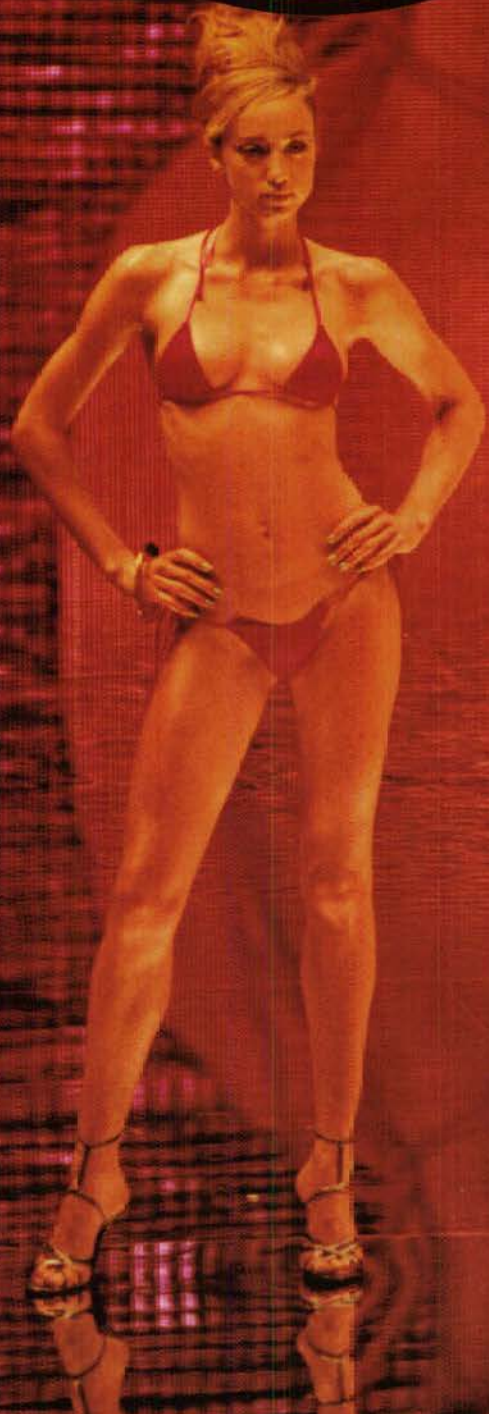


CX

TM



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technicians survival manual



ex Connections

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FP2400Q (Quad) – 4 x 380W at 4 ohms, 8.6kg



FP2600 – 2 x 840W at 4 ohms, 8kg



FP3400 – 2 x 1500W at 4 ohms, 10kg



FP6400 – 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 FP6400, 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.



Norwest Productions (Sydney & Brisbane)



Brisbane Sound (Brisbane)



Oceanic Aedia (Melbourne)



Staging Connections (Brisbane)



Bump Productions (Sydney)



Totally Sound (Bunbury)



Lake Audio (Newcastle)



Megavision (Perth)

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CX

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for technicians!

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the Entertainment Technology Association.

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COVER



A sensational picture by Gary Richardson of a TDC LED wall at Fashion Week. This picture captures the essence of technology enabling art.

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Juliusmedia

FIRST DRIVE: DIGICO

We put the new D5 console to the 20 minute test! Could you walk right up to this \$250,000+ baby and just mix a show without the owner's manual? That's the idea, so read about what happened....

Page 12

grandMA: TESTED

You'll find grandMA at a lot of leading events. This lighting desk has some true believers. We went to see how easy it is to drive, and report what you need....

Page 18

JOHN FARNHAM'S TENT

There's only one way to find out what works and what doesn't: on a tour, and that's to be there. We got embedded with The Last Time tour as it wound through far north Queensland. This is a major feature with tonnes of pictures!

Page 24

YAMAHA PM1D

Just like the DiGiCo D5, only completely different. These two ultra top end digital live concert consoles shoot for the same market, but do things quite differently. We put the PM1D through The 20 Minute Test, to see if it is possible to use it without instruction.

Page 40

DESIGN SOFTWARE

Do you have any idea just how much is out there in the world of lighting design software? We thought we did, until we started researching. This is a major feature, detailing a smorgasbord of software.

Page 46

DESTRUCTO! CLUB TECH

We bet you never wondered what a nightclub looks like in broad daylight. It ain't pretty, but someone has to go fix whatever breaks.

Page 54

AV AT BANKSTOWN

A savvy new installation, go to:.....

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LOADIN

Why you are now a member of the Entertainment Technology Association.

page 7

NEWS

What's new, what's happening.

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MOTORING

VW debut new LT46 giant van.

page 62

HELP!

Marissa reads heads.

page 63

FOOD

Alphonse details a one pot screamer, and How To Boil Rice! (?)

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EMAILS

There's some really excellent emails this month. We get it from all sides, and love it!

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INSIDE RIBBON TECHNOLOGY

Explained!

page 67

CATALYST V3

The Big Cat gets new features. It's wild!

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CHOOSING LIGHTS

How a Moving Light decision was made

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GLAMOUR

Guntis Sics demystifies.

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VIOLENCE

Is this sport? Duncan Fry

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BUMPOUT

In memory of Swampy

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REPLACES CONNECTIONS MAGAZINE

#3. JULY/AUGUST 2003

Great Range . . . True Diversity

AWM100

UHF Wireless Receiver
and Microphone



8x colour coded frequencies

recharge battery bay

**Ashton True Diversity Wireless Microphones will
take you places the others can't reach . . .
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You are now a member of the ETA, as bad news pops up everywhere

The biz was rocked when a series of winter calamities descended to form the perfect storm. First we became aware Standards Australia were to alter the Test and Tag laws, so that everything electrical needed to be tagged before every 'rental'. It threatened a cost blowout for every kind of show ticket, and naturally our trade were mortified.

Then Robyn and Tiny Good reported their successful rigging firm Showtech Australia had been denied public liability insurance, for no reason other than that the insurance industry decided we are all too risky - despite our industry having a triple A record of very few claims. Without Public Liability Insurance, a firm cannot trade.

Reeling from that, came news that at July 1 all musicians and musical acts were required to hold their own Public Liability Insurance cover in order to actually perform.

What have I forgotten? Oh yeah - from September 1st, all small businesses need to have Occupational Health and Safety standards just like the big firms.

I found the CX office under siege with people calling and emailing about these issues. I used the CX e-news, a regular email I send to over 7,000 people, to advise the trade about issues and news.

Things happened fast.

In brief, the outcome was the creation of the Entertainment Technology Association - ETA. It was born to be a peak industry body and is just that, because every CX Subscriber is now a member. We took legal advice, and appended a new association charter to the Juliusmedia company, who will be the association trustee.

ETA has already been there were it counts. Tony Davies from Chameleon Touring Systems represented ETA at a meeting with Standards Australia, and has been invited (along with a rep from ALIA, the Lighting Association, and a rep from the Hire and Rental Association) to sit on the Test and Tag committee. Having Tony represent our industry through ETA gives us a vote on that committee.

I'm going to be careful, and run ETA with the interests of the industry at heart. ETA isn't an attempt to take over anyone's turf, because there isn't an association that represents the broad entertainment technology industry.

ETA also needs no funds *at this time*,

because I am sponsoring it. Juliusmedia has the resources to run ETA, so we are.

We are also very well placed to ask questions without fear, and where necessary to be unpopular.

My association history is limited, most recently I was the secretary who shut down Showsafe after the final meeting didn't raise a quorum. I gave the balance of the association funds to Antenna, an association of theatre technicians, which failed anyway.

The fundamental weakness of associations can be seen from the Showsafe example. Its previous committee ran the thing well, but got tired. They handed it over to three people, including myself.

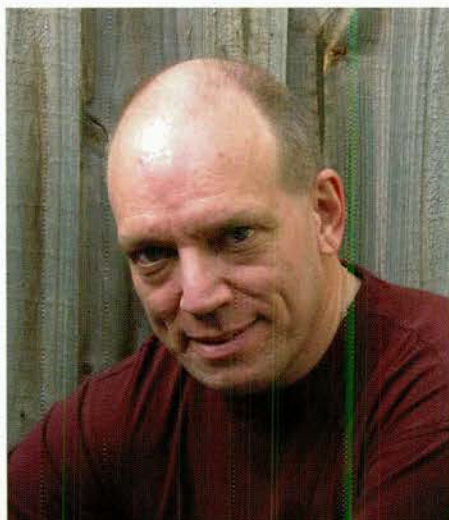
I'll never forget being reluctant to take on the secretary job, but the other two guys (let's call them Simon Jenkins and Mal Barnes) sat there talking and talking, telling the meeting audience how much they supported the association and what they would tirelessly do. Between the three of us we killed the thing stone cold dead.

Learning from that, I'm now running an association that is simplified but effective. And people like Tony Davies and Robyn and Tiny Good, who have issues they are taking to Government, have a legitimate peak industry body, a lobby group, behind them.

Bring forward your issues, and be prepared to help to drive those issues forward. We can all achieve a lot as a collective.

Email me about industry issues anytime: julius@juliusmedia.com, but please only call me on the phone if it is really necessary.

- Julius Grafton, publisher



This issue:

- **Our in-depth coverage** of the Farnham tent tour looks at the logistics of what was a sensational effort by all concerned. To get the story, we became embedded with the tour in far north Queensland. I hope you enjoy reading it!

- **We've had a 'first drive'** of three major concert consoles for this issue - the PM1D, D5 and grandMA. The consoles that compete with these will get a looksee soon too.

- **Feedback about CX** is terrific, we've culled the emails and only run a selection - even though they span four pages in this issue! I'm asked for more theatre coverage, and it is coming. Interestingly we attract a lot of venue management and show 'business' readership, so the editorial skew is headed a little in that direction too.

- **Talking to a reader** the other day I reflected on 13 years of publishing. First Channels (18 editions) then Connections (106 + 2 specials, + 4 issues of Presentech) and now CX. I calculated if you stack the 1,660,000 printed copies totalling 149,400,000 pages together, the pile would stand 8,831.2 metres tall - about the height of Mount Everest.

You'd need a 249 semi trailers because the mags weighed 4,980 tonnes. A convoy 5 kilometres long.

If you put every mag head to head, you'd stretch 4,980 kilometres. Better still, put every page head to head, and you'll go 224,200 kilometres, too far to comprehend!

The total word count equals roughly 7,810,000 (with about 1 million spelling mistakes!) and we've only been sued a couple of times.

We've used 9,960 photos, and rejected ten times that many.

Now that CX is settling in for the decade ahead, I'd like to thank you very warmly for reading these words.



MCLEAN & JOHNSTON MERGE

Johnston Audio and McLean Audio announce the formation of a new audio company, Johnston-McLean Audio. This brings together two of Melbourne's leading audio companies.

In announcing the merger, McLean Audio's Richard Bilinski (left) and Johnston Audio's Bruce Johnston say that they are looking forward to combining the strengths and unique talents of both companies.

"We are convinced the forming of Johnston-McLean Audio will be the beginning of an extremely productive partnership based on the combining of each partner's strengths and inventory" says Richard Bilinski.

Bruce Johnston, himself an internationally renowned sound engineer with world tours for Oasis and more recently silverchair, has steered Johnston Audio to providing services that would more than satisfy any local or visiting international act. Go to www.johnstonmcleanaudio.com.au

TAVERN

One of Brisbane's oldest Taverns that has been sitting dormant for several years has been resurrected. St Paul's Tavern has been nothing but a dust trap until recently purchased and renovated into an outstanding venue for live Jazz and Blues and private functions.

The venue although only opened recently but already has a reputation for outstanding live performances from some of the industries best including Rick Frice, Billy

Field, and a host of others, all who utilized the in-house Audio / Visual systems

Brisbane based Audio/Visual Contractors Technical Response Group installed Media Matrix, Turbosound, Lab Gruppen Rane, Australian Monitor, Martin Lighting, Ness Digital DVR recorders and Nightlife Music Video HDMS systems into St Pauls.

KENNEDY ADD DYNACORD

Kennedy Amplifier Hire Service of Mackay QLD has taken delivery of their second Dynacord CorusPro III system. Dale Kennedy MD said that he liked the sound of the first system so much that he immediately ordered a second system.

BIG PICTURE: CORRECTION

The article on pages 87 and 88 of the May/June issue of CX magazine contained an inaccurate statement. The text reads "Vision for the tour consisted of LED screens, but local supplier Big Picture managed to talk the tour into using video projection, providing a much clearer picture...."

This is totally incorrect. Big Picture say, and we agree, that:

"The correct version of events is this. We were initially approached

by the promoters and quoted a package which included LED screens. Quotes for the LED screen component were obtained from both Clipsalvision and Screencorp. From that point the promoters dealt directly with the LED suppliers. When the tour and schedule was eventually confirmed there was insufficient LED available from these local suppliers due to other commitments. We were then approached by the promoters to provide a digital video projection option which is what your journalist witnessed."

CX and Juliusmedia apologise for the error.

RIVERSIDE REFURBISHED

Riverside Centre Stage at Parramatta has been refurbished, with a new ProStage flexible seating expanding the Lennox Theatre (from 162 to 250), Rafferties (80 to 130) and now the main Riverside Theatre has been resealed with 761 new tipup seats from Hadley Australia.

Operations manager Col Peet (below) pauses for breath, after supervising installation. Riverside also recently covered its courtyard with a Shadola Tensile Fabric structure, creating a 350 seat space already used by Circus Oz.

EVENTIDE REMADE

Clockworks Legacy Plugin Bundle from Eventide, has faithful recreations of Eventide's famous processors from the 70. Details: Syntec International +61 2-9417-4700.

SENNHEISER ENG PACK

The new Evolution ENG100 Pack is targeted at camera operators who need flexibility with transmitters. It has a body pack transmitter with lapel mic, as well as a plug on transmitter for dynamic handheld mics. The kit also includes a variety of cable options. Details: Syntec International +61 2-9417-4700.

NEW WEB FOR MARTIN PRO

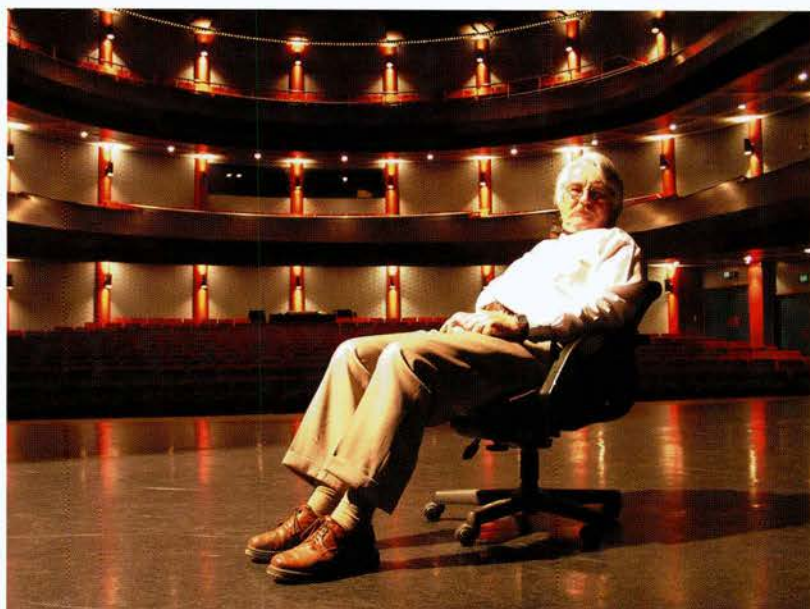
The new Martin Professional international Web Site Address is www.martin.com.

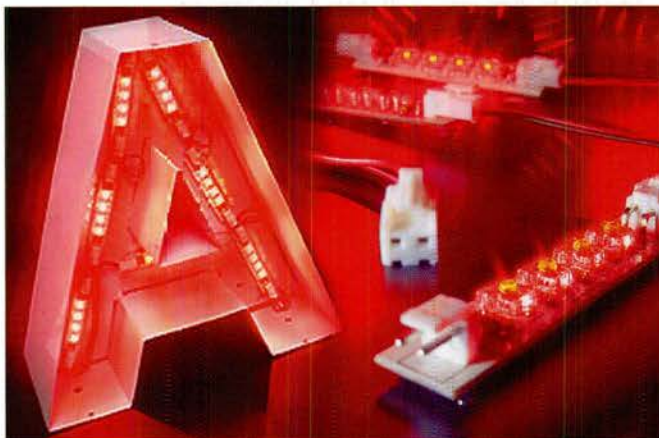
NOVATECH MOVED

Novatech Production Services move to 37A Manton St, Hindmarsh SA 5007, Ph: +61 8 8241 7630, Fax: +61 8 8341 7930, and web: www.novatechproductions.com.au Eben Nicholls has joined Novatech, handling marketing, sales and administration, while Anthony Ratley has joined as a trainee technician.

MUSIC CONFERENCE

Phil Tripp's well regarded AustralAsian Music Business Conference's 3 days of panels, 65+ speakers & unlimited networking runs August 14-16. You can register and find the topics and panels schedule at website www.immedia.com.au. Phil has an update emails facility, at <http://www.immedia.com.au/ambc/request.html>. Call Immedia on +61 2 9557 7766 for a brochure.





LED'S TO TAKE OVER

The Light Emitting Diode is your new lighting pal. With a lamp life measured in years, and very good electrical efficiency these little critters are finding their way into places where normal, mortal and fallible traditional light globes live. Check out www.led-robotics.com.

MEYER AT THE SUPERDOME

On Mother's Day weekend in May, the 100-piece Sydney Symphony Orchestra – along with two massed choirs, the Australian Navy Band and four of Australia's top operatic soloists – took to the stage for the second annual SuperDome Symphony Spectacular.

To carry sounds both delicate and dynamic throughout the 21,000-capacity arena, Coda Audio of Sydney supplied a 52-cabinet Meyer Sound self-powered system, (below), anchored by M Series line array components.

However, according to reports from those on the scene, the entire system seemed to vanish as soon as the orchestra began to play.



"I got quite a few comments about that," says Bob Scott, the freelance mixing engineer contracted for FOH duties. "People were asking me, 'What is the PA doing up there? I couldn't hear anything through it.' I took that as a great compliment, for myself and for all the others involved.

Live audio for the concert was provided by Coda Audio. Go to: www.coda-audio.com.au

PERTH CLUB, DJ EXPO

... will be held on the 12th and the 13th of August at the Palace Hotel, in Northbridge. It's an event for club owners & DJ's, and entry is free. It's the first show of its kind to be held in Perth, and exhibitors include JBL, Shure, JLA (High End and Robe), Stanton, Numark, Pioneer and Korg - amongst others

HBB APPOINT TAG

Recording specialists: HBB has appointed Technical Audio Group exclusive Australian distributors of its portable and studio recording products and HBB professional re-

ording media.

With the imminent launch of the new HBB PORTADRIIVE location sound recorder, the appointment of Technical Audio Group is particularly timely. Anthony Russo (TAG Technical Director) said "HBB has been very popular with Australian sound recordists and broadcasters, and we're naturally very excited".

