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FP2600 – 2 x 840W at 4 ohms, 8kg



FP340C – 2 x 1500W at 4 ohms, 10kg



FP640C – 2 x 2300W at 4 ohms, 10kg

Lab.Gruppen are based in Sweden and have been manufacturing touring grade switchmode power amplifiers since 1987. They are one of the leading brands in Europe and have recently expanded distribution to include Australia and the USA. The flagship of the range, the FP640C, delivers 2300W per channel into 4 ohms and an incredible 3200W per channel into 2 ohms. It weighs only 10kg, is 2RU in height and only 347mm deep.

While the power to weight ratio is an important feature, it is the sonic quality of Lab.Gruppen that has seen many users change from both conventional amplifiers and other brands of switchmodes to the Lab.Gruppen FP series. Here are just some of the local production companies who are now using Lab.Gruppen.



Narwest Productions (Sydney & Brisbane)



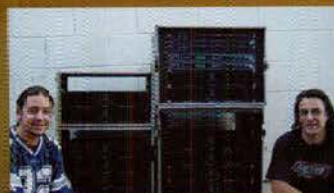
Brisbane Sound (Brisbane)



Oceania Audio (Melbourne)



Staging Connections (Brisbane)



Bump Productions (Sydney)



Totally Sound (Bunbury)



Lake Audio (Newcastle)



Megavision (Perth)

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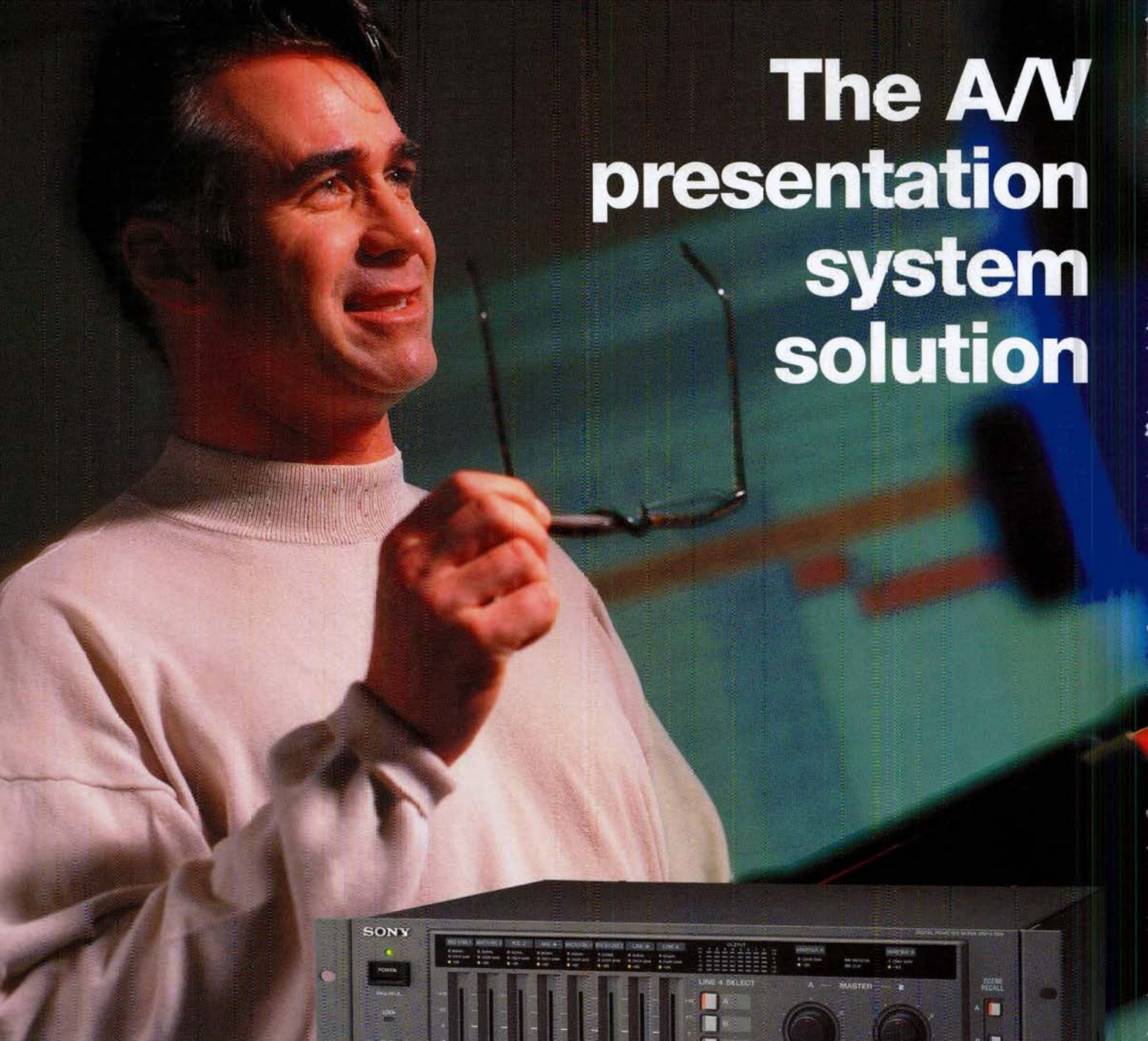
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# CX

the lifestyle magazine  
for technicians!

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your contact details, with  
the email subject marked  
'write to London'.

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## THE YEAR GONE

Learning from what happened helps in future

### BUMPER NEWS PAGES!

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Doughty's new Slimline Quick Triggers  
Imation Disc Stacker  
Five Sy80's  
Interactive Technologies  
ARX debut MicroMedia speakers  
Bruce Brown & David Jellings  
depart AM to form 'Mental Media'  
Skunkworks solving flat world problems  
Fibre Education Tour  
Juliusmedia open campus  
Jands go solo with Clearcom  
Shure do dual channel feedback finder  
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Meyer Sound Awarded Patent  
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A great launch for the GX. So what is it?

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FROM THE PEOPLE WHO ONCE PUBLISHED CONNECTIONS MAGAZINE  
#6. JANUARY/FEBRUARY 2004



## The year gone, and the crew ahead

Usually a look at what's just happened helps to define the near future.

'03 was the year our industry learned a few new tricks, and taught some too. The consumer got even fussier about great sound and vision, and that really helps the entertainment technology industry.

The big issues we face are cables and cost.

Equipment is getting slightly cheaper. Prices for consumer goods are actually deflating, due almost entirely to the rise of China as the major world electronics supplier. Mates who visit there often are agog at the development and increase in ability in Chinese manufacturing. "They can make anything, but the one thing they don't have is (their own) brands", says one.

The challenge now is to add value by integrating, installing or setting it all up a little quicker and with less cable. We still sometimes need to run a fistful of cable to a multi-input data projector, and we still mainly use analogue audio multicores. When will lighting data run through power cables or go wireless?

The good news is there will always be a professional technician, installer, engineer and operator, no matter how much cheaper the core technology becomes.

There's no way that everyone's technology will interconnect out of the box without commissioning hassles. There's also fat chance that someone without formal skills can walk up to an automated control surface and make great sound or vision.

On that topic, watch for a debate about who owns the intellectual property of a show design programmed into a console. According to some legal opinions, international copyright laws generally vest a proprietary right with the designer, even though they are paid to create the work.

Precedent? Graphic designers, photographers, and CX writers like Duncan Fry hold copyright over their work, after CX has purchased it for a specific single use in these pages and on CX Web. This opens the door to some interesting battles ahead for a show designer – and some employment contracts coming out the USA now fillet out the rights in favour of the producer.

The issue for you is that your nightly job, operating a console and realising your design, might be done by a lower paid operator, with your settings recalled scene by scene. It already happens in musical

theatre, where a designer is usually paid a royalty on future use of the design.

### NEW CREW- WHAT WE SAY

We get asked about the industry a lot these days, because our other line of business is training young people at Juliusmedia college. Parents who are about to dish out thousands of dollars for a Certificate or Diploma course are usually pretty inquisitive. They ask about the size of the industry, and prospects. This is what we say.....

"The global market for professional audio is worth one sixth of the market for potato crisps. Professional vision, and lighting, about the same. There are few corporate jets in our industry". To which some go: "Well, young Amanda can get a career elsewhere!"

We counter that with the almost sensational news that people enter our industry and then tend to stay. Like the Hotel California: you can check out, but you can never leave. I ask people to consider any other technology industry they care to name – practically every industry has a career churn rate many multiples higher than entertainment technology.

We talk in class about what inspires people in the industry. Visiting designers, technicians and engineers take the trainee's questions. Invariably motivation and lifestyle are up near the top. Pay scales are less often discussed, but we can point to the top level of the industry where the touring pay sits at two and a half grand a week.

Here's some excerpts of what recent trainee's heard from industry visitors:

"I love the industry. I love the camaraderie, the passion, the pressure to get things done properly and on time. And afterwards I love the party."

"This is the kind of job where if you are good with time, have energy, keep healthy and treat people properly, the world is your oyster".

"I'm a little bit of a celebrity voyeur, I let them do their gig without hassling them of course, but I love seeing their world and being steadily employed on the fringes of it. I like going to the social events, weddings, parties, releases. I like dating dancers, actors and models! But I'm very glad I'm not in their shoes".

Best of all, the industry is full of people with a sense of humour and a terrific work ethic. That's what we tell our prospects!

### THE WRONG STUFF

Last issue's spray at the hard and hot heads in show business management produced a few comments worth printing:

"Julius, you have a chip on your shoulder just because you didn't get along with (record company) executives like me. I remember you, at the Manzil Room, unreasonably refusing to work with us to support the band."

Or this:

"Not everyone is as bad as you portray. I know some great family oriented, even Christian artist managers who treat people really well. Don't lower the expectation, because that could become a self fulfilling prophecy".

The first writer, known widely as The Angry Ant, refers to me twenty years ago refusing to drive an hour each way to mix his band at weekend support gigs for \$30, while leaving my truck full of production (for which I charged \$500 a night at the time), parked idle outside. Unreasonable?

The second writer is completely correct.

### WRITERS WANTED!

Also last issue we introduced our 'Write Your Way To London' competition, with the opening entry from John Pailthorpe (CX5, page 89).

Poor John copped a hiding from readers in regards his wrong date for the draft - it ended in 1972, not 1975.

This issue we carry a worthy entry from Vicki Jansen - My Life In The Dome.

Readers, please keep them coming, CX is very receptive of new writers and material. Email: mail@juliusmedia.com

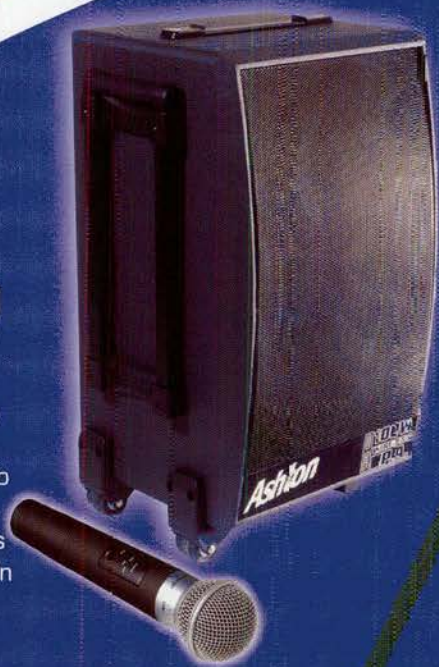
# Ashton

Designed in Australia

## Ashton WPA100

With wireless mic, CD player and tape deck, the WPA100 is great for anyone who needs portable sound. For a slick production, use voice priority to automatically override the CD. The rechargeable battery gives you 8 hours normal use. Plug in to power and recharge whilst using if required.

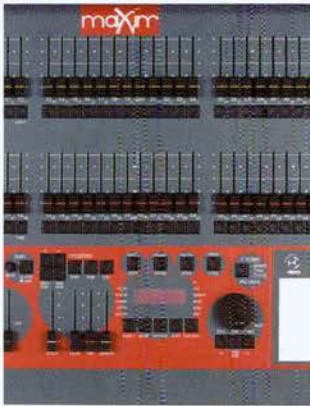
RRP \$1,495



### SPECIFICATIONS

- |                         |                              |
|-------------------------|------------------------------|
| - 100 Watts             | - Echo                       |
| - CD Player             | - Built-in battery & charger |
| - Tape Deck             | - Battery mains or DC power  |
| - Wireless Mic          | - Voice priority             |
| - 2 input channels jack |                              |
| - XLR input             |                              |

# WIRELESS PA



## LSC's maXim wins hearts

LSC's Australian produced maXim lighting control desks have achieved some notable sales.

Rohan Thornton, Head of Lighting at GTV9 Television in Melbourne, commented: "I was just blown away. The maXim filled the bill superbly, plenty of faders, the ability to record so many looks and grab them on the fly, the quick access to create effects with moving lights, the access to palettes and presets and the ease to overlay them on scenes is really incredible! It's as simple or as complex as it needs to be. The console novice can work one fader one light, through to a few moving lights and a lot of dimmer channels. Its' extreme versatility is one of its' great features."

Ian Anderson, Head of Lighting at Hillsong Church's new state-of-the-art 3,500 seat concert auditorium, stated: "We use a top end console for our main lighting desk, but I needed a smaller desk with similar features for portable use around the many venues we have. The maXim was an intuitive platform that gave us many of the top end features we were used to, but at an incredibly affordable price. We had looked at many alternatives, but LSC made our decision easy."

Clint Dulieu, owner of Fute Magic Productions, commented: "I was originally looking for a conventional desk with lots of faders, when I

came across the maXim. It provided me with everything I was looking for, AND with the PaTPad moving light module fitted, I was gob-smacked at how powerful the total package had become. I purchased the largest model and with direct access to 90 playbacks, it has proven to be a great console for my "on the fly" type shows".

The maXim is now being shipped to more than 42 countries worldwide and the range extends from small well-featured 24 fader desks, up to 120 fader/60 fixture control desks.

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

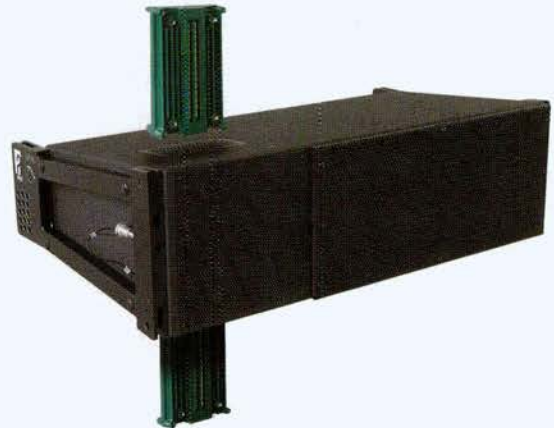
## Alcons intro "The Ribbon"

After extensive beta-testing over the last months and the presentation of The Ribbon line-array on the PLASA show in London, Alcons Audio is now shipping the first product of its L-series product range, the LR16.

The LR16 is an active 2-way line-source loudspeaker system, to be used in vertical arrays, either in stacked or flown configuration. The compact and flexible design makes it suited for small to medium-sized applications. With a maximum SPL of 135dB per unit, the LR16 is also suitable for larger applications, when used in extended arrays.

The L-series has been designed with a total system approach (speakers, amplifiers, processing and logistics) with the main design goal being creating a versatile system, that would make a sensible investment for also smaller rental companies. The Ribbon system can be scaled from (part of) a large-scale long-throw arena system to an ultra-compact single cabinet system, by changing 4 bolts of the unique revolvable wave-guide.

For HF reproduction, the LR16 is loaded with the Alcons RBN601 ribbon driver, which they call the worlds most



powerful ribbon driver.

Besides the ribbon's all-natural cylindrical (Isophasic) wavefront, its transient response caters for a superb intelligibility and throw with unprecedented gain-before-feedback. The 1000W peak power handling offers real digital dynamics, without any strain or threshold.

Mounted on the "Morpher" wave-guide, a frontal radiation of as high as 95% is reached, offering even and "spike-less" dispersion with seamless coverage.

The frequencies below 1200Hz are taken care of by two low-power compression 8" mid-bass drivers, making the system real full-range in most applications with its lowest usable frequency being 55Hz.

Essential part of a line-array is the flying system, both in easy handling as well as aiming accuracy. The integrated "heavy-duty" flying system doesn't have any separate/ loose parts and is certified to an unusual high safety-rating of 14:1 (12units). With the two-side usable bumper, the system can easily be ground stacked. The Alcons Ribbon Calculator (ARC) software calculates positions in 15 steps of 0.7 degrees.

For full system performance, the LR16 should be used in combination with an ALC2 or ALC4 amplifier/controller. Driven by the ALC, the LR16

delivers maximum sound quality with inaudible (power and excursion) protection, by means of SDP processing modules.

A complete "the Ribbon" line-array system consists of LR16 cabinets, ALC controller-amps in racks, flying hardware, aiming software and dedicated transport cases as integral part of the system logistics.

- [www.alconsaudio.com](http://www.alconsaudio.com)

## Brad Schiller's new LX Programming Book

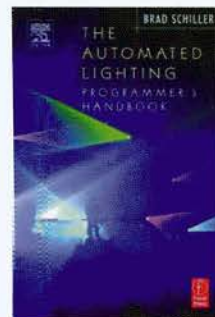
Brad Schiller is pleased to announce the release of a new book titled The Automated Lighting Programmer's Handbook. Schiller teamed with Focal Press to publish and distribute his manuscript.

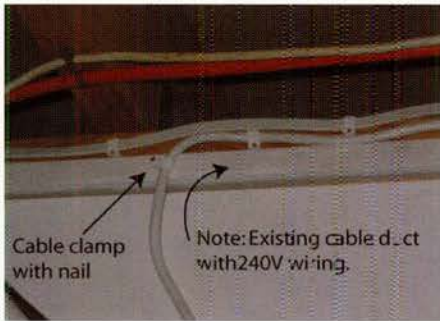
The Automated Lighting Programmer's Handbook explains in detail concepts and procedures regularly used by professional automated lighting programmers.

The Automated Lighting Programmer's Handbook is a guide strictly based on the process of programming, which is essentially the same

regardless of the fixture and console types.

- The book can be purchased at most on-line book retailers including: [www.focalpress.com](http://www.focalpress.com) [www.plsnbookshelf.com](http://www.plsnbookshelf.com) and of course [www.amazon.com](http://www.amazon.com)





### Safety? Yeah right....

Joakim Odlander writes from GoboTech Pty Ltd in Qld....

Here's a picture showing the installation of our new Air Conditioning system.

The AC company commissioned an Electrician to install the electricals and after they had all left I took this photo.

An Email to the company with the photo resulted in the electrician calling and saying he would not be that stupid. . He actually came in and had a look before stating that he didn't do it!

The AC guys then called and said they didn't have those clips and couldn't have done it.... I pointed out that if No one did it then there was a danger of No one doing it again.

The nail goes 13mm into the duct grazing the single power cable. 20cm to the right and the duct is packed with cables!

In this age of O&S stating that the lead to my new computer has to be inspected and tagged every 6months by an electrician such as this, I think that the test and tag hysteria is a false sense of security that penalises serious operators by adding to costs and administration without adding to meaningful safety.

Sure we should inspect our equipment to ensure that we are working safely but has this regular tagging of new items and items that are not moved around our office truly increased anyone's safety?

I have left the nail in place as a bit of a memento.

### Five Sy80's

Birmingham (UK) based SSE Hire Limited has ordered five InnovaSON Sy80 digital live consoles to supplement its extensive digital console inventory. SSE has been using

InnovaSON Sensory series consoles for over two years for prestigious clients such as David Gray, UB40, BBC Top of the Pops, Stereophonics, Massive Attack, Faithless, Sting and many more.

SSE Technical Director Chris Beale: "SSE already has eleven InnovaSON consoles in hire stock and they have become the most popular product we own. It's because we rarely have a console available without forward booking that we are expanding our inventory. The key to owning and hiring digital consoles is to ensure that they are versatile enough to cover the majority of the tasks demanded of them with a minimum of hardware re-configuration. The Sy80 achieves this goal very effectively and the control surface easily adapts to different applications, being as good at front of house as it is on monitors and equally effective in theatre or broadcast."

### Wireless Boundary Mic

Designed for any application where visible cable networks

are undesirable, the new Shure Microflex MX692/C boundary microphone provides systems integrators with wireless freedom and reliable performance. Frequency-agile with over 100 selectable channels via its own integrated UC wireless transmitter, the low-profile mic is easy to setup, and requires no drilling to install, thereby eliminating the need to bore a hole through any mounting surface.

The MX692/C is outfitted with a touch-sensitive logic switch which can be programmed for push-to-talk, push-to-mute, or toggle operation.

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

### Doughty's new Slimline Quick Triggers

The design of the Slimline Quick Trigger clamp (cute pic below!) gives a high degree of safety by allowing one person to hang heavy luminaires and scanners on any size tube from 40mm to 51mm.

The jaws are spring loaded to stay open leaving both hands free to lift and position the load, the weight of the object being hung then becomes its own safety factor by automatically closing the clamp.

This feature allows the luminaires to be easily positioned and then securely 'locked off' using the large Tee handle.

• [www.cdaust.com.au](http://www.cdaust.com.au)



### Imation Disc Stacker

Disc Stakka is an automated carousel that stores, protects and retrieves discs, including data CDs, DVDs, music and game discs.

The unit holds up to one hundred 12 cm discs and is linked to a PC or Mac computer via a single USB connection supplying both power and data. Units can be stacked up to five high to create a tower that holds 500 discs without needing additional cables or desk space.

The bundled OpdiTracker software can find and eject any disc within seconds — there's no need to remember where the disc was stored.

Priced at just A\$199, it is affordable. Productivity savings alone over the course of a year could more than recoup this investment.

Larger businesses can expand the system further by creating more than 100 towers that can be linked via powered USB hubs to store, manage and protect over 50,000 discs all from the one computer.

It has been designed and manufactured in Australia and comes with the OpdiTracker database and search engine. When a new data disc is inserted into the computer's CD or DVD drive, OpdiTracker automatically recognises it and gives users the option to add its name and capture its contents in the database. It can then be stored safely in the Disc Stakka for immediate retrieval at any time. Users can search OpdiTracker's database of stored discs by title.

• [www.imation.com.au](http://www.imation.com.au)



## Interactive Technologies

Coemar De Sisti Australia is now a distributor for Interactive Technologies, who manufacture several families of professional stage lighting control products and accessories. The following units outline their basic product families:

**Figment DMX:** a handheld DMX control solution to bridge the gap between handheld DMX test equipment and full-sized desktop consoles. It's a software application that runs on the Palm OS platform.

**Radio DMX:** DMX data distribution. Using RadioDMX, lighting control networks can be transmitted through the air, allowing the operation of lighting instruments in locations where running conventional DMX data cables may be impractical

**Sidewinder II & Sidewinder XR II:** Sidewinder DMX is a portable DMX processor with the power of a console built into an ultra-miniature package.

**MicroTech DMX:** The MicroTech is loaded with features needed to solve tricky DMX problems that occur with digital dimmers, moving lights, colour scrollers and virtually anything else that uses DMX.

**Cue Touch (below):** a universal, networkable LCD touch screen for controlling lighting and other multimedia systems.

• [www.cdaust.com.au](http://www.cdaust.com.au)



## ARX debut MicroMedia speakers

Intended for the Installation and AV markets the new MM 1 (pictured, right) from ARX is a two way speaker in a compact package.

Under its contoured steel mesh front lies an ARX Pro Series 8" (205 mm) Low frequency driver, and a 1" (25mm) Mid/High compression driver. This is coupled to a 80' x 60' flat front radial horn flare. Rated frequency response of 60Hz-20KHz at +/-5 dB, and it expects a recommended minimum amplifier power of 125 watts RMS.

The MM1 is designed to be used with ARXs MicroDrive 3ch Power Amplifier Processor or the ARX Pro-Sys multi channel loudspeaker control unit which supplies EQ trim, phase correction, sub crossover, and loudspeaker component protection.

• [www.trc.com.au](http://www.trc.com.au)

## Bruce Brown & David Jellings depart AM to form 'Mental Media'

Bruce Brown and David (DJ) Jellings, two of the Australian industry's most respected talents have announced the formation of Mental Media, their new transdisciplinary mixed-media design, production and management consultancy.

Whilst many may consider David and Bruce's departure from Audience Motivation insane after such an

extended association David Jellings

points out that he and Bruce will maintain links with AM as one of Mental Media's rapidly expanding client base of museums, galleries, exhibit designers and architects.



In addition David and Bruce will retain and develop their acknowledged position in the MICE and events industries, providing transdisciplinary services to PCO's and corporate clients both here and overseas.

