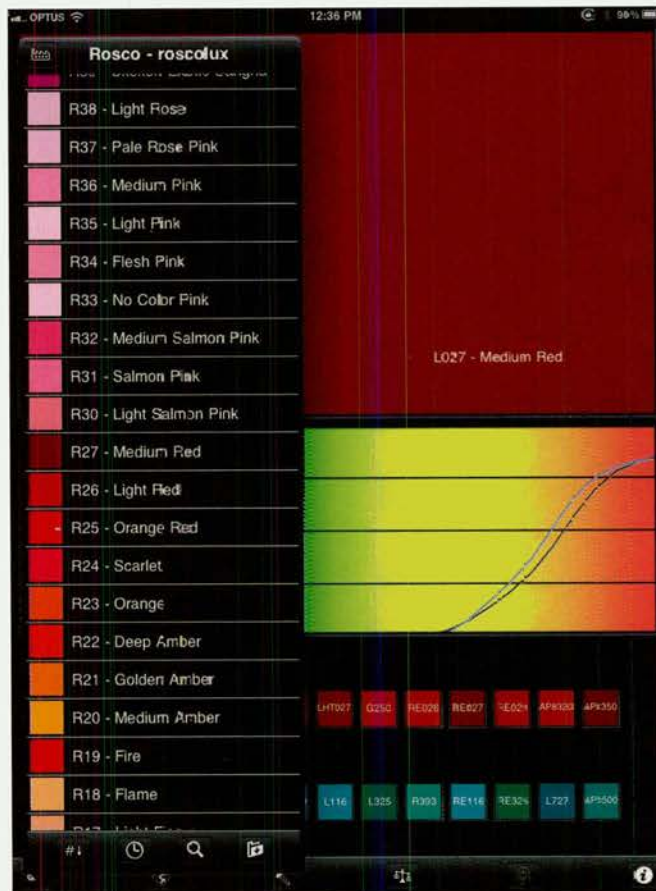
Another cool option is the way you can pull up a spectrum and use a colour picker. Choose the colour you want and the intensity, and Swatch HD will give you a list of the nearest available gel colours. You can even compare two gels side by side on screen. Select a colour and its various transmission properties are displayed, along with percentage values to achieve the colour with RGB or CMY colour mixing. A list of similar and complementary colours is also shown below.

For video of this GEARBOX review, click here in the interactive CX-E version of the magazine. If reading print, please visit [juliusmedia.com](http://juliusmedia.com) to find this review.



Okay, so an on-screen representation is never going to give you a full and accurate representation of how gels look with a light source – there's a disclaimer to this effect in the info page. Showing how a diff or frost works on a screen just isn't possible. You can't cut out bits of the CTO gels to stick over those ugly cold white LED desk lamps everyone's using now, and it won't keep your physical collection of gels sorted out. In some ways an app can never be a substitute for a real swatch book. Not that a real swatch book will keep your gel collection ordered either...

What swatch HD will do is provide a useful little way to compare colours from different manufacturers quickly, or look up various transmission properties easily. I really like the RGB and CMY percentage values thing too – great when you need to integrate standard fixtures with colour mixing ones. The search feature makes it quick and easy to find numbers for gel names. At under 11 bucks, it's a pretty cheap way to always have this reference info with you.



Brand:  
Wybron  
Model:  
Gel Swatch  
Library HD  
RRP:  
\$10.49  
Distributor:  
iTunes Store

# JLX-LITE

## LIGHTING BARS

**Need an economical lighting bar that's easy to install?**

Introducing the Jands JLX-LITE - a lightweight lighting bar system that has been designed with ease of installation in mind. The JLX-LITE is intended for static installations such as school halls, clubs, ballrooms and exhibition spaces and is designed to be installed and wired by a licensed electrician.