Media continues to be the cornerstone of HBB's product range with a line-up including seven CD-R discs, five DVD-R discs, two DVD-RAM discs, three MiniDiscs, two MO discs, DAT, ADAT and DTRS tapes.

HBB also have cautioned the recording industry that most CD's touting greater than 24x speed are inherently unreliable for audio use. Be warned!

Sound Supervisor, Andrew Stewart, who is responsible for in-house and involved in outside broadcast audio for the National Broadcaster's Avalon Studios said that the move into digital audio for TVNZ in Wellington was made much easier the moment staff discovered the Max Air 'Touchscreen' feature.

Stewart commented, "Instant affinity resulted as there was no need to break concentration and revert to a keyboard to key in commands, "It was brilliant," said Stewart, "simply 'touch' and it happens."

NEW N/DYM MICROPHONES

EV announce the reintroduction of two of the most popular and unique N/Dym Microphones. The N/D967 Concert Microphone is unique to the marketplace as a monitor engineer's favorite be-



FAIRLIGHT NEWS

"I'm an owner of Fairlight products and I would like to find more news about the Fairlight collapse and more about the new ownership of the company", writes G. Stampolis from Athens. He is one of many CX web readers who have emailed us since we broke the news of Fairlight's demise last issue. Our several attempts to contact new Fairlight owner John Lanken have gone no further than his message bank. The New Fairlight have established a website with some news at: www.fairlightau.com

TVNZ ADD 2ND MAXAIR

Television New Zealand (TVNZ) in Wellington have installed their second Max Air audio console for TVNZ, the first was installed earlier this year into a remote truck belonging to their OB division, 'Moving Pictures'.



cause of its remarkable gain-before-feedback and performance in high SPL, the N/D967 is back. The N/D367s (left) has a tight cardioid pickup pattern, specially tailored frequency response, and low handling noise. It offers added sensitivity in the 1-2 kHz region and a smooth, controlled response above 2 kHz. Go to

www.eviaudio.com.au for more.

SOCIAL EVENTS AT ENTECH

A 'day before' drinkfest, opening night cocktails, and a day two party are some of the revelry to feature at ENTECH 2004. Go to the web, www.juliusmedia.com for more.

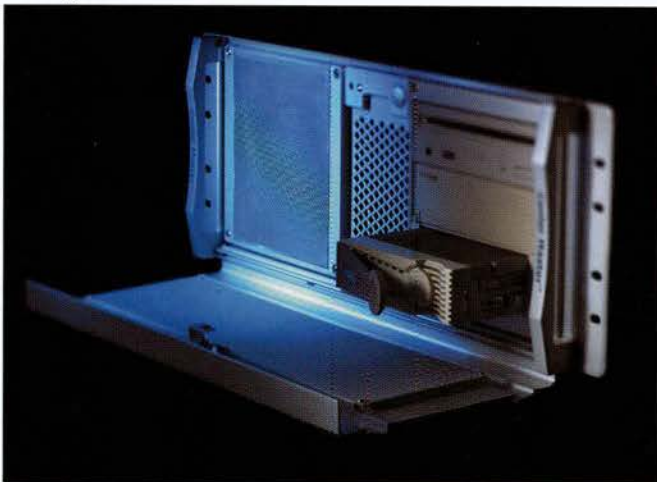


SOUNDCRAFT DEBUT MH3

The MH4 console by Soundcraft has proven very popular, now the MH3 (top) combines most features into a more affordable format. Main differences are number of busses, and the replacement of the sexy metrebridge on the MH4 with a set of LED ramps on the MH3. While the MH4 has individual channel modules, the MH3 makes do with clumps of eight. See more at www.jands.com.au

DIGICO SOUNDCHECK

This flashy new add-on digital recorder (below) for the D5 digital console (see review page 12) is a smart idea. It hooks up to the console via a couple of MADI cables, and provides real time high resolution multitrack recording. Already engineers are using it to play out soundchecks, and archive shows for future live CD releases. Go to www.digiconsoles.com for more.



MYLED'S RADICAL MOVER

I-vision have produced the first ever theatre-sized LED moving light fixture (right). This promises to be the start of another revolution, since the LED is everyone's best friend, and the worst invention ever, if you are Osram or Philips.

The MYLED T36 is an RGB moving yoke LED fixture, which simulates a conventional 250 sized wash or fresnel fitting, but is substantially brighter, lighter and less power-hungry.

Its lightsource consists of 36 high-brightness Luxeon LEDs. The unit comes with full dimming and colour mix control, and four lens options at 6, 10, 25 or 90 degrees. The main restriction of the fixture is that beam spread is fixed.

Advantages include up to 4300 lumens with a current consumption, for the light source of only

40Watts, a rise time of less than 100nS and over 50,000 hours of lamp life. The LEDs are tough, they suffer little visible degradation with age, and the colour balance is excellent.

The MYLED T36 uses 3 channels of DMX for colour changing and



two for pan and tilt. At 11 Kgs it is very light, portable and easily manageable. Light weight also means it can move more than twice as fast mechanically as conventional lightsource moving heads.

It contains no fans, and is perfect for theatrical and conference environments where low noise is a crucial issue. Low running costs and maintenance are also great assets, and a real solution for permanent architectural installations where fixtures are rigged in hard-to-access locations.

More at www.ivationuk.com

JEM'S NEW GEM

The ZR 24/7 HAZER is a high precision, continuously operating DMX haze generator capable of

delivering an optically translucent canvas of light-enhancing haze for long periods. It's the first in a new range of professional hazers from Jem, the ZR 24/7 uses the latest in reliable digital PCB technology.

Internet: www.martin.dk



LSC LAUNCH MINIM

The MINIM lighting desk has been specifically designed to complement the maXim range, filling a void for the entry level user both in features and price. Attractively styled and utilising the familiar programming and playback system popular on all LSC desks, the MINIM delivers a very easy to use platform with quick access buttons to all major functions – no menu driven systems.

Based on a typical theatrical style layout with 2 presets of 12 faders that can be used in a manual control level or a memory recall mode, the MINIM comes into its own by switching the lower bank of preset faders between "wide" preset – a further extension of the first 12 faders to a total of 24; and "Playback" masters.

The Playback masters can concurrently playback up to 12 recorded scenes or chases. Three pages of 12 Playbacks allows a maximum number of 36 memories to be stored with each memory able to be individually previewed and edited.

Meanwhile, in May the 1000th maXim was shipped by LSC. The lucky recipient was ADB S.A., LSC's distributor for France.

More at www.slclighting.com.au

MORE NEWS AT PAGE 84>

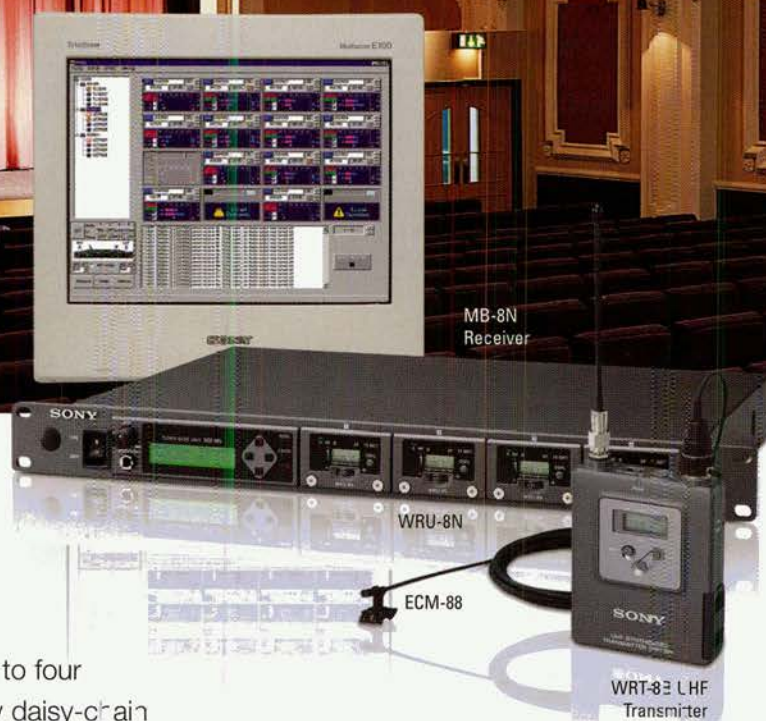
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mailed direct to you. Now every subscriber also becomes a member of ETA, the Entertainment Technology Association.
• Call now: 1-800-635-514 or do it at: www.juliusmedia.com

There's no drama... without Sony Wireless Systems

Digital Vision



Now with bundled PC control software to help you achieve new standards of performance

The new ME-8N receiver system accommodates up to four tuner units and has a built-in antenna divider for easy daisy-chain connection. The WRU-8N Tuner Unit achieves exceptional standards of RF performance. It features space diversity reception, and a wide dynamic range with low levels of noise and distortion. The MB-8N/WRU-8N combination provides excellent remote operation and monitoring. Over standard Ethernet connections, a complete system can be set up and controlled from a PC running the supplied GUI software. This includes the store and recall of different channel configurations, a feature that is particularly useful for location use and equipment rental organisations. A separate monitoring feature is included to allow the individual outputs of the tuner units to be checked.

Together with a supporting cast consisting of the ECM-88 micro-lavalier and WRT-8B transmitter, the MB-8N/WRU-8N are at the cutting edge of wireless microphone technology, bringing new standards of performance and functionality to wireless microphone systems.

Email proaudio.au@ap.sony.com or call your local B&P sales office for more information. Check-out "Microphones" in the Pro Audio web www.sony.com.au/proaudio

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www.sony.com.au

DiGiCo D5 Live Digital Console

You know the story. The pilot is taken ill, and you answer the call because you are a sound engineer. How would you fare with D5?

Imagine you mix on an Allen and Heath GL2200. Your last show was in Melbourne on Saturday, you've just flown to Los Angeles for a showcase gig, and the enthusiastic record company have trumped up a pile of your bands advance money to hire The Best PA They Can Find.

The FOH desk is a DiGiCo D5 digital live system, and while you are delighted, you have just twenty jetlagged minutes to find out how it works before soundcheck. There are heavy hitters prowling around, and everyone is on edge.

The pictures show how sexy the D5 is, replete in metallic 'sparkle' effect dark grey, with bright and colourful screens and a super clever LED lighting system.

I went into the fantasy gig simulator at Random Audio, where they have a very nice demo studio complete with 5.1 surround sound through L-Acoustic speakers, and various multitracked concerts lined up for audition. I was mixing A Major Act, live, with

48 tracks coming into the D5. Random even had vision of the band so I could see what was going on.

DiGiCo's D5 comes in several sized packages, but in each case the 'desk' or work surface is the same. It is a sexy beast, with extra fine illumination and four touch screens. Three banks of eight channels each have their own screen, then the right hand end of the desk is the master section, also with a screen.

A picture tells a thousand words, so look at the layout. On the right of each section are the EQ and dynamics controls, with a surround sound joystick underneath. At the flat fader area is a fader bank selector, so you can jump the faders from the eight channels represented, to more underneath.

These are labelled however you need, so my first eight channels can control 'drums' or 'percussion'. Changing the bank, all the percussion channels snap into place, while the drum channels are coasting away

CX 20 minute test



DiGiCo is new. But the company was born from a very well established digital console maker, Soundtracs. UK based, Soundtracs soldiered on with a digital console programme for many years, and build well regarded film and post digital consoles. The D5 Live was just a matter of time, and indeed we were the first publication in the world to run a picture of a prototype.



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Here 'The Biz' (above). Each eight channel section has its own EQ and dynamics controls at top right. You hit the selection buttons at lower right to choose what layer you are mixing. The console comes with three groups of eight like the above one. The screen is a touch screen.

The EQ screen is shown in more detail at lower right. It pops up whenever you touch an EQ control.

underneath, doing whatever I asked them to when I changed banks.

Within five minutes I have figured out where all my channels are, and I am making sound. Now it's time to equalise. The previous user has enabled the faders so that if I touch one, that particular channel's EQ section overrides the normal display of eight channels on the screen. I'm having no trouble at all setting any EQ, anywhere. So far it is all intuitive.

You can select whichever of the eight channels you wish to do EQ on by touching the fader, or the PFL button, or the touch screen.

Now I want some input gain attenuation. The topmost rotary knob on each of the 8 channels in this group does that, just like on a normal analogue desk. Like the channel faders, these can be grabbed and used without thinking about selecting them.

I grab the 'comp' knob in the Dynamics control area, and twist. The selected channel compression threshold is affected, but

how do I alter ratio and gain? Hmm. Look at the screen, the compressor is visualised horizontally, laid out at the top of the box, and the noise gate at the bottom. How do I operate? Look just under the screen – eight rotary faders. In fact, three rows of eight. The top row affect the compressor, the next row alter noise gate settings. It's too easy.

Twelve minutes have elapsed. I can mix the band, and almost entirely by looking at the desk. The only problem is I have lost the lead vocal. The very excellent 8 character illuminated labelling on the channel strip shows me the problem – he has two vocal mic channels, handheld and wireless. All fixed.

Now I move to the output, or 'master' section at the far right. There are two banks of 8 faders, plus a master fader to the right. When I started, I advanced them all to '0', which is about 80% up the fader. I still have no idea how this section is arrayed, but I've been able to mix because all the 48 chan-

nels of band are assigned to the master section. D5 comes with 64 (or 96 on the 'E' model) processing channels.

There are 48 busses on the console, and they can be whatever you would like them to be. One bus is dedicated to PFL/Solo (pre fade listen), and two busses are needed for left/right stereo output. Thereafter, you can choose to configure the board for Left, Centre, Right, or for 5.1, or for any other surround combination. Likewise you select how many auxiliary groups, stereo or mono, you need. Plus how many output groups.

Mission accomplished! It's at this point in the game I am happy, and well within my 20 minutes, but I am relying on the console having output configurations in place. This particular 'session' has 8 stereo auxiliary sends on each channel, and the band are assigned to the lower of the eight master faders. The effects returns are all assigned to the upper row. There are up to 24 master groups available across the 16 faders.

Having successfully introduced myself to the board, and done a meat-and-potatoes mix of This Band (with some mean EQ and compression applied to the main voice), I am ready to either open the user manual or seek direction from the friendly system engineer who will always accompany a console worth upwards of a third of a million dollars.

DiGiCo say that as a default, all inputs are routed to masters. In any case, getting routing sorted out is quite straightforward.

Some cool features: holding down the 'All' button on each group of 8 lets you 'top up' EQ for any channels that are 'ganged', or joined together. This is very handy if you have a couple of vocal channels, or some strings, and you want to brighten them collectively. The addition, or subtraction, of EQ maintains relative offset of each.

The channel faders sense the galvanic response of your flesh. That means they sense the electrical current of your living flesh. You can put a finger on the fader and it will respond by expanding the channel view on the screen. Put a finger nail to the



fader and it locks up. This avoids stray and uncommanded channel fader changes. It also removes a major form of irritation because people with style delusions can't mix wearing white gloves. In the old days, you would get beaten up for this taste travesty.

How deep do you want to go with D5? You can do it simple and emulate a normal analogue console, mixing 96 channels on a compact 1.5m worksurface without needing to physically almost jog across two vast (2.5m each) conventional boards. Because it is a digital console it has way more functionality applied to every input, so you can use a noise gate and a compressor on every channel. You have full parametric equalisation on every channel and five bands of parametric EQ on the output busses.

The real joy of a fully digital console is automation, where you can snap recall a scene, or run a timed automated sequence that is cue triggered by you, or automatically triggered by an event linked with digital sync. In more complex shows where there is an orchestra or there are multiple wireless packs coming and going, each needing a different EQ and gain, automation shines. D5 has timecode and machine control ability.

SETUP

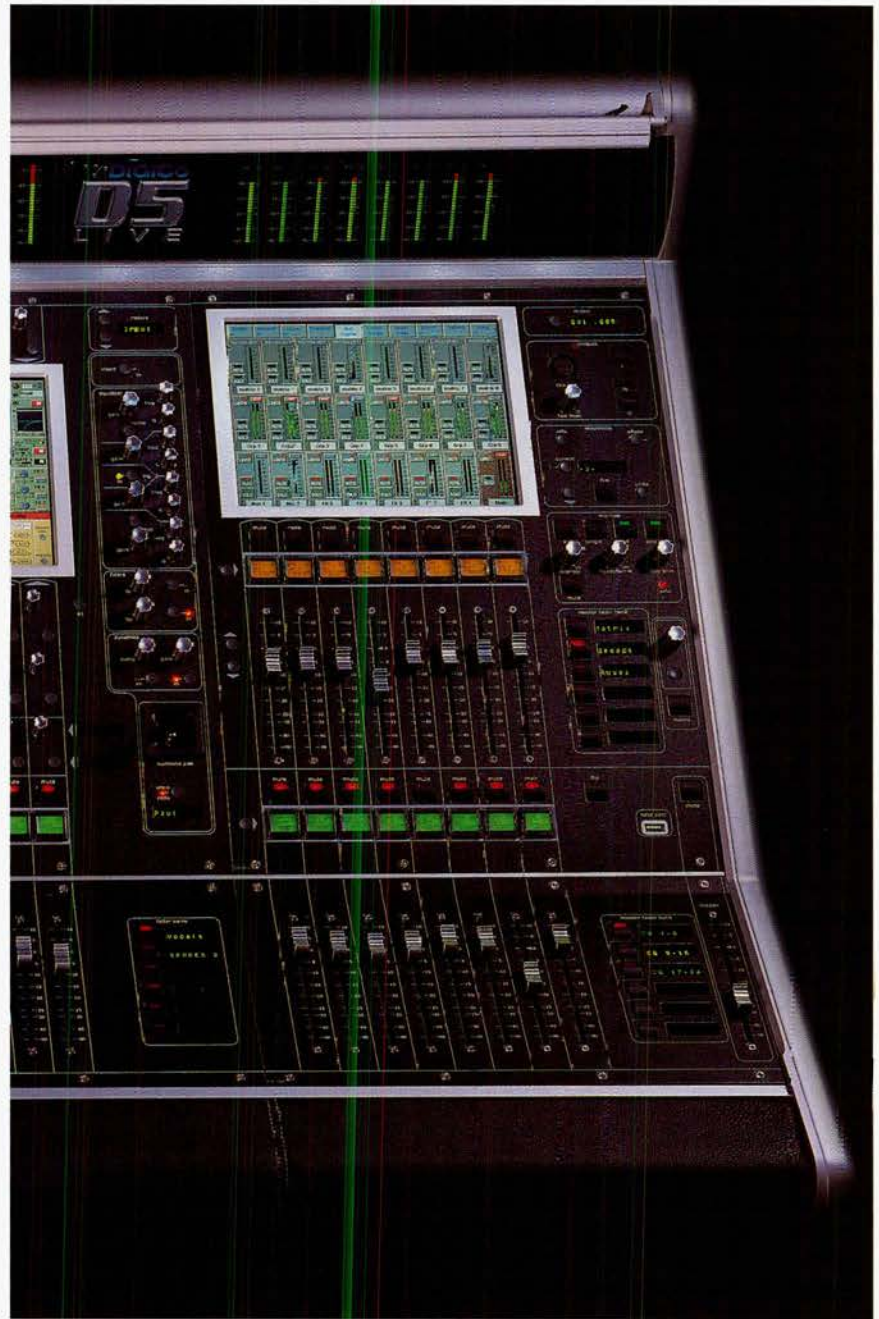
Let's wheel in the PA and set up the D5 live system. The desk (or work surface) is sized about the same as a 32 channel conventional console, about 1.5m wide. It weighs 215kg in the roadcase, about half what a 56 channel conventional concert console comes in at.