Their name suggests they may well be mad,

however Mental Media is a deliberate double entendre drawn from the balance between information and entertainment. The name also reflects David and Bruce's belief, that thinking and having fun are not mutually exclusive activities.

• [info@mentalmedia.com.au](mailto:info@mentalmedia.com.au)

## Skunkworks solving flat world problems

Strangely named A/V specialist, Skunkworks, has created considerable excitement amongst retailers with a new and affordable range of brackets and mounting arms for LCD flat screens.

Low-priced, attractive and highly durable, the new arms are solving a myriad of commercial and domestic mounting problems.

With a starting price of just \$50, compared to its nearest Australian competitor, which clocks in at close to the \$150 mark, the brackets are constructed of durable steel and finished in a matt coating of black, grey or silver.

The range accommodates every variety of flat screen - from TV to PC monitors - via the industry standard VESA mount. Each model accommo-

dates both 75 x 75cm and 100 x 100cm screen mounts.

Skunkworks is fast becoming known for its simple solutions that solve sophisticated technology problems.

Defined in the dictionary as "a group of people, who in order to achieve results, work on a project in a way that is outside the usual rules", the Aussie innovators provide all manner of installation and integration solutions for AV and IT problems as well as home theatres and professional applications.

Their range includes items like unusual cables and adaptors and the team scour the globe for new products to solve problems that people approach them with.

• [www.skunkworks.com.au](http://www.skunkworks.com.au)

## Fibre Education Tour

In late February 2004, Image Design Technology P/L (IDT) and Communication Specialties Inc USA are conducting a national technology education tour called "Fiber-Ed.com".

The Fiber-Ed.com tour will introduce and discuss the topic of Fiber Optic products and solutions within the Audio Visual installation industry and market place.

The classes will be conducted by Mr. John Lapinto, faculty member of the ICIA Academy (International Communications Industries Association Inc or better known as InfoComm) and CEO of Communication Specialties.

Mr. Lapinto will cover a range of interesting topics on the subject of Fiber Optics over a four-hour seminar.

The tour dates are as follows:

- Feb 23 Perth WA
- Feb 25 Brisbane QLD
- Feb 26 Melbourne VIC
- Feb 27 Sydney NSW

Info from [www.fiber-ed.com](http://www.fiber-ed.com) or [www.idt.com.au](http://www.idt.com.au)

# Forget evolution. KV2's ES Series™ is a superior new species.

When you can get the jaws of veteran sound company owners to drop, you figure you're doing something right.

That's what's been happening when we demo our ES Series™ Active Driven Speaker system.

Actually first we get snickers. The skeptical sound company staff watches us wheel in these laughably small boxes (the stack shown at left is **under four feet tall!**).

Then we fire it up and the disbelief starts. *How can that much performance be delivered by such a compact system?* Especially one priced significantly less than some companies charge for passive speakers.

## A different approach.

All of the ES Series electronics and amplification is housed in a separate, matching, roadable unit called the **EPAK™ 2500**: four task-specific power amplifiers with both passive and active cooling. Electronic crossover. Time correction, equalization, speaker protection, level controls and a unique bass management circuit that lets you control bass extension and attack.

Got that? It's an active system but the electronics don't add to the weight of the speaker boxes. Or risk having to be serviced after you've just flown them twenty feet over the stage.



And of course each ES Series component is bristling with fly-points.

## It really does sound better.

Those who have heard ES in action tell us it has astonishing dynamic range, wide dispersion and consistent clarity at any volume level. Especially considering the small footprint of an ES stack. Or as one European reviewer put it, *"The best sound system in a night club I've ever heard."*

## A new company. But with a pedigree.

We may be new but our track record is well-established. George Krampera, (the K in KV2) has been responsible for cutting edge transducer, electronics and speaker designs used worldwide by well-known pro audio manufacturers and dealers.

He packed every bit of that experience into the ES Series. New transducer designs. High-efficiency acoustic designs. Different amplifier topologies for high and low frequency transducers. New handle designs and special "slippery feet" for easy positioning on stage and a passion for creating systems that truly do raise the bar.

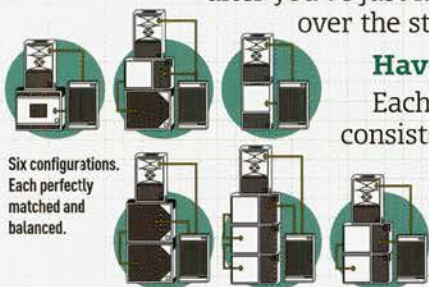
## Call now to arrange an immediate demo in your venue.

Hearing is believing. Especially for the typically cynical readers of CX magazine. Call us – or at least visit the KV2 web site ([www.kv2audio.com](http://www.kv2audio.com)) and download some spec sheets. We think you'll agree we really have bred a better species of small venue sound system.

## Have it your way.

Each ES Series system consists of an **ES 1.0** Mid/High box<sup>1</sup>, an EPAK 2500 and your choice of six different subwoofer combinations via the **ES 1.5**, **ES 2.5** and **ES 1.8** modules<sup>2</sup>.

You can rotate the ES 1.0 horn to run the system in either a horizontal or vertical stack.



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**Australian Audio**  
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<sup>1</sup> Actually, it's a 3-way, 1-inch compression driver, 6-inch midrange and 12-inch mid-bass, each driven by its own amplifier located in the EPAK 2500. <sup>2</sup> Single 15-inch, Dual 15-inch and single 18-inch. Mix and match 'em. Collect all three! © 2003 KV2 Audio. All Rights Reserved.

## Juliusmedia open campus

Juliusmedia college will open a dedicated training facility in March, at Rydalmere near Sydney's geographic centre.

The premises are the venue for all Sydney based Certificate and Diploma courses run by the firm (who publish CX).

Juliusmedia obtained registration as a training organisation in 2003, allowing delivery of nationally recognised and endorsed courses from the new Entertainment Industry Training Package.

The firm had planned to offer courses wholly at the nearby Parramatta Riverside Theatres, which themselves enjoyed a \$1.8 million refit across the past year. But Riverside have enjoyed a surge in bookings, and at the same time Juliusmedia courses have filled ahead of target.

Courses will be delivered at the facility, with practicals held at Riverside and other venues. By way of example, the end of Summer School show practical was to be held at Trinity Grammar School auditorium at presstime.

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

## Jands go solo with Clearcom

In the past the Clear-Com agency for Australia has been shared between Jands and Digital Arena Pty Ltd, the latter organisation addressing the Broadcast Market.

Clear-Com have recently appointed Jands as the single Agent for all Clear-Com Products across Australia.

## Shure do dual channel feedback finder

Shure Incorporated has introduced the new DFR22 Audio Processor, a 2-in, 2-out DSP product with Shure's automatic digital feedback reduction algorithm (DFR).

Primarily designed for the sound contracting market, the DFR22 also includes modules for equalization, dynamics processing, delay, and matrix mixing and is easily configured through a Windows interface.

"The DFR22 will give current users of our DFR11EQ and P4800 the best of both products in a new form factor said Bob Rieder of Shure.

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



## Metropolis Audio upgrade

One of Melbourne's most notable and respected recording studios for over 30 years, Metropolis Audio, has undertaken some major installations to their professional facilities

They've added more G5 Macintosh computers with Pro Tools (OS 10) HD Accel operating systems, making a total of four Pro Tools suites available for production.

The New HD systems allow the ability to record at Higher Sampling Rates (Up to 192K) with 3 HD Accel cards in each new system, a high rate of DSP power is achieved (equivalent to 10 TDM mix cards).

In response to the demands of major events, the Metropolis Outside Broadcast facility is also under going a major facelift.

Metropolis Director Ern Rose is a deadset Aussie audio legend, according to us here at CX magazine.

The re-vamp will enable the OB truck to comfortably house up to three large consoles plus various outboard gear & machinery, enough grunt for any audio project and eliminating the space issues of some past event set-ups. "We see this as a real alternative to the labour intensive build ups, typically used in such large events" says Ern Rose.

Ern is pictured (top) with Studio Manager Nikki Jones (front) & Kim Reithart (left).

• [www.metropolisaudio.com.au](http://www.metropolisaudio.com.au)

## 2004: a Year of Digital Interference?

John Penhallcv writes:

This is a "must read" for all users of VHF Wireless Micro Systems in the following frequencies in the Ch.9A band: 202.4, 202.9, 203.3, 203.7, 203.8 and 204.25MHz in the following TV reception areas: Metropolitan Sydney & Melbourne, Canberra & Hobart, Batemans Bay, Moruya & Bathurst in Country NSW, Mackay and Wide Bay in Queensland and the Upper Murray in Country Victoria.

Following the establishment of DTV services in Hobart (SBS) & Canberra (ABC) in 2001 the output power of these transmitters has gradually been increased so that most users of Ch. 9A Wireless systems in these areas would have noticed the interference and changed over to UHF systems.

In the last few months Bateman's Bay, Moruya on the NSW Southcoast (ABC), the Upper Murray in NE Victoria (ABC), Wide Bay (ABC) and Mackay (7) on the Central Queensland coast have all started transmitting and Bathurst, NSW is scheduled to start DTV transmissions for Channel 10 (ten) in the March to June 2004 period.

To test for DTV interference just turn the TX system on and stand next to the receiver then start counting your steps as you walk away from it and if the RF lights on the receiver

Exceeding Demand! Sydney's Riverside Theatre has boomed since a \$1.8 million upgrade recently. Pictured is Riverside Director Robert Love, with Pro Stage Australia's Kelvin Harman; Sean Clarke and Col Peet (Riverside Production Dept). Pro Stage's seating system at Riverside, lifted venue capacity 25%



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start to fall away from full strength and the sound suddenly disappear after about 15 steps from the antennas, like someone threw a heavy blanket over your head - then you are affected by the Digital Transmissions from the legal owner of the bandwidth in your area.

It is now your responsibility to replace that system with a UHF one that won't conflict with any TV transmissions - your sound system supplier should be able to guide you to a suitable alternative.

Meanwhile, Sydney may well be experiencing interference from the DRB trials by the time this article is published. Commercial Radio Australia (CRA) have been given permission by the Government to commence trials of their Digital Radio System on the Channel 9A bandwidth that ultimately can provide 15 to 20 radio stations with text & pictures.

While there are no guarantees that CRA will ultimately want to buy or be offered the spectrum from the government, the 18 months of free trial time could well cause such annoying interference to many VHF wireless mic users in Sydney that it won't be worthwhile keeping your systems going so the switch to UHF has to happen and be budgeted for in the next 12 months or as soon as interference is received.

Likewise in Melbourne, DRB tests are scheduled to commence soon but no firm date has been publicised at the time of writing so as they say it won't happen overnight but it will happen!

For further information and advice call John Penhallow of Aerobic Microphones Australia +61 2 9313 4995 or email: john@aeromic.com.au

## Massive images

These 90m x 13m images were created using 4 pigi projectors tiled together each with



different keystone correction determined entirely by CAD simulation.

The task was performed by Peter Milne from The Electric Canvas.  
 • [www.theelectriccanvas.com.au](http://www.theelectriccanvas.com.au)

## New Ethergate

Enttec have just released a hot new product, the DMX Ethergate Mark 2. Here are the main features of the device:

- DMX to Ethernet Conversion, Wireless DMX by combining with wireless Ethernet equipment (not included), DMX Connectors, DMX Outputs can be separate universes, or two of the same universe.

- It can operate as either an input or output (dipswitch selectable); Solderless change from DMX in to DMX out (with optional accessory); Up to 6 Universes of DMX accessible in Plug & Play mode Up to 256 Universes of DMX accessible in Configured mode; and it is ArtNet compatible

• [www.balancedtech.com.au](http://www.balancedtech.com.au)

## Meyer Sound Awarded Patent for M3D/M3D-Sub Rigging System

The United States Patent Office has awarded Meyer Sound its seventeenth US patent, this time for the rigging system used on the M3D line array and M3D-Sub directional subwoofer. The

issuance of a patent recognizes the rigging system's innovations including the CamLink system, which allows splay angles to be changed much more easily than in other rigging systems.

Meyer's rigging system features a rigid design, which offers numerous advantages. For a start, no pullback cable, required by other systems, is necessary. Without pullback cables, cabinet angle adjustments can be accomplished without having to release the array, while the rotating cam at the rear of the frame means that only the front of the cabinet need be adjusted to change the splay angle; no parts need be exchanged.

Rigid mounting also enables arrays to be transported intact, maintaining cabinet splaying, saving truck space, and greatly simplifying and speeding setup.

• [www.meyersound.com](http://www.meyersound.com)

## Coalition of the confused?

The war on terror has moved to the Australian pro audio scene, with the release of a deck of cards detailing the least wanted suspects.

Featuring characters like 'The Leveller' (below), Tony 'Da Bomb' and Simmo The Stringer, the card game is the new buzz. It has various unidentified audio types appearing throughout.

Contact Technical Audio Group for a deck.

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



## ALMA --v- AES

The mission of ALMA, "The International Loudspeaker Association," is to provide a worldwide loudspeaker industry forum for the exchange of technical and business information of practical value, and to develop standards, practices and educational programs on practical subjects related to loudspeakers.

They have just run a Symposium with the theme of "Test & Measurement: What's the Buzz?" which offered a venue to address industry challenges and strategies. We at CX heartily support any effort to expand industry standards and to attempt to introduce better controls over errant marketing claims.

To learn more about ALMA or the Symposium, please refer to [www.alma.org](http://www.alma.org)

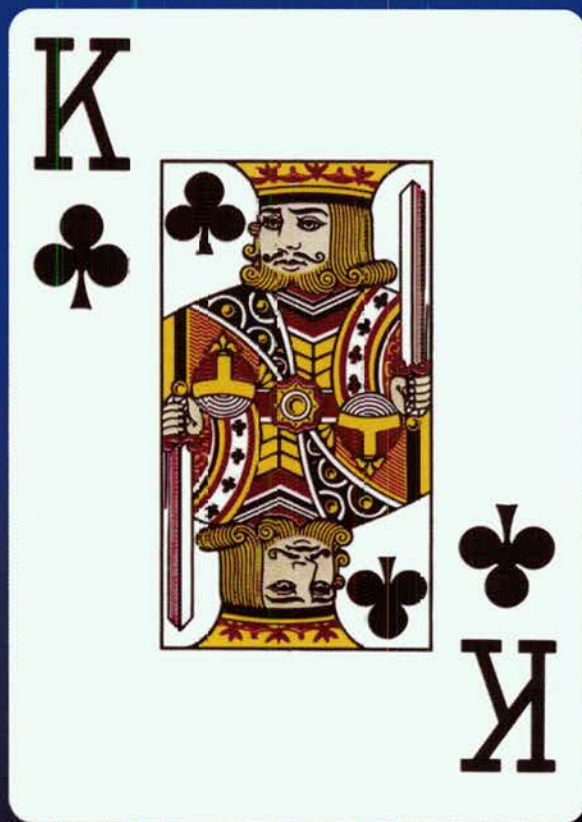
## Bosch launch in Au

Bosch Security Systems are proud to announce the official launch of the Communications Business Unit in Australia and New Zealand. Communications encompasses Public Address and Congress systems.

The first product to be launched is the Plena all-in-one combined background music (BGM) and paging system to satisfy the growing public address requirements of small to medium sized businesses.

The All-in-one is part of the Bosch Plena public address range, which covers applications ranging from simple installations to multizone call systems. It is 'Plug-and-Play' equipment in which most units are simply connected together using a single cable, saving time during installation.

• [www.boschsecurity.com.au](http://www.boschsecurity.com.au)



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## The Rox

Michael Lang's Congo Blue Solutions have completed an installation in the Western Sydney locality of Penrith called The Rox (above).

It has a Martin audio rig with 4 x W3's 2 x S218; 2 x S18's; 4 x F12; 4 x F10 and 6x F8, plus a bunch of moving lights: 8 x Mac 250 Kryptons, 4 Mac 300's, 12 Aliens, Light Jockey; rear project screens and the new Jem 24/7 hazer.

It's a pretty funky looking club, they even gave the dj a processed fold back with sub.

## Walsh for Olympics

Australian event supremo Andrew Walsh has been named Director of Ceremonies for the Athens Olympic Games in 2004.

Mr. Walsh replaces a previous appointment made by Jack Morton Worldwide, who are the Producers of the 2004 Olympic Games Opening and Closing Ceremonies. The Opening Ceremony is on Friday 13th August 2004 – very close in event terms.

Mr. Walsh will now make fast decisions about the script, the segments, the budget and importantly the technical contracts and technical directors for the opening, which will be the largest entertainment event of 2004.

Jack Morton Worldwide are thought to favor technical personnel and vendors from

the UK for the Opening, while Andrew Walsh is obviously comfortable working with Australians who now have the recent successful experience of the 2000 Sydney games and the 2003 Rugby World Cup, for which Mr. Walsh was the creative director.

## Thunderstruck in Perth

Satellite Recording Studio were recently involved in recording some material for the new ACDC movie 'Thunderstruck', with a handful of scenes also shot there. Produced by Jodi Matherson, written by Shaun Angus Hall and directed by Darren Ashton, the movie stars Stephen Curry (The Castle), Sam Worthington (Dirty Deeds) and is to feature guest appearances by the ACDC boys themselves.

It is expected to hit the screens in July 2004.

Satellite have also just completed a major acoustic overhaul with South Australian company Aco Technology overseeing both the analysis and acoustic fitout.

Aco were the initial designers of the facility some 8 years ago. Aco also built two specialised acoustic boxes designed as isolation booths for electric guitars and bass cabinets; along with a vocal booth with sight lines into the recording room.

• [www.satelliterecording.com](http://www.satelliterecording.com)

## Strop finishes Crobar

Sydney based club installer George 'Strop' Stavropoulos has just put the finishing touches to the huge club Crobar in New York. He is pictured at right with one of the speaker stacks.

The venue has 3 rooms with a capacity of around 5000. The sound system was designed by Steve Dash and Strop with both standard JBL boxes and their own custom boxes as well. All amplification is Crown, with processing by BSS and DBX.



players then, with less product choices, good margins for all and believe it or not distributors helped each other!

Syntec have also seen major changes in technology over the past 30 years. The market has moved from reel to reel tape recorders with Dolby SR noise reduction, cartridge machines, to DAT machines, hard drive recorders and CD's.

Syntec has also changed. From a one man company in a back room, to 6 offices and a purpose built warehouse and now with 30 people in Australia and New Zealand.

Having leading agencies such as Bryston, Eventide, Fostex, Manley, Myriad, Neumann, Orban, Rycote, Sennheiser, Tannoy and VDB, they have divided the company into

divisions to meet the individual needs of their HiFi, MI, Contracting and Professional customers.

• [www.syntec.com.au](http://www.syntec.com.au)

## Syntec reaches 30

This year has been a year of birthdays. Neumann have been celebrating their 75th and leading Aussie audio distributor Syntec International reached 30.

Like many businesses Syntec began in a small way. Founder Clive Sloss himself spent 30 years in the business (3XY, 3UZ, Byer Industries, Rola, Simon Gray), then decided to go it alone and started Syntec in the back room of his house in Castle Cove.

18 months later Robert Sloss (Clive's son, pictured right) decided to hang up his ABC sound recording headphones and joined the company.



In those early days they sold many products including Teac/Tascam, Optro, Design 2000 and early in 1973 they took on their first overseas agencies, Orban and Rycote, (both of which they still have).

Other notable brands they represented were Stellavox, Quad, Nexo and BSS. Later they were proud to represent Studer, Revox and SSL Mixing Consoles.

As other suppliers from those early days will tell you, the world has changed since the times of selling direct to Broadcasters, Recording Studios and Government departments. There were fewer

## Yamaha's funny guy

**Y**amaha's new O1X is a lot more than a compact digital mixer, so the firm toured uber musician Bertje Smorenburg around the region to tell people why. The energetic Dutchman did just that, breaking the message in a very effective way – using music and humour. He did eight presentations in five Australian states in six days. Did you know Dutch people can't dance? Bertje said so!

The little O1X appears like an O3D replacement at first blush, but is not. It is both a digital mixer with Yamaha's long lineage – they are the most prominent maker of this category of product – and it also a network device which acts as the front end for your PC audio product.

It supports Logic, Nuendo, Sonar, Cubase and a host of other products, and connects to your PC or laptop by Firewire. It then assumes a personality, channel info and track names appear on the strip above the 8 flying faders, and the mouse is sidelined. You get to use knobs on the O1X to control parameters, and faders to control level. The result is faster useage of your sequencer or recorder software.

Significantly it comes with a plug-in bundle, Bertje's demonstration included the Pitch Fix, an auto tuner that "can make sound like your mother in law on helium!" Subtle is a word that doesn't appear in his dictionary.

Other plug-in's include Final Master, with 3 bands of compressor limiter, a complete channel strip, a Hammond plug-in where you use the knobs on the desk instead of a mouse to control organ sliders, and Studio Manager.

There's even a Delay-Lama plug in, unless that was a Bertje prank, it has an animated, inflated budda style face with a mouth that forms different shapes for different 'ommm' sounds. It's the weirdest plug-in we've seen yet.....

The Firewire cable carries everything – audio, midi and time clock. The device works with Yamaha's MLAN protocol.

There are 2 microphone inputs with phantom power, a bunch of line inputs, and even a guitar input. There are 28 internal channels, and two effectors. The little message strip can even inform and educate, it will advise in sober terms that 'your computer just crashed'.

O1X opens up a host of possibilities, if you



need more mic inputs get a bunch of Pre Sonus preamps and hook them up with MLAN.

The pricepoint in Australia is circa \$4000.

- MOTIF ES7 is a keyboard, more accurately a Music Production Synthesizer which, if purchased in Holland, comes with 1kg of marijuana. That's what Bertje says. Yamaha Amsterdam refuse to reply to my emails seeking clarification.

It is loaded with sounds, Bertje played a bewildering variety of music styles, and constructed some 'on-the-fly'. "It ever has useless stuff, like guitar appegiater" he stressed.

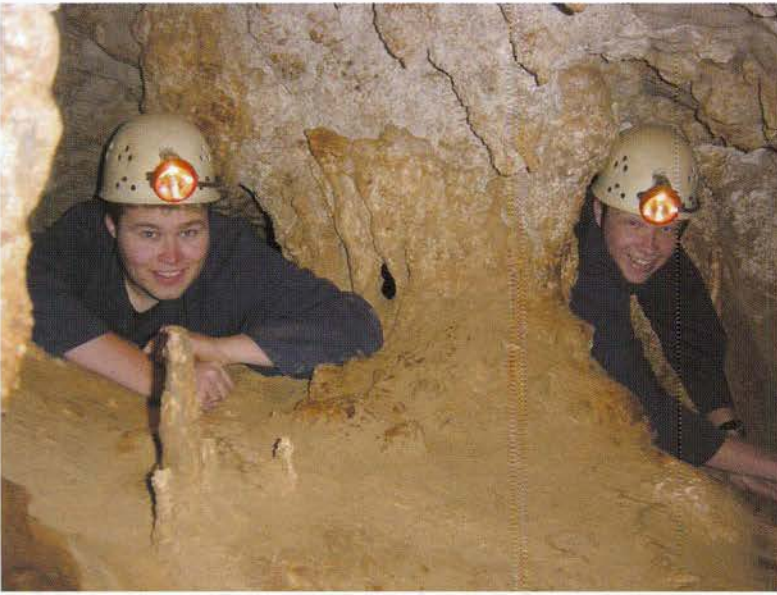
Making a track took just minutes. First he set a metronome then played 4 bars of guitar in a loop, added a funky bass line – with semi-tones and fret noises – then put on a Fender Rhodes. Drums, horns and presto!

MOTIF ES7 also records samples, there was a sultry female voice which Bertje insists was his ex-girlfriend. "You told me I was the only one ..... FOREVER", she sings. "I lied", he quipped "I hate guitar players, and Whitney Houston. And Kenny Gee music playing in elevators. I rip the speaker out!" Talk about connecting with your audience! A very funny guy. If you are a guy, that is

All you need is money, to buy a MOTIF ES7. How much we were not told. "Sell everything in your house! You have Roland gear? Sell it!" The Yamaha guys in the front row are doubled over, and the audience get the message.

Bertje Smorenburg in full flight. We almost bought the keyboard, he was so good!





## Underground gig for Richard and Clint

**R**ichard Neville is a lighting guy who young, but not too silly. He still does shows that are fun, where money isn't the complete objective. One he really enjoys is Carols in Jenolan Caves where Richard and his colleague Clint Dulieu get to practice their caving skills.

"Half the reason we got the gig is we know the place inside out. We love adventure caving!"