## EASY INSTALLATION

For more info visit:  
[www.jands.com.au](http://www.jands.com.au)

### Features

- Durable construction, lightweight with black or white finish.
- Distributed Loads of (up to) 5Kg/m & Point Loads of (up to) 50kg
- Two module lengths, 2m with 4 outlets and 3m with 6 outlets for simple user-customised solutions from standard building blocks.
- Multiple mounting holes to assist static installations.
- 10A standard outlets.
- Cable knock-outs for alternative cable entry points.
- ELV knock-outs for industry standard fittings.

audio • lighting • staging

CX

The Call Out!

# 100v LINE SYSTEMS

part 4



By Paul Matthews

In this episode looking at 100v Line PA we take a poke at configurations you're likely to come across. There's no "Australian Standard" specifically for PA system cabling. That's fine because we don't want one, do we...

There ARE numerous Aussie standards referring to fire warning and detection systems in buildings – and most of these systems use 100v Line PA as part of the design. Overseas (particularly in Europe and Asia) you'll find they're more advanced than us Aussies, with most large public buildings having both fire and PA functions handled by one large integrated system. Over there this happens because generally there's one management responsible for the building's construction and it's use.

In Australia our industry works differently – it's a bit more chaos theory. There's usually several layers of people between the building designer and the building user who may even be renting. At construction stage there is usually an architect, builder and subcontracting electrician in between the client and the actual building. Chances

of the poor client getting what they want installed in terms of PA amongst this mess are very low. As a result most Aussie public buildings end up with two separate systems installed – designed for different uses entirely.

The first is specifically for fire and evacuation known collectively as an EWIS, or "Evacuation, Warning and Intercommunication System". Its installation is tightly controlled by the BCA (Building Code of Australia) and other standards. Over the years these have evolved into purpose built systems designed only to evacuate buildings. Whenever you walk into the foyer of a large modern building and look to either side of the entrance you'll see a large rack of indicator lights (the fire panel) behind a door of glass built into a wall.

Throughout the building, in each room you will find the ubiquitous 100mm white ceiling flush mount speakers and probably a small red phone on the wall in some

rooms. These are wired back to the fire panel using mostly red Fig 8 cable and occasionally green fire rated flat single pair cables for the handsets. Although technically a 100v Line PA system, the speakers are rarely intended to do much more than emit warning tones. A small microphone is usually also included on the panel for "emergency announcements".

The power ratings are conservative because these systems all run off 24vDC batteries within the fire panel. They don't look like what we would call an "amplifier" at all – they're not in a rack case, they're just a bare bones circuit board and transformer built into the panel and with an output of around 120w for a large system – usually breaking down to around 1w per speaker in a typical low rise 3 ~ 4 storey building. Speech intelligibility and audio quality is not a high priority with these systems. They are there to meet a minimum standard and that's all they do. And they are always invariably the responsibility of the building owner regardless of what the building is actually used for.

One other important aspect of EWIS systems is that they are "maintained" systems. This means that between the amplifier and the speaker lines sits a special "line monitoring" unit which constantly measures the impedance and integrity of each outgoing speaker zone cable. If for any reason these parameters stray from the expected norm, a fault alarm is generated. In most cases the EWIS system is capable of informing the maintenance contractor directly if this happens without the owner



even having to place a service call.

The second type of more traditional PA system you will find in an Australian building is the type we are more concerned with and for which there are no applicable standards at all. This will invariably be the one you as a PA contractor – will be called to service. It's likely been installed and controlled by the tenant (if renting) or whoever actually uses the building.

It's job is to distribute voice, announcements and music around the site usually with far more emphasis placed on sound quality and speech intelligibility than with EWIS systems. As a result amp. power is much higher, speakers are larger and "mains only" operation is the norm. Cabling can be a combination of 100v Line and 8 ohm – for example a typical public hall or church could have 8 ohm speakers in the main performance area and a host of other speakers around the venue run using 100v Line.

Cabling can be just about anything – because there are no standards – but invariably the most popular cable type for the 100v Line segments is still 0.75mm Fig 8 ("lamp cord") or good old fashioned 0.5mm multi pair telephone cable. Although Fig 8 is robust, cheap and still very widely used, multi pair has the distinct advantage that you can easily run multiple zones down a single cable and also leave spares for expansion later. Nowadays blue Cat 5 (data) cable is also regularly found in 100v line PA service.