The D5 measures about 600mm deep, and the start of the metre bridge is 470mm from the front edge. A normal concert board is more than 900mm deep – sometimes with the uppermost gain and phase controls out of reach.

We have a local rack, which sits to one side or somewhere near the desk. It has 40 male and female XLR connectors, allowing you to insert or connect to or from the desk. The local rack is patched to the desk using 2 MADI cables, one for in, the other for out.

Down at the stage are one, or two, remote racks for connections of analogue audio. If you buy the 64 channel version, you have one rack. The 96 channel version features exactly the same desk (or work surface) but has a second rack and an extra card in the desk.

Our stage racks do not contain the 'system' processing engine; this is done at the desk. The stage and remote racks are a



bunch of A/D and D/A converters, and have plenty of XLR connectors for audio plus a couple for AES-EBU. Each stage rack has a dual power supply, just in case one goes fishing.

These remote racks are connected using a single fibre optic multicore made by Optocore, a German company. Optionally, two 100m cores are supplied so you have a redundant loop in the unlikely event one core has a problem. If we have the second stage rack, a shorter optical core connects to the first. You can run up to a kilometre of optical cable between desk and stage.

At this stage in the setup we connect microphones inputs, and PA outputs at the

This is the output area (above). The fader at far right is the master fader. Like all consoles of this stature, you can assign ins and outs how you like, and make the master faders into almost anything. Single channels, or multiple channels, can be assigned a master. Subgroups and matrix outputs can be made from the 40 main and 8 matrix output busses.



Of note is the ability for two D5 work surfaces to share stage racks. This way a stage monitor configured D5 and a front of house D5 are connected to the one stage processing rack. They are sharing a microphone preamp at every input.

If one console engineer adjusts input gain on a given channel by +3dB, the second console input gain automatically tracks and adjusts 3dB down, in real time.

"The engineer need not know about it," states console sales chief Bob Doyle. "If we didn't have this, they would need to call each other up every time they wanted to adjust the header gain".

stage racks, and also any local audio channels you may want at the desk – like the output of a CD player, and a desk microphone. Maybe you need some delay outputs back at FOH from the 8 matrix busses on the D5 too.

Power up, and after a fast 45 second bootup, all is ready. There are dual power supplies for the desk and racks. You would always use a UPS – uninterruptible power supply – to iron out any mains disruptions and voltage spikes that do happen in the real world.

MORE

Some neat features include the data port on the front of the desk, so you can upload or download your show settings to a USB key. Plug into any D5 anywhere. An internal modem lets the factory interrogate your console, or upload software into it. And a pull out keyboard lets you type labels and automation names easily.

There are new software versions for Theatre and Monitor on the way. In Monitor mode you can do third octave equalisation on outputs. Like with all new generation digital consoles, venue seating footprints are about half what a normal console and outboard racks demand. This can amount to eight seats.

• More info at www.randomaudio.com.au

HOT NEW ADDITION: Digitracs Soundcheck Show Recorder hooks up to the D5 via a couple of MADI cables and then gives seamless record and playback from 56 inputs of the desk.

It comes with 4 x 200GB drives in a RAID array. This gives as much as 20 hours recording time. For getting the audio out of the system, there is hot-swappable 80Gb hard drive caddy that make the system ultra easy to manage.

A live engineer could record the band at soundcheck, then cross reference the soundcheck to a live performance that was recorded. This would let him/her tighten up system settings ahead of a show, says Doyle. The recent Beck tour saw sound engineer Jon Lemon have the band in for just two numbers at soundcheck. These were recorded on Soundcheck, then the venue mix and EQ set at leisure after the band departed.

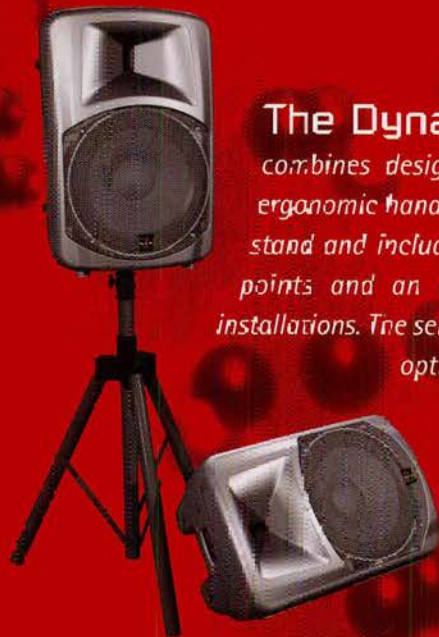
In theatre shows it is conceivable an understudy could come in and rehearse a part, with all the mix elements in replay from the previous performance. Yes, you CAN record a show in multitrack with most consoles, but wow- 2 MADI cables with seamless hookup! And export the files to virtually any format via Firewire afterwards!

Dynamics series



DS -115 /DS -115A

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The Dynamics series

combines design with function. Their unique enclosure design has three ergonomic handles for easy carrying, will accept a standard 35 mm mounting stand and includes a floor monitor position for added flexibility. Nine rigging points and an optional mounting bracket facilitates use in permanent installations. The self-powered or passive versions lets the user choose the powering option that best suits their needs. The DS-115A incorporates the latest in amplifier technology. A Class "D" amplifier powers the low frequency section and a Class "A/B" powers the highs. Protection circuitry is provided for both amps and the components. A 500 W Class "D" amp gives the SUB-18A sub-woofer system a solid bottom-end. SUB-18A SUB-18F

DS-115 Passive Full Range -115 /DS -115A



grand MA

With a growing list of lighting designers, shows and venues looking to this relative new comer for controlling lights on the biggest events, CX decided it was time to take a serious look at what all the fuss is with grandMA.

Paul Collison, a freelance lighting designer and operator, has become well versed in the methodology of the grandMA, and he took this writer on a tour of the desk, and the process for preparing it for the show.

Some have called this desk the ultimate in flexible show control, and when you first start to use the grandMA you might wonder if all these options aren't just making this desk more complicated than it really needs to be. But hang on, if you keep ploughing ahead preparing the desk you will discover that the grandMA is a significant leap forward in lighting control ability.

This desk is not one that you can just walk up to and use – even if you know how to program the desk. The design concept seems to be that of 'create the work environment that the user needs for that show' – which is great except that others users may be a little slow to work out how to operate YOUR show.

When you walk up to the grandMA for the first time, you will certainly find it easier to

operate if you have had some experience with other moving light consoles before you get there. Things like patching fixtures, setting up palettes, and building cue stacks are good to understand in principle (or from the WholeHog software) so that you can deal with the options this desk gives. Plus a good understanding of DMX and its channel limits, as well as the concept of DMX delivered via Ethernet will certainly make the use of this desk easier to grasp.

Assuming that to come to this desk with the knowledge already in hand, the rest become MUCH simpler.

The first step to using any desk with moving light control is telling the desk what it is controlling. The software patch or 'Fixture Patch' as this desk calls it introduces one of the first programming options that the grandMA introduces – the Fixture Layer. You can have any number of Fixture Layers, and most operators tend to make each Layer either contain one type of lantern, or one location in the rig. If you create a new 'Layer'

Paul described the process of learning to drive the WholeHog desks when they first appeared as very hard - *because most of the users were still learning how to control these new moving light things* as well!

Part of the reason why this desk is so accessible is that most users of this desk will come to it with some prior experience of moving lights.



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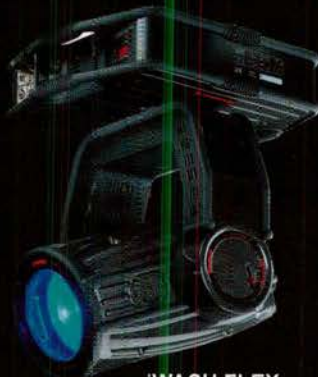
ACHIEVE BALANCE Only FLEX allows you to balance the intensity of your FLEX to match you other lighting devices electronically with "on-demand" power to spare for special effects. Our exclusive "Best Color" system automatically balances lamp intensity to color selection for visual continuity between light and dark colors (patent pending).

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and put 16x Mac2000's in it, another layer with 60 normal dimmer channels, and another layer with 12 Xspots, then it become very easy to grab all of the Mac2000s that the desk is controlling and change a parameter that affects everything in that layer – restrict output to 90%, set the default strobe value, and so on.

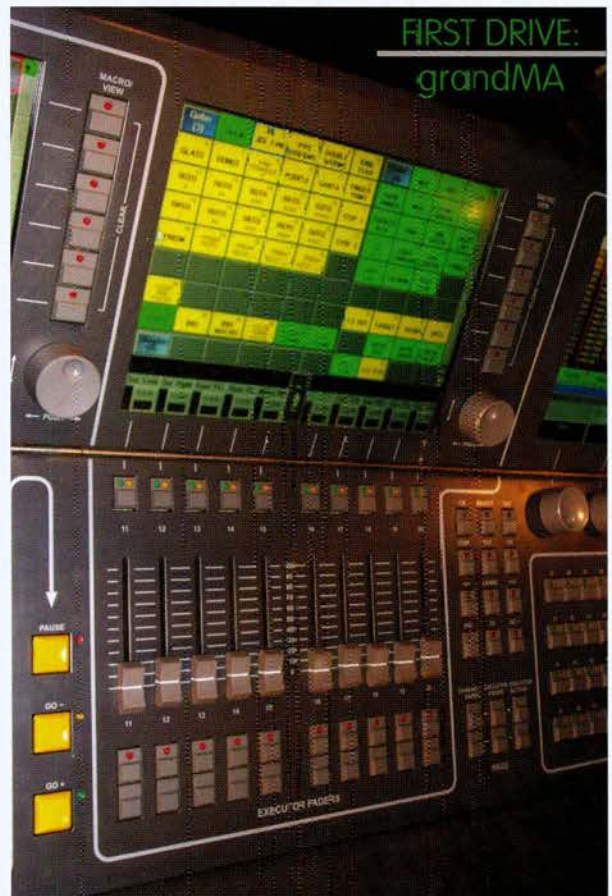
While Paul mentioned that you could use the 'Fixture Layer' feature to group a bunch of different fixture types together (all of the above devices could have been in one layer), he could not see why that would be worth doing except in very unusual circumstances. However, he does say that using the desk like this “does make patching in the patch window a little easier. More manageable.”

Once the type of fixture is selected in the layer, it is patched to the four possible DMX universes that the desk can control via DMX 512. These outputs are the standard five pin XLR. Four more outputs are accessible via the Ethernet port upgrade. MA Lighting are working on a Node that they say can further increase the channel controlling ability of the console many times over.

The grandMA automatically rolls the unit patching into the next DMX universe if there is not enough channels – something that Paul showed me when he patched 100 Mac2000s, starting at DMX universe A – channel 1. The 100th Mac sat in the fifth DMX universe!

With this bit of programming out of the way, next comes the configuration of the screens – the user set up.

According to Paul, the process of setting the desk up for the first time is “pretty daunting”, and certainly something of a 'trial and refine' process. There are three colour LCD touch screens on the grandMA. Two more external screens can be connected to display whatever you need. A sixth screen can also be connected to show the “DOS-



like” commands the desk is handing – good for possible error checking, but Paul has little time for the sixth monitor output.

“Is 5 screens already not enough?” he says. “It is getting a little hard to see the stage now through 3 external monitors and a vision monitor!”

The key thing to this layout is that three of your screens are touch panels and two are 'display only', so setting these latter ones may be a good place to start. The best things for these monitors is information rather than views you may need to interact with. Although you can access these screens via the mouse, it can be a little time consuming. Paul likes to display the Programmer window on one of these windows. This allows him to see feedback from the console. The other external screen could be the simulated stage view (a wireframe 3D representation of what is happening on the stage), or output screens could also be placed here.

The touch screens are where you place features that you are going to need to access during programming, and these will become the flexible palettes that a user will build up over a period of using the desk for different shows.

Adjacent to each of the three touch screens are five buttons (so fifteen in total), which change the display configuration. Each of the fifteen buttons can change the displayed view on any one or all of the screens to whatever display is needed – including instant scrolling to unseen screen buttons on palette windows. Fifteen different display options is sure to satisfy the needs of even the most disorganised or complicated setups.



Paul Collison

FIRST DRIVE: grandMA

The good thing about spending the time to set up these screens properly is that a user can save these settings, and apply them to any future show without interrupting the existing show that the desk is programmed to run – thus reducing the setup time for each subsequent time you use the desk.

Obviously the types of lanterns you have will be different from show to show, but if you are used to grabbing colours from a particular place on a specific screen, then starting work on a new show can be much easier. A new feature of the most recent software release is that the grandMA can convert a show programmed on Mac 500's and 600's to a show that has Studio colors and Studio Spots or vice versa. Some information may be lost in the process but not having to go back to square 1 is very beneficial.

Setting up the screens and recording palettes could take a few hours – Paul likes to set aside a good half a day to patch and prepare a larger show before getting to the venue.

"Most of my work is done these days before getting on site."

However, after all of this preparation, you are now ready to begin that wonderful process of plotting.

Unlike other moving light consoles, the grandMA uses a 'Latest Takes Precedence' methodology, which Paul much prefers over the old method of having palettes take priority over cues and then have those changes locked away until clear is pressed.– which can lead to some visual mistakes when you are forced to 'release' lanterns that are under the control of a palette. This means that, if you use the palettes to grab all Mac2000's and send them "Blue" – and then trigger a cue which would crossfade these lights to green, the crossfade would happen seamlessly, in the time specified in the cue and the palette no longer has these lanterns 'grabbed'.

The 20 fader/button groups that make up the "Executor Faders" as used for recording cues also have a number of interesting features. Each of the three buttons can be whatever function you need then to be – Go, Go Back, Pause, On, Off, Rate, <<<, >>>, Top, Flash, Out, Toggle, Fix, Select, Swop & Load. Alternatively, if you want more control over the cue, why not use two faders to control it. Each cue can have up to five faders assigned to it, controlling Master Level for the cue, Rate, Cross Fade A, Cross Fade B, and an interesting new feature called Swap. A simple chase could quickly use two faders – one to control the level and one to control the speed of the chase.

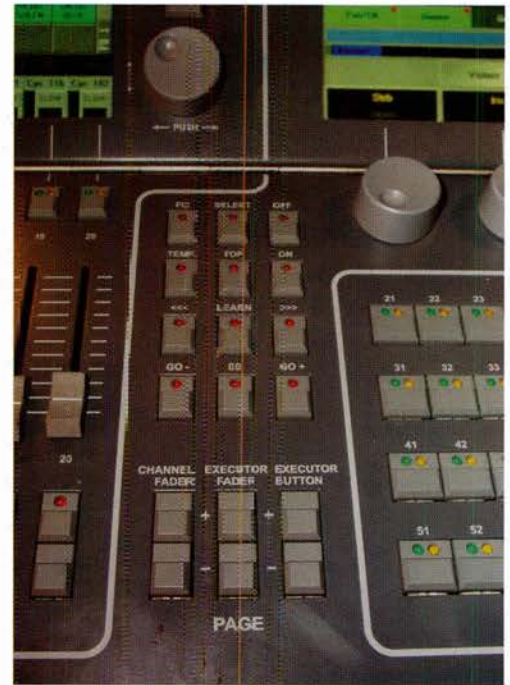
There are 64 pages of 20 "Executable Faders", but if you want to trigger a cue or effect that doesn't really need a fader at all, there are a further 40 "Executable Buttons" – and again 64 pages of them.

One of Paul's favourite features on this desk is probably one of its simplest. The twenty faders can also be used like a bunch of channels on a

conventional desk. One button hit changes the purpose from being "Executables" to "Channels", and because the faders are motorised, they will jump to the correct levels they were last left at. A second hit of the button jumps to the next group of twenty channels with the faders also jumping to their new positions, and so on. While it may take a bit of careful planning to ensure the your four cyc circuits are not split between two groups of twenty, this way of grabbing channels makes this desk very easy to use. All of a sudden we now have a console that is just as happy controlling 100 Vari-Lites as it is controlling 100 dimmer channels. Unfortunately, this feature does not include the ability to quickly grab the intensities of moving lights as well – (maybe in a future upgrade?)

Another little trick with this desk is the three levels of "clear" when you hit this button. When you are programming, you will want to grab a bunch of lights, point them somewhere and grab another point them and so on to build a cue state. The first hit of the CLEAR button lets go of the currently selected parameter, but keeps the levels that you set in the memory and live on the stage. You can go ahead and add to the state so that when you record it those values are loaded into the cue.

Hit the CLEAR twice, and the memory of the cue you are programming is cleared, but the lights on the stage don't move. Now you can plot cues that needed those lights positioned and visible in order to record the new cue, but you didn't want them as





They could all move to what ever desk, log in, and not only would their control interface jump to whatever they had set up, but each would be prevented from accidentally 'fiddling' from another users lights.

To take this concept to the next step, MA Lighting also have WindowsCE software so that you could wirelessly (using WiFi Ethernet) tweak controls from you palmtop or laptop computer. With a properly setup wireless network, this could be achieved from anywhere in a football stadium (and probably from the car park as well)

If you wanted, you could set up a computer near the Stage Manager, and set it up so that they could see that you have triggered the cues she (or he I suppose) has called. They could even trigger the cue themselves.

It would seem that MA Lighting are spending their days thinking up more and more new ways to make this desk able to do anything a user could possibly want. According to Paul, they have certainly listened to the user feedback, and provided features that we identify.

Paul had only two gripes with the desk with the latest upgrade of software. One is that you cannot easily grab one light in an effect and adjust its parameters without affecting the others grouped in the same effect – say if one was hitting the video screen when doing a movement effect, you can't just grab that lantern and change the size a little while the effect is running.

The second is that he didn't have much use for the trackball – but if it could be turned into a cup holder...



part of the new cue itself.

Hit the CLEAR three times, and it is like hitting Clear/Restore on the Hog – all channels are released and the stage jumps (usually) to black.

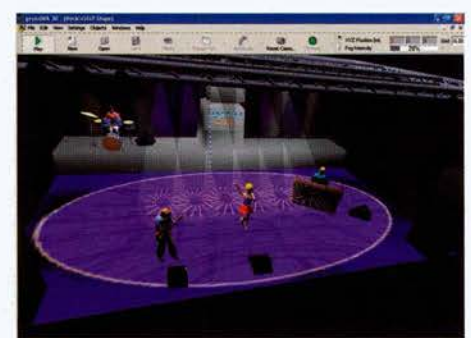
There is way more to the process of programming this desk, but hopefully you can see that, given a basis in existing (simpler) technology the grandMA is not all that hard at all.