The caves are about 3 hours drive west of Sydney at the end of a very windy road which enters The Grand Arch. Traffic drives through, and parks above Caves House, a historical hotel and restaurant facility. The Caves Trust put on Carols inside the Grand Arch one day a year – and it takes some specific organization to do it.

Richard's gig starts at 3am the day prior when he and Clint climb into the van for the long haul over the mountains. Arriving at sun-up, they spend the day rigging lights. The organizers allocate a security guard, as the setup is in the arch, which is a public area for 364 days a year.

Once the sun flops late over the rim of the hills, the programming and patching starts. The guys spend the night doing this, from a Hog 600 and a Maxim console, grabbing some food from the staff kitchen, or dipping into supplies they have brought with them. When fatigue sets in, a road case beckons.

The setup was punctuated by the realization that some youth from some where far away have decided the twisting cave road is now a road racing venue. The startled lighting pair were beavering and programming away at 0200, thinking they and the snoozing guard were the only souls awake within a hundred kilometers, when they heard the first moron coming down the mountain. Seems like a long way to drive for the pleasure of running you - the bro; your skanky ho and your sick hot Commodore off the side of a mountain if you miss a bend, huh?

"It's like the surface of the moon in there", Richard says of the cave, "I can see my footprints from the year before!" Clint and Richard haul, pull,

and struggle the equipment into place, amongst the rock scape and side caves of the arch. "It's an occupational health and safety nightmare", jokes Richard. They actually leave a cache of gells in a rock cavity each year. No one goes there.

Finding power is fun too, and the two available 32 amp three phase supplies define the limitations of the show – which is performed twice, for about 1000 people. One supply is down deep, and involves a wade through an underground creek.

A major consideration is the ecology of the caves. There is a rare cave spider resident there, so the guys need to take great care when removing equipment not to break any webs. By that time the duo are so fatigued after almost 48 hours on site that they lovingly persuaded and enticed a common Huntsman spider out of a moving light, instead of exterminating it.

The lighting brief is to feature the caves, as some audience members have almost a full 360 degree cave vista to see. "Every year my main aim is to make it as immersive as possible. The first time we turn all on, we get a massive wow from the audience, then the pressure is on to keep it up for the 16 items that follow!"

"The lighting plays a major role in the show, it's cool to be let loose".

A creative idea: the guys sit mirrorballs in the rocks with no motors, wedged a metre or two from the movers – "You hit it, you get lots of little stars. I use lots of little tricks, to get as much light out as possible. I zoom out and frost the movers, for a massive wash."

Since it is a cave, and all the outside lights are out, it is completely dark down there, so even the house lights need to be just right.

The show itself, run as a matinee in the afternoon and again at night, is a mixture of a concert retelling of nativity, while it is being acted on stage. Carolers and angels appear through the rocks, shepherds come down through caves. Then there are solo items.

As the road runs in through the arch, which is the venue, the organizers have the ticketing and the arrivals sequenced carefully. Up to 30 busses come in, and then the road is closed for the show. One guy came late, his car headlights came down, security stopped him, and then he wandered off. When the show was done, the road was opened for the people to drive out – and his car was blocking the way. The crew picked it up and moved it out of the way.

"It's completely exhausting. We bumpout, go back to Sydney and spend hour and half with an air compressor, cleaning dust out of the lights. It's a fun gig, that's the reason we do it. There's not as much money as it could be for a December. But it's pretty special to do it, and they are a nice group of people to be with.

• Richard's work can be seen at his company website: [www.rsnlx.com](http://www.rsnlx.com)

# Powderfinger Debuts the Nexo GeoT PA

The big thing in PAs is the line array. Now Nexo have come up with a new concept. How does it work? John Grimshaw investigates.....

**W**hen it comes to high end PA systems, it seems that the average touring artist demands the latest technology to adorn their concerts. Having listened to the PA behind the most recent Powderfinger tour, it is entirely possible that every touring artist and his dog will want to try out the

new Nexo GeoT system.

That certainly is the hope of Bruce Johnston. His company Johnston Audio Services is one of the few PA rental suppliers for the brand. When we caught up with Bruce at the recent Powderfinger concerts in Sydney Entertainment Centre, he was keen to talk about his new system.

Bruce has been involved with big audio for many years, and is one of the 'nice guys' of the industry. He is certainly known as the FOH Engineer for Oasis, which was when his association started with the Nexo brand. It happened in Europe where Nexo is based.

Oasis was touring the area, and Bruce got the opportunity to drive the Alpha system during a series of five Oasis gigs. He said that the sound just got better and better each night as he got used to the system. He was also getting comments from the management like, "Geez, the vocals were clear tonight".

The other things that intrigued Bruce about that original system was that you could fit 16 boxes in a row on the truck, and each one only weighed about 45kg. Back in Australia, Bruce decided to buy an Alpha system.

He has been quite busy ever since with numerous FOH engineers specifying a Nexo system for their events.

The technology and quality behind the speakers that originally brought Bruce into the Nexo brand continued to evolve – and now we have the Nexo GeoT.

This is not really a line array system – though it does look like one. The Nexo website describes this as a Tangent Array system. Where a line array is designed to place the point source of the audio in a single plane, as well as controlling the directivity of the audio, the Tangent Array allows a system engineer to create the effect of a very small single point source for an entire array. This (and some other innovations) has led Nexo to increased intelligibility and a significant reduction in phase distortion.

The Nexo website goes into significant detail as to how this works for those propeller heads out there that want to really



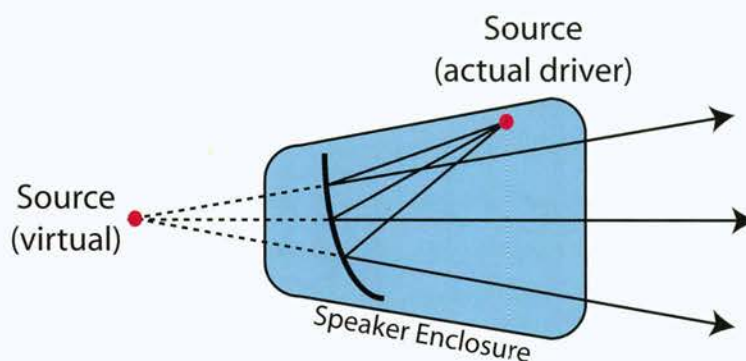
understand the physics of the system ([www.nexo-sa.com](http://www.nexo-sa.com)). For everyone else, pictured on the right is the simple version.

If you imagine your speaker driver as the point source of audio within the speaker cabinet, the acoustic pressure wave (the audio) that is emitted by the driver is aimed at a specially curved hyperbolic reflector. This curve redirects the audio out the front of the enclosure, simulating the "virtual" position of the driver behind the box.

Using this design, as well as their own coupling, directivity, phase control and hypercardioid subwoofers, Nexo was able to create the Geo S system. It was this smaller system that allowed the Wiggles touring audio to go from a Semi-trailer to an 8 ton truck.

The Nexo GeoT is the second generation of this technology – and the improvements are significant for both acoustic response, power output and ease of physical handling/installation. When we visited the Sydney Entertainment Centre at 10am for the Powderfinger bump in, the PA speakers were still cased up (yes, they are small enough to actually need road cases), and being unloaded from the truck. The riggers

## The Hyperbolic Reflector...



had kindly located the required two chain motors per side for FOH PA.

The time was 10:08 and rigging the OP side stack started.....

The top plate is hung on the two chain motors, the speaker cables are taped to the top plate and the first opened road case is wheeled into position.

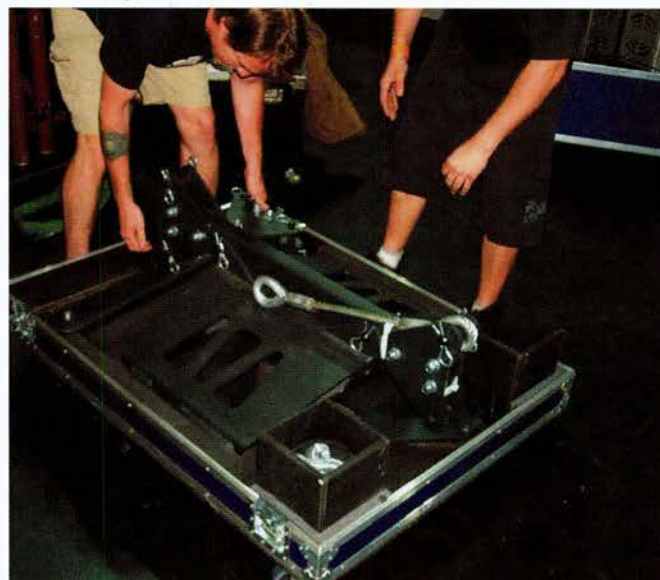
Four locking pins are used to attach the integral rigging plates on the first box to the top plate. Up go the chain motors.

Each subsequent PA box is then wheeled into position, locked in place and lifted out of the road case base by the motors. The final boxes in the array are smaller - to cope with the very short throw, and are set at a much steeper angle on the pre-drilled side plates.

Once all the boxes are in position, the 'kelping bar' is attached. This is used to give the array the perfect required angle to the hang.



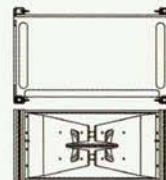
Nexo subs, ready to thump



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In addition to being extraordinarily light, the super-high-strength 6061-T6 aluminum fly bar and rigging system can suspend up to 18 modules at a 10:1 safety rating. All rigging stays within the perimeter of the enclosure and all pieces stay with the enclosures in transit.

## ZERO FRONTAL AREA LOW FREQUENCY SECTION

To keep the horn mouth as large as possible, the LF drivers were moved to the sides of the system. Proper spacing then creates an off-axis null in the horizontal plane, putting more acoustical energy on-axis. The look is different, but performance is significantly better.

## BIG HORNS HAVE NEVER BEEN THIS SMALL

The mid- and high-frequency sections share a horn mouth that fills the entire face of the enclosure. Keeping the horn big lets the KF730 provide unmatched horizontal coverage consistency – an issue only addressed by a horn-loaded design. While line array effects may improve control in the vertical plane it has no effect in the horizontal, where most line arrays suffer significantly.

## INGENIOUS HANDLES

After the system was designed, EAW engineers had no place left to locate side handles. Necessity being the mother of invention, they devised a way to fit them into the woofer cavity.

## TOTAL SYSTEM PERFORMANCE

EAW's *SLAM* delivers concert-level output with the unmistakable smoothness and transient response that are the hallmarks of an EAW loudspeaker system. Frequency response remains consistent up to and beyond the nominal pattern edge. And our unique *Divergence Shading* technique maintains consistent SPLs at varying throw distances from 10 to 200 feet.

EAW's new **KF730 SLAM** sets new standards for line array size and performance, packing more punch than many "full size" systems. It's a true KF Series horn-loaded, three-way design squeezed into a package smaller than most two-way and all three-way compact systems on the market.

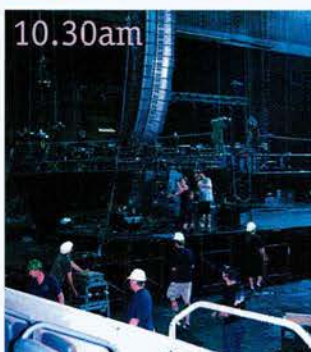
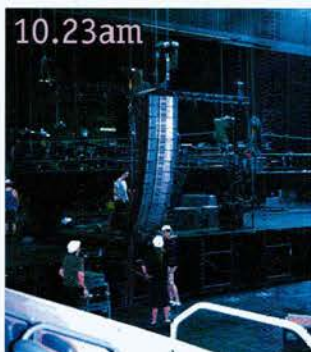
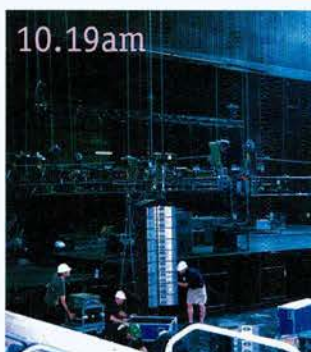
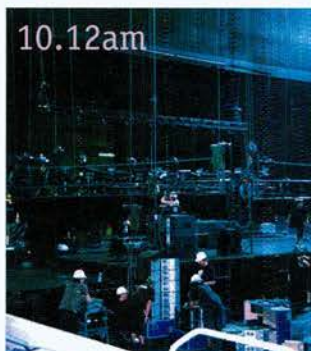
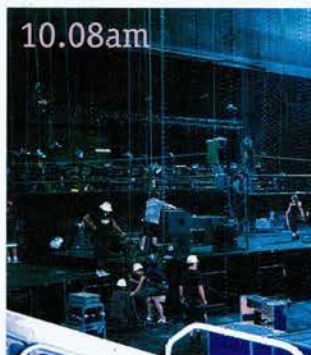
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**KF730 LINE ARRAY**

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## Going up.....



Drew Menard prepares the Kelping Bar

Adjustments are made and the angles were finalized at 10:23am. The rig is flown out and set at its trim height by 10:31am.

The two crew it took to rig this system then walked off to do the other side. 23 minutes from nothing rigged to the system in position at trim height. Not only that, the entire thing was rigged within the footprint of the hung array – no more pushing other equipment and chairs out of the way to pre-rig the PA as a train along the floor before it flies.

At Powderfinger the system engineer, Drew Menard, had the trim height set high. Very high. It was way above the height of the lighting rig. This was something that the proprietary Nexø software told him to do, because at first glance it just looks wrong. In fact when you walk in the see the show, it looks like there is no sound system at all!

However, any skepticism that was had during the bump-in is quickly eliminated with the system's run up and the sound check starts. During the show, this writer had the opportunity to walk around the entire room. From the back row of the stadium all the way to the stage, I walked around, critically listening to what the system was putting out.

The system sounded extremely uniform throughout the room – from the back row to the front of the stage the sound felt like it was running at the same level. In fact it was probably loudest on the walkway that rings the room between the upper and lower seating banks, right behind the mix position.

The gig shot below was taken from this walkway - the loudest point in the room!

It was certainly loud everywhere but more importantly, as I walked around the room,



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the only time I could discern a shift in the phasing and the quality of the sound was when I was starting to move alongside the stage – an area covered by separate fill speakers. Even then, the quality remained high from the Nexo Alpha speakers used to fill the sides on either side of the stage.

One of the more surprising discoveries of the system was first pointed out to me by Bruce Johnston. If you stand a few meters in front of the sub woofers that were placed on the deck in front of the stage, it sounds like they are full range speakers. While this is definitely an acoustic illusion, the effect is very real - that despite the fact that the main PA speakers are trimmed at a very high position. You certainly do not feel like sound is landing on you from on high.

So there you have it, a very punchy, loud system, with excellent bottom end. No phasing problems that I could find, easy to rig and small to transport. What more could you ask for. The system used at Powderfinger was sitting on Camco amps, matched to the speaker power, and these amps were not working very hard at all. The impression was that you could have probably run the system at AC/DC levels without too much trouble. Wow!

There is already a great deal of interest from many in the industry wanting to use the system they are raving about in Europe.

- [www.johnstonaudioservices.com](http://www.johnstonaudioservices.com)

Footnote: **No Johnston/McLean merger.** It happened, then they de-merged. The two firms travel onwards as previous. The partnership to be is understood to have unwound due to a change of heart of one of the owners. Neither is talking, it is understood relations are strained, but maintained.



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# Powderfinger – Vulture St Tour Comes Home



*Powderfinger returned home to tour Australia after a very successful tour of Europe and UK. They brought the biggest version of their show to date. The arena sized show might be a major step up for the band, but the show has been translated to the big stage quite successfully by the team behind the production. John Grimshaw reports:*

**P**roduction Manager Ifan Thomas is about as relaxed as they come. His Bono style semi-transparent sunglasses and thongs complete the look of a Production Manager who clearly has everything under control. His intention was to move into semi-retirement here in Australia, but his reputation saw him called

**Ifan Thomas's touring harmony point of view:** Working as a team is essential to Ifan's plan. This was born out of bitter experience, seeing and trying to work with "too many bullshit tour and production managers in the US."



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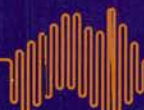
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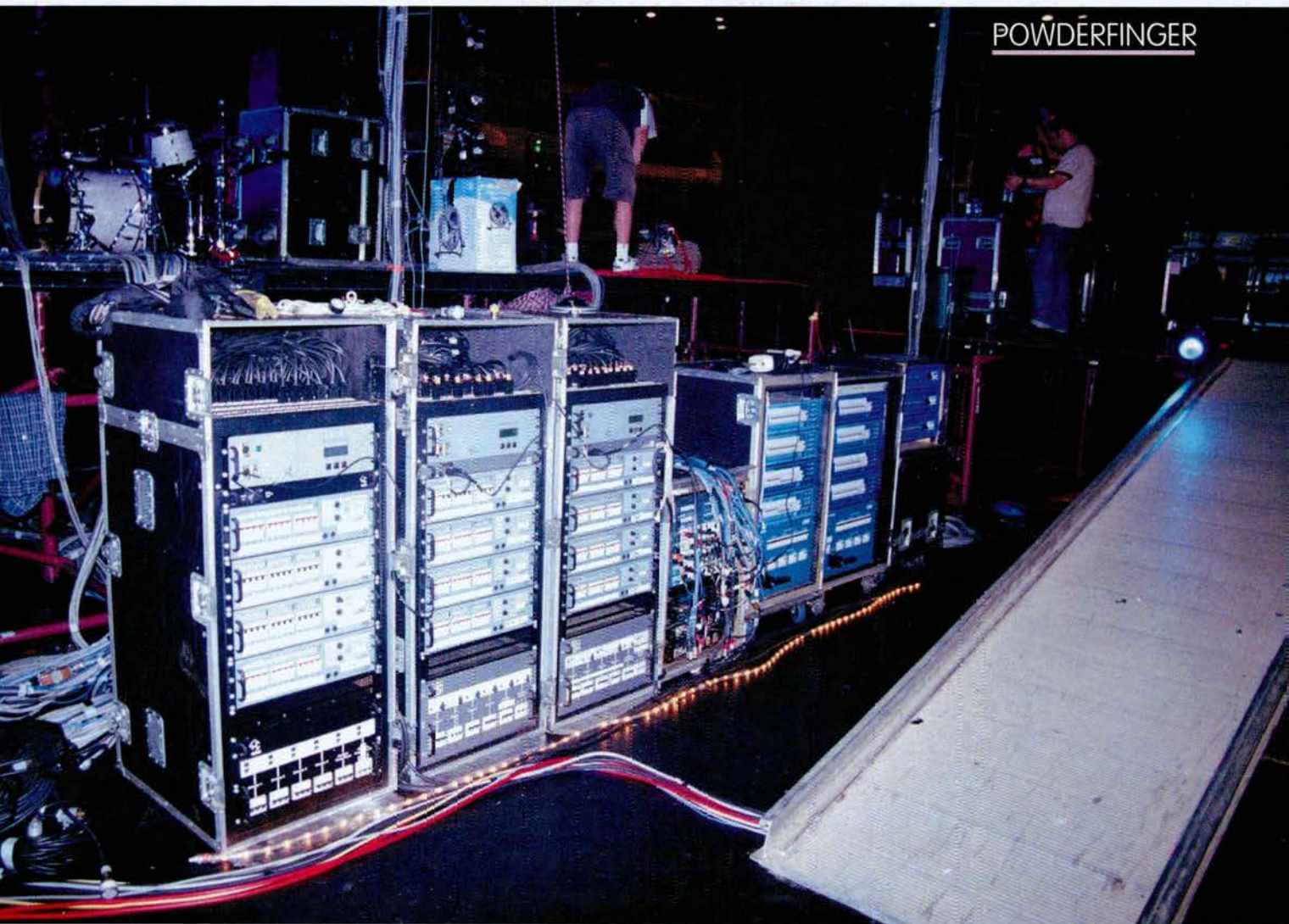
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up out of the blue to manage the Powderfinger tour.

When asked to describe what he does he told us his role was part Tour Manager, part Account Manager, part promoters rep and obviously all Production Manager. For so many hats to sit on the one head, Ifan relies on a close-knit team environment. When you are touring with a bunch of people, it would seem the most important ingredient for Ifan is ensuring and maintaining the ability for everyone to be able to work very closely together.

Clearly this is one of Ifan's talents as he goes on to say that he likes a working environment where everyone feels they have a say. So, he likes to take the idea of 'two heads are better than one' to the next logical step.

This is the main way he deals with the breadth of scale for the shows - from the small venue ones in Europe to the arena shows in Australia. With everyone on board, the team is able to make the show as good as it can be. He describes this process of scaling as, "Not the same monster for every show, but the best monster for that venue."

His work will be cut out for him as the tour moves next year on to Spain, Belgium, Brussels, Austria, Germany and the UK - al-

l bigger venues than the previous European tour - which is what makes the arena experiences in Australia especially important.

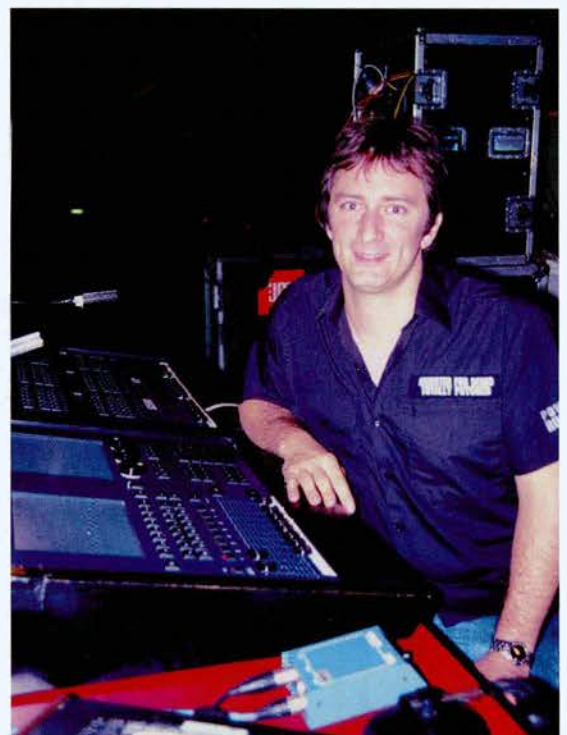
## Lighting

Lighting Designer Jason Eoyd (pictured at right) has been working with Powderfinger since February 2000, but this leg of the tour is the first time he has been able to stretch out his concepts to an arena style show for the band.

Home for Jason was New York, though his mashed up US accent places his heritage a bit further south (Austin, Texas). He came to the Powderfinger design after taking a year off, and presented the band with three design concepts.

The resulting look stems from an idea of 'sunlit zen' with thin horizontal lines.

Jason says he likes and uses a lot of saturated colour. The



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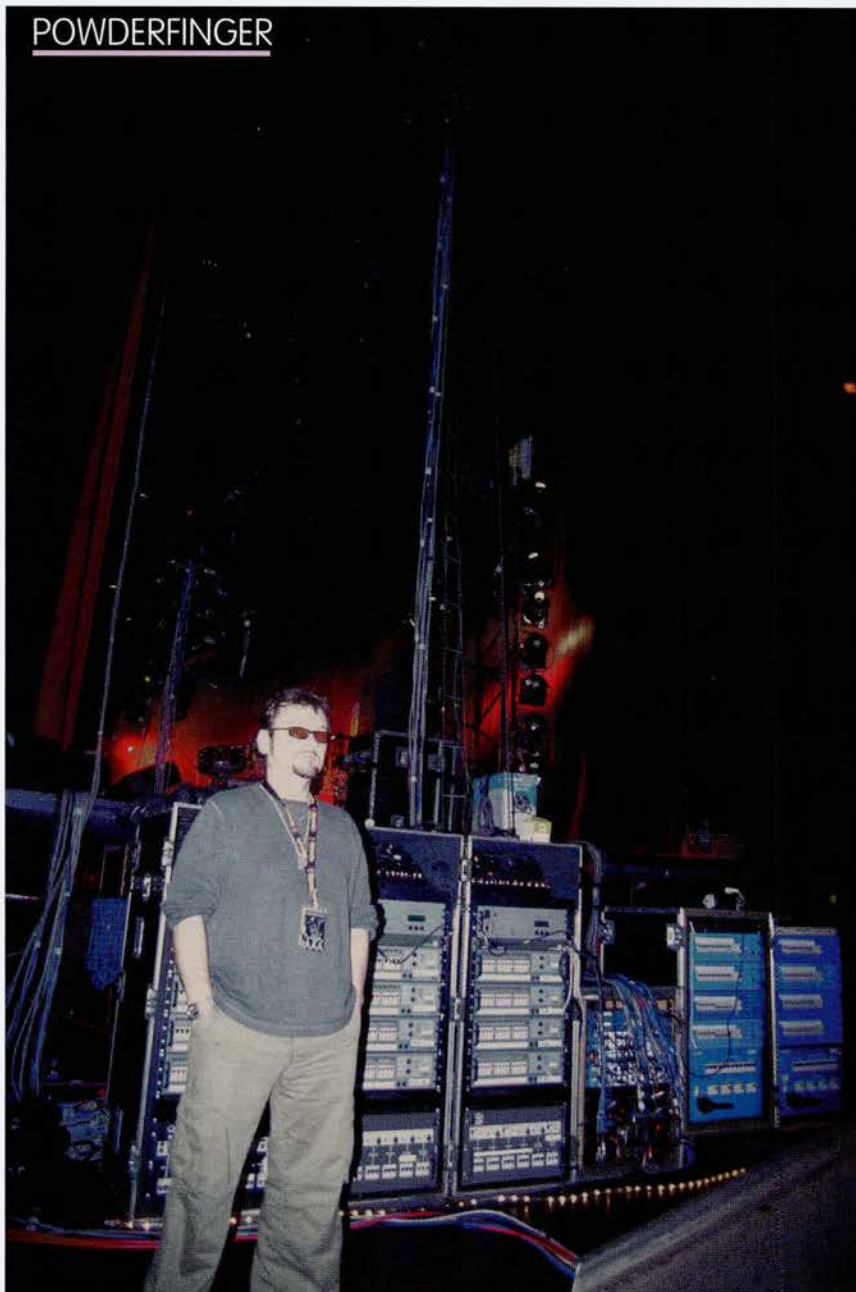
Jerry Bruckheimer's Perfect Theater Experience is a combination of D-ILA and D-VHS, only available from JVC. JVC's D-ILA projectors provide silky, color-rich images that — even close to the screen — do not show pixelization. Three models of D-ILA projectors are available for home theater, screening room or professional theater applications with native resolutions up to 2048 x 1536. JVC's D-VHS is currently the highest quality and most economical way to record and playback true high definition. No other format, including DVD comes close. To hear Jerry Bruckheimer describe the Perfect Theater Experience in his own words or for more information about D-ILA and D-VHS visit [www.jvc.com/pro](http://www.jvc.com/pro).