Because the copper size in multi pair is generally smaller than with fig 8, loop resistance on long cable runs becomes more of a concern when using telephone cable. However it's equally more flexible to use – because it gives you more options to add sectors later as a system expands by using spare cable pairs. Loop resistance is controlled either by putting less speakers on each pair (and just using more pairs) or just by paralleling pairs driving bigger loads.

Ideally in a 100v line PA system every speaker should be on it's own separate zone. The more zones the better – because this means that when something goes wrong, a fault is very easy to find and isolate from the amplifier end – you just connect your impedance meter and test each line pair in turn until you find the one that is either open or short circuit. You can then immediately reconnect all the "still working" zones and get the system on the air again very fast for the client. Then you can deal with finding the fault on one specific cable pair, a ready knowing which speaker is crook because it will be the only one still not working.

In reality most 100v Line PA systems have speakers arranged in grouped zones usually serving a specific building area. The less zones there are, the harder it is to find a fault. The worst systems of all have only one zone – wired by some wag who thought he was being smart by saving cable. In the event that a system like this goes down with a short circuit, you have no other option than to spend hours going over the entire venue removing speakers and disconnecting loops until you can isolate the fault enough to work out how to get around the problem. Faults like this can take days to find and leave a very angry customer. Remember this when you're installing a new system!

**Next time : Trouble shooting 100v Line PA systems.**

ROSCO



### New from Rosco!

DichroFilm - Very High temperature Filters  
GOBOs - 400+ new designs in steel & glass  
DMX Iris - control the beam size remotely  
Call for information or to find you 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: 61 (0) 3 9874 5988 fax: 61 (0) 3 9874 0977 e mail: sales@trc.com.au



**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

**Better Faster Bigger**  
MS SQL Database **Rebuilt!**  
Superior Performance  
Full Featured!

If you haven't seen RentalPoint Software lately, it's time to look at Version 8, the rebuilt new release. Better - Faster - Bigger



**Almost Bionic**

Six Million Dollars Worth Yours! For a lot Less!

**RentalPoint**  
SOFTWARE

visit: www.rcntp.com

**B.S. SOUND PA HIRE**

Band PA Systems, Voca PA Systems, Lights.  
Pick up and do it yourself, or Delivered, Set up and Operated by experienced Crew.

Mark Barry; (03) 9889 1999 or 0419 993 966  
www.bssound.com.au mark@bssound.com.au



**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@me.com

# Advertiser INDEX CX 63 September 2011

• Amber _____	27, 45	• Nightlife _____	IBC
• Audio Products Group _____	25, 37	• Norwest Productions _____	19
• BS Sound _____	64	• Penn Elcom _____	29
• Cases.com.au _____	15	• PRG _____	31
• Chameleon Touring Systems _____	47	• Production Audio Services _____	11
• Clay Paky Australia _____	13	• Rentalpoint _____	64
• CMI _____	FC, 21, 51	• Riedel _____	33
• CX Summer Roadshow _____	32	• Rosco _____	63
• CX TV _____	55	• SSE _____	9
• Entertainment Assist _____	49	• Subscriptions _____	53
• Eventquip _____	39	• Technical Audio Group _____	7, 43
• HES _____	35	• The Resource Corp. _____	63
• Jands _____	IFC, 3, 57, 61	• ULA _____	59, BC
• Madison Technology _____	17	• VR Solutions _____	35
• Matrix Productions _____	64		
• Meyer Sound Australia _____	5		



**GOTTA MOVE IT FAST!**  
PUT AN AD IN THE CLASSIFIEDS



► ADVERTISING MANAGER: **Steve James**  
Call: Call +61 2 8090 0560 | Email: cx.web@me.com  
www.juliusmedia.com AND GO TO CX MAG

ears, then it might be better to admit that things aren't exactly perfect. Blame the drum monitor or the keyboard player's amp!

Or you could blame something else entirely. Years ago, I ran a rehearsal and demo studio, PFC Studios, so named because the first few customers, upon hearing how low the prices were, exclaimed "Shit, that's Pretty F--kin' Cheap!" so PFC it became.