However, the user interface doesn't stop there. Where this desk really comes in to its own is in how it can run with another desk – or even a standard PC as a live backup or as alternate control points. In the Rugby world cup opening ceremony, four of these desks are to be used and networked together. Any one of them can run the show by itself, but image plotting lights in a place the size of the footy stadium.

Imagine being able to walk to a different view, jump on the nearest desk and Tweak the focus. What if you had three different operators, each looking after three different groups of lights – one for the audience effect, one for the on field entertainment and one for the sky scanning spotlights.

Story by John Grimshaw.

Thanks to Lots of Watts for the loan of the grandMA, and to Paul Collison for his time.



Now there is more time to party



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This low voltage MR-16 Tungsten Halogen lamp, used for fiber-optic and entertainment applications, has an average rated life of 700 hours - that's 14 times the life of standard ELC lamps achieved with Xenon Gas Fill Technology. The Osram ELC-7/X employs a dichroic coated glass reflector for best color stability over its lifetime.

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94 shows in front of more than 460,000 people and with only 2 caravans written off. John Farnham is off the road for the last time, after almost a solid year of hard work.



No deaths, births, marriages or even serious injuries. A war started and finished, and a brought almost broke over the top of the regional touring tent. At times it looked like a circus, but it was anything but.

Touted as 35 years in 2 and a half hours, the regional shows actually ran until well after 11pm in a sexy new six-pole big top from Unique Attractions. Taking the John Farnham Band on the road is no small matter, since the band is large and the production values are high. With this is the expectation that conditions will be conducive to a great show. Doing all this on showgrounds, ovals and vacant lots of land in country towns is the stuff nightmares are made of.

There were some close calls with disaster, but the tour finished on a sensational high, with one of the last three arena shows at Rod Laver televised to a high rating national audience.



Tour!

John Farnham triumphs - For The Last Time

By Julius Grafton

CX went on the road to see how the regional tour worked, and found co-ordination of almost military standards, and a virtual small army at work.

The regional shows started in Kalgoorlie in West Australia in January, at the height of summer. The tent had been set up in Melbourne a week earlier, with production rehearsals finding the right fit for equipment and the right looks and sounds. Final touring lists and production elements were loaded into four production trucks, and the long, long 4 day haul started across the country.

Production Manager Adrian 'Ada' Smith filled me in on the details.

"There are four trucks, one of them a 'B' double". These were made up of 2 pan techs, and 2 Tautliners – which are open sided trucks with side curtains, easier to unload with a forklift. The fifth trailer was a flat top loaded with 2 x 20' containers – one of which was a complete, silenced generator set from Generator rentals. The second container was used for general equipment.

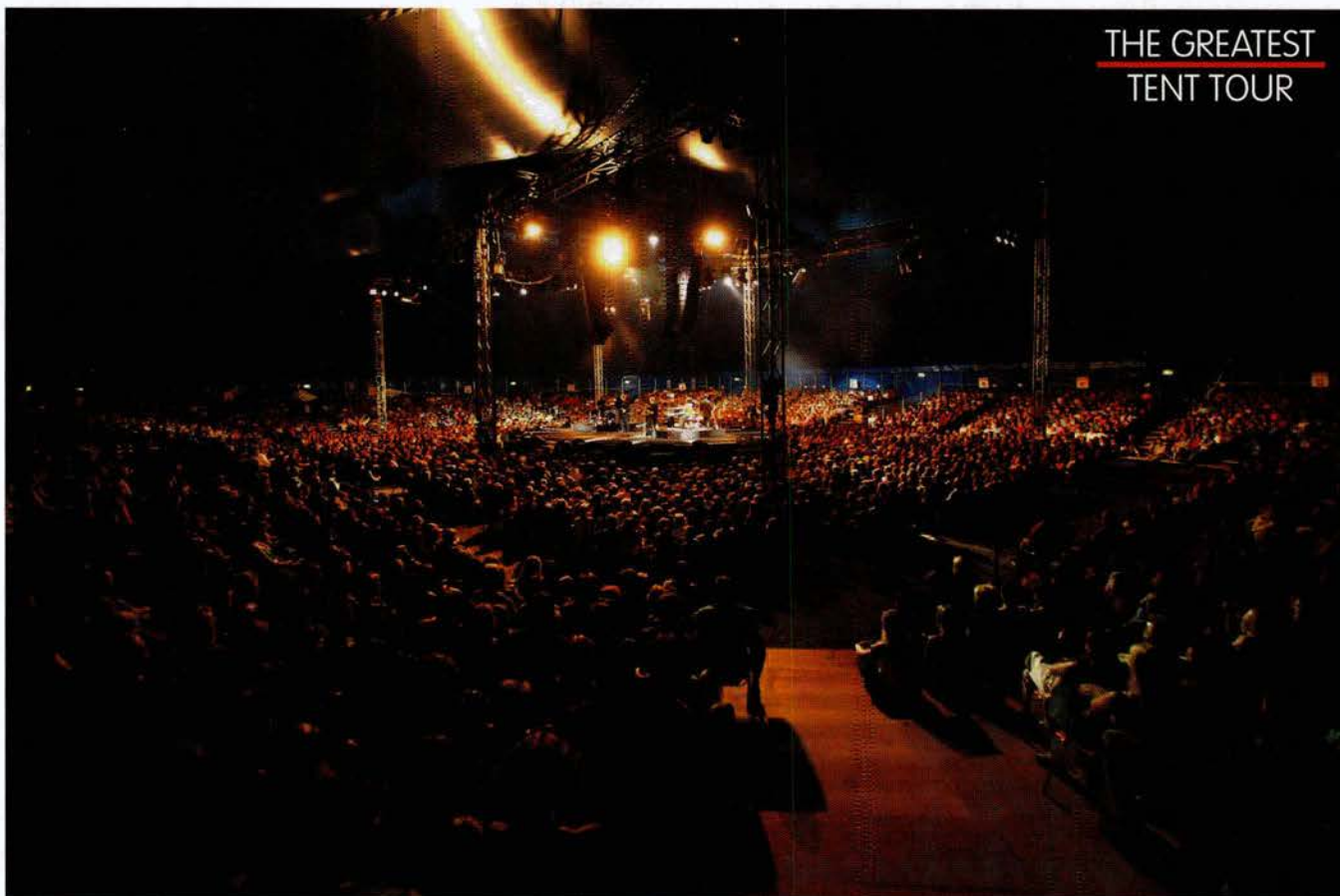
The layout of the load was carefully orchestrated, because when you arrive at a tent, you don't have the luxury of spare floor space to put stuff into. So it needed to come out of the trucks in order of requirement. This meant the audio and lighting were mixed around the trucks. Some really neat time saving features were dreamed up before the tent even started – the dimmer racks were placed and strapped into a Tautliner, which was backed up to the tent – so they could remain on the truck in use. That saves serious setup time!

The other big timesaver was created by monitor systems engineer Bob Daniels, who devised a large all-in-one dolly for the two Yamaha DM-2000 mixing consoles and outboard RF racks. The consoles sat above the racks and the multicore patch, with the whole conglomerate strapped together and pre-patched. It is fork lifted off the truck, and up onto the rear seating bleacher.

But this story is getting a little ahead of itself, because getting this touring town on



Production manager Adrian 'Ada' Smith and tour manager Michelle Duncon



the road was the subject of endless planning.

The people behind John Farnham are resourceful and seasoned. Farnham is Australia's all time favourite entertainer by any measure, and has a huge reputation as a superb singer. His vocal range and delivery make it appear easy, and his affinity with his audience is totally the reason for his outstanding success. The guy is genuinely unassuming about his success, and uncertain that his next show will be as popular as his last one. It's this edge that keeps him at his prime and returns value to the audience.

A John Farnham show isn't cabaret, as some more cynical observers may assert. It is a musical performance, interspersed with a lot of banter from the star, who has a long and risqué series of gags and stories that often are self deprecating. His long time backup singer Lindsay Field is the butt of plenty, derided in fun as a 'bloody hippy' and told to get a haircut. Pretty well everyone on stage gets a shellacking, including new female singer Dannielle Gaha – who we learn prefers tea and Tim Tams to the alleged hard drinking of the rest of the band.

Farnham's back catalogue is made up of solid commercial pop and rock tunes, many of which are the soundtrack of Australia. Song after song roll out, and almost everyone under the age of 60 can identify with some or most of them. It is easy listening, melodic, played hard and loud, with feel and precision. The band are as good as you will get, made up of 2 guitars, bass, drums, keys, and three

brass. The backup singers have terrific versatility, and Dannielle Gaha brings new life into her role – she moves incredibly well, having also been a formidable dancer in her short career.

The tent show is done in the round, and is made up of two halves, the first being an acoustic set with different performers coming on and off. The interval, at about 9pm allows a changeover where the centre riser is split into two, which are wheeled apart and the stage reset. One of the pan techs acts as a band gear assembly area.

Intimate! In the round, for 3,941 people. The Unique Attractions tent was airconditioned.

Part of the show compound. The Swagman mobile home is a dressing room for Mr. F.



POWERED MIXERS FOR THE REAL WORLD

PA20-CP

16 mic/line inputs,
2 dual stereo inputs

PA12-CP

(Illustrated)
8 mic/line inputs,
2 dual stereo inputs,
desk/rack mount

If you know our touring consoles you'll know we never make 'me too' mixers, and we're not about to start. Our designers have applied their hands-on, real world mixing experience to create a range of 1kW powered consoles that give you walk-up-and-go simplicity and a whole host of practical innovations for getting the most out of a small PA system.

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ALLEN&HEATH

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- **Semi-parametric output EQ** for accurate frequency control
- **4 Band channel EQ** with swept high mid and 250Hz low mid
- Built-in **stereo digital FX** with footswitch control + MIDI edit
- **SPDIF** digital audio outputs
- **2 Dual stereo channels** for summed or 4 independent inputs
- Standby and post-LR BGM operating modes
- **Switchable sub bass filter** on mono output
- Individual +48V phantom power switching
- **100mm faders, notes and inserts** throughout

Full 1kW into 4 or 8 ohms

Most amplifiers give their full power into 4 ohms, so if you're using 8 ohm speakers you're getting a lot less power. But if you pay for 1000W of amplification, you want 1000W, right? Our unique Constant Power amplifier design reconfigures the power supply for optimum current (4 ohms) or voltage (8 ohms) - so you're getting the full 500W per side into either impedance. The new amp is a bipolar assisted MOSFET Class AB configuration and uses a heavy duty linear power supply for rock solid bass and full range clarity. Amplifiers can be assigned for stereo PA, mono PA with single foldback or dual foldback.

Audiophile 2 stage padless preamp

Our latest zero-compromise preamp sets a new benchmark for all round performance. The elimination of a pad circuit results in lower noise figures when line level signals are used with the higher impedance jack input and also ensures the integrity of the frequency response. The gain range of the XLR mic input is extended from -5dB to over +60dB which means it can handle the quietest signals right through to high levels from microphones and still retain the low input impedance required for low noise performance. This has been achieved with an ingenious design which keeps the control of the gain smooth and well spaced when turning the knob. The result is a superbly quiet, accurate and musical preamp which has the range and matching to get the best from all of your sources. The only thing we forgot was to think up a convincing TLA (three letter acronym) to describe it!

4 band input EQ

PA series mixers are designed to sound superb with the EQ flat, giving you full scope to use equalisation as a creative tool for sound shaping. Having 4 bands of EQ (rather than the 3 you find on most comparable consoles) gives you the power to accurately pinpoint the sounds that you want to lift or cut back. A bit of HF to brighten up a guitar, less LM and a bit more HM to get a snappy kick drum sound, some LF to add depth to the FX - a few subtle creative touches like these can make all the difference between a solid performance and a sparkling one.

4 band semi-parametric output EQ

The traditional graphic EQs found on most powered mixers simply let you cut or boost 7 or 9 fixed frequency bands. With just a handful of bands available, each one one needs to be very broad, making these EQs somewhat crude devices. This is why we decided to defy convention and design a semi-parametric output EQ for the PA series. Each of its 4 bands has a sweep as well as a cut / boost control, so the width of each band can be very tight (the Q (width) is 1:8 measured at +10dB), allowing you to identify and treat the problem frequency without all that unnecessary change to surrounding frequencies.

Quality Digital FX

PA series consoles come equipped with a high spec internal stereo FX unit (a development of the proven design used in our acclaimed MixWizard desks) that is simple to use and loaded with 16 practical presets. Want more flexibility? Our free FX editor software lets you access more presets and edit the parameters via MIDI. Still madly in love with your old reverb unit? No problem - you can run an extra effects unit through the FX channel as well as or instead of the internal processor.

Build like a tank

This is a rugged, professionally made piece of kit that has been designed and built to last. Each channel is on an individual, vertically mounted circuit card for ease of service, greater resistance to drinks spills and increased rigidity. Every rotary control is screwed down to the front panel with a stainless steel nut, so the metal chassis takes the force of any impacts, not the electronics inside.

SPDIF + Analogue Recording

Whether you're using DAT, CD, MiniDisc, FC, Digital Audio Workstation, HD recorder or good old cassette, the PA series' RCA phono and SPDIF digital 2-track outputs make the job of creating high quality recordings supremely simple.



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TECHNICAL AUDIO GROUP

WITH
**CONSTANT
POWER**





Enough rain to make a lake (top), enough earthmoving equipment to make a road (top right), and some miserable, slow loadins (right). The little DV-Disc line array came up trumps (above).

The second half runs about 2 hours, and lighting director Chris Newman has a remarkable mix of looks and fees that span the whole night. Towards the end of the show, the big hit that really kicked John Farnham's career into profit is played – "You're the Voice." Somewhat out of the blue are two female bagpipe players who march on in precision and play the couple of bars required – then march out. Did the tour pay them to tour the country for just a minute onstage?

Backstage are around 79 support crew EC trucks, vans and various Taragets.

The crew come in two factions.

Unique Attractions supplied the air-conditioned tent, four 25' toilet trailers, dressing room trailers, production office, box office, fences, catering tent, show catering, audience catering concessions and everything that goes to make up a venue that seats 3,941 people.

Unique had around 50 crew on the road, under the supervision of owners Tony and Debbie Gasser. The Gasser family originate in

Switzerland and are a circus clan. The family operate Silver's Circus in Australia. Unique Attractions is a logical diversification and started prior to the 2000 Olympics when Tony reasoned that a large venue tent would be profitable. It was, and when the Farnham tour came along he added a second tent, needed to leapfrog the first.

The Gassers do a slight recoil at the tag that the Farnham entourage apply to them, which is 'Carnie' – a term we hear reasonably often here at CX, and given to mean people who work in the carnival, circus and amusement park biz. "Our crew we call tent hands", explains Debbie Gasser, an attractive, fit blond former trapeze artist.

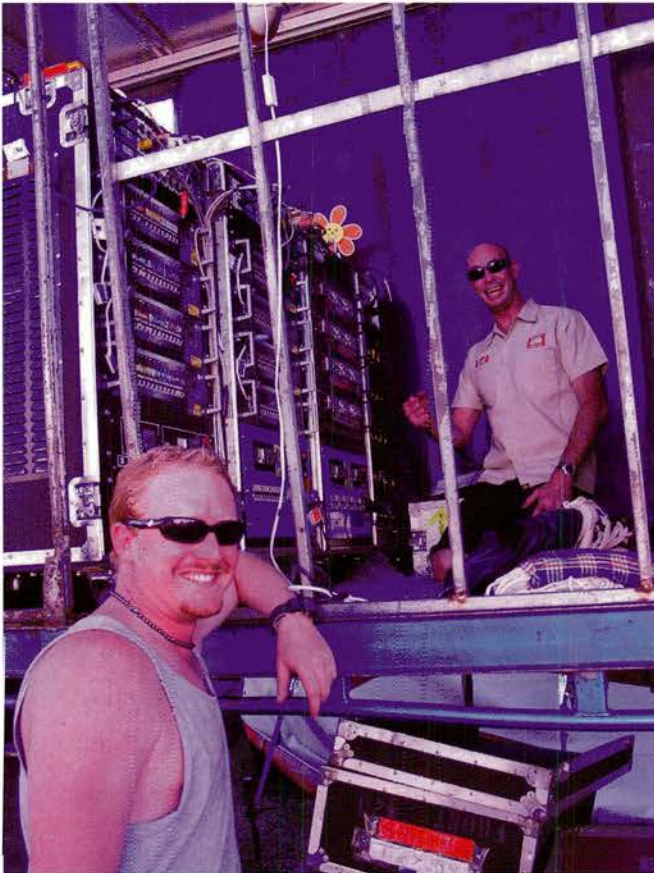
Husband and partner Tony also worked the trapeze, and has that good locking, tanned charisma that comes from being a performer – particularly since he mastered and starred in The Wheel Of Death in his father's circus.

Gasser Family interests are scattered around the country. After the Farnham tour one of the tents remained in North Queensland for a horse show, organised by a cousin.

Codenamed 'Star Piss One', this item of equipment is air conditioned. Of course!



THE GREATEST TENT TOUR



Dimmers stayed strapped on a Tautliner - saving bulk time. Rob Oswald is in position for a show, monitoring the racks, while Mr. Versatile, Trent O'Connor doubles as lighting crew chief and head rigger.

Chill-out zone backstage (below), with dimmer truck (and Rob) in the background.



The Carnies and the Farnie's - the Farnham clan - represent two fascinating and somewhat different touring cultures.

Out back behind the show compound is the Carnie village, like you see behind any circus. A toilet and shower trailer, large caravan for the owners family, smaller but luxury caravans for key crew, and some more (ahem) basic vans for the assorted grunt labour that are sometimes hired from backpacker hostels. Aside from the skilled core, most of the carnie entourage are disposable labour whose main pre-requisite is a truck license.

On the other side of the wire - literally - are the Farnham crew. They stay at a decent hotel if the town has one, arrive after the tent is set up, and leave once the production is loaded onto their trucks.

The one place the clans mix, is the catering tent, where realistic compromises were made in terms of food and presentation before the tour started. Show catering is often very excellent, with many exciting choices. CX always enjoys a backstage meal, although seldom offered. The Gasser's managed to strike a happy medium that produced a choice of two main courses at dinner, kept the Farnham people and band relatively satisfied, and rewarded the carnie crew who had never seen anything like it.

The Farnham organisation is headed by the energetic and wily Glenn Wheatley, whose partner Gaynor often deputises for him when absent. Glenn Wheatley heads up Talentworks, who also act as tour promoters.

Talentworks started preparations well in advance for the regional tour, which followed straight after a record breaking run of indoor arena concerts across capital cities. The tent tour was a very risky endeavour, and looked quite shaky just prior to the start due to soft regional economies caused by the longest drought in history.

Some towns had three nights in a row put on sale simultaneously which in hindsight was not a good idea. Of the originally planned 65 tent shows, about 7 were rolled back where three shows were planned in a row that

Temperature extremes? You get the lot when you tackle outback Australia. Crew and artist manager Glenn Wheatley (at far right) kill time in heated relaxation zone backstage. Generator truck is to the right, dimmer truck and Big Top off to the left.



would better support two.