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## POWDERFINGER



Ifan Thomas (above) and Optocore stage rack (right).

### Some AUDIO Websites...

[www.johnstonaudioservices.com](http://www.johnstonaudioservices.com)  
for GeoT info and other interesting bits and pictures

[www.nexo-sa.com](http://www.nexo-sa.com) for the full tech spec of the Nexo system

[www.gtaust.com/products/products\\_optocore.shtml](http://www.gtaust.com/products/products_optocore.shtml) for information on the Optocore multicore system

[www.camcoaudio.com](http://www.camcoaudio.com) for information on the Camco Vortex Amps used (6000 w digital)



show starts as an "old school rock" show. With a red curtain hung as a backdrop, the show starts very static. Little if any moving lights actually moving. After a couple of songs, the curtain is dropped to reveal a very long thin LED screen in front of a black backdrop. This screen (along with the two side screens which have been only showing static images up to this point) suddenly starts to add moving textures to the stage, with the lighting coming to life as well.

After a few more numbers like this, the music moves into a more acoustic style section, with the band shifting downstage in front of a black star cloth that is rolled in behind them. After this comes the final 'look' of the show, with all guns blazing and a cyc now revealed, the stage is all colour and movement, with more and more light up to the final song.

Another 'less than usual' aspect to the lighting show was the lack of followspots. Jason had a number of fixed Source 4 Profile rigged instead to cover the needs of a 'followspot' look - of course the band probably needed to be trained to not move out of the light! We asked why he decided against the follow spots.

"I think they are distracting most of the time - and the band is so democratic if I had 1, I would need 5."

Some of the key things that Jason worked on with the design was matching the lights to the video. Colour matching and complementing the movement of the images was high on his list of priorities. The initial design was created using WYSIWYG. However, the programming period was a mad

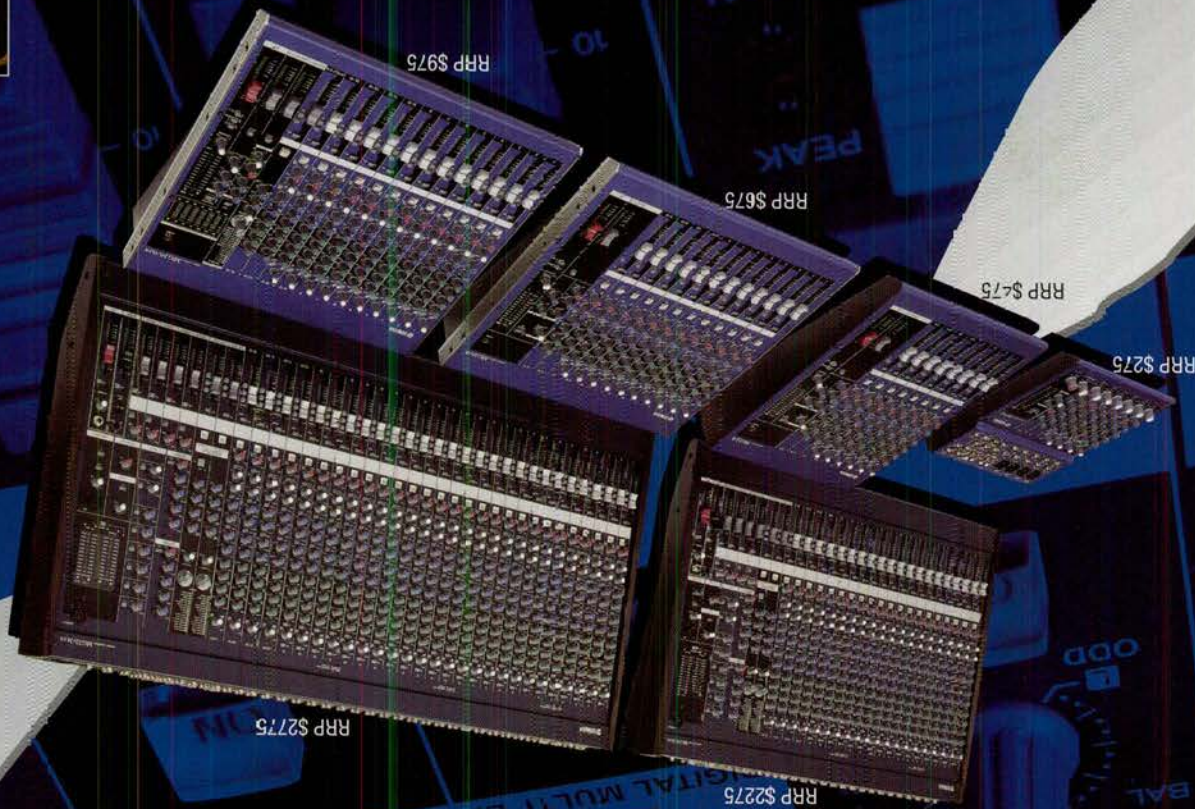
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## POWDERFINGER

rush, as he only had 2 days to prepare the Whole Hog II for the first gig.

Jason said that he has quite enjoyed the Australian leg of the tour, thanks especially to the crew supporting him. Jeff Pavey - Lighting Crew Chief, Luke Radin - Moving Light Tech, and Pat Clarke - Dimmers. On the subject of the lighting supplier, Jason was very effusive:

"Chameleon is awesome as well. I have had the best touring experience in 8 years."

### Video

Video Director Scott Walton of 50/50 Films showed us through the system. There are three main video elements to the show, two side screens and the long thin LED wall. The side screens have been reformatted to produce exactly square images, while the LED wall has pixel ratio of 1100 x 170.

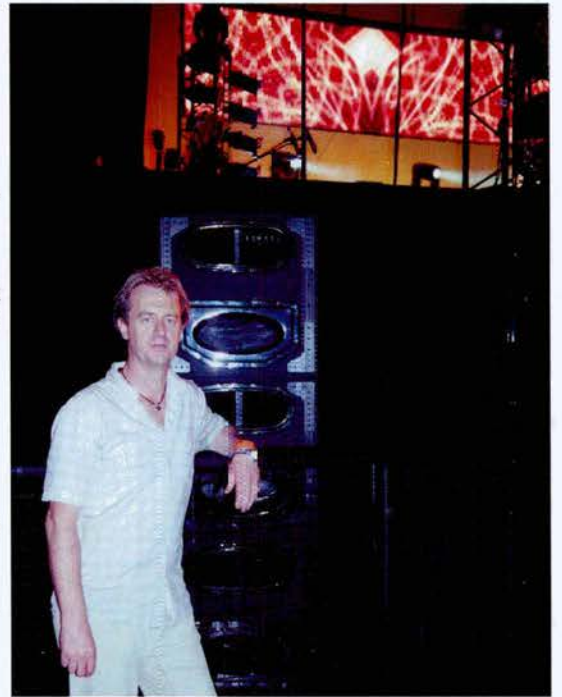
The replay content for these displays was produced by 50/50 Films, the same mob that did the music videos for Powderfinger. Live content is provided by two operated

cameras, one remote control camera and a couple of lipstick cams.

The resulting images looked very slick and professional, with the Barco LED strip providing a very bright high quality image throughout the night. It was certainly interesting to see how this element of the show was carefully worked in with the lighting design to produce an overall effect. It would certainly be true to say that the LED screen was more used as a complex lighting effect than as a traditional video replay.

When compared with many shows that originate overseas, this was an extremely simple production, with very little in the way of touring video hardware. While this might have led to some compromises in overall picture quality, the end result was still very good.

The replay images are run from a Dataton Watchout system, which has a computer per



Bruce Johnstone,  
international audio  
magnate, lapsed surfer



Mark McElligott

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display running backstage, and a main control computer cueing them for play-backs loops, still images and live image pass-through. For an extremely simple system, they were able to produce a quite complex vision display – easily comparable to the newest version of the Catalyst control systems (version 3).

**Audio**

Mark McElligott is not a fan of Line Array systems, so it must have taken some convincing to get him to use the new Tangent Array system from Nexo. His close relationship with Johnston Audio and previous reliance on the Nexo Alpha system probably had a great deal to do with the decision. From Mark's point of view, the Alphas were perfect for this band.

"They still have that rock pedigree. The guitars sound like guitars. Not like Line Arrays – off axis they sound like shit."

The "clean, pristine" sound with little bottom end is not what Mark needed, so he was initially skeptical about the Nexo GeoT Tangent Array. However, after hearing the system in Brisbane during rehearsals for the tour, he decided to take a punt. The result has been very impressive sound for this tour.

He said it took him a couple of shows to

get used to the clarity and spread of the sound. "You hear the PA as one unit, they don't sound like they are split up." This is despite the fact that the subs are sitting in front of the stage and the main PA is set so high. The Nexo system is also capable of flying the Subs with the main PA, something that Mark would have liked to have done so that the front rows of punters were not flattened by the sound. However the hardware needed was not available by the time the show was underway, and standing in the front row in front of the PA subs wasn't all that bad – in fact the audio quality there was exceptionally good!

Coming from a studio background, Mark likes heavy use of compression in his live mix. The drum kit runs a special system of hard compression that is run back in the console and mixed with the live output. It probably runs about 50/50 compressed audio to live audio, which Mark describes as giving the kit some real punch. There is also lighter compression run over the Guitars and the whole mix output.

The mics run into Avalon SPS727 valve based mic preamps – giving the vocals the warmth that Mark likes to hear in the vocal mix. Running with a slew of other effects – gates, reverbs, harmonizers, distressors (see list), this is a reasonably complex rig that Mark runs from the Midas Heritage H3000 console.



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Interestingly, Mark also uses a baby Allan and Heath 16ch console - one that would be more at home in a pub - for the small 'acoustic style' section. The idea is to give this part of the gig a different sound - which it certainly does.

Another interesting part of this gig is that the FOH is connected to the stage via fibre optic cable rather than a traditional multicore. The Optocore LX 4 Network System allows for 48 channels of audio to be sent from the stage and 16 returned to the stage, all without signal loss and for a seriously long distance if required. The stage end of the system incorporates a remote controllable head end with built in mic preamps, remote switchable phantom power and even some data transfer.

There are two RS485 returns from the FOH position which can be used for DMX or AES/EBU outputs, as well as a video send from the stage. A laptop at FOH controls the system, allowing the user to control master level for system balancing as required. •

**> How Mark McElligot got started**

• Like many FOH engineers, Mark McElligott was a musician first until he saw the light and the employment prospects.

A native of Townsville, Mark managed to get himself into Brisbane after lying about his abilities as an engineer to a covers band that needed an urgent replacement. Apparently there was enough native talent that he pulled off the gig without the band noticing - and thus started a career in studio and live engineering.

Mark comes from the days when Brisbane had a vibrant live scene, and the bands used

**Powderfinger Crew List**

Prod Manager:	Ifan Thomas
Prod Assistant:	Oana Gilbert
FOH:	Mark McElligott
Mons:	Steve Brown
LD:	Jason Boyd
Stage Manager/ Backline:	Matt "Matrix" McNamara
Drums:	Duane Billings
Guitars:	Chris "Toph" Hough

Johnston Audio FOH Rigger:	Drew Menard
System rigger:	Paul Gould
Monitor Rigger:	Mark Crawley

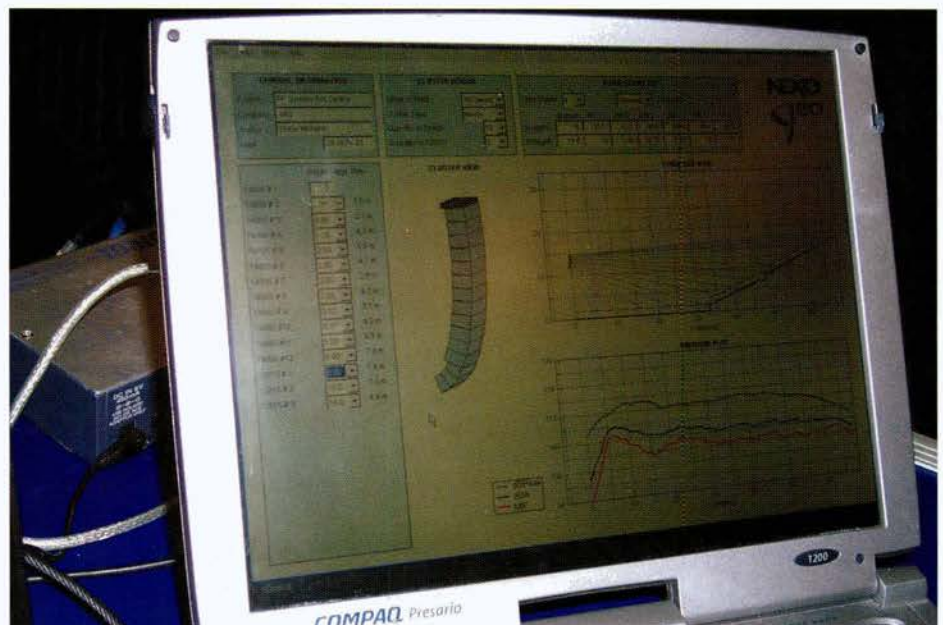
Chameleon Lighting Crew Chief:	Jeff Pavey
System Rigger:	Pat Clark
System Rigger:	Luke Radin

Video Producer	Paul Butler
Director	Scott Walton
Tech/Camera Op	Shane Davidson
Video Wall Tech	Olan Wynton

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---------------------------	--

to occupy what is affectionately remembered as "The Target Building" - a disused Target store in Fortitude Valley that was taken over for a number of years in the eighties by Brisbane's up and coming bands.

This was a period of excitement for Mark, as he worked on numerous projects and bands in his studio. This was the environment that fostered Powderfinger themselves.

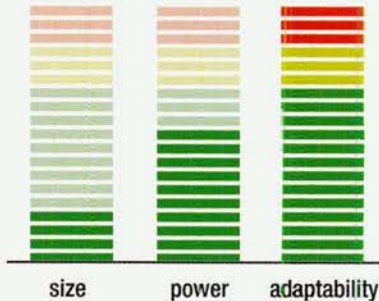




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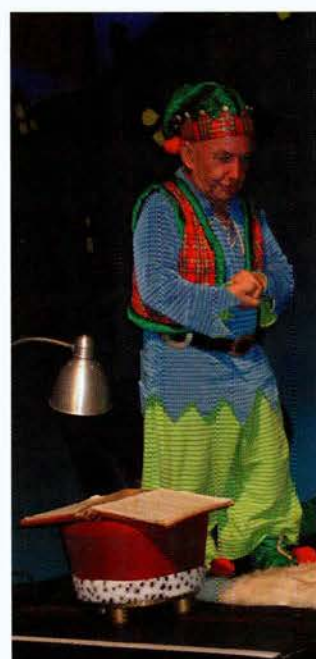


\* **SIZE:** 11.15" W x 22.43" H x 12.25" D (283 mm x 570 mm x 311 mm) **WEIGHT:** 46 lbs (21.35 kg) **POWER:** 128 dB Max Peak SPL **PRICE:** \$5400 incl. GST.



# Santa's Kingdom

Julius Grafton went backstage at the new entertainment concept that's set to make squillions



You need to listen to what this guy tells you - or elf!

**6**0 people every 10 minutes, at \$37.50 each. Running around the clock for five weeks. 136,500 people paid around A\$4.7 million gross, which was the bottom line at Santa's Kingdom. It's a winning new entertainment concept that wowed kids and their keepers in Sydney prior to Christmas. We went inside to see if it was just a snow job.

David Atkins transformed the 5,500 square metre Royal Hall of Industries at Fox Studios into another world, where the building ceased to exist, and fantasy steps in.

You surrender your ticket, and go into a nice holding lounge where you wait for your arrival colour to be called. Meantime you buy a beverage or a cookie, and listen to a humorous character and interact with clowns and snow men. Your group of 60 then walks into the Tunnel, described as the inside of a Christmas Tree. It is a stunning collection of decorations, baubles, and 16 lights, and tens of thousands of little lights on a thing called a sparkle net.

There's a dwarf who tells you the rules - the main rule is not to eat the snow, especially if it is yellow.

Santa's Toy Factory is the next environment, it is a wonderland of tools, toys, characters and an oversized train set that runs around above head height. It's bright, colourful and full of promise and fantasy.

At this stage you get the sense you are moving at a pre-determined pace, since the whole experience relies on putting 60 people through the entry as often as every 10 minutes - as many as 360 an hour. As soon as you move into the next world, the doors close behind you.

Next is the petting zoo, where an assortment of furry friends get petted. The hay in here is changed every day, I'm told, and also sprayed with fire retardant. Somehow the elves, maidens, dwarfs and other characters manage to prise little fingers from around Freddie Ferret's neck, and the group moves into The Enchanted Forest.

This is a virtual maze of Christmas trees



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## SANTA'S KINGDOM



Staging Rentals chief Meri Cook. They built a lot of the Kingdom.



all sprayed with anti-fire stuff and sparkling away. It is the last world before the big finale, which is The Village.

The groups pile into the Village and spend some quality time there. It has an ice rink, with beautiful ice ballet. A pantomime stage has a show with dancing reindeer. There is a real snow slide with snow that is made each night. There are carousel rides, a post office, food, drinks, and even an ice throwing range.

Eventually the group's colour is called and the kiddies make their way into an individual booth for a one-on-one with Santa. These 14 booths were unkindly christened the Michael Jackson Snow Experience by the lighting crew. In the booth is The Man, on The Throne, with a photographer on hand. The pictures are transferred to a photo shop at the exit.

So now you have an idea what the show is all about.

The idea comes from the UK,

where promoter Garry Van Egmond spotted it. He has a strong relationship with the Riverdance people, having promoted them in the Asia-Pacific region.

The international promoter of Riverdance, Morris Cassidy, called before Christmas 2002 to advise the new Santa Kingdom concept in the UK had just sold 167,000 tickets in 10 days. Garry Van Egmond rushed to the UK and secured the rights.

He put together a consortium of David Atkins Enterprises (holding 25%), and International Concert Attractions with 15%. Together they all took the risk of building the show, and running the 2003 season in Sydney.

It carried considerable cost – industry estimates say the show needed more than \$4 million through the box office to break even for the first season. The maximum possible take across the season was \$3 million before merchandising.

Everything inside the venue was built from scratch. Set Designer





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Eamon D'Arcy commissioned Staging Rentals to do much of the work. Staging CEO Meri Took told CX the design changed several times things were moved around, as he and Roderick Van Gelder, the Fox Studio's rigging and operations dude, faced the challenges of rigging from a load limited roof.

The venue was air conditioned for the season. A 500mm deep scaffold was erected around the perimeter, with water ballast at the base to stabilise it. Staging Rentals hung drapes everywhere – they have kilometers of drapes in stock.

Walls, exit doors, backstage corridors, and work areas were all designed in and built, with power, rigging, lights, sound and specialist stuff like snow making machinery all allocated space.

Lighting designer Gavan Swift had fun, cutting loose with lots of colour. The equipment came from Chameleon Touring Systems.

Audio had its challenges, with multiple zones that needed to be discrete. "The brief was for the floor staff to operate cues", says Norwest Productions CEO Chris Kennedy. "I looked at Richmond Show Design, and AMX, but I found another solution".

Norwest became the local agents for a system called SFX, which is a cue based system that plays out wave files. Using either a PCI card or an external box, you can wire remote control for things like a switch closure, and assign it to fire a cue sequence.

"I was actually looking around for something like this when I discovered the major flaw with Yamaha's O2R and DM 2000 digital consoles", says Chris Kennedy. "I was doing a show, and the producer wanted to insert a scene. So I wanted a cue between scene 12 and 13 – and had to laboriously move

all the scenes up by one."

SFX lets the Santa's Kingdom show run automatically, with one audio operator on hand to monitor the various zones and systems.

Garry Van Egmond Enterprises now plan to run Santa's Kingdom in four territories at the end of 2004. The show will go to Singapore, Auckland and Melbourne, and re-run in Sydney.

"We won't cut any of the elements" said Christo Van Egmond. "We are looking at getting the set made in China". It's a huge

undertaking to put the show up simultaneously in four distant cities.

The Sydney show had 14,000 people through on the first weekend, which truly tested the concept. Extra Santa booths were installed. Christo says they found up to 800 people at a time were populating the Village, which really needs a little more space. "Some people were sending several hours in there".

With a cast of around 300 (arranged into two shifts - the North Pole and the South Pole) and 40 crew this is a ballsy show to attempt. We're glad to see it paying off!

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## Australia's largest annual live show

Audio engineer Tony Moffatt with Norwest Productions' new Yamaha PM1D digital console. Also used: 1 x Series 5 Scundcraft, and 2 x DM 2000

**T**his is a not widely understood fact - the NSW Schools Spectacular is the longest continually running event of kind, and the largest. Now into the twentieth year, the Spectacular features all kinds of live music and dances acts from public schools across NSW.

The show is run by the NSW Department of Education and Training, who have devised methods of keeping an event with around 3500 thousand performers under control.

Director Mary Lopez managed to get all the acts through technical rehearsals when CX called to see the setup, the organisers have created a running book with everything needed for all crew to track what is going on. (See picture on next page).

The live show, run over two performances at the Sydney Entertainment Centre was transformed into a 90-minute special which was broadcast on ABC Television in December. John Forman, an internationally renowned musical director and television personality, who appeared as a student in five Schools Spectaculars, was the host of the show.

During the program he introduced fellow Schools Spectacular 'graduate', Brooke McClymont, a rising recording artist who has just had one of her songs recorded by Australian pop legend, Olivia Newton-John.

Many successes that have emerged from the Schools Spectacular stage over the years - too many to list. The calibre of performance was very high.