A succession of local bands tramped through with their three song repertoires and happily went home with a cassette of their performance in exchange for a couple of hundred bucks!

One night it was the turn of Jason Creadlock and the Stopcocks, a band of apprentice plumbers playing reggae and ska. All was going well until the good ol' Gigmaster Mk 1 console finally decided to vaporise itself, as the band played obliviously on.

"Shit, what's happened?" I asked Col since he and I had built it.

"Hmm ...It's stuffed," he replied. Great. One of the benefits of having technical people on hand is that they can always come up with a pinpoint diagnosis of the problem!

"Jeez I can't tell them that," I said, thinking of my dollars flying out the control room window.

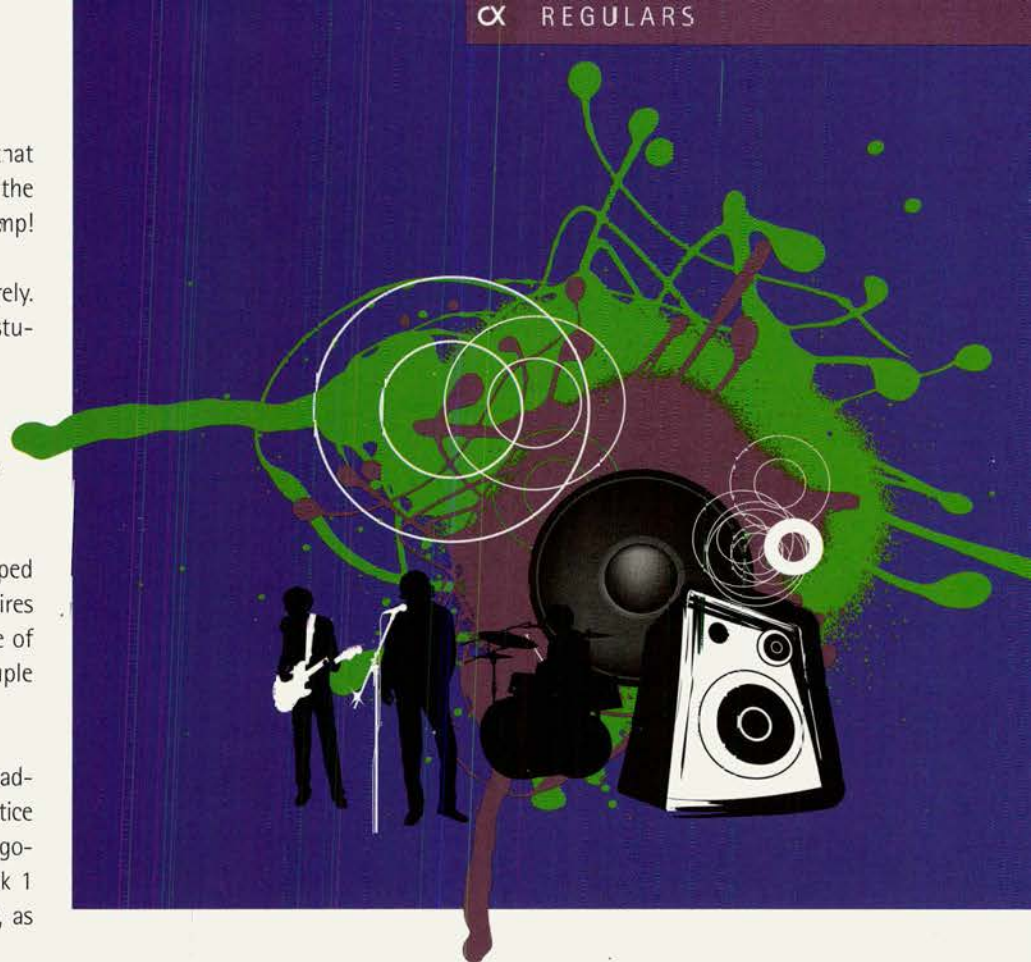
"Well, tell them it's...er, tell them it's 'substrate overload'," he said.