58 shows were delivered, with no cancellations, and attendances of about 80% - producing gross revenues of an estimated \$15 million, or \$714,000 a week, across five months. Before Glenn Wheatley starts trying to find a finance leak in his organisation, we hasten to reassure that these numbers are our own calculations!

I asked Ada about whether the regional tour was run at a loss, and he told me firmly that to the contrary, the tour definitely made money.

MAKE A TENT SHOW!

Here's how a typical couple of country town shows were put together.

Back at the beginning Tony Gasser got site permits together, since his organisation knows every empty park and paddock in almost every town in Australia, through touring Silver's Circus. "I could get the best deal too" he offered, "Whereas if the John Farnham organisation tried to hire the sites they would pay top dollar".

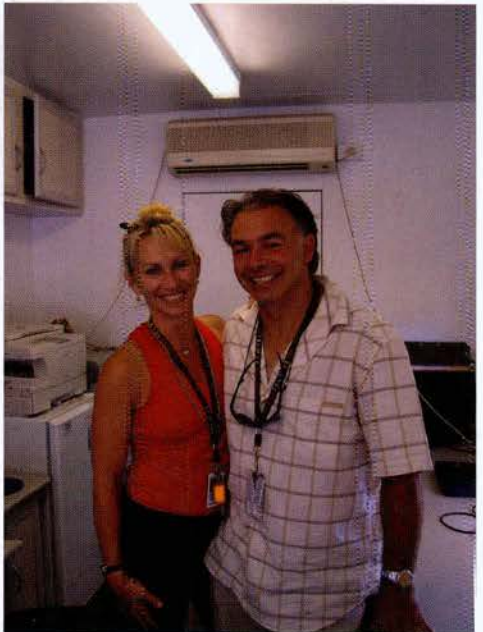
The advance crew of six have arrived in the next town on tour and set up the second big top, which awaits side walls and seating.

In the previous town the last show comes down at 11.20pm, and the Farnham production crew set about striking their gear. While this is happening, the Unique crew are packing toilets, the large foyer tent, seating and anything that can come down without getting in the way of the Tech Crew. The production trucks are locked and loaded by about 2.30am at the latest, except when un-scheduled rain is messing things up badly - which did happen!

When the Farnham crew drive off in their three Taragos' the Unique crew pack the seating bleachers and pull down the big top. "It is a race to sunrise", says Tony. "We aim to be in bed at dawn, for a sleep until about 11am. We leave the toilets, showers and catering up, and have the small site generator running if we don't have town power."

There is always a travel day, and for Unique it also a work day. The entourage form a loose convoy and leave around lunchtime for the next town. When they get there, they need to form another little village with their caravans, get their catering tent up and kitchen van working, and start fitting out the pre-erected tent.

The advance crew are waiting, and collect the tent from



Tony and Debbie Gasser, owners of Unique Attractions - part of the Silver's Circus family.



Carnie village out back of the campground. Catering tent at right.

John Henderson, monitor engineer, with two Yamaha DM-1000 consoles used for extensive in-ear monitors on the tour. The consoles, and the RF racks underneath, are all strapped onto one dolly designed by Bob Daniels (left) - named The Behemoth!



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the previous show, leaving their empty tent truck so the main crew can load the tent on at the end of this towns shows. The advance crew depart for the next town.

Unique have all night to make good the tent before the production trucks and crew arrive at 0730am the next day.

That's the ideal scenario - and it was the outcome when the crew were well versed and rehearsed and when it didn't rain.

ENTER THE RAIN GOD!

The first shows in Kalgoorlie were followed by a travel day, a setup day, then a show in Geraldton – which is 984km north-west. The story about what happened is generally agreed between the Carnies and the Farnies.

“It took them about 19 hours to pack everything up” states Ada. Production had locked their Showtravel trucks and seen them off hours earlier. The Farnies then rested, and flew to Geraldton on the afternoon of the travel day, hitting the show site at 0630am on showday. The big top was there, along with the production trucks, but not all the Carnie convoy. By this time the side walls, the seating system, toilets, catering tent, air conditioning plants, foyer tent, production office van, dressing room vans, and the various support vehicles should have not only been there, but been ready for operations.

“Where are ### are they”? Ada asked Tony Gasser. “It’s all OK”, Tony replied.

“Call them on their mobiles!” Ada demanded. There is little or no digital mobile coverage outside of larger towns across Australia. The



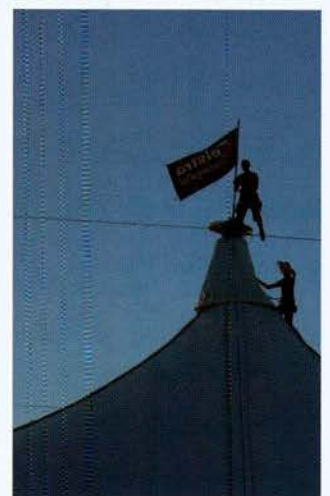
Bob Daniels, Grant 'Tosh' Walsh, and Chris Newman (top). One man security team, Ashley Buck reloads (below).

convoy was travelling blind.

The Gasser's were under siege, but kept insisting it would all come together.

The tour was in crisis, and the setup for the show that night was slipping further and further behind. Tony Gasser confirms the essence of the story. “They were yelling – Glen (Wheatley) was saying they would have to pull the show!”. The liquidated damages clause in the contract with Unique would have seen the company pay up to \$350,000 to the Farnham organisation for the lost show.

Somehow, the convoy arrived in dribs and drabs, and the show was set up. Fatigued Carnie crew had done a 16 hour drive with possibly inadequate breaks. West Australian



Lighting crew climb to admire sunset (above); backline crew at work (left).

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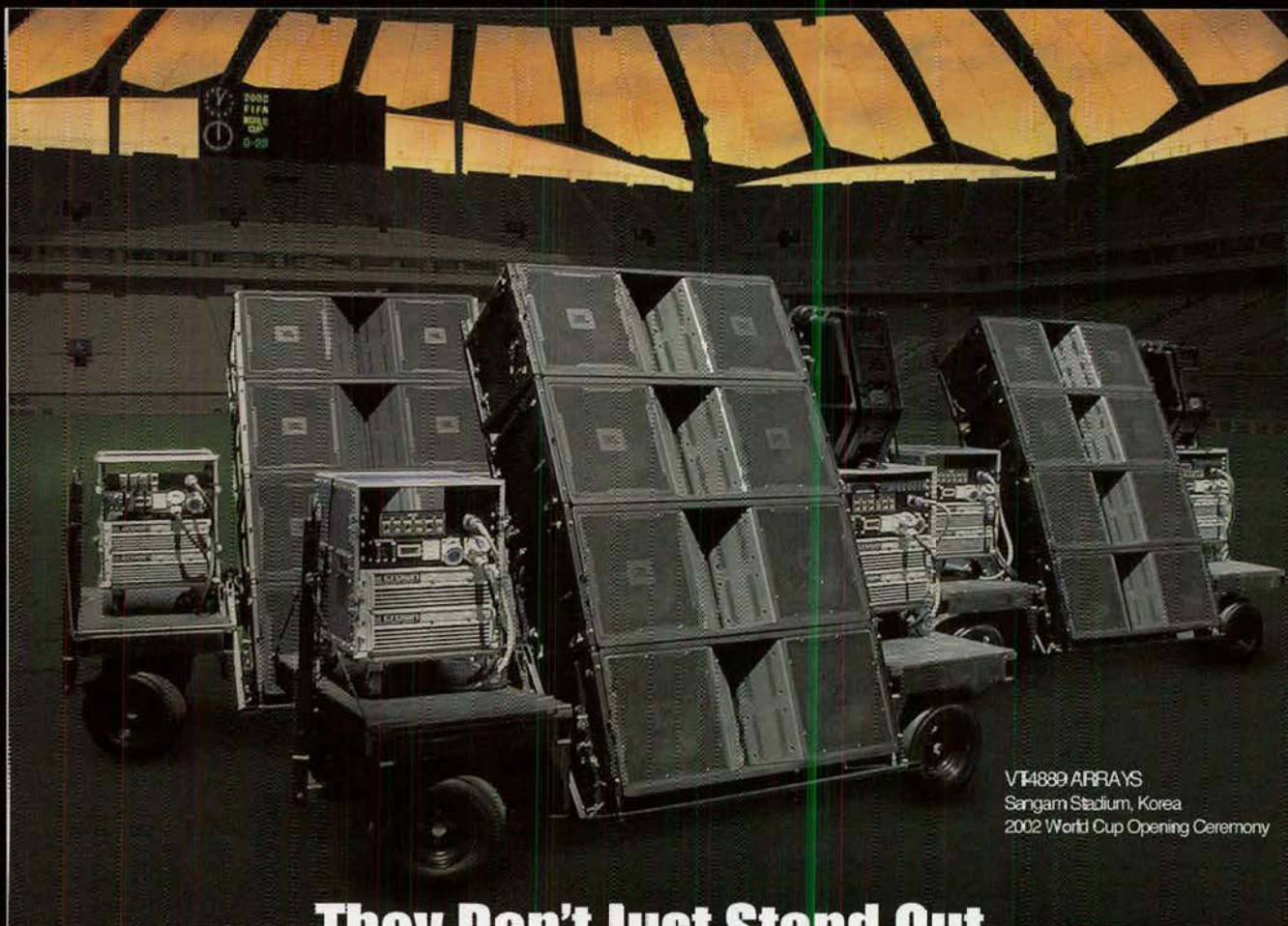
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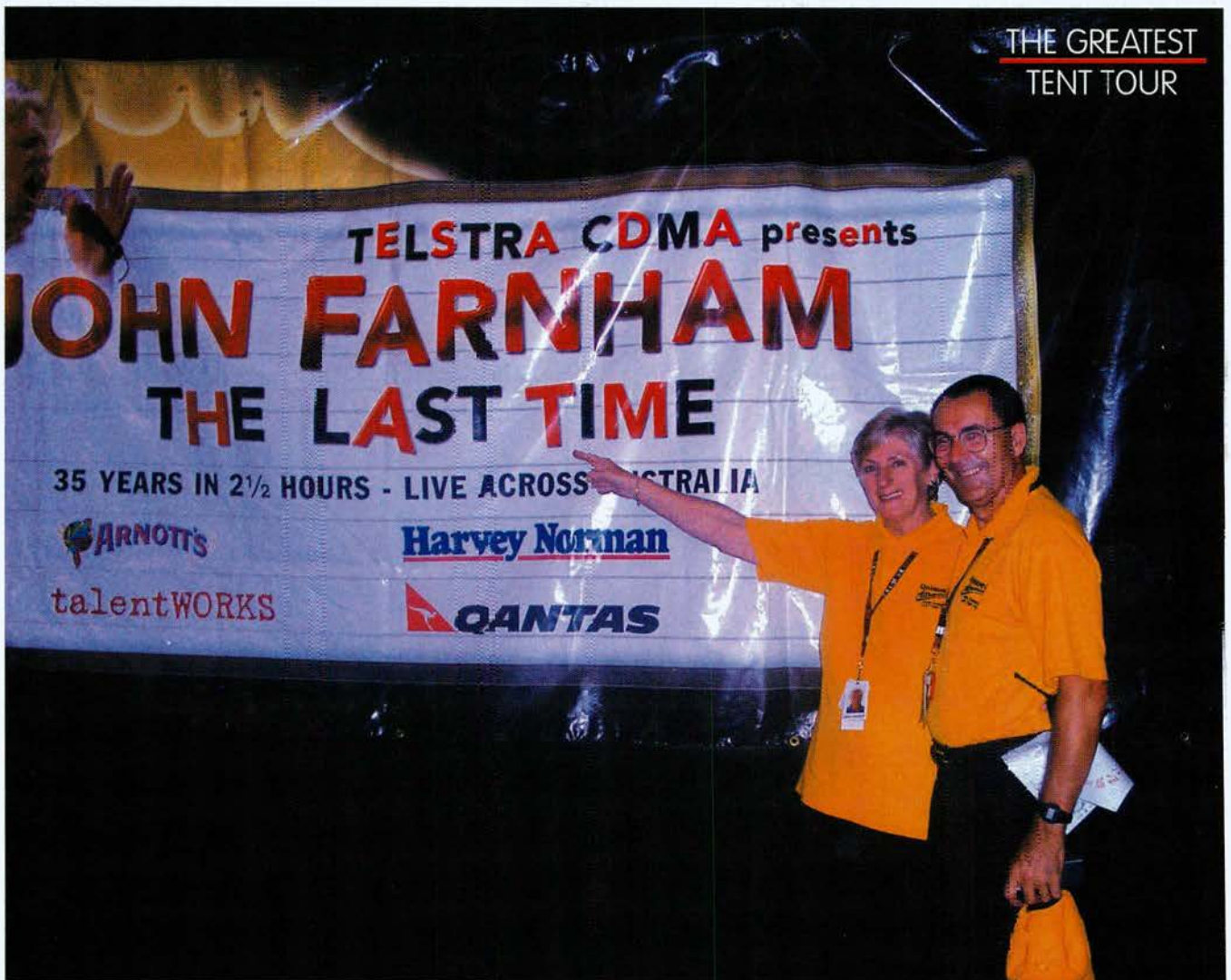
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NEW!

VT4881
Compact arrayable dual-coil 15" subwoofer.
Frequency range: 18 Hz - 160 Hz
787 mm x 559 mm x 686 mm (31" x 22" x 27")
55 kg (120 lb)



Work Cover got involved pretty quick when reports filtered in of Carnie crew quitting in exhaustion. The Farnham organisation were very, very concerned with the situation, as were Unique Attractions.

Things took a while to gel in Western Australia. The schedule saw the tour move down from Geraldton to Bunbury, 605km south – about a 12 hour drive. Once again, the Farnham organisation had scheduled the show in a responsible manner, allowing a travel day, then a setup day. “The west was tough”, says Ada.

Unique pulled through, the Carnies were chewing through crew, but thanks to the circus network and the occasional backpacker hostel, were able to replace those who fell away. But it was quite different to what the Farnham people are used to – in Entertainment, crews stay together and are valued for their technical skills. Many of the Carnies were nothing but raw, brute expendable labour.

Like with all touring tent shows, the tent crew are multi tasking. The ushers were tent crew. The concession catering stand workers were tent crew, or their spouses. The people who cleaned the toilet trucks, manned the entrances, and worked the box office all had other tasks at other times. And there were many, many vehicles to drive between shows.

I sat in the Unique Attractions office for an

hour talking to Maddie Jackson, who along with husband Laurie, managed the venue aspects of the tour. The Jackson's came on board just prior to the start of the tour, when Tony Gasser wisely sought experienced venue management for the shows.

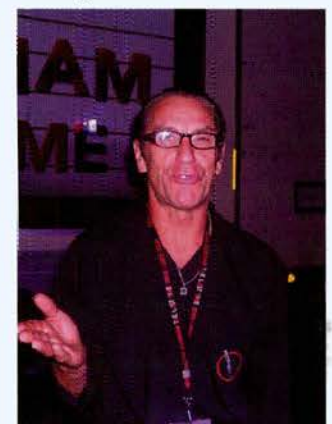
The Jacksons handled venue permits, safety, parking and general people logistics, and in many ways were the go-betweens with Unique and the Carnie crew on the one side, and the Farnham organisation (promoters, clients, attraction) on the other. This kind of tour was nothing like a circus, where the tent is built up and the attractions are strung between a couple of king poles in an hour or so. The Farnham crew needed valuable time to set and prepare a complex production. This is why things were tough on the Carnie crew.

The next leg was to Albany, a sedate 350km south-east, just a six hour drive. But there was no travel day this time, just one day to travel and prepare the tent before show day.

Salvation arrived in the form of a break for the tent crew, with the tour headed back up to Perth for a pair of Arena shows at Burswood. The production trucks met with more production for the larger show, while the tent crews rested then tackled the long, long drive east across the Nullarbor Plains to Whyalla, where a show was scheduled six days after Albany.

Maddie and Laurie Jackson managed the venue, and were the glue between two quite different touring cultures.

Australian touring scene veteran. Graham 'Scrooge' Madigan - site crew chief on the regional tour.



Whyalla featured enough rain to bog the all terrain forklifts the Carnies were using. The semi trailers were bogged down to their axles. A grader was required to drag the trucks out of the mud. What was planned for an 11am departure on the morning after the last show became 11pm.

From South Australia onwards, the drought would selectively break just over the top of the tent, at the most inconvenient moments. For example, Broken Hill was the first single date tent show on the tour, and the rain followed the conveyance too. The locals were in shock, and called JF 'The Rain God'!

Also in shock was Maddie Jackson who was driving a Landcruiser towing her and Laurie's new caravan when a road train flipped the van over. Maddie went to hospital in shock, while Laurie spent five hours organising a remote area salvage of the van. It was to be motel rooms instead of the caravan for the venue managers after this day.

Mildura, Griffith. Wagga Wagga. A bury, Bendigo, Ballarat. The tour rolled on through Autumn.

The production was inserted into an indoor venue in Hobart, which is never easy to do when you are travelling with a custom designed 'in-the-round' production. The Tasmania shows without the tent gave Unique Attractions some time to regroup and draw breath.

The tent run continued in Canberra. Wollongong, then over the mountains to Bathurst. The catering van didn't make it, ending up in thousands of pieces down Victoria Pass. Luckily no one was hurt. Then on to Dubbo, Tamworth, Port Macquarie, Coffs. Two or three shows in each town, one or two, sometimes more days in between. In Lismore the occasional bothersome rain became a civil engineering crisis, when rivers of water turned the first field at the Showgrounds into a lake. The show was relocated to the University Sports Oval.

"They were terrific at the Uni", says Laurie Jackson. "We had to get a grader and roadbase to

make access - it cost us about 14 grand for things like that there, and we chewed up the grounds. They didn't charge us for that!"

It bucketed down. The mud was terrible. The crew had to unload one semi at a time. The production crew were carrying 80 sheets of plywood, and heaps of Terraplaz modular walkway. Just when the Carnies should have been able to relate into the routine, rain ate up valuable time, slowing setup and pull-down.

PRODUCTION DAY

A production day started at 0730 with breakfast. First off the trucks was the ESS (ECS with Shirley Staging) truss system which was prepped and flown, with lighting crew boss Trent O'Connor doubling as chief rigger. ESS truss was needed to cover the long spans between the six king poles in the tent, where 15 tonnes of production is flown.

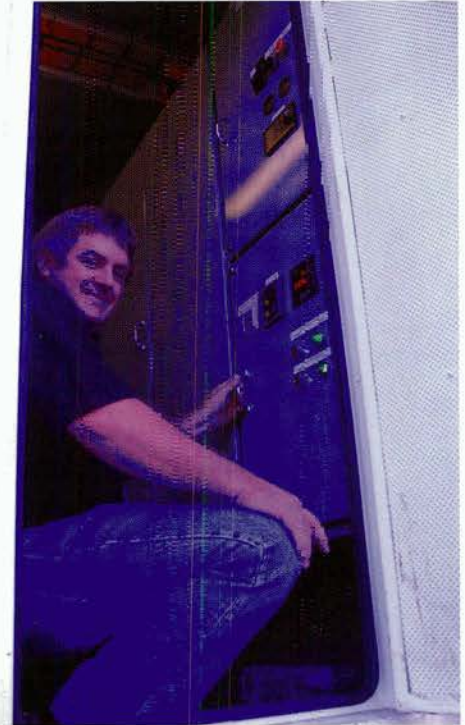
Next the Stageweld staging system comes off the trucks, and the chain motor cases are opened up. Most of the audio racks and cases are forked into position on the flat grass under the big top.