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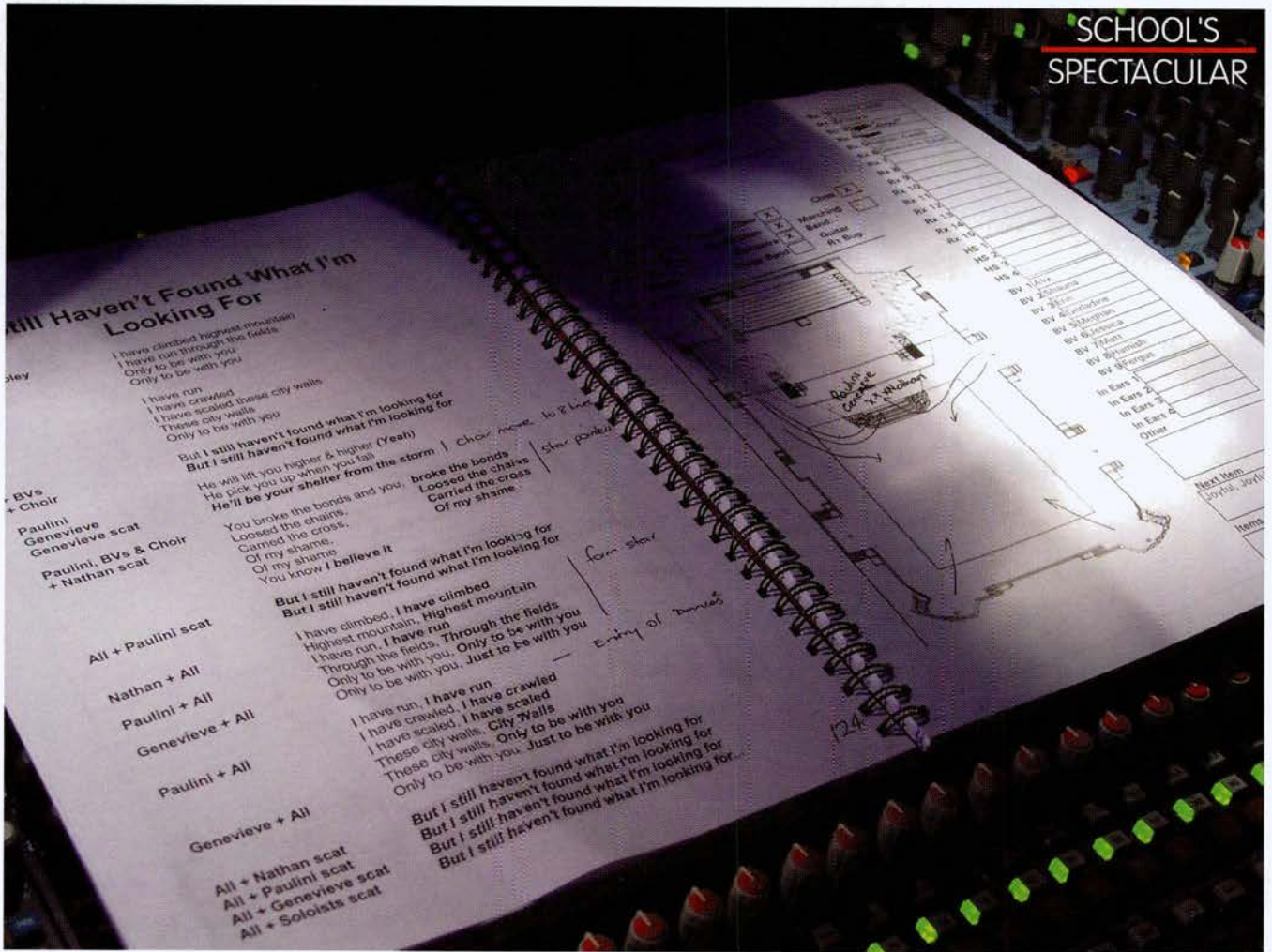
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The running book (above) made things work!

The show uses the entire flat floor of the Entertainment Centre as a stage. This view is from the top of the choir area, looking back to FOH



Many of the kids appearing were graduates of the NSW Department of Education and Training's highly-acclaimed Talent Development Program. The show is an insight into the breadth and versatility of young talent in NSW.

Music styles ranged from pop, rock and bluegrass to classics, performed by an 80-piece symphony orchestra and 700-voice choir, opera and high-kicking Broadway

show numbers.

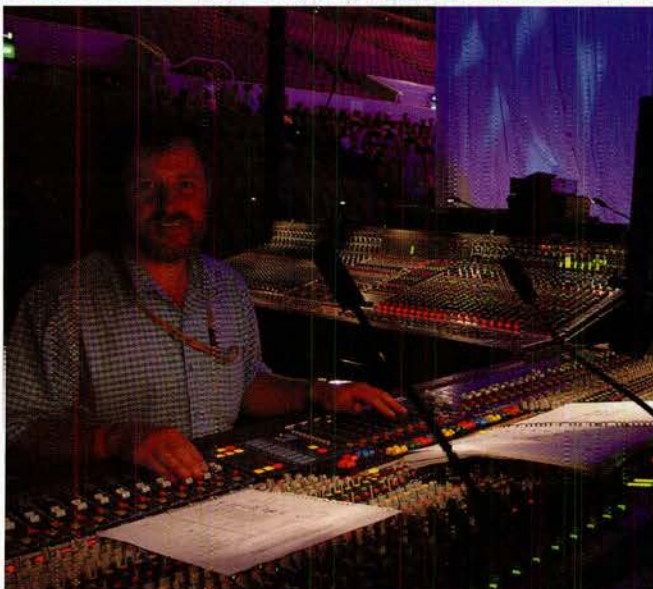
David Coombes, who directed the Long Way to the Top concert show, used multiple cameras to capture the excitingly colourful choreographed routines, that brought a vibrant dimension to the music with a full spectrum of dance.

Production came from Norwest (sound), Chameleon (Lighting) and Staging Rentals built the set. •

Keeping tabs on wireless mic's (below)



SCHOOL'S  
SPECTACULAR



Gary Hall was trying to send 20 mixes to places he couldn't see. The monitor position had no view - and no TV monitor.

Jason Frupp and Trudy Dalglish at lighting control



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# Ted Fregon

## and the tale of two Bytecrafs

Interview with  
Julius Grafton

**T**ed Fregon is the CEO of Bycraft Automation, the firm which was once part of the greater Bycraft conglomerate. He was anointed as a stage automation pioneer recently by a commentator. He is more like a technology pioneer, coming from the era that saw the birth of core memory and the microchip.

Bycraft is a terrific brand, which is just now redefining its image, since the firm effectively split in half after the 2000 Olympics. At the time it boasted revenues of 30 million and had well over 200 staff. Like many partnerships, the two founders felt like heading in different directions, so they did.

Fast forward to now, and Bycraft Entertainment is completely separate to Bycraft Automation. Entertainment is headed by the ambitious, headstrong Stephen Found, and it boasts very lucrative and expanding contracts to service gaming machines in several states. It also holds the

largest lighting hire and production inventory in Australia, after buying the lighting hire assets of Jands Production Services two years ago.

Bycraft Automation, on the other hand, is a manufacturing company who build world class stage flying and machinery control systems, and state of the art sine wave dimmers. It is effectively an intellectual property business. BA has extensive contracts within a growing number of new and proposed theatres across Asia and Europe. They win a growing pile of business because governments in China are seeking to promote the creative arts – so they build theatres. And safety laws quite rightly frown on the old finger chopping, out of control and dangerous way of flying. The hemp rope and the falling bar is out, fast motorized systems are in. Worldwide.

I met Ted for morning tea on a rain lashed morning, and he told me BA is about to undergo some significant changes. It will change its name soon, as in his words, he is not totally comfortable sharing the Bycraft name. Some customers in the theatre world are not happy with the gaming business that Bycraft Entertainment are involved in, he says.

Gaming service is the major part of the Bycraft Entertainment business, the Bycraft logo is on a large fleet of service vehicles attending a lot of poker machines around the clock. Gaming and the entertainment industry are uneasy bedfellows, at least according to Ted, but the two things are completely linked on a 24/7 basis. Where there is gaming, there is usually entertainment.

The Bycraft story starts in 1984, when Ted worked for the Rank company. They had a wide and weird collection of businesses which included Strand Electric. Rank decided to quit Australia, and Ted acquired a contract from them, for a fittout at the Victorian Arts Centre. Stephen Found came on board, initially as an employee – then as a partner.

“Stephen had a fantastic customer service focus, he would really attend to them”, Ted recalls. Between them they quickly snared contracts to service Strand MMS and Galaxy consoles, which were installed at major broadcasters and venues. These early memory boards needed a lot of love and attention. The cashflow from the contracts went into research and development – Bycraft launched dimmers just at the time theatre thinking went from a few dimmers



with patchbays, to a dimmer for every outlet.

"We were the first people to put a user interface on a dimmer", he states.

Phantom of the Opera was another milestone for the firm, the automation system was the most sophisticated yet seen in theatre. The two traveling towers with the bridge between them were independently controlled, with Ethernet holding the whole thing together. "Looking back, we were selling vapourware" Ted admits, "because it didn't even work until the first technical rehearsal. In fact, the automation faulted in the rehearsal and I'll never forget Mort Clark's voice booking out, as he squinted from the stage into the darkened auditorium, 'Ted Fregon..... Ted Fregon..... where are you?'"

The problem turned out to be a dislodged wire, the system topology was right, and the production motored on for years and years without a significant Bytecraft Automation problem.

But the stage automation business is not for the feint hearted. Ted had an ugly experience last year with the new Esplanade Theatres on the Bay installation at Singapore. This beautiful new performing arts complex features an automation system installed in a partnership between Mitsubishi and Bytecraft. Like all technology installations, there is a commissioning curve where there will be faults. These are logged, and detailed at handover, and methodically worked through and fixed afterwards. Everyone involved in entertainment technology understands this – whether the system is sound, lighting, vision or automation, it will usually not work collectively as advertised, straight out of the box, on day one. The bits all do what they are supposed to, but together they need nurturing. We could fill this magazine with stories along this line.

There is a theory many engineers call a Bathtub Curve, where the system fault list is steep at the start, then settles into a long flat stretch (the bottom of the bath) then starts a climb at the end of the bath (years and years later).

The Singapore situation was fairly routine, except one of the first shows in Esplanade was a major theatrical production mounted by an aggressive western promoter. There were automation problems with the set, which Ted freely admits.

"They didn't lose a performance; they didn't have a stop to any show. Sure there were problems. But then the promoter claimed a large sum of money from the venue. The venue turned to my contract partner who were a soft target. They settled with the venue, the venue settled with the promoter. Then they withheld some of my progress payments". Ted is still amazed at the whole affair.

"It's voracious conduct", he rues. And maybe a sign of these litigious times. Stories about promoters (or anyone for that matter) getting unreasonably aggressive can rebound, because the tight knit entertainment community simply factors it in when next dealing with the promoter. From this writer's chair, history has seen plenty of bold and audacious characters come and go, while the people they have won small victories against are still here - in the industry.

The real success for Bytecraft Automation is that they are entering 2004 with a strong order book – particularly in China. "Theatre tenders there are announced quickly, and are awarded quickly. Then they build quickly", Ted marvels. Which is great for Bytecraft Automation. •

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# KV<sup>2</sup> kicks off

**M**arcelo Vercelli (pictured right) is touring the world showing his new compact PA system. I caught up with him in Australia, and learned that KV2 Audio have an interesting concept with their new ES system.

ES is pitched at a part of the market that appears wide open. If you scrutinise the offerings of loudspeaker manufacturers across the world, you'll find very few integrated systems designed to be sold as a pair or a quartet of stacks. That's where KV2 have decided to compete, and in my mind it is a smart idea.

I have some history with the middle market, in the early 1980's I helped Renkus Heinz launch their Smart System in Australia. It was unashamedly a poor mans MSL 3 system. Meyer had revolutionised the PA business with their Processor Controlled box and subwoofer. Renkus Heinz kind of copied them. I sold so many systems it wasn't funny.

The ES System comes in a package. You buy the oddly shaped but extremely practical EPAK amplifier, and then connect one or two stacks to it using the supplied cables - which travel in the amp system lid. The stack options are smart - the top box, which is always the hardest thing to get right - is a no brainer. There is just one mid-high box, called the ES 1.0 which is loaded with 1 x 12" woofer, 1 x 6" midrange and 1 x high frequency horn. The boxes are very compact, and light weight.

All the speaker components are made by 18 Sound for KV2. 18 Sound's founders come from the same part of Italy as Marcelo - who is now USA based. He worked at Mackie with several other KV2 people, who all left when Mackie got too stretched with expansion. Before they left they spent time with EAW too, which had become a Mackie owned company.

The smart thinking extends to the choice of three subwoofers. The top box will give you sensible sound down to about 100hz (-3db at 130Hz, or -10dB at 80Hz) which is almost OK for just voice alone. So if using the system for light weight reinforcement, why spend more than you need to? Select the ES 1.5 single 15" sub. The EPAK amp array will drive up to three of these. For more delivery, choose the ES 1.8 18" woofer version. For maximum bass, there is a 2 x 15" unit, the ES 2.5.

The ability to mix and match sub-bass means different system



capabilities can be optioned.

So why not self amplify the speaker boxes, like Marcelo and his mates did when they designed the Mackie Fusion? Weight is the answer. They saw the concept fail to ignite the market.

The other aspect is cost, because it is expensive to have a four or an eight or twelve box system that is self amplified. KV2 say you just need two or four EPAK's for your system, which can be configured in a lot of different ways - at least at the subwoofer end. In every single case, you'll use two or four mid-high boxes; and combinations of sub boxes.

By Julius  
Grafton



I've heard the ES System too. It seems to have a lot of headroom and sounds coherent and clean.

The EPAK has a four amplifier stages, 100w / 200w / 600w and 1,600 watts for the subs. It has inbuilt EQ and system management, and you switch-select which combination of subwoofers are used.

There is also a switch that changes the system EQ if a second EPAK and stack are to be used on the same side as the first.

Real smart stuff can't wait to actually use one!

• [www.kv2audio.com](http://www.kv2audio.com)

Distributed in Australia by  
Australian Audio Supplies.

PLUGGED IN • ACTIVE • LIVE • BRIGHT

# ENTECH

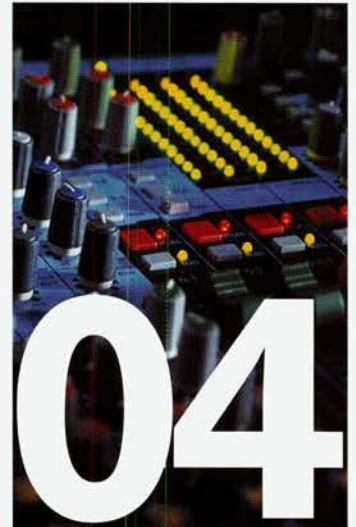
**ENTECH IS PEOPLE**

I'm going to ENTECH to research my events and better understand the complexity of vision technology

- Amanda Carlisle



**ENTECH IS SEMINARS** Daily at the show. Many topics!  
Get the OH&S certificate on setup Sunday! **ENTECH IS EDUCATION**  
**ENTECH IS PLUGGED IN!** NEW demo rooms loud and bright!



# 04

**Sydney Exhibition & Convention Centre**

Monday April 5 ~ Tuesday April 6 ~ Wednesday April 7

PLUGGED IN • ACTIVE • LIVE • BRIGHT



**ENTECH IS MY SHOW!**

My club plan to replace the sound system. I'll be there with the owner

- Jackson Alexander

**ENTECH IS EQUIPMENT!** Around 100 stands, \$40 million of kit!  
5,200 trade visitors\* • 1,200 exhibitor staff **ENTECH IS NETWORKING**  
**ENTECH IS SOCIAL!** Field Trips! Hospitality! Waffles! (Beer!)

Sydney Exhibition & Convention Centre  
Monday April 5 ~ Tuesday April 6 ~ Wednesday April 7

**ENTECH**  
register now & get info at [www.juliusmedia.com](http://www.juliusmedia.com)

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## ENTECH IS OPPORTUNITY

Our church needs in ear monitors and new lighting. There are seven of us coming from the praise and worship team.

We didn't go last time, but our friends did. The opportunity it presents us only comes every two years. We need to justify every cent, we've raised around \$2 million for our new church. Whatever we don't spend will go back into our community. Everyone says meet us at ENTECH! I can't wait!

- Melanie Rogers

## NEW! ENTECH IS DEMONSTRATIONS!

Demo rooms and the Tumbalong Auditorium: running all day. Plugged in, Active, Live and Bright!

**ENTECH IS DEALS!** Show specials - be there!  
Match the pitch with the reality **ENTECH IS VALIDATION**  
**ENTECH IS KNOWLEDGE!** Experts from around the world!

Sydney Exhibition & Convention Centre

Monday April 5 ~ Tuesday April 6 ~ Wednesday April 7

**ENTECH**

register now & get info at [www.jl.usmedia.com](http://www.jl.usmedia.com)

PLUGGED IN • ACTIVE • LIVE • BRIGHT



## ENTECH IS TRENDS

### ENTECH IS THE REAL DEAL

"The only entertainment technology trade event of its kind in the southern hemisphere. *Join us for the tenth anniversary show - our best yet!*"

- Julius Grafton, founder

I validate my decisions at ENTECH. I need to meet the people behind the equipment. I form a view about future trends there!

I usually go to one or two seminars, on two days. That leaves me lots of time to do the stands. I'm glad about the demo rooms this year. The seminars are extremely good value - less than 20 dollars each.

- Simon Faraday



**ENTECH IS  
THE PLACE  
TO SEE,  
TOUCH AND  
HEAR....**

Professional  
Audio, Lighting,  
Staging and Vision  
- live, studio,  
installed and  
broadcast.

## ENTECH IS IMPRESSIONS

**ENTECH IS ISSUES!**

Free industry meetings

**ENTECH IS THE PARTY**

More additional industry events than ever

**ENTECH IS ACCESS!**

Find new channels, find new suppliers

My interest is spread over all the ENTECH equipment, I need new lights, sound and some plasma.

I like walking around the exhibits and seeing how the manufacturers present themselves. It tells me things about their product. More than ever I think the entertainment technology market is about fashion- I need to see how excited my customers are about different brands. I'm the guy watching.

- Tim Menodes

**Sydney Exhibition & Convention Centre**

Monday April 5 ~ Tuesday April 6 ~ Wednesday April 7

**ENTECH**

register now & get info at [www.juliusmedia.com](http://www.juliusmedia.com)



# the daily SCHEDULE

Check our website for changes which may happen!

**TRADE SHOW ENTRY IS FREE AFTER REGISTRATION REGISTER NOW AT [www.juliusmedia.com](http://www.juliusmedia.com) OR use form at right for Ticketed events FULL INFO ON THESE EVENTS IS AT [www.juliusmedia.com](http://www.juliusmedia.com)**

## Sunday April 4th

• Setup day  
**NO EXHIBITS OPEN**

### ◆ STAGE OH&S COURSE

Complete the Stage OH&S Course and attain a Nationally Recognised unit of competency from the Entertainment Industry Training Package.

**This is the Juliusmedia stage OH&S course, delivered in full.**

At completion you obtain a Statement of Attainment from Juliusmedia college.

Tumbalong 1 - 10am - 4.30pm.

• Cost: A\$99 or A\$59 for students. **SAVE! This course normally costs \$180.**

### ◆ REGISTER

Registration opens at 4pm today. Save time!

### ◆ SOCIAL:

Gather at 5pm at Registration for a choice of two FREE social gatherings.....

1. Bus trip to **Hillsong Church**. Leaves 5.05pm sharp! Register in advance for a free trip out, and back. See the largest new church of kind, in full flight at the Sunday night worship service. Hillsong boasts an extremely impressive technical array.

2. **Bar crawl** with desperate industry types. Leaves 5.05pm, not so sharp. Gather at the same place – registration – and be lead astray by CX Journalists.

## Monday April 5th

EXHIBITS: 10am - 6pm  
REGISTRATION: 9am

### ◆ HALF DAY CONFERENCE

The business, The laws, and You.

• Test and Tag • OH&S • Tax • Qualifications • Laws • Industry Accreditation • Insurance

**The 101 things you hate to bother with that can bring you down!**

Tumbalong Room 1  
1pm - 5.30pm.

Cost \$49 (Students \$30)

### ◆ SEMINARS

Lighting Design and Video

Tumbalong Room 2  
1pm - 2.30pm.

\$18 or \$12 for students

Vision and System Control over Ethernet

Tumbalong Room 2  
3.00pm - 4.30pm.

\$18 or \$12 for students

### ◆ FIELD TRIP

**New Theatres for Old?**  
A visit to the brand new Sydney Theatre at Walsh Bay.

Departs at 2pm by bus.  
\$18 or \$12 for students.

### ◆ SOCIAL

**Opening day cocktail party!**

From show closure at 6pm, just go upstairs to the Tumbalong 1 and 2 (seminar) rooms. Drink and nibbles from 6pm, with entertainment. Ends 8pm.  
Cost: \$10 (incl drinks, food)

## Tuesday April 6th

EXHIBITS: 10am - 6pm  
REGISTRATION: 9am

### ◆ Biz-2-Biz Hour

Exhibitors only, from 9am.

### ◆ Free Meeting

**Industry training**

Chaired by Jamie Ivarsen. Learn about the new Entertainment Industry Training Package, and the Australian Qualifications Framework.

Tumbalong Room 1  
10am - 11.30am.

No cost, no need to book.

### ◆ SEMINARS

**Height safety**

Tumbalong Room 2  
10.30am - 12 midday.

\$18 or \$12 for students

**AV Presentation Systems**

Tumbalong Room 1  
1pm - 3pm.

\$18 or \$12 for students

**Bruce Jackson and Friends, LIVE!**

The legend of live sound - a fun - and educational - session!

Tumbalong Room 2  
1pm - 3pm.

\$18 or \$12 for students

**Houses of Worship - technology trends**

Tumbalong Room 1  
3.30pm - 5pm.

\$18 or \$12 for students

**Framing Pictures**

With Lighting Designers  
Tumbalong Room 2  
3.30pm - 5pm.

\$18 or \$12 for students

## Wednes. April 7th

EXHIBITS: 10am - 5pm  
REGISTRATION: 9am

### ◆ Biz-2-Biz Hour

Exhibitors only, from 9am.

### ◆ Free Meeting

**An industry accreditation scheme.**

Join Camille Bradsmith from the Events Industry Association, as she details how your firm can get the new accreditation package.

Tumbalong Room 1  
10am - 11.30am.

No cost. No need to book.

### ◆ SEMINARS

**Electrical safety**

Test and Tag, principles of electrical safety.

Tumbalong Room 2  
10.30am - 12 midday.

\$18 or \$12 for students

**Ready, aim, FIRE! Moving Light shootout**

We put a bunch of moving lights through their paces.

Tumbalong Room 1  
1pm - 3pm. \$18 or \$12 for students

**Show Sound Design**

Designers from several camps put their views.

Tumbalong Room 2  
1pm - 3pm.

\$18 or \$12 for students

**Who does the consultant serve - user or client?**

The way a theatre consultant relates to the rest of the design team.

Tumbalong Room 1  
3.30pm - 5pm.

\$18 or \$12 for students

**Sydney Exhibition & Convention Centre**

Monday April 5 ~ Tuesday April 6 ~ Wednesday April 7

**ENTeCH**

register now & get info at [www.juliusmedia.com](http://www.juliusmedia.com)



# ENTECH 2004 Event **TICKET PURCHASE FORM**

For **FREE SHOW REGISTRATION ONLY**, (without buying any events) please go to [www.juliusmedia.com](http://www.juliusmedia.com) and **do not use this form**. Use this form **ONLY** if you wish to purchase one of the events shown at right that carry a cost. You will be automatically registered for free trade show entry if you buy one of these events. Your visitor badge will be posted to you. **This form cannot be used if received after March 20th!**

Fields marked with \* are required info!

Please fax this form to: +61 2 9876-5715 or mail it to Juliusmedia, Locked Bag 30, Epping NSW 1710 Australia

Title \_\_\_\_\_ \*

First Name \_\_\_\_\_ \*

Surname \_\_\_\_\_ \*

Job Title \_\_\_\_\_ \*

Organisation\* \_\_\_\_\_

Address \_\_\_\_\_ \*

Suburb \_\_\_\_\_ \*

State \_\_\_\_\_ \*

Post Code \_\_\_\_\_ \*

Country \_\_\_\_\_ \*

Phone \_\_\_\_\_ \*

Fax \_\_\_\_\_ \*

Mobile \_\_\_\_\_ \*

Email \_\_\_\_\_ \*

This email address will serve as our main point of contact with you for registration and seminar confirmation. We will not sell it to bambi-undressed.com or in fact divulge it to anyone else.

### Attendee Type

- Visitor
- Media

### Your Primary Interest(s)

- Pro Audio
- Lighting
- Vision / AV
- Staging
- Automation & Control
- Services

### What areas of Technical Training are you interested in?

- O H & S
- Audio
- Lighting
- Stage Management
- Venue & Events M'gement

### Would you like to be updated on certified training courses?

- Yes
- No

### Where did you hear about this ENTECH ?

- CX Magazine
- Audio Technology Magazine
- International Magazine
- Word of Mouth
- Website

### Have you heard of CX Magazine (formerly called Connections)?

- Yes
- No

◆ For **FREE SHOW REGISTRATION ONLY**, with out buying an event ticket, please go to [www.juliusmedia.com](http://www.juliusmedia.com) and **do not use this form!**

### PAYMENTS: (Make cheques out to Juliusmedia Pty Ltd)

- Chq
- Diners
- Amex
- Vsa
- M. Card

Card No:#

TOTAL AS \_\_\_\_\_

Expiry date:

Name on card: \_\_\_\_\_ **SIGNED: ✕** \_\_\_\_\_

Fax to +61 2 9876-5715 or mail to **JULIUSMEDIA**, Locked Bag 30, EPPING NSW 1710, Australia  
•Juliusmedia Pty Ltd is a training, publishing and events company registered in Australia. ABN 62 098 850 036  
Cancellation charges: If you cancel 21 days or less before the event, no refund of any payments received is allowed.