"Sounds technical enough for me," I replied and went into the studio to give the boys the bad news.

I waved my hands for them to stop.

"We'll have to stop now, guys - I'm sorry but you'll have to come back tomorrow night."

"What's wrong?" they all asked. I put on my most serious courtroom appearance voice. "I'm afraid we've got a bad case of ...substrate overload in the control room. We'll have to work all night to try and correct it, but we should be OK for 6 o'clock tomorrow evening. Thanks for your understanding, guys" and I went back into the control room.



We listened to them on the talkback as they packed up. "Wow, sounds serious...What do you suppose it is...Do you think we might have caused it?...Jeez let's get out of here quick!"

Of course, the problem was simply a fried chip and was easily found and replaced the next day. But 'substrate overload' has always been our universal catchphrase for any electronics problem ever since.

My other assistant Jim was always itching to have a mix, so I let him and Chris take out the system one night, so I could sit and relax at home.

It turned out not to be a good night for them. The room was extremely lively and reflective, everything was feeding back, and Jim was struggling to get any consistent sound out of it. The whole thing was a battle, and Jim was losing! So to pass the time in between songs, as we all like to do, Jim would pop the headphones on and listen in on the PFL to the band. You could always hear interesting little snippets of band conversation, like "Mind my pedals, you great cickhead!" or "What happened to the last chorus, fat-arse?" or "Hurry up for Chrissake!" or "Is my hair alright? Do these pants make my bum look big?" and so on. This night, however, he realised the truth of

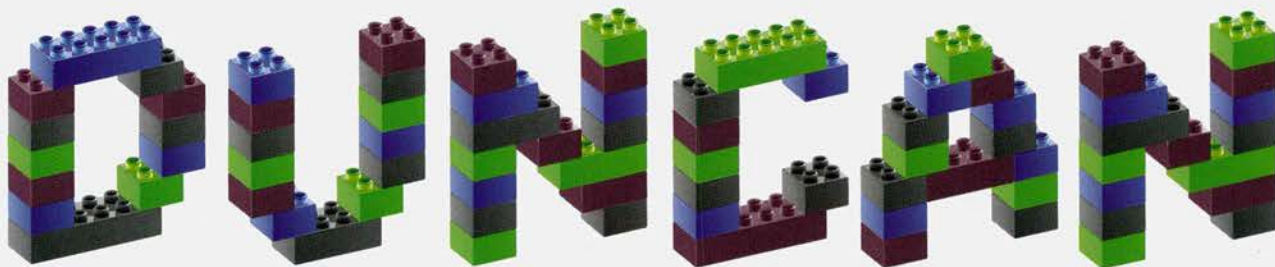
the saying that 'listeners hear no good of themselves', and got an earful of what the band thought about his mix.

"Shit, this guy's hopeless - couldn't mix a bloody cake!"

Things were much better the next time he took the system out with Chris; this time for a small gig down at Phillip Island at the Isle Of Wight hotel.

The night was going well, the joint was jumpin', the band was jumpin' too, and probably jumpin' just a bit too much, because all of a sudden the music stopped and the band disappeared! The stage imploded - the industry standard' cheap stage made from thin sheets of old chipboard on milk crates finally disintegrating, with the band all collapsing towards each other in the centre!

"Just try luck," moaned Jim. "It was all sounding pretty good, too - who'd have thought the stage would disappear!" This was perhaps too hard an act to follow. It was getting towards the end of the gig anyway, and the general consensus was that the stage was too far gone to have any hope of being resurrected, so everyone called it a night and went home.



# FRY



## Couldn't mix a cake

Stories from the front line

© 2011 Duncan Fry

**W**hat does a good mix sound like? Well, for a start, don't ask the band – they will happily tell you it sounds good even with the Front of House system turned off!

During a break on a gig in Deniliquin (Denni to the locals) my sometime assistant Chris and I retired to the luxury of the Crew accommodation (two bunks, plus furniture painted on the walls) for a quiet drink away from the crowd and cigarette smoke. It's quite possible in hindsight that time may have slipped away somewhat as we sat back on the bottom bunk, sipping on a Jack Daniels or three, with the disco blaring in the background.