Once the trussing is up, the lighting truck is tipped, followed by the L-Acoustic's DVdosc line array speakers - which are flown after the lights are rigged. The stage backline equipment is at the front of the audio truck, being the equipment needed last in the setup.

There were four truss followspots used, and the operators became affectionately known as 'the young bladders', since they climbed up there at about 7pm and didn't come back down until after 11.20pm. The follow spot operators were drawn from a six man site crew which travelled with The Farnies. The most senior of the six is none other than the veteran known as Scrooge.

This site crew were the loaders and general hands supporting the Farnham production crew. They were Richard Nosworthy, Paul Freeman (son of another legend - Howard), Matt Kelly, Albie Joseph and Mark Ryding.

It was an efficient production. The crew were split into three groups - sound, lighting, and backline. The sound dept. was headed by long time



Peter Waldren of Generator Rentals, with his dual unit.



Production Office at left, with dressing room mobile home.

THE GREATEST TENT TOUR



Air conditioning packs are reverse cycle, and run off a site generator. They went on at 3pm daily.

Farnham engineer Grant 'Tosh' Walsh, with the equally long serving John Henderson heading up the monitor team. Bob Daniels from Jands assisted John Henderson, while Pat Richardson was the audio crew chief on behalf of Jands. Fat spent happy time in a hammock under the seating system, observing the amp racks during the show. Fellow Jands crew were Troy Gillett, kept busy with wireless in-ear and mic duty, and Jonathan Dunlop.

John Farnham's long time lighting designer Chris Newman had a crew of 4 headed by Trent, with Rob Oswald, Greg Jones and Peter Lothian doing lighting tech duties. Peter normally is second operator and deputy LD on John Farnham's arena shows.

The backline crew were Gary Rabbourn (Keyboards), Frank Iskra (Drums and stuff the audience give to The Star); and Barry Woods was the guitar tech.

Adc on the six site crew plus stage tech Wayne

Rafferty, and electrician Murray Feach - assisted by Peter Waldren who owns Generator Rentals.

Over in the production van, Ade handled production management and Michelle Dundon was the tour manager. Jane Charleston backed both of them up, and Liam Hayes was the accountant.

Other people on the Farnham payroll were Lee-Anne Meyer (wardrobe); Michael Dray (driver/box office) and Gail Codden - merchandise.

Security was a one man team, Ashley Buck toured with John Farnham, and picked up local security contractors in each town. He briefed them, and had security on by 2pm at the tent each day, after which passes were required for access. He would then drive the Holden Statesman back to the hotel and collect John Farnham for soundcheck, which happened every single show day.

The ESS truss goes up first, left. Rain slows things down, just when you don't need it (below).



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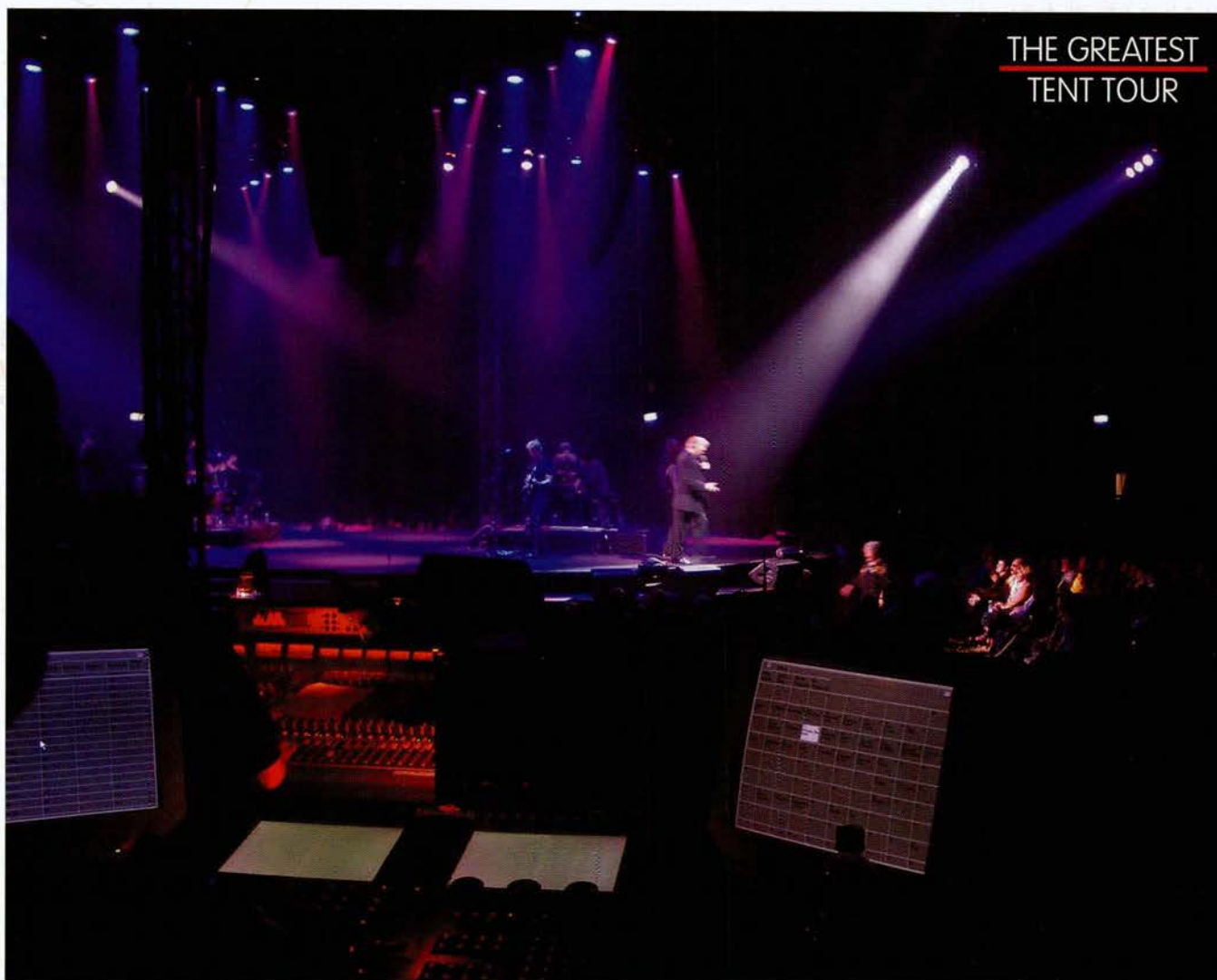
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Interestingly, touring in a tent removes much of the variables in touring a show, since the acoustic is only influenced by air temperature. The tent will shrink and expand, but in essence always sound much the same. Likewise the lights are always in exactly the same place, with the same focus. Not like moving around from venue to venue, adapting to different sized stages and rig trims!

Each setup day the production crew had lunch then finished off, returning to the hotel by about 2.30 for a shower and a change of shirt. Soundcheck ran 4 till 5.30, followed by dinner. If it was a loadout day, production was usually out within 3 hours, unless rain was slowing things down and making everyone miserable.

The rain bothered the tour over Lismore and Caloundra before letting up for the run North to Cairns. Toowoomba, Bundaberg, Rockhampton, Mackay, Townsville all saw two show nights.

The long road ends at Cairns, where there are no decent sized towns to the North.

The Last Time Tour arrived, delivered, and left every town scheduled, from January to June. It was the longest, most intensive, and largest regional tour of a music act ever staged in Australia.

Along the way no one was hurt, no shows were pulled at the last minute, and two quite different

touring cultures were melded into a slick touring machine.

100 people in over 50 vehicles brought very high musical and production values to towns where nothing like this had ever been before.

CX salutes John Farnham for having the strength of character and for taking a huge risk. He delivered the show as a tribute to his fans, and returned them a dividend in spades. Along the way, he probably didn't make a lot of money, and sure risked losing a pile. I doubt we'll see anything like this tour for a long time to come.

This is the final product! The view over Chris Newman's Hog II and the FOH Yamaha PM 4000 console.



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Yamaha PM1D digital mixing console

How would you fare if thrown in control of a new digital console? We gave Yamaha's flagship the 20 minute test....

Yamaha's PM1D digital mixing console is the top of their range, the concert console that aspires to also mix large theatrical productions, and broadcast. This is the pinnacle of the Yamaha company, who have made mixing consoles and been a market leader for many, many years. Yamaha in many ways lead the live digital console market, offering a growing lineup. The PM1D is streets ahead of the next digital console in their range. The DM2000. So expect a 'son of PM1D' soon.

How easy is PM1D for an untrained by semi-experienced operator? I found one – me – and went to Hillsong in Sydney's north-west, where three PM1D's live in a new auditorium, surrounded by state of the art audio. David Watson is the Production Manager there, and he was very generous with his time.

I told Dave I wanted the zero introduction experience, so he confined himself to starting up the large distributed EAW PA and Line Array through IQ and Media Matrix, and hitting the bootup button on the PM1D. Hillsong have possibly the most advanced large auditorium sound system in the region.

I stood looking at the gorgeous PM1D system work surface, official name CS1D Control Surface, taking in the panel. It is Yamaha styled, which portrays a heavy duty vibe, almost military or sci-fi in style. It took about four minutes to digest the layout.

There are 48 input channels represented on the surface, in four groups of twelve. There is just one other layer, so you switch between channels 1 – 48, and 49 – 96. The master section is in the middle, with the solitary screen. To the immediate left of the master zone is a master input channel, with

CX 20 Minute test



Digital means FAST, and COMPACT. Here you see a 96 channel console. To run this many inputs with traditional analogue, you'd need two consoles, each much larger than the PM1D. That's just the start to the benefits of a console like this!





Detail of a channel, above, with a wider view at right showing the Master Input Channel. At left of the Master Input Channel are the two vertical stacks of auxiliary (or 'Mix') outputs. There are 48 of these!

At right is the Dynamics (Compressor/limiter; and Noise gate) with the EQ section. Note the readouts for frequency centres. The idea of PM1D is you can mix without reference to the monitor screen.

EVERY input control represented, complete with labels, rotary encoders with illuminated positioning, and readouts for EQ frequencies and important dynamics functions.

To the right of the master strip is the output master channel, where whichever output you select can be worked on.

The really important, and exciting, aspect of PM1D is that you can use it without reference to the screen. It is a panel, the same way your analogue mixer is a panel.

Here's what I did:

First, I scanned the 48 input faders and found the pair that controlled the CD inputs. This is a common first step with a normal console – you want some input programme, so you put a Violent Femmes CD on. Because this was a House Of Worship, I settled for some God Rock instead. Sounded phatt, by the way!

Hitting the 'cue' button snapped that channel to the input section, where I could

straight away see EQ, auxiliary sends, and compressor and noise gate settings. Hitting any channel cue button will bring any channel to the master section. After a minute you get used to doing this.

Each channel, dare I call them that, boasts three rotary encoders, which control an auxiliary send (select one of 48 - yes, 48! - at the master section); an input gain control, and an input pan control. You can route the channel direct to the Stereo outputs – a nice thing for anyone in a hurry. There are LEDs for gate and compressor threshold, a DCA master group assignment switch, and a six point LED ramp for the channel. There is a short name label, four characters wide, a cue button for pre fade listen, and a select switch. Hillsong had programmed their PM1D's so the cue (pfl) button also acted as a select button, bringing the selected channel to the master input channel.

You can do all your work at the middle of the console, by using the twelve DCA masters for the twelve most important channels or groups, and on the master input channel,



features. Every feature is represented in exactly the same way it would be on a normal, analogue console.

Let's step down in master input channel strips. It is arranged as a vertical stack of controls, because there are so many functions. To give you an idea, imagine your console had an input strip with 51 rotary knobs, 39 info readouts, 103 illuminated switches, a motorised 100m fader and various LEDs. If it were arranged in the traditional vertical line, it would stretch about 3 metres tall!

There are two vertical stacks of 24 auxiliary sends, the other 24 are a button away. Each has a short label, so you know what is what.

Noise gate, compressor, and EQ sections are extremely well equipped.

Within my nominal 20 minutes, I have scoped the console, gotten used to where everything is, figured out the input strips, made assignments of some input channels to some DCA masters, assigned other channels direct to stereo, and talked through the desk using an SM 58 mic plugged into a local input at the local rack of input and output converters.

If asked to, I think I could make a mix using what was connected to the board, without knowing how to reassign inputs. I could manage the gain structure of a basic mix, add and subtract EQ, set and alter compression or gating. That's probably the limit for a new user, at 20 minutes.



I liked the feeling of endless possibilities that a digital console gave me.

There is a raft of other considerations when assessing a console like this one. Yamaha have Manager software which allows external operation in real time of the board from a PC connected to the work surface via RS 232. The software also allows configurations to be loaded via a memory card that may have been prepared on laptop prior. Most large digital consoles have a feature similar to this.

FM1D has a lot of buses – 48 auxiliary

Dave Watson takes control of Manager software by remote control with his Compaq Tablet. Tablet is on the wireless LAN at Hillsong. Dave browses to the FC hooked up to the PM1D, then can operate and monitor the console from anywhere in the venue!

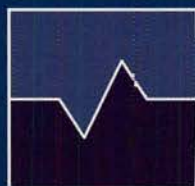
Stand on stage and adjust foldback.... sit in seat 3,029 and adjust the send to your zone. Override the engineer...! Awesome, right?

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All desks like this have some kind of remote software where you can sort out channel assignments - inputs and outputs can be strung together in thousands of ways. Data can be loaded into the desk via a card.

Selected output channel has extremely comprehensive control features (below).

outputs, and 24 matrix outputs, along with stereo A, and stereo B. Plus several Monitor and Cue outputs. It has a stage monitor software version which Hillsong also use. It re-enables the standard CS1D work surface in new and exciting ways.

An example that monitor engineers will recognise. Imagine you select the output of, say, send one. EVERY channel fader on the console snaps to that send! You could also use the desk in the traditional way, where each send is adjusted through an auxiliary. You are controlling your mix in new and immediate ways.

Yamaha have 8 SPX styled effects engines within the PM1D, plus 24 third octave equalisers ready for any of the outputs. Every one of the 48 auxiliary and 24 matrix outputs has a limiter, delay, and six band parametric EQ available. Wow!

Mixing with PM1D you could set each song as a snapshot memory, so that all 96 channels are reset, potentially in every way. Like with all digital consoles, this opens up wild new ways to tailor sound, since you can



make huge changes to EQ and auxiliary sends, and master channel assignments, that just happen when you want them.

This is a primer, all about my first 20 minutes alone with the desk without a manual.

There's so much more to learn.

Find info at www.yamaha.com





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Extensive software options!

It can be confusing checking out the software options out there. CX has taken a serious look at what the options in Lighting software currently are. We were surprised just how much was out there, and *just what you can do!*

Software for lighting comes in many different flavours. The key ones are...

- ◆ CAD (Computer Aided Design) packages for drawing lighting plans;
- ◆ 3D visualisers for “seeing” the plan before the first lamp is hung;
- ◆ Paperwork creators for dealing with the copious different types of lists we need to rig and maintain a show;
- ◆ Control software to actually run a show from a computer;
- ◆ Offline editors – which allow you to plot or replot a show via a PC (and possibly learn how to use a specific desk).

But there’s more! Read on.



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The hidden "Links" list!

The problem with searching for lighting software on the web is that many of the link libraries are woefully incomplete and contain broken links.

Serious Google surfing takes time - compiling this list took many hours of research.

To help you get to these places a little easier, we have put the links described in this story in a special location on our website for your convenience.

You won't find this page by browsing our site - but because you have taken the time to read this story, you can go to the following 'hidden' page to hyperlink directly to all of the web pages listed in this article.

Go to: www.juliusmedia.com/lx-software.htm

If you know of other links to add, please don't hesitate to drop us a line at mail@juliusmedia.com

Of course, there are also numerous other 'tools' available as well, for things light calculating lux, dimmer curves, beam angles, power consumption etc. The list we have compiled puts the software that we actually found (no unchecked links here!) into a list that follows the above "Categories". Many of the options have multiple abilities.

All of this is designed as a starting point for you to investigate what options suit your purpose.

While that list presented here is reasonably extensive, there are a couple of software packages that seem reasonably common amongst Australian lighting designers we have talked to. All have long since left behind the trusty lighting stencil for a CAD package of some description.

Packages like WYSIWYG, Vectorworks Spotlight and Stardraw are popular because they help designer create visual images to 'pitch' their ideas during tendering and pre-production design meetings. The work put into creating these 'visualisations' then becomes part of the 2D plan and paperwork that technicians will see in the venue when they are hanging the lights.

Like all software, the more you know about it, the faster it will be for you to use. More often than not, when a designer chooses a package to buy, they will stick with that package for a long time - perhaps even ignoring upgrades because the time it takes to re-train may be hard to justify. So, if you are choosing a lighting design package for the first time, you would be well advised to actually download some demos and try them out (most allow you to do this relatively easily).

Any external advice will always be biased to the software that that person uses, but it is always worth should talking to different people about what they use and why they like it. One good question is "How long did it take for you to really 'know' the software?"

Many of these packages have a traditional CAD style of interface, so learning how to use a generic CAD program like AutoCAD or TurboCAD could be a good idea. TurboCAD offer a 'light' option, free from the US site www.imsisoft.com. With this and some downloaded CAD symbols (like the ones from Modelbox - also free), you will be on your way - but you will have to manage your own paperwork!

Another thing to remember is that many CAD packages don't directly deal with the needs of the live performance lighting designer. Most do help the architectural

lighting designer, so you should be sure what they are talking about when they describe 'lighting' features. However AutoCAD has numerous dedicated third party 'add-on' patches for lighting designers, and Vectorworks created their own with "Spotlight"

Managing the paperwork is a useful tool that many of these packages try to address in various ways. Channel lists, lantern schedules, colour cut sheets are great to generate directly from the plan so that you don't 'lose' that all important bit of information, only to discover it at the bump-in - like a special colour used in one lantern for an important effect, or that you have run out of channels.

Computer as a Lighting Desk...

As far as using a computer as a lighting desk, this is still very rarely done, but if you are looking down this path then you would be well advised to take the key 'suggestion' from the pro-audio computer users - set up the computer to be 'dedicated' to the task.

In other words, do not load extraneous software.

If you use the computer for other purposes, then it is more likely that software glitches could occur during a show - particularly if you are downloading software off the internet, or using that computer to view email.

The reason why using a computer like this also requires specialised hardware comes back to the DMX protocol. The hardware found on a standard computer is not able to directly read the DMX data protocol, because it runs at an unusual speed (250,000 bits per second) and each packet of data has an unusual size (9bit).