Tick thing Write cost

### ◆ STAGE OH&S COURSE

- SUNDAY A\$99 \_\_\_\_\_
- A\$59 for students \_\_\_\_\_

### ◆ HALF DAY CONFERENCE

- MONDAY A\$49 \_\_\_\_\_
- Students \$30 \_\_\_\_\_

### ◆ SEMINARS

#### Lighting Design and Video

- MONDAY A\$18 \_\_\_\_\_
- Students \$12 \_\_\_\_\_

#### Vision and System Control over Ethernet

- MONDAY A\$18 \_\_\_\_\_
- Students \$12 \_\_\_\_\_

### ◆ FIELD TRIP

#### New Theatres for Old?

- MONDAY A\$18 \_\_\_\_\_
- Students \$12 \_\_\_\_\_

### ◆ SOCIAL

#### Opening day cocktail party!

- MONDAY A\$10 \_\_\_\_\_

### ◆ SEMINARS

#### Height safety

- TUESDAY A\$18 \_\_\_\_\_
- Students \$12 \_\_\_\_\_

#### AV Presentation Systems

- TUESDAY A\$18 \_\_\_\_\_
- Students \$12 \_\_\_\_\_

#### Bruce Jackson and Friends

- TUESDAY A\$18 \_\_\_\_\_
- Students \$12 \_\_\_\_\_

#### Houses of Worship - trends

- TUESDAY A\$18 \_\_\_\_\_
- Students \$12 \_\_\_\_\_

#### Framing Pictures

- TUESDAY A\$18 \_\_\_\_\_
- Students \$12 \_\_\_\_\_

#### Electrical safety

- WEDNESDAY A\$18 \_\_\_\_\_
- Students \$12 \_\_\_\_\_

#### Ready, aim, FIRE! Shootout

- WEDNESDAY A\$18 \_\_\_\_\_
- Students \$12 \_\_\_\_\_

#### Show Sound Design

- WEDNESDAY A\$18 \_\_\_\_\_
- Students \$12 \_\_\_\_\_

#### Who does the consultant serve?

- WEDNESDAY A\$18 \_\_\_\_\_
- Students \$12 \_\_\_\_\_



A business activity of:

Travel and accom deals online at [www.juliusmedia.com](http://www.juliusmedia.com)



**Sydney Exhibition & Convention Centre**  
Monday April 5 ~ Tuesday April 6 ~ Wednesday April 7

**ENTECH**  
register now & get info at [www.juliusmedia.com](http://www.juliusmedia.com)

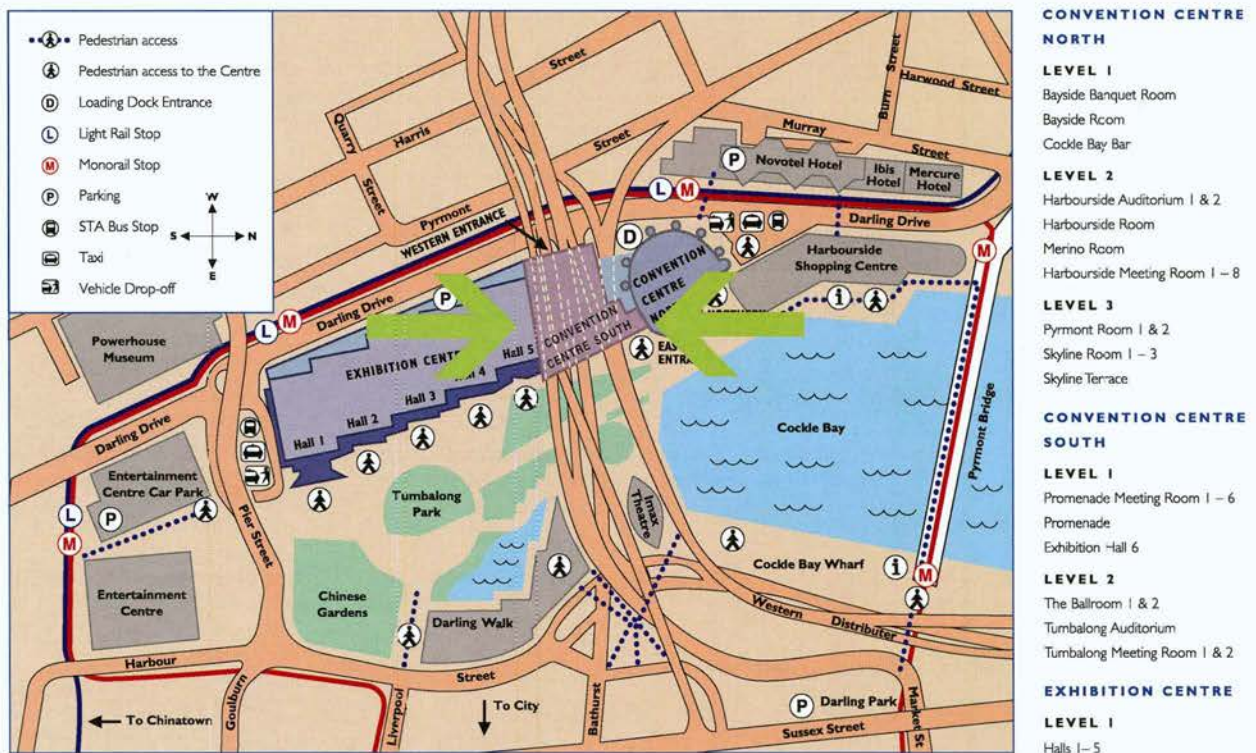
# ENTTECH

## 10th ANNIVERSARY TRADE SHOW for the entertainment technology industries

### Sydney Exhibition & Convention Centre

Monday April 5 ~ Tuesday April 6 ~ Wednesday April 7

Sydney Convention and Exhibition Centre, Darling Harbour, Australia.



**ENTTECH Show registration is FREE, do it now online at [www.juliusmedia.com](http://www.juliusmedia.com)**  
**Seminar Tickets can also be purchased online, or using form on previous page**

Collecting registrations: if you register late, or need to register on site, we have made substantial changes in an effort to reduce the lengthy queues and embarrassment of 2002.

1. You can register on SUNDAY, the day prior to the show, from 4pm - 5.30pm at the venue.
2. We have a new registration contractor and new systems to avoid the pathetic jam of 2002.
3. Seminar tickets are on sale at the seminar room door, not at registration. That should help!

Seminar audiovisual contractors:



Travel and accomodation specialists:



ENTTECH is a business activity of:



Held every 2 years. Largest trade show of its kind in the region. Features great seminars and workshops.  
 Info at [www.juliusmedia.com](http://www.juliusmedia.com), or call +61 2 9876-3530. Email [louiseb@juliusmedia.com](mailto:louiseb@juliusmedia.com)

# NEXO

WE DON'T NEED TO BE SEEN **TO BE HEARD**



**Nexo GEO T** used by  
Oasis - Hamburg 2003



# Entertainment Safety Digest

CX is very committed to entertainment safety. We teach in excess of the minimum OH&S courses standards at Juliusmedia college.

We are also committed to responsible pro active implementation of safety practices and standards.

We oppose overreaction and exploitation of safety laws for gain or malice.

Because new laws in most jurisdictions allow for extremely heavy fines and also jail terms for 'industrial manslaughter', no one can ignore or minimise safety standards.

The big picture: this is all about avoiding and minimising death and injury. Anyone who has endured rehabilitation after an accident would prefer the accident didn't happen in the first place.

Accidents cost money, time, and cause human pain and suffering.

*SAFETY DIGEST IS  
COMPILED BY JOHN  
GRIMSHAW*

## **CONFERENCE:**

- The Laws and Us
- ENTECH 2004, Sydney
  - Monday April 5
  - 1pm - 5pm
  - Book online at [www.juliusmedia.com](http://www.juliusmedia.com) - go to the ENTECH area.

**F**or those of you that work in an organisation where a full and proper "work method statement" has been devised, thinking about safety equipment should be second nature to you. But with new products becoming available all the time, it is worth taking a look to see what might be out there that will make life a little easier.

## **Flooring**

One of the most important products worth knowing about when it comes to covering large outdoor areas is Terraplas (pictured below). Designed specifically as a turf protection system for stadia and other venues, this product has seen acceptance worldwide in a growing number of major venues.

The big appeal is the speed of setup/removal, with major rock concerts able to be staged the day before/after a major sports event – in fact they could be within hours of each other.

It is designed to allow the passage of air, light and water, so the grass can survive while it is covered.

Terraplas is made 2m x 2m x 64mm panels, with each one locking to the

adjoining panels by means of eight camlocks. Once locked, there are no trip hazards for the punters, and the surface is even coated in a non-skid material to deal with wet conditions. The strength of the system is significant – it can easily hold the weight of stages and towers.

The company also make a number of other products in the same kind of vein. Check out their website for more details.  
[www.terraplas.com](http://www.terraplas.com)

## **Ear Protection – For you and not the punter?**

Damage to hearing relates to the volume of the sound as well as the time exposed to it. So, a punter that is there to see a show may not be as close to the speakers as you are, or has not sat through daily rehearsals or shows. Beware of the technical rehearsal of a musical – particularly a rock musical. For a show that is only meant to be two hours long, an all day technical rehearsal could be quite dangerous.

If you have ever been to an AC DC concert, you know how loud a show can get. I have worked on an AC DC tour as a follow spot operator, and sat through three consecutive shows – directly adjacent to the





# The *fast track* to a Career in Entertainment Technology!

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Our courses are building blocks: enrol for Certificate III, then do Certificate IV, then do an Advanced Diploma. Each course fits neatly into the next, and you do not need to make a long term commitment. You can even do one course now, and pick up another one at a later time.

**EMPLOYERS:** We are approved to provide Government Funded traineeships. Ask us about further incentives from Government.

**ALREADY SKILLED?** We can assess you, and issue a qualification - usually on the same day.

**NOW ENROLLING:** Certificate III night school starts March 8. Monday and Wednesday nights, 6.30 - 9.30. We feed you too!  
Certificate IV and Advanced Diploma, full time, start May.

**~ GOVERNMENT REGISTERED ~**  
**CERTIFICATES & ADVANCED DIPLOMAS**  
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main speaker stack. I had 'in ear' hearing protection as well as a good pair of Beyer-dynamic headsets. Not a problem. On the other hand, my brother who attended one of the three concerts had tinnitus (a constant tone) in his ears for days after the concert.

Disposable in ear protection is usually around \$2 from any chemist. If you want to

buy bulk, one option is to check out the website [www.safetyonline.net.au](http://www.safetyonline.net.au) or [www.safetyquip.com.au](http://www.safetyquip.com.au). They have a range of corded and uncorded products ranging from \$60 to \$80 for boxes of 100 or 200 sets. (20 to 32dB SPL protection depending on brand)

Currently, the system is approved for use in Australian states: Qld, NSW and Vic. However, with heavy interest building in WA, SA and New Zealand, the company is looking to get the system expanded and accepted by the work cover authorities in those areas.

SME costs around \$850 for the initial package, which includes a full hardcopy version of the package. Or, you can opt for an electronic only version at \$650. There is a further optional maintenance fee of \$100 per year, which allows you access to the website and any updates that are made to the system.

Check out the [www.molliwell.com.au](http://www.molliwell.com.au) website (hit the "S.M.E Suppliers" link) to find a distributor near you. This list also doubles as a handy list of OH&S specialists.

There is also a free 'OH&S Kit' on the [www.juliusmedia.com](http://www.juliusmedia.com) website : go to the ETA 'Association' area on the main news page.

### More Safety Products and Ideas?

Drop us a line and let us know - whether you are a user, distributor or supplier. We will run this feature every time we find something interesting to tell the rest of the industry about, so make sure you keep YOUR industry magazine in the loop!

[mail@juliusmedia.com](mailto:mail@juliusmedia.com)

### Company Safety Policies

Even if you employ only one person, you need to have safety policies and procedures that ensure you comply with state and national guidelines on workplace safety. How can you do this on a tight budget, when the big companies are spending thousands on their own proprietary safety systems?

One option is to take a look at a product like "Safety Made Easy" (SME). Designed and distributed by a company called Molliwell ([www.molliwell.com.au](http://www.molliwell.com.au)), this is a specialised software service that is updated yearly. Inside it are all of the tools necessary to build your own safety procedures manual. It is designed to take a small to medium business through the safety minefield, helping to identify risks and procedures to minimise or eliminate that risk.

How it works is simple. You simply follow the software as it asks you questions. If you are able to give it all the answers it needs, it can then print the documentation you need for your safety "bible". Where it identifies shortcomings, you will know exactly what areas need to be addressed so that you comply with legislation.

The system has forms, templates, and procedures for Induction, Job Safety Analysis, Work Permits, Emergency Response, Chemical Inventory and Assessment, Risk Management, Workplace Inspections and Safety Management System Audit.

According to the documentation, you can implement the "Safety Made Easy" system yourself, or contact your qualified safety consultant for professional support.

### Harnesses

Implementation of a harness system is not as simple as going to your local supplier, buying a couple of harnesses and handing them to the people that need them, saying "There you are, use these things."

Implementing a harnessing system comes at the end of a thorough evaluation of the options:

- Is there a safer way of doing the job without the harness?
- What will the anchor points for the system be?
- What are the methods for dealing with a rescue after a fall has taken place?
- Who is being trained in the use/maintenance of the system?
- What are you going to do to make sure your system remains safe and compliant with evolving legislation?
- What sort of equipment is going to be needed?
- Are you going to have to change your work methods to accommodate the changes?

Anyone that asks this writer about harnesses has always been told get an expert in this field to come and evaluate if and how a harness system can/should be implemented. In fact, there are very specific national standards that are applied to the installation, use and care of industrial fall-arrest systems and devices

Remember, unless you are working off a ladder, when you are more than 1.8 above the floor then you should be using some kind of height safety system/procedure. It could be as simple as installing hand rails. It could be as

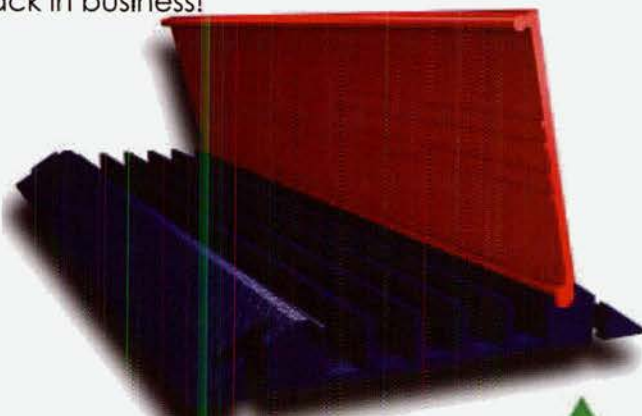
The common cable tray. Let us know what you PAID for yours, and where you got it. We'll spread the news!  
[mail@juliusmedia.com](mailto:mail@juliusmedia.com)



# Stage Safety Pty Ltd

## WE ARE BACK!

After a three year legal battle with a multinational company who tried to rip us off, justice was done and we are back in business!



The only Australian made cable guards. Protect your cables and your Public Liability premium. Beware of illegal copies - only buy guards with the HEADS! logo



## Australian Made for Australian Conditions

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For detailed information about our products, please visit our website: [www.stagesafety.com](http://www.stagesafety.com)

All sales enquiries, please call **Bob Higgins** on 0418 815 775 or email [bhiggins@adelaide.on.net](mailto:bhiggins@adelaide.on.net)

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Non-Linear Post Production - Studio & Field  
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Indoor & Outdoor Screen Solutions  
Catalyst Applications  
**Consultancy**  
Production Design and Management  
Live Show Direction for Concert, Broadcast & Corporate Events  
Specialist Crew

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F + 61 2 9439 0377  
[www.bigpicture.com](http://www.bigpicture.com)

when you need to see the big picture...





environmental elements will considerably accelerate wear - salt, sand, snow, ice, moisture, chemicals. In exceptional circumstances, wear or damage could occur on the first use which reduces the lifetime of the product to that one single use.

### Non-Ladder Access

One anti-ladder option which is gaining interest in Europe is Cablenet, designed and manufactured by British firm Slingco. This is a specially woven steel wire rope net that creates an invisible working platform just below the lighting rig. Technicians just walk around in the air to hang and focus whatever they need to, while the lights project through the net without casting shadows.

Cablenet can be produced as a modular system - i.e. in regular shaped panels which can be built up to cover entire auditoria or even exhibition halls - or custom woven to fit any shaped room. These 'virtual floors' can also cope with obstacles like pillars, and can even incorporate access ports to allow small objects - such as microphones - to move up and down through the net.

Slingco's cablenets are now used in dozens of theatres, exhibition halls and multimedia venues. They have installations in the UK, Spain and Denmark but not yet outside Europe, but if this appears to be a potential solution for your venue, don't let that stop you contacting them. [www.thecablenet.net](http://www.thecablenet.net)



complex as a full re-positioning harness operating with a flying box arrangement.

Also, it is worth remembering that these items have a limited lifespan. For example, the following information is from the "NAVAHO COMPLETE" harness, sold by Total Height Safety:

*Shelf life (in favourable conditions):*

- Helmets, harnesses, webbing slings and lanyards: 5 years
- Metallic products: no limitation.

The useful life depends on the intensity and the environment of usage. Certain

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- ◆ Funktion One Resolution
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oops, Dr. G

**E**ven a mild electrical shock from a standard 10A outlet that hits you just at the wrong time in your heart's rhythm could stop you cold. You should treat single and three phase sources with the care and respect that you would give to Hannibal Lecter...

As one particular electrician in the industry is often reminding this writer too many theatrical technicians treat electrical supply with indifference - or even neglect. So, what happens when you get an electrical shock?

You can die one of three ways.

One. The electrical shock is so intense that

you more or less 'cook' yourself. Not a pretty description, and it is a miracle if the person survives at all.

The second way is that the electrical shock stops your heart or simply damages your heart. This could be a very mild shock if the electricity happens to get you in the right place. A slightly damaged heart may work for years after the shock, just waiting for another mild shock to cause serious problems.

Interestingly, the medical specialists that deal with reading and interpreting electrocardiograms can often identify if you have had

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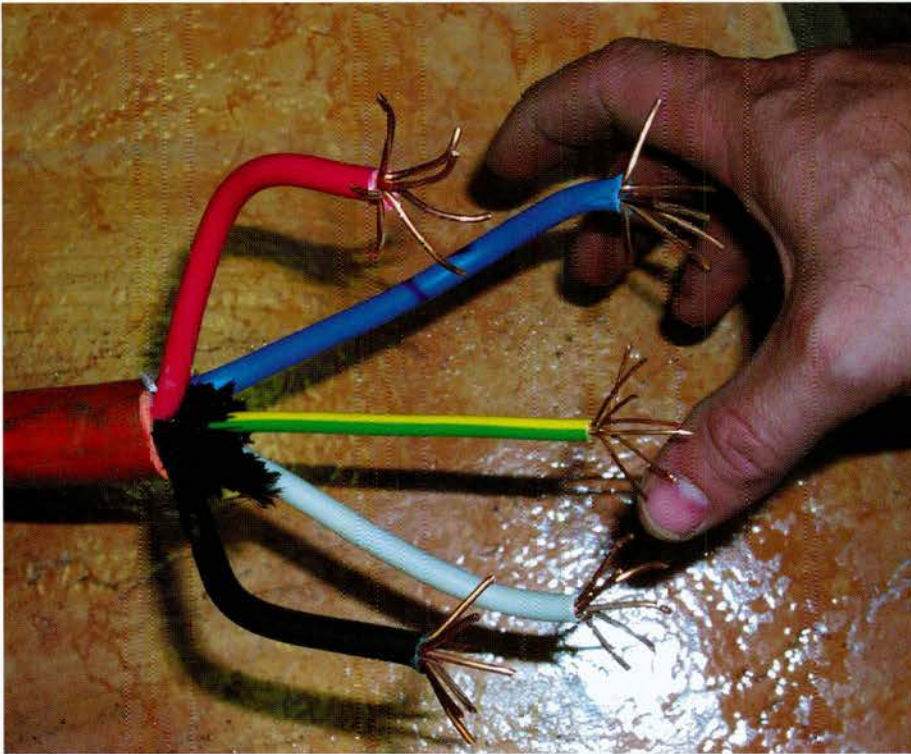
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**What is Lactic Acidosis?**

“Profound acidosis is toxic to the body and harms normal heart function.” (source: [www.emedicine.com/aaem/topic395.htm](http://www.emedicine.com/aaem/topic395.htm)).

The longer it takes to get medical treatment, the less likely it is that a person will recover.

One little electric shock can kill you afterwards.

**Inspection required.**

A visual looksee at each cable each time you roll or unroll it is standard professional practice. Nicks and cuts do happen, more often than you think.

**Important DOs and DON'Ts**

Never disconnect a lead or device when it is under load.

Even a single power lead with a 650W lantern running on the end will cause a decent spark inside the socket at the point of disconnection. Each time this happens, the socket and the pins get damaged. This damage causes resistance at the join – and given enough damage, that could lead to a fire. If you have ever seen someone disconnect a three phase connection under load, it is the same effect, but multiplied significantly.

That kind of disconnection will ‘blacken’ the interior of the socket, and cause it to fail its next electrical tagging. It could even potentially ‘jump cut’ and get you depending on the amount of load, age/wear of the connection, etc.



a serious electrical shock (or even numerous ones) in your lifetime by the permanent damage it does to a normal heart's rhythm.

The third is a little more insidious – the shock poisons you. I was once told an anecdote of an electrical worker working with lines up a power pole. It was three phase of the kind we use in every show. The man was given an electrical shock while up the pole. He was shaken, felt a bit drained but thought he was more or less ok.

That night he fell down dead face first into his dinner.

Why?

Unknown to him his heart muscle was struggling harder and harder to deal with the massive amounts of lactic acid his system had produced. Lactic acid is a by-product of muscle use. The electrical shock had made every muscle in his body contract – strenuously. Lactic acid increased sharply and his body could not get rid of it. That caused lactic acidosis. (See side box)

**Ever had a bit of a shock?**

If you have, then you would know that you would ache after the ‘belt’ – particularly around the area of the shock. Your whole body might feel suddenly exhausted. There is little first aid you can give for an electrical shock, other than dealing with any obvious injuries, and looking for signs the person is going into shock. In this situation, even if you start to feel better, you would be well advised to get yourself off to a hospital to be checked out by people that can test to see if your heart was damaged, or if your shock is more life-threatening than you might know.

You are far better off avoiding the shock in the first place.



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**Know how to power up, and down your system**

Set up a routine, and follow it. Not only that, get others to follow the routine (just say the the LD or the Audio Tech told you that was the way they wanted it done!)

The basic idea is, "to control the load".

A sequence could be: (for lighting):

- fade out the performance lights and bring up worklights. With arc lamps, you would obviously turn the lamps off remotely, while leaving the unit fans running.
- waiting five to ten minutes with the gear running so that it can cool down. This can apply to amps, transformers, or anything.
- switch off the gear.
- switch of the power supply

Powering up is simply the reverse. When you are following the routine, you can be assured that the bump out will happen without any unexpected surprises.

At Juliusmedia college, we give audio students a pre-flight checklist. It helps preserve the system components, as well as the health and safety of all in the vicinity!



**Curly cord**

This is often caused when a cable carries an electrical load while the cable is fixed/stretched tightly in position.

**Always inspect for damage**

Sure the device or lead might have an up-to-date tag. Ignore it. You don't have to be an electrician to look for problems. Treat the device as potentially having a fault, and as you install it, LOOK for obvious faults:

- exposed inner shielding or copper, or nicks on the outer shielding
- heat damage
- carbon scoring or deposits on the plug ends, or inside the plug itself
- signs of stress – like a cable that has become curly (see picture at left)
- electrical tape being used to cover a hole

If you find something wrong, DON'T USE THE CABLE. Mark it by taping over the plug AND the socket with RED ELECTRICAL TAPE. Put it aside and get another one.