One of the songs sounded vaguely familiar.

"Isn't that one of the songs the band plays?" I asked.

"Yeah, but it sounds like shit though," he replied. "What's that stupid DJ doing, playing one of their songs? After all, he's got their song list in front of him."

Indeed, this was true. One of the most important jobs at a cover band gig was to give the DJ a copy of the band's song list, so that he wouldn't play any of the same songs the band did. To transgress this unwritten law was just not the done thing, and in cases where it had been done, the DJ had often ended up packed into a road case and pushed down some stairs!

I settled back and sipped some more.

"Hey, this is another of the band's songs," exclaimed Chris as the next tune drifted in to us. "What's going on here?"

Realisation suddenly hit me like an ice pick in the forehead.

"Holy crap, that's not the disco...that's the bloody band playing!"  
"Shit a brick" yells Chris, and we hurtled out

the master faders, so the sound gradually increased, until within a minute it was back up to normal ear bleeding levels again.

I changed from kneeling down behind the desk to being hunched over it, and the band continued on their merry way. They never said a word about it, either then or later!

That's a fairly drastic example, I know, but the thing is, at most gigs, all the band can hear is themselves and the monitors, and

*"SO TO PASS THE TIME IN BETWEEN SONGS, as we all like to do, Jim would pop the headphones on and listen in on the PFL to the band. You could always hear interesting little snippets of band conversation, like "Mind my pedals, you great dick-head!" or "What happened to the last chorus, fat-arse?"*

of the room, down the corridor, and stood in the doorway of the main lounge, out of sight of the band. Sure enough, there they were, singing and playing their hearts out on stage, with only the thin sound of the actual instruments and a bit of vocal splash from the monitors. It sounded really bad – no wonder we thought it was the disco!

Chris and I crouched down on our knees and sneaked across behind the crowd to the mixing desk. Very slowly, and still kneeling down, I s-l-o-w-l-y pushed the levels on

maybe a bit of slap from the back wall if it's a fairly large place.

So when they come up to you in a break and ask "How's it sound out front?" you can tell them whatever you like. My suggestion is that you tell them it sounds really great, especially if you want to get paid, anyway!

Of course, if the system feeds back all night and the band can see the audience screaming "Make it stop" with their fingers in their

# This is a Power Play.

What do you get when you combine the best music video content with premium DJ software and Pioneer CDJs?

## Nightlife's DJPro!

After extensive R&D, Nightlife has just released the latest version of our DJ platform - now with full CDJ integration.

DJs now have the same level of creative control over the visual - not just audio. DJPro comes preloaded with Nightlife's licensed music video library along with a full range of the latest radio and alternate mixes.

...Nightlife also integrates with wireless devices, POS & AV control systems and smartphones. Things have never been so 'hands-on'!

Call us to talk about a solution that best suits your client.



Call us today!  
1800 679 748

FOR MORE INFO:  
[www.nightlife.com.au](http://www.nightlife.com.au)



Bring your venue to life!

ROBIN<sup>®</sup> MMX Spot

# TIME FOR A NEW VISION

DEMO STOCK  
AVAILABLE NOW!

CALL 1300 ULA GROUP

- ✓ Extremely bright  
- Excels 1200W fixtures
- ✓ **MMX Spot Touring**  
> 190,000 LUX @ 5m distance
- ✓ **MMX Spot Theatre**  
> 100,000 LUX @ 5m distance
- ✓ Innovative dual graphic wheel
- ✓ 2 rotating gobo wheels  
+ 5-facet rotating prism
- ✓ Amazing zoom range 8.5° - 46°
- ✓ Remote hot-spot control
- ✓ Weighs only 25.3 Kg



BRISBANE | SYDNEY | MELBOURNE

EMAIL [sales@ulagroup.com](mailto:sales@ulagroup.com)

FREE CALL 1300 ULA GROUP | 1300 852 476

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

**ROBE**<sup>®</sup>

[www.robe.cz](http://www.robe.cz)