The need for this specialised hardware had allowed the software developers to provide their software for free off the internet - but tie it to a specific (and usually expensive) hardware add-on.

Offline Editing of your show...

Many of the major lighting desk manufacturers provide a means to edit or create your show on the computer before to get to the venue. Some even design this software so you can learn how to use their desk while to edit your show.

The best example of this is WholeHog PC, which is based on the WholeHog 2 console. Avolites' Pearl Simulator is another one, as is the grandMA off-line editor.



Lighting Control - DMX Output

Software	OS	Description	Local Distribution	Prices (Aus\$ inc GST)
HORIZON by Entertainment Technology (build: 125)	Win	In combination with specialised hardware, Horizon includes control of dimmers, moving lights and other devices using TCP/IP Ethernet and DMX512/1990 data transmission protocols. A lighting desk on a PC (Source Website: www.etdimming.com) Demo: Web demo available	Rosco Aust Pty Ltd +61 2 9906 6262 www.rosco.com	Aus\$3,509 for the interface hardware
LightJockey 2 by Martin Professional (ver: 2)	Win	A controller designed for the club and mobile DJ market. This Windows based controller has multiple interface options for control of up to 100 fixture over 2048 DMX channels. (Source Website: www.martin.dk) Demo: Full version downloadable	Show Technology +61 2 9748 1122 www.showtech.com.au	Aus\$5499 (2048ch PCI) Aus\$2999 (512ch PCI/USB) Aus\$5499 (1024ch PCMCIA)
SAM by SAM (ver: 4.0d22)	Mac	SAMSC is automated and manual show control software for theaters, Rock and Roll, installations and multimedia (Source Website: www.rfbl.demon.co.uk) Demo: Web demo available		POA
ShowCAD Artist by ShowCad (ver: 1.1.42.157)	Win	This software can control up to 6000 DMX channels via USB DMX interfaces. Able to control numerous multi-media functions of the computer and various I/O control (including RS232, Timecode) (Source Website: www.showcad.com) Demo: Web demo available	Coemar DeSisti Pty Ltd +61 3 9467 8666 www.cdaust.com.au	Aus\$3,432 for 512 channels via USB
ShowCAD Artist Light by ShowCad	Win	The same as the full version, except limited to 150channels and no external interfaces control options. (Source Website: www.showcad.com) Demo: Web demo available	Coemar DeSisti Pty Ltd +61 3 9467 8666 www.cdaust.com.au	Very new! Price to be determined
ShowMagic by Show Magic (ver: 5)	Win	ShowMagic is lighting, sound and video control for 64, 128, 256, 512, 1024 or 2048 DMX channels. 3LX and AV versions include flexible auto-scheduler combined with event triggering and control output via RS232 or Midi. (Source Website: www.showmagic.net) Demo: Web demo available	Universal Lighting and Audio Pty Ltd (ULA) +61 7 5510 1333 www.ula.com.au	Aus\$1815 (64ch) though to Aus\$8167.50 (1024ch inc GST)

Lighting Control - Offline editing

Some of these options may be able to output DMX with optional hardware.

Software	OS	Description	Local Distribution	Prices (Aus\$ inc GST)
Avolites Pearl Simulator by Avolites (ver: 1.2)	Win	The Avolites Pearl Simulator allows off line editing and creation of shows, which can be saved to disk and loaded into a real console. The Simulator and the Visualiser together are designed to be used as an offline editor, a teaching/training tool, and a means to present lighting ideas to prospective clients (Source Website: www.avolites.com) Demo: Full version downloadable	Universal Lighting and Audio Pty Ltd (ULA) +61 7 5510 1333 www.ula.com.au	\$ Free
ETCedit by ETC (ver: 3.06)	Win	ETCedit supports ETC's original Expression line (Concept, Expression, Impression and Insight), MicroVision, MicroVisionFX, and Vision consoles. (Source Website: www.etconnect.com) Demo: Full version downloadable on the internet	Jands Electronics +61 2 9582 0909 www.jands.com.au	\$ Free
Event4 Off-Line Editor by Jands	Win	Offline editor for the Event 4 lighting console (Source Website: www.jands.com.au) Demo: Full version downloadable on the internet	Jands Electronics +61 2 9582 0909 www.jands.com.au	\$ Free
Expression/Express Off-Line by ETC (ver: 3.1)	Win	Expression Off-Line supports the Expression 2 & 3 lines, and Express consoles. This file also includes the Expression Personality Editor. (Source Website: www.etconnect.com) Demo: Full version downloadable on the internet	Jands Electronics +61 2 9582 0909 www.jands.com.au	\$ Free
GeniusPro Operating Software by Strand Lighting (ver: 2.6d)	Dos	When installing, the software will ask if you are setting up a console, backup or offline editor. It requires a PC running Windows 95 or 98, or later version Windows plus VirtualPC. (Source Website: www.strandlight.com) Demo: Download the "Operating System" .exe file for the Genius pro (you will need to know a little DOS)	Bytcraft Entertainment Pty Ltd +61 3 8710 2555 www.bytcraftentertainment.com	\$ Free
grandMA Offline Editor by MA Lighting	Win	Complete offline editing environment for the grandMA. Also an excellent teaching tool for learning how to use the desk (Source Website: www.malighting.de) Demo: Full version downloadable on the internet	Show Technology +61 2 9748 1122 www.showtech.com.au	\$ Free
Obsession Off-Line by ETC (ver: 5.0.5)	Win	ETC Obsession Off-Line is a software program that allows lighting designers and technicians prepare and edit shows for Obsession II line lighting consoles. (Source Website: www.etconnect.com) Demo: Full version on the internet	Jands Electronics +61 2 9582 0909 www.jands.com.au	\$ Free
TrackMaster 2 by John McKernon S/ware (ver: 2)	Win	Old DOS based offline editor for cue data. It can share show files directly with several lighting consoles, and has interesting reporting options. (Source Website: www.mckernon.com) Demo: Web demo available - usage limited		US\$250
WholehogPC by High End Systems (ver: 3.2)	Win	Offline editor for the Wholehog II, Hog 500 and Hog 1000. Add DMX Widgets for up to 4 universes of DMX, and/or USB programming and playback wings. Can also interface with WYSIWYG, Martin Show Designer and Capture Sweden's Capture 3 on the same computer - no DMX output or input hardware is needed. (Source Website: www.flyingpig.com) Demo: Fully working version on the web	Universal Lighting and Audio Pty Ltd (ULA) +61 7 5510 1333 www.ula.com.au	\$ Free (Aus\$3850 for DMX USB widget and Aus\$6380ea for Playback and Programming wings)

Lighting Control - Visualiser

Software	OS	Description	Local Distribution	Prices (Aus\$ inc GST)
Avolites Stage Visualiser by Avolites (ver: 6.08)	Win	This simulation programme uses software and hardware to allow LX designers & programmers to pre-programme the lighting rig without having access to the instruments, the rig or the venue. (Source Website: www.avolites.com) Demo: Full version downloadable - only loads 'demo' files without dongle	Universal Lighting and Audio Pty Ltd (ULA) +61 7 5510 1333 www.ula.com.au	UK£100 for the dongle
Capture 3.0 by Capture Sweden (ver: 3.0.10)	Win	This software is devoted to the concept of being a "Visualiser", but it is also a fully functional lighting design tool. (Source Website: www.capturesweden.com) Demo: Full version downloadable - cannot save until unlocked		US\$999 via the web
grandMA 3D by MA Lighting (ver: 2.2)	Win	When connected to a grandMA console (or the offline editor) this software allows the user to view 3D rendered visualisations of the desk output. (Source Website: www.malighting.de) Demo: Full version downloadable on the internet	Show Technology +61 2 9748 1122 www.showtech.com.au	\$ Free

We asked a couple of lighting designers about the software they use and why. 4 out of 7 use the Apple Mac - like we do at CX.

Graham Walne

Autodesk on a PC. Has the ability to draw any shape or symbol I wish plus calculation features- this is a standard CAD package and not especially a lighting package per se - many of which I consider overcomplicated and expensive as a result.

Trudy Dalgleish

I am a Mac user and I use MacLux Pro and Vectorworks and Cad 5 depending on my mood and how involved the design is. The reason I use so many is that I do a lot of transfers of American designers and they all use Vector or Cad.

Alex Saad

WYSIWYG on a PC is the best - because it does everything. Great of import and export of AutoCAD files, excellent real time rendering - and the rendering is very accurate. Plus, the symbol library has everything I need.

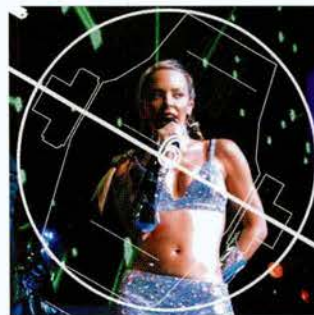
Nigel Levings

MacLux pro. Mr Levings tells us that it is "quick and easy" and has "fully integrated paperwork, beam and lux calculations." He also uses Vectorworks, "for pretty drawings."

Gavan Swift

I use Vectorworks Spotlight V10 to draft my lighting designs, and Lightwright for my paperwork. I do all this on my Macintosh. I use Vectorworks Spotlight as it is a full featured CAD program with a great Theatrical Lighting component integrated directly into the program - not supplied by a third party vendor.

It also has direct links to Lightwright, including a [Lightwright] button in the export info command. Another additional bonus is that companies like Chameleon, Staging Rentals, and Bytcraft all have Vectorworks so swapping files is a breeze. I use Lightwright for paperwork as it is the easiest and most efficient program for creating and maintaining lighting paperwork.



Stephen Wickham

I use "PowerCADD" on a Mac and have been using it for 10 years. This is not a lighting specific program but it does all I need. It has a short learning curve, uses very little memory and is designed to be used as if you were drafting on a drafting board with a pencil as we used to do.

Paul Collison

I use Martin Show Designer to design because it is a fantastic 3D visualiser/design tool - including real-time stuff via DMX. Unfortunately it lacks the ability to plot plans of larger shows that are readable, so I use Stardraw 2D for this part of the job. When Martin eventually fix this problem with Show Designer, I think this will be one of the best design packages around.

• Article and research by John Grimshaw



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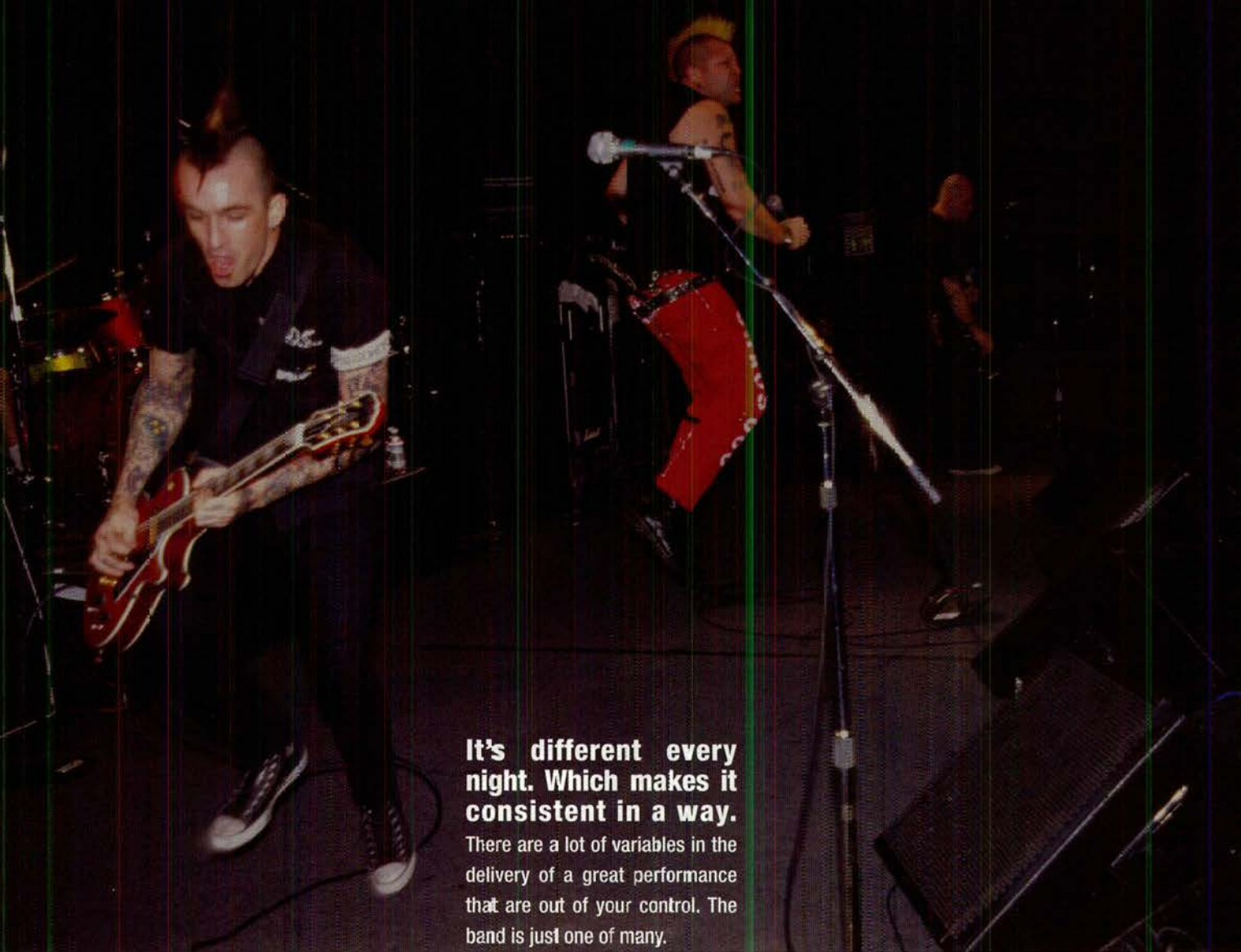
Lighting Design

Software	OS	Description	Local Distribution	Prices (Aus\$ inc GST)
Auto Block by MSZ Design (ver: 12.0)	Win	This is an add-on for AutoCad that provided all that a lighting designer needs to create projects. Also adds the ability to generate paperwork via the additional software "AutoBlock SE" (Source Website: www.mszdesign.net)		US\$450 after you buy AutoCad
CompuCAD by Compulite (ver: 2)	Win	Complete design & implementation package intended to help facilitate much of the lighting design, paperwork and plotting processes. (Source Website: www.compulite.com) Demo: No demo on the web	Coemar DeSisti Pty Ltd +61 3 9467 8666 www.cdaust.com.au	Aus\$1,896
FATcad by Articulate Solutions (ver: 1.15)	Win	A user friendly 2D/3D package that runs in AutoCAD 2000 using the .dwg format. With no specialist knowledge of CAD necessary, drawings can be easily created with comprehensive library of fully interchangeable 2D and 3D symbols. (Source Website: www.fatcad.com) Demo: Web demo available		UK£490
LD Assistant Ac by Design and Drafting (ver: 1,2 & 2.5)	Win	This program can be supplied as a stand alone CAD program, or as a plug-in for AutoCad. There are three levels of program - vC1, v02 and v02.5. Each enable more features on the software. (Source Website: www.design-drafting.com) Demo Web demo available		US\$995 (stand alone v01 see web for all prices)
LxDesigner Lite/Standard by LxDesigns (ver: 1.08.04)	Win	2D lighting design software. Included are a number of symbol libraries for set, rigging and fixtures. Built-in reports can generate paperwork such as gel, rigging and equipment calls. (Source Website: www.lxdesigns.co.uk) Demo: Full version downloadable - runs as demo until unlocked		UK£246 (£99 for the lite version)
MacLux Pro by MacLux (ver: 2)	Mac	MacLux Pro allows you to create light plots by drawing light symbols and hanging positions on top of imported graphics. Information is attached to the drawing as you work, which means paperwork can be extracted without additional effort. Lights can be "turned on," which not only shows their beams but actually allows the creation of cues. (Source Website: www.macluxpro.com) Demo: Web demo available		US\$350
Microlux 2000 by LuxArt (ver: 5.38)	Win	Use Microlux 2000 to produce plans and schedules. It includes a comprehensive library of spots, trusses, gels, and gobos. With fully rendered 3D views and beam representations, it even calculates illumination for you. (Source Website: www.luxart.com) Demo: Full version downloadable - runs for 15 days		US\$699
ShowDesigner by Martin Professional (ver: 4.4.3.4)	Win	Martin ShowDesigner (MSD) is a design software tool which allows LD's to develop lighting designs in vivid 3-D computer graphics for advanced lighting simulation. (Source Website: www.martin.dk) Demo: Web demo available	Show Technology +61 2 9748 1122 www.showtech.com.au	Aus\$4,999 Software only
Softplot by Crescit Software Inc. (ver: 8)	Win	SoftPlot provides the necessary software tools for lighting designers, technicians, directors, gaffers, cinematographers and electricians for the creation and maintenance of lighting design plots, paperwork reports, grip plots and rental orders. (Source Website: www.crescit.com) Demo: Web demo available	Rosco Aust Pty Ltd +61 2 9906 6262 www.rosco.com	Approx Aus\$500
SoftStage Design by Soft++ Ltd (ver: 1.0)	Win	SoftStage Design is a tool for designing a venue or scene layout, and designing the lighting to go with it. It offers high quality simulation with fully rendered beams as well as accurate portrayal of shadows cast by objects in the scene. (Source Website: www.softplusplus.com) Demo: Web demo available		UK£295
Stardraw Lighting 2D by Stardraw	Win	Stardraw Lighting 2D replaces Stardraw 2D Version 3. It takes all of its predecessor's speed, simplicity and reliability and adds powerful new features, a huge symbols library and regular updates. (Source Website: www.stardraw.com) Demo: Web demo available	Coemar DeSisti Pty Ltd +61 3 9467 8666 www.cdaust.com.au	Aus\$2,098 inc GST
Stardraw Professional by Stardraw	Win	Stardraw Professional is a fully featured 2D and 3D CAD application that includes full rendering and texturing abilities. Interfaces with a free viewer for printing Stardraw documents. (Source Website: www.stardraw.com) Demo: Web demo available	Coemar DeSisti Pty Ltd +61 3 9467 8666 www.cdaust.com.au	Aus\$2,448 inc GST
Stardraw.net by Stardraw	Win	Stardraw's new online CAD software, which allows designers to design via the Stardraw website. (Source Website: www.stardraw.com) Demo: Web demo available	Coemar DeSisti Pty Ltd +61 3 9467 8666 www.cdaust.com.au	POA
VectorWorks Spotlight by VectorWorks (ver: 10.1)	Win & Mac	VectorWorks SPOTLIGHT merges 2D drafting and powerful 3D modeling with advanced lighting design and production tools. Now it is easy to create light plots, place set and scenic elements on stage, automate reports and schedules and visualize design concepts in 3D (Source Website: www.nemetschek.com) Demo: Demo available on request via CD	Ozcad Pty Ltd +61 2 8338 8622 www.ozcad.com.au	Aus\$2,849 inc GST (there is also a cheaper "BASIC" version of this software)
WYSIWYG Report by Cast Software (v: 5)	Win	This is the basic WYSIWYG package. It allows Lighting professionals to create 2D plans of their productions along with all of the necessary paperwork. (Source Website: www.castlighting.com) Demo: Web demo available	Jands Electronics +61 2 9582 0909 www.jands.com.au	Aus\$1,495
WYSIWYG Design by Cast Software (v: 5)	Win	All of the features of "Report" version, plus allows Lighting professionals to explore their designs in a 3D environment. (Source Website: www.castlighting.com) Demo: Web demo available	Jands Electronics +61 2 9582 0909 www.jands.com.au	Aus \$3,695
WYSIWYG Perform by Cast Software (v: 5)	Win	All of the features of "Design" version, plus it allows a DMX console or a compatible off line editor to be connected to the computer and WYSIWYG Perform will simulate on screen the effect of the console's/editor's output in real-time. (Source Website: www.castlighting.com) Demo: No demo on the web	Jands Electronics +61 2 9582 0909 www.jands.com.au	Aus\$6,795 (Perf.500) Aus\$9,495 (Perf.1000) Aus\$12,995 (Perf.2000)
WYSIWYG Learn by Cast Software (v: 5)	Win	The special WYSIWYG package is available only to educational institutions. WYSIWYG Learn incorporates a multiple seat license allowing 10 users to run WYSIWYG Report or Design, and any one user can also use the WYSIWYG Perform 500 simulation software. (Source Website: www.castlighting.com)	Jands Electronics +61 2 9582 0909 www.jands.com.au	POA