**Always treat an energized device as having a 'hot' surface**

Particularly with lights, it is always good practice to not have a hold of a unit when it is being run up for the first time. Then if there is a stray active wire resting on the housing, you stand a chance of the circuit protection kicking in before you are even involved. Next, you should assume that the circuit protection I just mentioned IS faulty, and brush the back of the unit with the back of your hand before grabbing hold of the

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- and you don't even have to touch anything. Some electrical currents will happily jump out to meet you, and it isn't like Lassie the dog welcoming you home. That is why emergency services cannot enter "high voltage" areas, even if a person is in serious trouble right in front of them. You should always treat these areas as completely off limits.

### The final word.....

Remember to think safe, and to say no when you are unsure or uncomfortable.

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device. Circuit breakers are there to protect the wiring and the equipment, and there are certain conditions where that breaker will happily allow current to pass through you - because you are not a large enough load on the system for the circuit breaker to trip.

While a RCD (residual current device) is designed to save your life, if you have the right circumstances it also can allow you to electrocute yourself without tripping itself. These protections are an important part of the workplace, but you should always use work methods that you would use if these protections were not there.

### High Voltage

While show technicians never need to deal with what the electrical suppliers call "High Voltage" (11,000v and up), sub-stations are often in close proximity to where we work. Some are actually inside the venue.

These places are more than just dangerous



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# A New Dawn for Clay Paky in Australasia



**C**lay Paky was one of the original moving light companies. Today they make some of the highest quality moving lights in the world, but of late they have become very hard to buy or hire in Australia. That is set to change with Total Concept Projects picking up the distributorship from 2004.

TCP have taken on Clay Paky's full range of product in Australia, and interest is already building from some of the biggest users around. Clay Paky has a huge range of fixtures spanning theatrical, rock, architectural, club, and specialty lighting effects.

Mark Devin, formerly of Herkes Professional Lighting, has taken up a role at TCP to manage the product line. He told CX that TCP has started the process of talking to Lighting Designers and architectural lighting specialists about the product range. Part of the building interest in Clay Paky has been the search by lighting designers for new tools to work with. Devin sees Clay Paky as offering designers a suite of options that could significantly open the scope for original lighting effects.

## Product Range Highlights

Some of the very interesting fixtures include the Stage Profile Plus SV – a very bright moving head profile with fully controllable shutter blades, and VERY quiet. This lantern could well be the perfect theatrical lantern for venues that have long avoided moving lights because of the amount of noise they typically generate. This unit won an award at a recent Plasa show for the best design of automated shutters – it can produce a full "curtain" effect by any of the four shutter blades. Another feature of this unit is that it

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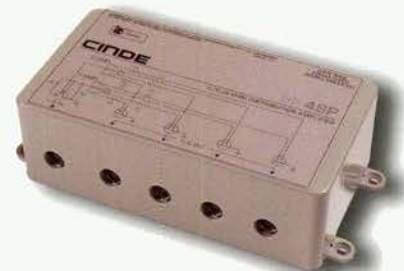
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has the ability to change heads, from profile to wash. A 1000 watt colour changer is also available in this range for the lower colour temperature applications.

According to Clay Paky, the Royal Albert Hall was quite pleased with its acquisition of a number of these units. Mark Jones, the Hall's Senior Technical Show Manager, explains: "For a theatre with a history like ours, we needed to find exactly the right products for its setting. When we realised we needed to develop our lighting system, we did some extensive research into all the lighting companies around. We chose Clay Paky's Stage Profile Plus SV because it seemed designed for our needs. To start with, it is incredibly silent: anyone working in theatre knows how important operating silence is, and what's more, the theatre's acoustics tend to amplify the minimum sound".

Clay Paky have some very sophisticated followspots that allow control of things like colour, iris and intensity via rear mounted electronic controls. These controls can also be DMX driven, giving precise co-ordination with all





followspots at once.

One of the newest additions to the product line is the Point collection of products. It comes in three versions, standard lantern, recessed ceiling fitting and as a moving head. The interesting thing about this product is its size – the moving head unit would almost sit within the page of paper you are reading now. And at 235mm high, this little animal will fit into very tight positions.

Intended as a simple profile light, the only control you have is selecting which of the 7 colours to project, and intensity – plus pan and tilt if you have the moving head version.

You can also purchase a gobo projection kit to add to the unit. This gives you a manually focused lens and gobo holder that is attached to the front of the unit. It can be controlled via DMX, set to work by itself (with a built-in mic to listen to the music), or as a group with one projector giving commands to the other projectors so they can work without control and in sync with each other.

Of some of the more traditional Clay Paky products, they continue to build and improve on the moving mirror lanterns. Moving mirrors will always be with us because no moving yoke can ever move

as fast as a mirror. Designers are now realising that some applications are more than suitable for moving mirror, and there is a very substantial price saving to be had, compared to a moving yoke.

The Golden Scan HPE is the current top of the heap moving mirror, with Stage Scan and Super Scan Zoom rounding out the three most important products in this part of the line up.

Each have their own niche, with the Golden Scan HPE giving the grunty output needed in large events, the Stage Scan optimized of quiet operation and the Super Scan Zoom has been engineered with the



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highest precision optics that Clay Paky could put in one package. The often used and very reliable Miniscan HPE is also still available.

Another new product is the Rainspot. IP 65 rated, it has interchangeable lenses, with electronic focus. The Lamp is 575 HSR. It is one of only a handful of outdoor profile style projectors and, according to Mark at TCP, is reasonably priced.

Clay Paky also has a very broad range of Disco effects like the Astro Raggi or Hedgehog.

By far the best way to get a feel for the huge range of options Clay Paky has to offer is to go online at: [www.claypaky.it](http://www.claypaky.it)

There you can browse through the range of product. Talk to Mark Devin at TCP for more details. +61 2 9648 3444

### Divided Loyalties

The previous distributor of Clay Paky was Show Technology – the distributor of Martin Lighting. It has always been a question in the minds of CX staff how a distributor can best represent two highly competitive brands without favoring one over the other. You only have to look at the proliferation of Martin lighting across the country to see which brand got the better deal.

This was a shame because each year we would troupe off the Plaza in the UK, and see the full range of Clay Paky product, and wonder why this stuff never hit the Australian market.

## INTERVIEW: Tony Musico of TCP

Clay Paky is a leading lighting manufacturer who have a long history in Australia and the region. The brand has faded from view in recent years. Now they have new representation, and expect to recapture some old business, along with a lot of new.

CX examines the current thinking from the Clay Paky camp by speaking with Tony Musico; the joint founder of Total Concept Projects who have just signed on to represent the brand in Australia. Tony has a unique perspective – TCP have sold, installed and repaired virtually every brand of lighting equipment. They have been clients of all distributors.

Tony also heads up the Asian office for TCP in Malaysia, which he hastens to assure, does not distribute Clay Paky in that country. Tony has commissioned major outdoor lighting contracts across Asia.

*Total Concept Projects are one of the leading audio visual installation contractors in Australia. You've been installing and repairing lighting for almost twenty years. How does that sit or conflict with product distribution?*

We're not going to try to hide the fact it is Total Concept Projects behind Clay Paky here. Everyone already knows, it's better to be transparent. Regardless if TCP is also a reseller or not, people can rely on a limited distribution model. We will set up a couple (of resellers) in Sydney, a couple in



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Melbourne and Brisbane, and one in Perth and Adelaide. We'll keep it tight, and support it well.

*What are your lighting origins – when and why did you first get involved with professional lighting?*

Richard Skarzinski and I started in 1984, as DJ's. We started installation work and did the Polish Club, Bankstown Sports Club, and Cupids nightclub. We got into production – and did the big Seaworld shows early in the early 1990's.

*What were your reflections on the lighting industry back then? Was it exciting? Was it businesslike?*

At the start, we were buying Clay Paky and Coemar. It was a very different market back then. Peter Kemp (now Coemar DeSisti Australia) had the agency for virtually everything. Everyone was in it to have some fun! Some disco effects cost \$15,000 in the late 1980's. To build a nightclub you had to have effects.

These days you can achieve a hell of a lot more with 16 or 32 moving lights. You can vary the effects, put up different gobo's, different beam angles, pan, tilt, just do more. In those days you relied on the centre piece effect.

*When did lighting transition away from disco effects?*

Clay Paky brought out the Golden Scan and the Tiger Scan in the late 1980s. Coemar tried too, with the Jupiter and the Forte. Clay Paky were kings of the moving mirror. Clay Paky complained that High End Systems copied the Golden Scan with their Intellabeam!

That was the beginning of the transition. Disco effects impacted into the stage scene. Now everyone's selling a moving light – every man and his dog. The manufacturers that have the best optics are companies with their origins in theatre. With cheaper brands, you couldn't compare optics and light output.

*So what's the argument for Clay Paky from Total Concept Projects?*

We've owned a lot of Clay Paky over the years, like the Astro Disco and the Astro Raggi back at the beginning. We've still got some in our rental stock! Clay Paky products are very well made, very well built, and extremely quiet. I've seen their factory processes and they are second to none.

Our approach is to ensure spare parts are here. Someone wants a part you don't have, you air freight it out, you don't wait for next

sea shipment. We need to rebuild the brand based on service. We will keep swap out units. If someone buys eight moving lights, I'll buy one more and keep it for swap out. Our pricing is going to be cheaper than it was. We'll build through reliability, with a limited distribution network.

My opinion is Clay Paky made an error previously selecting a distributor – Show Technology - whose main line was Martin. Martin was easier to sell, at a lower cost. They decided it was easy to sell cheaper, rather than push to benefits of a product. It was easier for them to sell Martin, so that's what they did.

Today's market is a buyers market, however price doesn't seem to be as important in Australia as in Asia. Here, people here tend to buy quality lighting, whereas in Asia price is everything.

*What's the focus, no pun intended, of your push from the Clay Paky range?*

We're not getting too heavily into the moving yoke market at the start. The number of people in the market for 1200SV are limited. We'll work on the display market, the advertising market, colour changers, and try to get away from 'me too'. We can combine other new lines we are carrying, like Trika. We will offer a full line.

We will offer deals to the rental companies, but they are very well connected these days. We are not putting a lot of emphasis on that part of the market, but we will do a clean swapout if they have a problem with a unit.

In Malaysia we distribute Coemar, Meyer Sound, and do some work with Jands. I found in that market if you look after people, they come back.

*Clay Paky don't have a 575 moving yoke. Doesn't that make it tough?*

They've got a 300, and a 1200 golden spot. But there is a 575 coming. We also have our own brand, the Get Lit stuff we source from the UK. Get Lit offer the GL scan, with a 150, a 250, and a 575 moving yoke. Why Get Lit? We want to promote own brand. I may find cheaper or better product in China.

*How do Clay Paky sit on the world stage these days?*

Huge. Look at the new Caesar's Palace theatre in Vegas – they have 60 1200 SV's in there for Celine Dion. The Americans went through due process and chose the SV for a large theatre application. That speaks volumes.

*What's your closing argument for Clay Paky from TCP?*

Clay Paky have given us 100% support, they have very good intentions. They have very good assistance with marketing, they want to be the number one brand in Australia. We've set up a structure with Danielle Cerin, Mark Devon, and have Daniel Butler handling spare parts and service – he is ex Bytecraft and Jands Vari-Lite.

We've had a client spend 100 grand on a lighting brand and had hassles getting service and parts. Look out boys – letting a contractor do it for a change might fix some of the problems in the past!





## Punching beyond your weight - the Novatech story

**A**delaide Casino is an OK kind of Casino if you've never traveled anywhere. If you have, you'll find more interesting gambling palaces in the poorest city in the USA – Vicksburg, Mississippi. Putting it plainly, Adelaide's casino is pathetic.

Into the casino a few years ago went Eben Nicholls, who in a previous life worked for Staging Connections. Eben got the entertainment management gig, which was strange since the Sky City (why do they call it that?) Casino is carved out of the 180C's styled Adelaide Railway Station. It has no ball room. It has no theatre. It has not much of anything except gambling. It's in a city, with a sky above it. And a railway station under.

The brave and amazing decision was taken to run shows in the Marble Hall, which is the entrance lobby to the place. It is a tall marble hall, with a set of stairs leading down the trains. The acoustics would be terrific for opera. There is a high dome in the middle, and four heritage listed telephone booths. Eben assured the management he could put Jimmy Barnes in there, and pull up to 750 people into the space. They made a temporary entry to the gaming floor, set up a barrier, and sold tickets outside.

To make this all work in the production technical sense, Eben discovered the Novakovic brothers, who at very tender ages were tearing up the Adelaide lighting and sound scene. Their fledgling company, Novatech Productions, was appointed service provider for light and sound at the Casino. The rest of the industry didn't notice, since at the time there was no venue in the Casino.

They put carpet on the marble floor, hung painted hooks high and unobtrusively to take multicores back

from the temporary stage, and put in a ground support truss since nothing could be flown from the ornate arched ceilings. A lot of fiddling was done, and when touring sound engineers arrived, a lot of reassurances were made as heads were shaken. In the end result, the wretched space works as advertised.

Eben's experiences with the Novakovic boys were all very positive. "They were just straight forward, 'yes we can do this', 'no - we suggest you do that this way'. Great customer service", Eben says. They worked together on Casino stuff, and then Eben went to work for Novatech as marketing manager.

"It was a bit of a shock", he reported, "since dealing with the guys when I was at the Casino it was all positive – but together they are passionate." This is code for brotherly fighting. Novatech Productions features some fiery exchanges between the two. Loud arguments but not biff, I'm told.

"Menk used to beat me up when we were young", says older brother Leko, now 24. Menk is short for Minenko, aged 23 and slightly taker and leaner of the two. They are sons of Yugoslav migrants from Elizabeth, 'the skumbag side of Adelaide' (their words), and they are very, very close.

So close that when we sit for a meal, they both drink Stella and both order lamb chops.

Novatech Productions is extraordinary because younger guys with a passion have made a business that is growing dramatically, and because between them and their small team they are true cross-genre hoppers. Novatech has mainly avoided being stereotyped as 'a lighting company' or 'a sound company' or one of the subsets. In actuality they

From left:  
Minenko 'Menk'  
Novakovic, Marcus  
Watt, Leko  
Novakovic and  
Anthony Rattley at  
front. Not pictured:  
Eben Nicholls



The neatest production warehouse we've been in for a long time!

Novatech also manufacture these extremely professional power distribution systems



service a wide range of market sectors, but focused mainly on corporate AV.

Until recently the firm was under the radar of the rest of small production industry in the South Australian capital. By Eben's estimation there are around 250 working in the sector in the state. Adelaide has a population of around 1 million people. Now that Novatech have eaten into some existing business in Adelaide, they face the usual healthy industry speculation and sledging that anyone new and successful gets. The best one I heard was that the boys were drug dealers. Since I'm supposed to be one as well, we had fun with that concept. In actual fact, the firm has expanded due to hard work – Frank Madzin (Madzin Productions) and Jason Owen (Day 2 Nite) have built similar businesses in Sydney, and have both endured or enjoyed being slandered by older competitors.

The Novakovic story starts when Leko got bored at school and started assisting a dance promoter in exchange for a cut of the door. The cut multiplied, to the extent the year 12 leaving exam featured a ringing mobile – Leko's – and the furious supervisor cautioned if he answered it, he was out of the exam. He never did graduate.

Younger brother Menk had increasingly come under Leko's wing after their dad died. The two of them are very supportive of their widowed mum, a pensioner. She comes in and cleans the offices at Novatech; vacuuming under the desks while the staff are on the phone. "Lift your feet!" she orders in broken English. It's that kind of place.

What makes this young firm one to watch is the depth of experience and 'can-do' attitudes of the boys and the staff. By way of example, the brothers are audio enthusiasts. Yet Menk is possibly the smartest lighting service technician I've yet met. Out back in the workshop, which is scrupulously clean and orderly, are disassembled Clay Paky Golden Scan 1200's. Menk strips them, has the chassis powder coated, and rebuilds them. He installs a short arc lamp which delivers as much as a third more lumens, and then has a moving light that is almost better than new.

Although they have a lot of Clay Paky, and a strong respect for the engineering of the Italian moving lights, they also have Martin in their rental fleet – all neatly packed in nice blue roadcases. In fact, Novatech have enough moving lights to handle most varieties of work that comes through Adelaide.

They have sound, video and data equipment too, along with all the unusual stuff that working production firms accumulate. One excellent example is the 6 metre Kabuki drops they made for a very un-usual

corporate gig. The producer wanted a Kabuki to drop from an arched Hoecker structure. No one knew how to do a curtain drop from an 18 degree angle, but the boys got their metal fabricator to make a rotating pipe with vertical spikes for the curtain eyelets, engineered in such a way it would work hung from a matrix truss. Easy!

If I want to see how thorough a production company is, I usually go to the accessory dept. At Novatech they have their cables on large wheeled racks, so the whole cable rack can go into a truck and off to a major gig. The cables and looms themselves are immaculate, maintained at the highest standard. Rigging slings are all neatly machine labeled and everything has a tray.

From the front office, to the back wall, the place is very tidy and very well presented.

Bread and butter business for Novatech Productions comes from service, and like all contracting firms they find plenty of business in the town's nightclubs. These are difficult contracts to keep for any length of time, because club owners just never want bad news.

Menk has the technical chops to fix almost anything, and in record time. The flexibility of having a versatile service dept is a big asset in a city without factory service support for any brand of sound or lighting. As long as Novatech can make club service pay, and have the time to do it, then calling and working on ageing sound and lighting equipment is a good way to be well placed when new money is to be spent.

"I'm looking forward to ENTECH", says Leko, as he has a club who will re-equip with moving lights. "We've always found the best deals when we buy at ENTECH. Last time we bought a pile of Martin, they shipped it straight from the stand to us".

With Adelaide fast becoming a mature market for Novatech, they are already looking beyond the borders. They have made forays interstate, in all three directions, and have clients in most of the main cities. A move to establish an interstate office is a probability. Eben says Sydney is 14 hours away, Melbourne 8 – and it doesn't cost a lot to drive your own 8 tonner interstate for a gig. Maybe if you are all young and keen, that is!

On the other hand, the purpose of Novatech inviting me to Adelaide to write this story was to try to put them on the radar of touring productions, who truck lights and sound into Adelaide when they could get the job done locally. The Novakovic's want their story known, and as we love seeing new young operators with a lot of ambition and energy, we are happy to assist.

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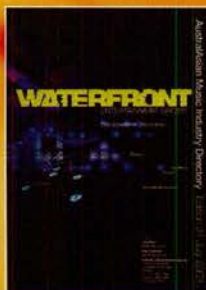
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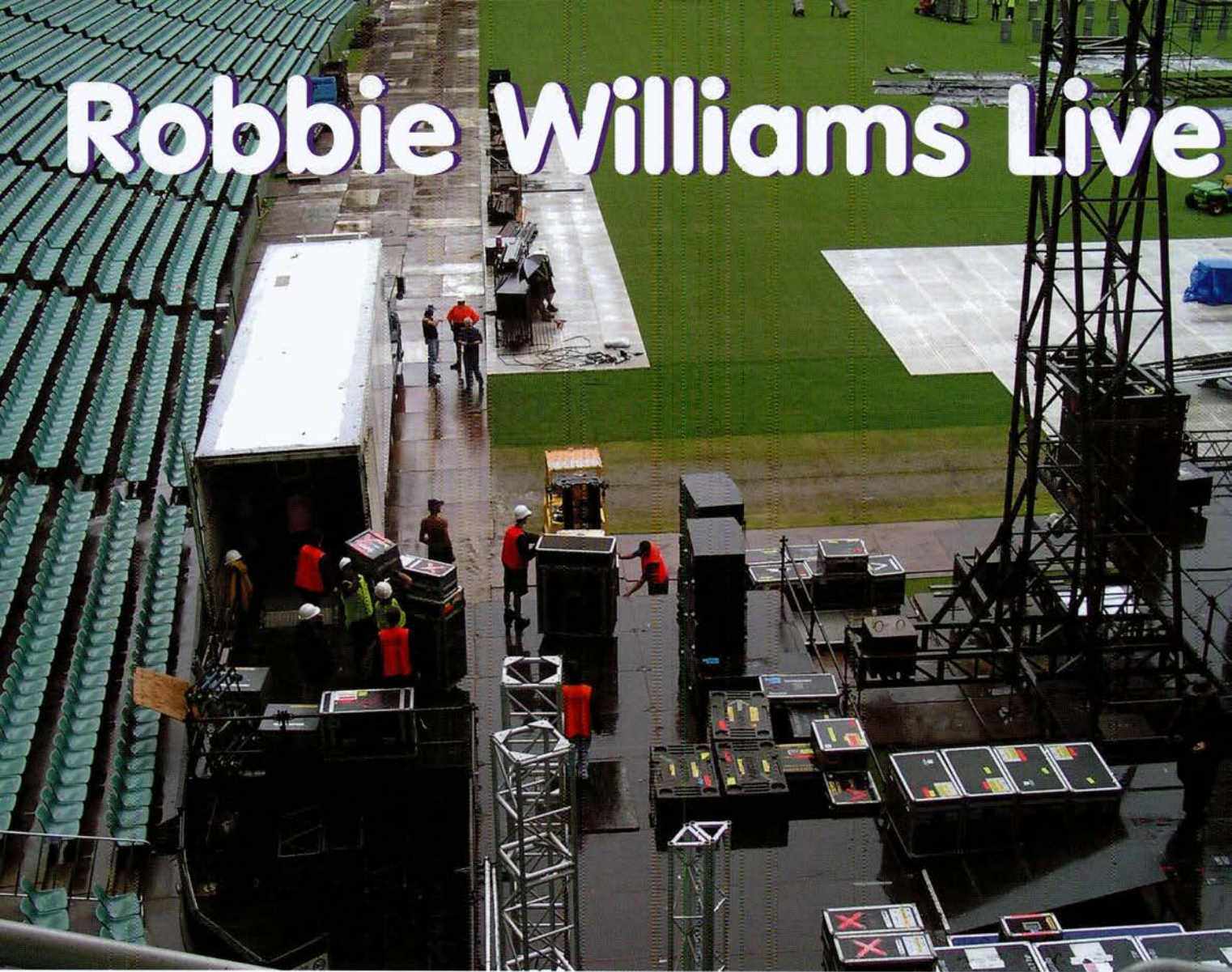
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# Robbie Williams Live



## How to put on a big show - with huge

**W**ob Roberts is an international music industry touring production manager. He can make a tour lose money by implementing bad decisions. He can also make a tour lose money by making bad decisions. All these things, and every element of a show, are scheduled and planned well ahead of time. Then the show hits the road and hopefully it all plays out.

Wob Roberts (below)



The Australian and New Zealand legs of Robbie Williams' tour did indeed make money, and there was little doubt enough seats would sell to do it. So what is the difference between two ultra large shows that lost money, and this one?

The first money losing tour we refer to is non other than that of The Rolling Stones. They choose to tour the way they do, and the outcome was calculated well before they signed contracts to come to the region. They just like doing it their way.

Big loss of the last year, and staring in venues near or the same as the ones Robbie Williams used, was Bruce 'The Boss' Springsteen - whose management simply were too voracious for the local promoter, who was left with acres of unsold seats

There's more parallels to be had too, because The Boss managed to put on a show that impressed people sitting between the mix tower and the stage, but upset anyone sitting mostly elsewhere. Many of them demanded refunds, some went home early. There was simply not enough sound,



## costs - and still make money

or the wind was wrong.

Robbie Williams' shows ran to critical acclaim, and the worst complaints we heard were related only to the inevitable slap back that you get under the Sydney Football Stadium's weirdo roof. There was more than enough sound, thank you very much, the lights were big and brassy, and there was large format vision.

The act itself was very entertaining which is a side issue where production values are concerned - but it's worth mentioning.

Back to the cost issue, and it's where veteran promoters like Michael Chugg make all the difference. Guys like Chugg tend to have a solid gut feeling for what will work.

The Robbie Williams tour relied on mainly locally obtained production, which limited the shipping costs to the stage set, and the air freight component was a moderately slim £7 tonnes out of London.

All major items were sourced locally. The stage from ESS, power from Agreko, lights from Bytecraft, sound from Oceania, and vision from Big Picture with LED screens by

Mistralvision. (See item next page)

So what is Wob's job like?

"It's mayhem control, I run stupid question central. I'm supposed to have all the info!"

He actually is moving to Brazil, and says he can do his job from anywhere there is a phone and a modem. Brazil is a long way from the UK, but Wob's wife is Brazilian and expecting a child soon. So he is learning Portuguese for the move.

The shows down under were scaled back from the monster that won the summer tour season in Europe during mid to late 2003. That tour was the most successful for many years by any one act, and culminated in the act selling out three outdoor concerts at Knebworth, the spiritual prime outdoor site where the previous record was two shows sold out by Led Zepplin.

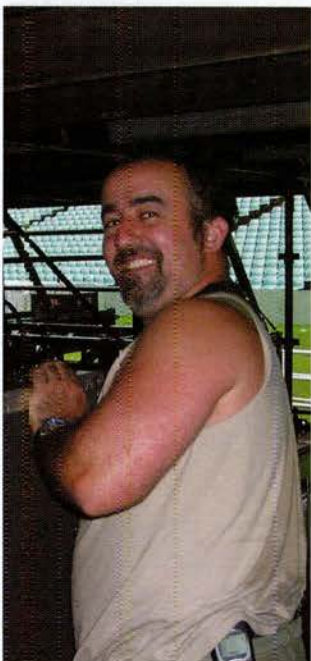
Putting a show into that place was no fun, since the entire festival grounds are fed by one two lane road, which resulted in a traffic jam that prevented the crew getting to their hotels after the show.





Photo courtesy Cat Strom

Bytecraft tech Raff Bono setting up under the stage on a wet setup day



The show used in Europe had the LED screens motoring around the stage, which put a massive load onto the roof. It severely limited the work that lighting designer Liz Berry could do. But she refused to complain!

"The weighed 40 tonnes - anywhere you put a light, there could be a screen in front", she told me. "But here we have some backlight! A nice change."

Her tour started with the usual arsenal of inventory, and with the look of the bright motoring screens factored in, a surprise arcse.

"I had a bunch of ACL's (aircraft landing lights) and you just couldn't see them!" This is the end play in a new era where you have things like Vari-Lite VL-3000's that just produce so much light - in front of LED screens that themselves are highly fluorescent. It's the era of mega-bright vision.

Getting to New Zealand for the first show in the tour down under was a nervous time for Liz Berry, because there were four separate lots of production, all meeting in one place.

"I had sea freighted the front end from London, had extra VL's from LA because I couldn't get enough here, then we had the Bytecraft rig, and conventionals and trusses from Spotlite in NZ. We had one day to make it all come together".

Liz gave Bytecraft crew chief Matt Burden

a big rap. "It could have been the biggest nightmare if Matt hadn't been so together. He knew what he'd packed, and where it was."

She drove the show using a Vari-Lite Virtuoso console, and called the twelve followspots.

Underneath the lighting tower were a pair of DiGiCo D5 consoles, one for the main act and one for the support. Driving a solid and punchy sound that appeared to disregard EPA regulations was Australian abroad, Dave Bracey. He's been working from London for around 13 years now, having made his way there from the Australian touring scene of the 1980's.

The PA used for this tour was the EV X-Line array owned by Oceania Audio of Auckland and Melbourne. It certainly delivered, it was refreshing to hear a rock show as loud as it should be, instead of asking the guy next to you to talk a little quieter.

The normal system of choice for Dave Bracey is a V-Dosc rig, Lab Gruppen powered. Presumably Jands didn't have enough V-Dosc available at this time.

Wob was also nonplussed about the stringent noise limitations imposed on all inner city outdoor venues. "We don't have a problem, we just point the line array where we want the sound to go. No problem!"

ROBBIE WILLIAMS



I went walking outside the Football Stadium during the Sunday night show - at 9.30pm, and it was sure loud enough out there. Maybe residents are getting realistic and not complaining as much?

Stage Manager Gary Currier (*pic, below*) describes his gig as logistics coordinator and psychologist. "I'm a father or uncle figure sometimes. There can be some fragile people who need help and assistance."

Unlike a theatre stage manager, Gary takes control of the whole stage during setup and pulldown- as well as when the show is running.

"In theatre you call cues and oversee

people, but with a show like this everyone mainly knows where they are going".

Gary has the big picture on the ground, like when trucks are arriving and leaving. "It can get very chaotic".

The chaos factor of international touring had its zenith for this crew when they did a show in Moscow last year. Once again they choose to pick up local production, and were amazed to see the truss spot operators sitting on common garden chairs which were somehow attached to a truss.

"When they all sat down, the truss tilted over. It was hilariously scary," confirmed Wob. LD Berry had a translator who was on

### Can Do Better dept....

One unfortunate aspect to the Robbie Williams concert was the nature of the LED screens used at the event. On the Saturday evening Sydney performance, the screens on both sides of the stage each had problems: where whole panels of LEDs were going out or flickering.

Obviously, by the time the show had started, there was nothing the crew could do but sit back, watch and hope that the screens would be OK when Robbie hit the stage. They weren't.

The intermittent failure of the screens was very annoying for the bulk of the audience relying on these screens to see the show.

It's worth noting the setup on Friday was in teeming rain, which may have had something to do with the failures. The screens appeared to be functioning normally for the second (Sunday) show.

In addition, the image quality was poor. These Mistralvision LED have a pixel size something like 25mm - spaced some 50mm apart (pitch).

It doesn't matter how far back you sit, if you have normal eyesight, you can see the pixels. This compares to the newer LED systems made by Barco which have about a 10mm pixel size and a 15-20mm pitch.

It's as pronounced a difference as that between an older PA like an S4 or TMS3 system, and a new line array. Once you hear the line array, you couldn't go back!

The sponsor advert for a chicken burger product were actually hard to read at any distance due to the LED pitch.

You will not often see these kinds of LED screens as a backdrop to a television event (Barco product was the backdrop for Australian Idol) because at this huge pixel size, they just don't look terrific on TV.



Dave Bracey

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the comms to these operators too.

"You realise what a luxury followspots are when you have to scale back and just say 'point your light at the guy'", she comments.

This writer was impressed at the relaxed and friendly vibe evident in the entourage and amongst the local crew.

Head of Security Cary Nightingale (above) was politeness personified. He also has the adrenaline fuelled job of supervising stage security; in the case of the Sydney show, this was supplied by ACES - who are a security firm of the highest standard.

I spent three songs in the pit - below - which is a loud and dangerous place. Security were quickly and efficiently hauling one after another collapsed and distressed females out of the crowd and over the barrier and carrying them away. They had water bottles for those who needed water,

and handled themselves really professionally.

Cary also has the exceptionally demanding gig of arranging to transport a female, chosen from the front row by the star, who must be plucked (with a 'p') from the crowd and delivered to the stage to be kissed by Robbie Williams.

After one show in Auckland, one in Melbourne (setting a new house record at Telstra Dome) and two shows at the Sydney Football Stadium, it was time for a Christmas break for the crew. •

- By Arton Jarvis.



# MY LIFE IN THE DOME

And other circular stories. By Vicki Jansen

Dad was a wrestler. We moved around the eastern seaboard. My last school was the long run – 3 years. We peninsula girls spent plenty of time doing the fun things. But then I fell in love.

When you're 15 with sudden freedom you're really still in chains. Mum had gone and left us by then, and dad's work was whatever he could do. The wrestle days were gone. I'm an only kid, so I told him what I would do. He agreed. My horizons were as flat as you'll get when you've only seen the world from the bus window.

My love was strangely focused on Tim Rogers whose gangly guitar posturing triggered something in me I never knew and haven't found since. After a summer that got cold I decided chasing a band like You Am I was fairly pointless, seeing as the girls who got the invites to places I'd never been were taller and had larger breasts than I.

Not that I depreciate the inner me, the sanctuary. I'm just fine. I like how I look. I turn boys heads when I wear my favourite Lee jeans with a singlet top. I like to flirt just like any woman.

My winter turned steamy with the walk to the next year, and I got friendly with the crew who did most of the dance parties out there. I don't really like that scene, but I sure didn't mind the chance to do something – anything – away from the Tafe course Dad forced me into to. It must have been the draw to entertainment from the memories of the crowds yelling at Dad. The roar of the greasepaint, the smell of the crowd.

Mal and Craig seemed genuine when they said I could help rig, I did, and the second time they paid me. I ended up doing the load in, the rig, and the out for about a dozen gigs of all kinds and sizes.

Brian (not his real name) at the Civic (which is not the theatre either) showed me the bio box and the domes, and was patient in his mentoring. There was no tension, which a girl can get with a man. It works like this: he says he will show you something. You are eager, and attentive, wanting to absorb the knowledge. He moves around you, and delicately manoeuvres you into

whatever position the task requires. The touch is gentle. He pauses slightly in the explanation, catching his breath, his hand still on you. The girl gets the subtext confirmed and usually just wants to leave, like now. The guy thinks she wants to be intimate, or something. Whatever! Just because she is there in the first place.

The stage door toad got me one night. He called me into dressing room one and grabbed my left breast. His breath smelled like the cheeseburger with onions he'd gobbled half an hour before curtain. I could smell the grease on his beard. I'd gone down to the wings to get a replacement beltback. Stage door cretin had nothing to do but loose his job, almost get arrested and get me into the continual gaze of the board. I had a bruise on my left arm just above the elbow. The police wanted to charge him, but he broke down with photos of his kids in his wallet sitting on the floor and I lost my need for justice.

I said goodbye to my dad and left him alone for the first time ever. I took my tears with me. I moved interstate, called up my new contacts and started work for one of the venues on the circuit. I've been accepted as a professional tech, I do domes, rig, and multitask as an usher or even serving coffee in the interval bar. I draw the line at the box office.

My lessons for me, if I could go back and be my own mentor, wouldn't really be terribly different. Be confident. Be right. Be polite. Be attentive. Be early - but only as much as the job requires. Men can read you wrong. Never let a man think of you as a female who isn't a worker. Never let a man think of you as a female when you are a worker. And if you meet a toad who harasses you, seek justice so he doesn't do it to another girl.

It's a cool industry. I love it!

I like how I look. I turn boys heads when I wear my favourite Lee jeans with a singlet top.

- The Author - Vicki Jansen - has entered our **Write your way to London** competition. She gets \$100 for this story, because we published it, plus she may win a paid round trip to London to cover the Plasa show next September for CX.

You can enter too - just email your words (and pictures if possible) on any relevant topic plus your contact details, with the email subject marked 'write to London'. Email: [mail@juliusmedia.com](mailto:mail@juliusmedia.com)

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# CAN THE SPAM

A forlorn hope, but Dunc can dream!

Now that a New Year is underway, let's hope everyone got a little bit of what they wanted for Christmas.

I didn't ask for much this year. All I wanted was a brief respite from the avalanche of spam that has clogged up mine and everybody else's email In-box for the past twelve months.

And did I get it? In a pig's backside. If anything, the deluge of waffle became even larger as the festive season approached. Over 350 a day in a good week, every one of them meaningless tripe.

By far the largest number came from people wanting me to buy medications online. This has got to be the biggest time waster to send to anyone in Australia, since the Pharmaceutical Benefits Scheme here means that most prescription drugs are available at a vastly reduced price to anyone needing them. If you've ever had to buy a Ventolin in the USA for \$US49 you'll know what I mean, since here one will cost you between 10 – 12 dollars Aussie!

Some of the medical emails have a vaguely authentic, confidence building ring-of-truth look about them, with logos and business addresses, whereas others are riddled with confidence destroying grammar and spelling errors:

"Hiya Mr Dunk- welcom to are onlinee phrmasy. All doctor ready to prescribe your needys at best cost prices. Most welcome your with privacy you confidence buy. Just give Credit card, etc. etc." All it needs on the end is "Me love you bang bang longtime Johnny!"

The way I see it is, if anyone is prepared to even think about buying Viagra, Phentermine, Cialis or any other recreational doodle drugs from Mexican websites that send out stuff like this then they truly deserve to have it drop off.

Then there's the Paris Hilton video. "Isn't that a hotel?" asked one of the guys at work. No, but they've both had similar traffic through the front and back doors! Shot in glorious living green and black nightcam (ahem, er...so I'm told) it has the eerie look of an alien life form sex education video. In the interests of CX readers I sent a team of researchers to check it out. They found that most of the links don't get you more than about 30 seconds of the video, then automatically send you on a tortuous path of multiple pop up windows and different sites, all with the one aim of harvesting your details as many times as possible.

Actually I feel a bit sorry for Paris Hilton. If everyone had their youthful indiscretions as a nineteen-year-old put up on websites for the world to see, then most of us would have egg on our faces too. Film buffs trivia – this adds a whole new meaning to Joan Crawford's quote at the end of the classic 'Now Voyager', "We'll all ways have Paris!"

After Paris there are the emails I like to call the Appendage-izers, all guaranteeing to add 3 inches to my dongle dimensions. How on earth did they know I needed it? Have they been talking to 'her indoors'? Has an old girlfriend put a video of me up on the net? Unlikely I suppose, since luckily there were no videocams when I

was a Single White Male. But if I took advantage of even half of the email offers I get for such enlargement, I'd be trailing something the length of a fire hose behind me all day, and pole vaulting across the room every time I caught a glimpse of Carmen Lawrence on the TV!

I also have to confess that I don't speak Russian, and I suspect that the majority of people around the wired world who aren't Russian don't speak it either. So what possible reason could there be for Russian spammers to send out worldwide emails to people IN RUSSIAN??? We must get twenty a day at least, stuff that is a complete WOFTAM\*\*\* to most of the population anywhere except Russia.

The rest are literally crap, especially the ones advertising the Ultimate Colon Cleanser! Others are inadvertently humorous, some just plain poor taste. How else to explain a website called Pregnant Teen Wives - Amateur Moms who got more from their High School Prom than they expected? Or Lonely Soccer Moms looking for Love. Or Captain Butthole-Stabbing and his crew of (surprise, surprise) naked girls? Or a book advertising Get Sexy Girls Now – Advanced techniques in Seduction, Charisma and Attraction, so replete with mis-spelled words that it shows how hard it can be to type with only one hand. Honestly, I'm not making any of this up!

I'm no prude, and I've certainly got nothing against looking at pictures of good looking girls in various stages of undress. But all this unwanted, unasked-for email comes at a price, and that price is a clogging up of the email system so badly that the whole thing shuts down. Just ask BigPond users!

The cheekiest of all are emails wanting to sell you anti-spam software that say 'Want to stop getting emails like this?' then exhort you to buy their software!

Most of these emails have one aim - to verify that your email address is a 'live' one by getting you to reply. Why would they want to do that? So they can sell your address. How? Well, I'm glad you asked. On the 23rd December another unwanted email arrived, offering to sell us a CD-ROM of email addresses. I noted the date, because unfortunately the offer expired on the 12th December, making the whole thing yet another WOFTAM.

The CD was called the 'G'Day Mate Email CD.' Even though it came from Hong Kong!

Only \$US99 for 500,000 verified Aussie business email addresses, and 3 million unverified ones. By verified they mean that if you have replied to spam saying "Why don't you shove it up sideways and stop sending me this crap", well, that means you're verified!

The CD ROM also guarantees that there are no Hotmail or other free email service addresses on there, implying that those addresses are only used by wastrels, spammers and fly-by-nighters. This is interesting in itself, because the only address you can reply to for the CD is a Hotmail address!

'Nuff said?

\*\*\*WOFTAM – Waste Of Time And Money

# FAVOURITE TOOL?

You talking to me? But seriously.....

We asked a number of LDs around the country two questions:

*What is the one 'must have' tool, device, work method or thing that you 'use' or 'do' to make your lighting work?*  
and: *What was your favourite project for 2003?*

## Phill Dodd

The 'must have' - leatherman, roll of gaff, maglite (small) and back-up disk for the desk. Why? To help cover my insecurities & most potential disasters requiring IA (immediate action).

2003's 'favourite project' - Creating a cold look for a staged presentation of Douglas Stewart's radio-play "Fire on the Snow" (about Scott's Antarctic expedition). Being able to use the capacities of moving-yoke luminaire with movement both actual & suggested, & also patterned light via gobo's for illusion.

## Marcus Watt

The 'must have' - The most important aspect of show lighting can be summed up in one word: maintenance.

It stands to reason that your equipment needs to be maintained. Not just in working order, but kept as close to 'as new' condition as possible. After all, without working fixtures you have no show! Maintaining gear starts on a basic level of treating equipment with respect.

Handling, rigging and moving of lights should always be done with care. Making sure that there is enough (skilled) crew so as to avoid damage from lights being dropped or handled roughly is essential. It only takes one stuck prism or rotator to spoil an entire scene. A solid understanding of the internal workings of your fixtures is also essential, this enables you to problem solve most issues and resolve them with minimal disruption to your programming time.

As an LD, a level of perfection needs to be attainable, and this can only be achieved with fixtures that work first time, every time.

## Steve Leiter

The 'must have' - I thought initially about hardware but that is subjective to creative to me. So I came to the conclusion that I always appear to go for a different angle. It may be as simple as rigging a lamp or truss differently, looking for a seldom used piece of equipment but consciously aiming for a change to something. Repetitiveness is a death trap.

2003's 'favourite project' - I am tossing up between a car launch which I designed for Jack Morton / Subaru in NZ. Lots of challenges here. Overseas and in snowfields, trying to impress the locals, trying to make this a car launch that was different to all the others. I used a Trackpod from Martin as a "wow" item and tailoring the entire show to that was what I think made the difference here.

The other show was a BMW launch and the reason I mention this one is that I was not the designer but the lighting director. I have always strove to try to work under great designers to learn more. Phil Leathlean is a great designer and very demanding. I feel that as a lighting professional I learned more on that than any show all year.

## Peter Neufeld

The 'must have' - A section [plan] - for even if you have a floor plan you still need a section even if it's just in your head! In fact, even without a floor plan you could still design just off a section.

2003's 'favourite project' - My lighting with Larry Eastwood of this years Bell Shakespeare Company's production of 'Hamlet' because the set and lighting were inextricably linked and it was such a phenomenal success both artistically and otherwise, although being on Mark Hammer's team for the opening ceremony for the Rugby World Cup is hard to beat!

## Graham Walne

The 'must have' - what an interesting question. I can easily put together a short list. This would include the following:

- the development of PC based drafting programs which removed the rigidity of the old stencil-traced plans and let me experiment but also test my assumptions;
- those lighting controls which are fast and simple (a small list this) so that I can light over the technical and avoid formal plotting sessions altogether;
- a good production manager who constantly tests the schedule and the budget to get more out of them and manages problems before we get into the venue;
- the democracy of Australian theatre (by comparison which much in Europe) so that all contributions are respected alongside an understanding that the process a mounting a production is more organic than linear.

2003's 'favourite project' - Easy for me, Perth Theatre Company's award winning 'Skin Tight' because it was one of those rare occasions when everything and everyone fitted together perfectly and the whole became greater than the sum of its parts. This was a very physical piece for which the set hinted at a boxing ring and with two actors (Karen Roberts and Stuart Halusz) both fighting and caressing each other by turns. I could not have lit this without their patiently repeating each movement time and time again until both the lighting and the timing fitted perfectly. Their professionalism inspired us all.

## Trudy Dalglish

The 'must have' - My must have are moving lights (of almost any kind) - because it makes for a very flexible rig, you can change your ideas easily on the run. Directors love the immediacy of being able to try different looks without having to wait as the ladder comes out. It saves an enormous amount of time during a bump in - eg: focus, they save space - why hang 10 lamps when 1 mover will do. The amount of different looks a mover can give... I love them and I can't remember lighting a show without them since 1989!

2003's 'favourite project' would have to be between the 30th Birthday celebration for the Opera House where I was lucky to have Gale Edwards to direct the first half and a new ballet by Meyrl Tankard as the second half. It was very challenging but fantastic to work with two great directors. The other would have been Fame into South Africa (Pretoria) using prehistoric moving lights, a challenge to make 650 cues look like something!



## ProTools LE a hit

Digidesign's ProTools LE has achieved its mission – expanding sales, without cannibalising ProTools's traditional TDM product. Asia-Pacific sales manager John Rechsteimer (pictured top left) told CX that the traditional grip that Apple hold on the recording market appears to be easing.

"It used to be difficult to get PC, the Mac was easier since it was a closed system", he says. "Certainly now the Mac presence is declining", added Digidesign Australia chief David Corazza (pictured right). "Windows XP in particular is not a bad operating system."

Digidesign are market leaders in the complete

recording system segment, with competition on the side from sequencer makers and at the low end from makers of sound cards. But the firm, owned by AVID, have strengthened their market position by sticking to what they do best.

"A lot of TDM owners have LE too", continues John, "like people needing sound effects on a laptop".

## Ad-notam brings AV just like magic to your mirror

German manufacturer ad-notam have released a series of LCD screens which mount behind a mirror or glass surface (pictured, below). The screens come in sizes up to 30", and the real kicker is they are 12v powered.

Each ad-notam screen comes with a mounting template, and a bunch of magnetized strips that are glued to the back of the mirror or glass.

The ad-notam screen then simply attaches using magnets.

Viewing angle is respectable at 110 degrees horizontal and 60 degrees vertical. We determined the resolution and contrast to be good.

• Info: [www.ad-notam.com](http://www.ad-notam.com) or from Australian importer, [www.tecsound.com.au](http://www.tecsound.com.au)

## Industry Training Study

This year John Grimshaw is researching and collating material for a Masters thesis that could change the way future generations of technicians are brought into the industry.

The thesis is on training, and the entertainment technology industry. John has a valuable insight gained through his previous job teaching audio visual at a large college; and his current work with Juliusmedia in the delivery of the new Entertainment Industry Training Package.

John was also on various committees assisting CREATE Australia in the rebirth of the Entertainment Industry Training Package in 2003.

Government departments and large companies often rely on documents and studies like this to formulate strategies. John intends that the documents he produces reflect industry experience and needs as much help as possible.

You can help. If you fit any of the descriptors below, please get in contact. If you know of people that fit the descriptions below, please ask them to get in contact. Venues and other employers can get involved in this project via current and retired employees who can take part.

**Training History:** The 'old guard' of the backstage industry – people who worked backstage on events through the evolution of technology over the last fifty years. While a questionnaire will be prepared, it may be preferred that this information is also gained by interview. Plus John wants to know about old venues and old technology that may have survived the wreckers and junk yards. This could be in schools, universities, regional venues or big city. Seeking hidden treasures.

**Technicians At Work:** People that are using their skills today, and have more than five years experience. There is a

(continued over page)



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questionnaire being prepared that asks you about how you got into the industry, and your impressions of the state of training and new technicians today.

**Training Today:** People who have joined the industry in the last five years. If you have joined the industry in this period, then there is a special questionnaire being prepared that can be sent to you.

This is partly to quantify how people are currently entering the industry, as well as to identify people that could become part of the major study to track how the industry utilises your skills as an effective asset.

For those that find time to help John in this project – a very big thank you. It is extremely rare that our industry gets the opportunity to examine itself in this way, and the more people that can get involved in this project as it evolves, the more useful the end result will be for the whole

industry. John says: "I would especially like the thank Julius Grafton for his commitment to training, and allowing me to use his publication as a focus point for the research."

Contact:  
John Grimshaw  
Juliusmedia  
Locked Bag 30  
Epping 1710 NSW Australia  
or use email:  
john@juliusmedia.com

## Seriously Wet

Music Industry winner John Woodruff appeared to have a good handicap place in the Sydney to Hobart yacht race in sight at presstime. His new boat, Seriously Ten, is co-owned and crewed by record industry exec Sean James and Jands Production Services partner Eric Robinson.

Seriously Ten is a Volvo 60, designed by Laurie Davidson, it is Woodruff's second boat. He told The Australian newspaper that managing bands like The Angels and The

Baby Animals sucked, because once the band got successful they fired him. He said that band managers always eventually got fired because the band had to pay them, while whoever held the publishing deal continued to get paid.

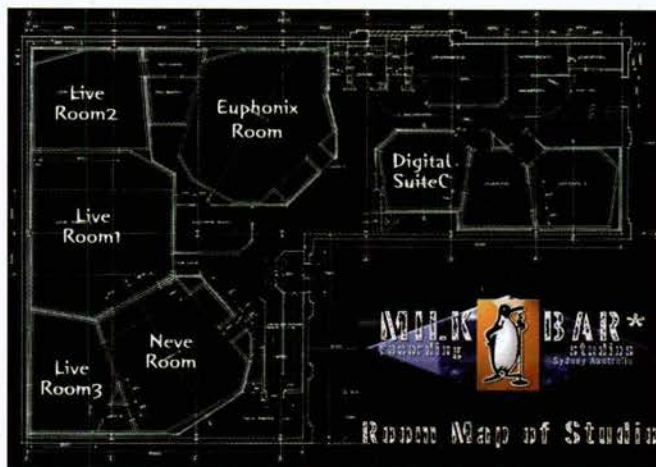
That knowledge brought his yacht, plus a lot more - he is estimated to have grossed ten million (and still counting) from Savage Garden.

## Milkbar goes sour

Milk Bar Recording Studio Pty Ltd has been liquidated by Sims Partners Accountants.

The facility in Sydney's Camperdown boasted Euphonix and Neve, with 4 Live Rooms, Multimedia Rooms, and more. (See map)

It was built by Sammy Kannis, and ran up against Tom Misner's Studio 301 which is not run for profit.



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