Other Tools

Software	OS	Description	Local Distribution	Prices (Aus\$ inc GST)
LD Calculator by Paul Pelletier S/ware (ver: 1.0.2)	Win	The LD Calculator provides an array of tools to calculate an automated various daily task such as DMX addresses, current load, photometric and more. (Source Website: www.jam-ind.com/LightGroup/Software/freeware.htm) Demo: Full version downloadable on the internet		\$ Free
LD Import by The Kilowatt Company	Dos	LdImport provides the LightDoc user with an interface to AutoCAD, the industry standard CAD program, eliminating the majority of data entry for LightDoc by extracting the data directly from your AutoCAD lighting plan. (Source Website: www.kilowatt.com.au) Demo: Web demo available	Kilowatt Pty Ltd +61 3 6229 1662 www.kilowatt.com.au	Aus\$38.50
Light Jockey plug-ins by Light Inspiration	Win	A swag of plug-ins to control the Martin LightJockey software (Source Website: www.lightinspiration.com/programs/) Demo: Full version downloadable on the internet		\$ Free
Light Shop by Crescit Software	Win	Light Shop provides photometric information needed for more than 1500 instruments world-wide. (Source Website: www.crescit.com) Demo: Web demo		US\$79
LightCalc by The Kilowatt Company	Dos	LightCalc is a tool kit to make many of the routine calculations involved with Lighting Design, including Beamspread, Throw distance, Intensity and Angle of Illumination; Projected Image Size and Lens Requirements; Colour filter cross-matching; and Finding a luminaire to meet specific performance requirements. (Source Website: www.kilowatt.com.au) Demo: Web demo available	Kilowatt Pty Ltd +61 3 6229 1662 www.kilowatt.com.au	Aus\$71.50
LightDoc by The Kilowatt Company	Dos	LightDoc provides a fast and flexible system for producing and updating the documentation for a lighting design. LightDoc is designed to reduce the time required to produce lighting documentation without the need to become a touch typist. (Source Website: www.kilowatt.com.au) Demo: Web demo available	Kilowatt Pty Ltd +61 3 6229 1662 www.kilowatt.com.au	Aus\$110
Lighting Symbols by Modelbox Design Office	Win	A significant library of Lighting symbols for use in CAD packages. Now includes numerous 'old' models as well (Source Website: www.modelbox.co.uk/symbols.html) Demo: Full version downloadable on the internet		\$ Free
Lightwright by John McKernon Software	Win	Lightwright is a unique cross between a spreadsheet and a database, designed specifically to manage professional lighting design paperwork (Source Website: www.mckernon.com) Demo: Web demo available - usage limited	Bytecraft Ent. Pty Ltd +61 3 8710 2555 www.bytecraftentertainment.com	Aus\$877.80 (for person), \$1595 (for company), \$381.7 (student) all inc GST
LJ DMX IN Emulator by Paul Pelletier Software (ver: 4.03)	Win	The LJ DMX IN Emulator (with the Martin Lightjockey) simulates an external DMX desk being connected to the Lightjockey. It proved to be very useful when you have to configure a set-up without having the physical desk near you. (Source Website: www.jam-ind.com/LightGroup/Software/freeware.htm) Demo: Full version downloadable on the internet		\$ Free
LJ Scheduler by Paul Pelletier Software (ver: 2.91)	Win	The LJ Scheduler (with the Martin Lightjockey) gives the possibility to automated a fixed installation to run different events at specific time in the day. A calendar also provide a very flexible way to organize events over a year. (Source Website: www.jam-ind.com/LightGroup/Software/freeware.htm) Demo: Full version downloadable on the internet		\$ Free
LJ Touch by Paul Pelletier Software (ver: 1.26)	Win	The LJ Touch (with the Martin Lightjockey) is to customize up to 144 buttons per pages and virtually unlimited number of pages. Each button can call as many different action into the Lightjockey. Although the LJ Touch is perfect with a touch screen monitor, it can be use with a mouse as well. (Source Website: www.jam-ind.com/LightGroup/Software/freeware.htm) Demo: Full version downloadable on the internet		\$ Free
Pocket Lighting Beam Calc by West Side	Pal m	Find beam sizes and illumination for common lighting fixtures. (Source Website: www.westsidesystems.com/pocket/pocket.html) Demo: Web demo available		US\$20
Pocket Lighting Color Names by West Side	Pal m	Gel color name and number cross-reference. Roscolux, Lee, GAM and Cinegel libraries included - over 600 colors. (Source Website: www.westsidesystems.com/pocket/pocket.html) Demo: Web demo available		US\$5
Pocket Lighting Cue Tools bundle by West Side Systems	Pal m	Capture multiple exact timings during stage action to aid in constructing complex cues AND Draw your desired profile with the stylus, tap "Nums", and read the % levels (Source Website: www.westsidesystems.com/pocket/pocket.html) Demo: Web demo available		US\$10
Pocket Lighting DMXCalc by West Side	Pal m	Quickly calculate multi-universe DMX addresses. (Source Website: www.westsidesystems.com/pocket/pocket.html) Demo: Web demo available		US\$5.12
ProjectionMagic by Mark Mongold (ver: 1.2)	Mac	ProjectionMagic calculates specifications for theatrical projection set ups. It includes popup menus with lens specs for Ektagraphic and Pani projectors. The application is extremely fast and works in both Metric and Imperial. (Source Website: www.mongold.org) Demo: Fully working shareware version on the web		US\$20 to gaze newest version
Theatrical Lighting Designer Interactive by Crescit Software	Win & Mac	Interactive learning tool for the development of knowledge and skill in lighting & design for the stage. Using audio, graphics, video, animation, text and a powerful and intuitive interface, a student discovers and implements the practical skills of lighting for the stage. (Source Website: www.crescit.com) Demo: No demo, but there is a good features list at the Crescit site.	Rosco Aust Pty Ltd +61 2 9906 6262 www.rosco.com	Aus\$132 inc GST
Virtual Light Lab by West Side Systems	Win & Mac	Virtual Light Lab software allows lighting designers, teachers, or students to & experiment with light, shadow, and color effects in a simulated lighting studio. (Source Website: www.westsidesystems.com) Demo: Web demo available		US\$169



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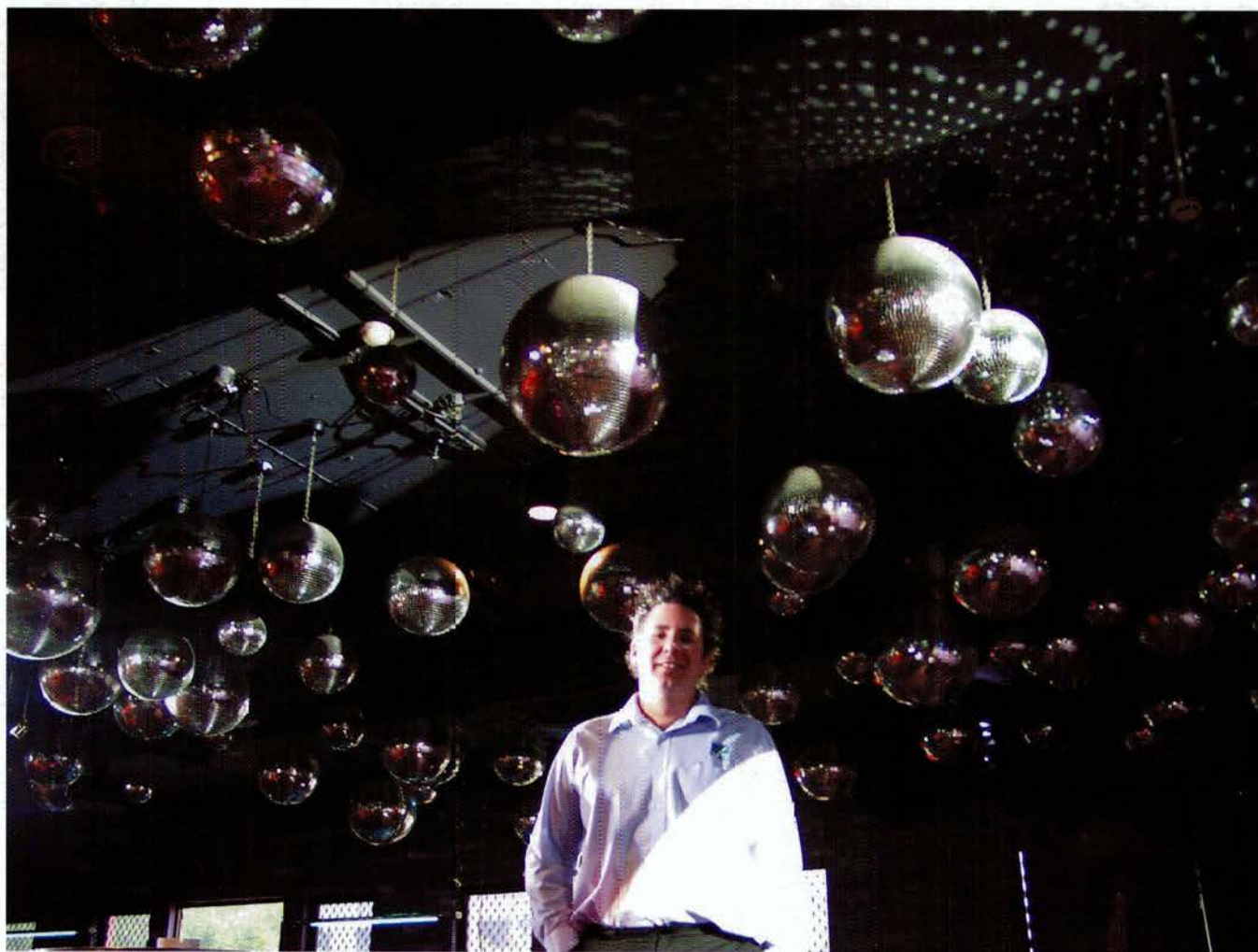
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Club Maintenance - the battlefield

We took to the road with a switched on young technician, to see How Things Go Wrong!

Brain Lawrence is the service dispatcher at TCP in Sydney. He sends paramedics to tend to injured nightclubs. Ant Field is a specialist technician who has seen a lot of damage. Between them they know one common enemy. The DJ.

Clubs with sound, lighting and vision systems are weird places in daylight. There's that malingering odour, those sticky floors, and the nicotine glaze – especially the nicotine glaze. Ant is immunised, and he rolls up in one of the 15 or so white vans with green TCP scheme on them. He enters the accident scene, towing his trolley loaded with hand tools and emergency spare parts. He surveys the carnage, nostrils flaring as club bluff stirs.

After a solid weekend of retro action, The Bristol Arms Hotel in the Sydney CBD is empty except for some desperate drinkers this Tuesday lunchtime. Level one features the first of the horrors, a ceiling that is almost covered in mirror balls. There are literally too many to count. When they need

a clean, it takes two men several days to do it. The attractive young blonde duty manager appears, and says what Ant does Not Want To Hear. "There are a couple of mirror balls not working."

Ant is here as part of his weekly rounds, a notionally regular sweep of the Sydney basin that goes as far north as Newcastle and as far south as Wollongong. TCP are Total Concept Projects, a firm whose reach in the audio visual installation market is pretty strong. They have about a dozen sizeable club installations, which are serviced under contract, and a small army of corporate audiovisual installation service crew who go into boardrooms and places people do not get obscenely drunk and attack the equipment.

TCP is culturally very aware of what can break, and how it can break. They have a 24/7 emergency callout service, and even at \$295 for the first hour (night and weekend rate, the day rate is \$195), they find people tend to phone first and think second. Usually



Ant Field and Brian Lawrence

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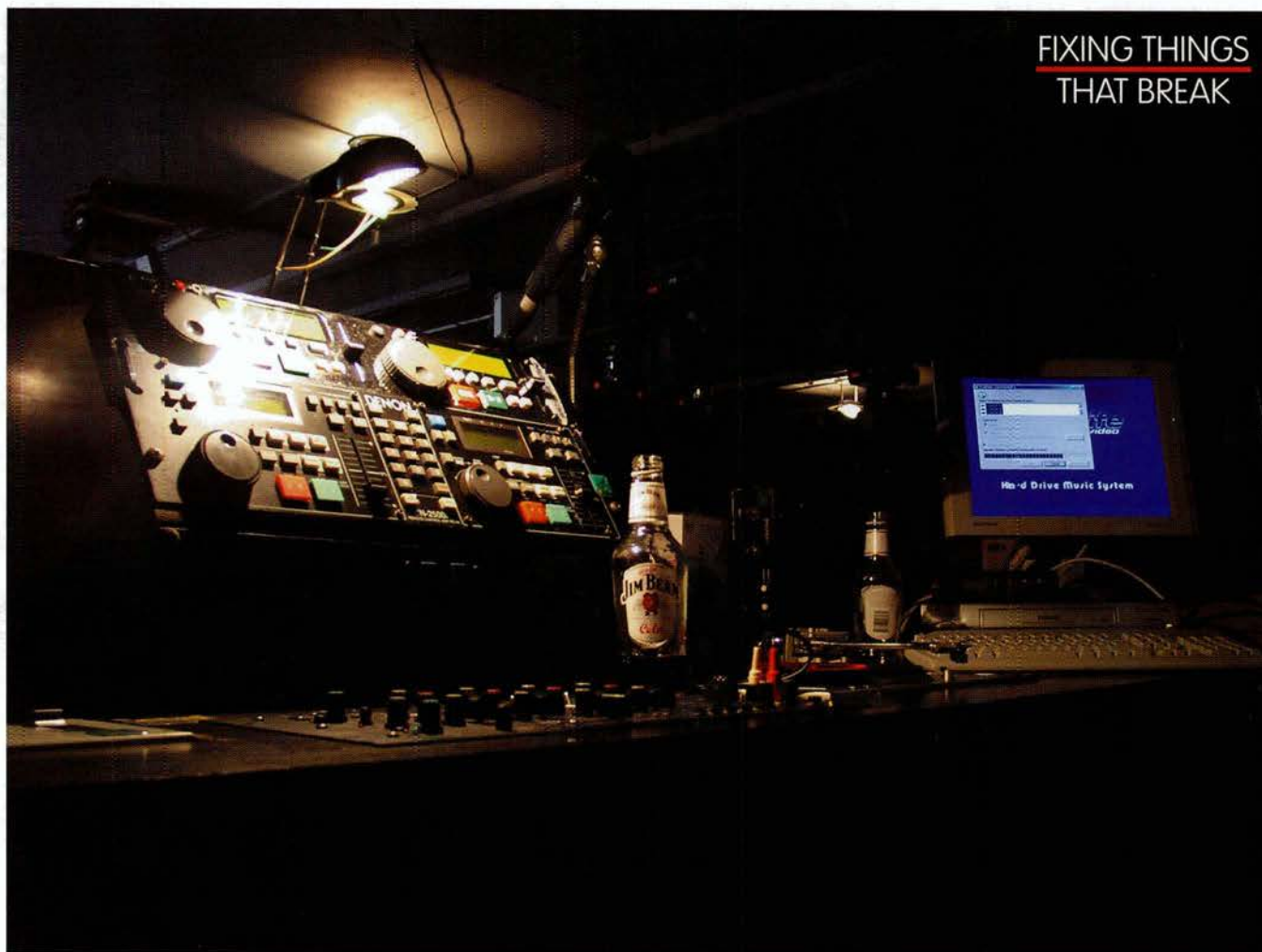
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The work area. Nightlife Music Video system is cued off the top Denon deck. Do you prefer pre-mixed Jim Bean?

it's the fault of a DJ

Ant is a DJ too, so he is allowed to be critical of his brethren.

Up in the Bristol Arms that afternoon we find an example of DJ malady. An SL1200 turntable is connected not to the photo input, but to the line input of the Rane DJ mixer. Ant explains DJs tend to bring in all manner of mediums, like laptops, loaded with MP3 files for replay – and try to plug them in wherever they can.

An interesting story involves a crushed turntable, where a not small DJ person of Pacific decent just decided to sit upon it. Or the console with a cover that was clearly labelled 'Front / Back' being put on backwards, crushing two tone arms – every week! What about the mysterious aging head shell and needle that was new on Monday, and two years old the next Monday? Someone is swapping old for new – who could that be?

A typical service call can uncover any possibility. The idea is to prevent things stopping, as well as to fix things that do. So Ant goes on a preliminary tour of the three level nightclub. Each system is booted up, all lights checked, and a CD or vinyl record is played at reasonably high levels. Ant walks the dance floor, listening to each speaker.

DJ mixers get a hiding, so TCP tend to specify Rane brand which are reasonably

heavy duty. One thing that needs field replacement is the pitch fader membrane on Denon CD decks, essentially a bit of plastic behind the fader. When it goes, the pitch tends to jump, says Ant. Another item to check is that the CD spins up quick enough, because the lasers can degrade over time. "There is a pot on the board - we can turn them up a little before they need to be replaced," says Ant.

On the middle level of the Bristol Arms is the Retro Room where the lights are just that. There is neon on the ceiling, and no dmx. Things are run The Old Way, with contact switches in a remote box, all fired from a vintage analogue controller. Things like helicopters and space beacons are used there.

The amp rack in each room gets a clean out, Ant uses an electric blower to blast muck out of the fan vents. We had a maintenance story a couple of issues ago where the firm concerned said not to use air to clean out fans, due to energising the fan motor. Different firm, different policy. You choose!

There are some lamps to be replaced here, the old 4515 sealed beam type in the Par 36 'hotspots'. Plus a space beacon has stopped, so the transformer appears suspect. That'll be a ladder job and a straight changeover.

TCP have a pretty impressive stock of

Most used tool (below)



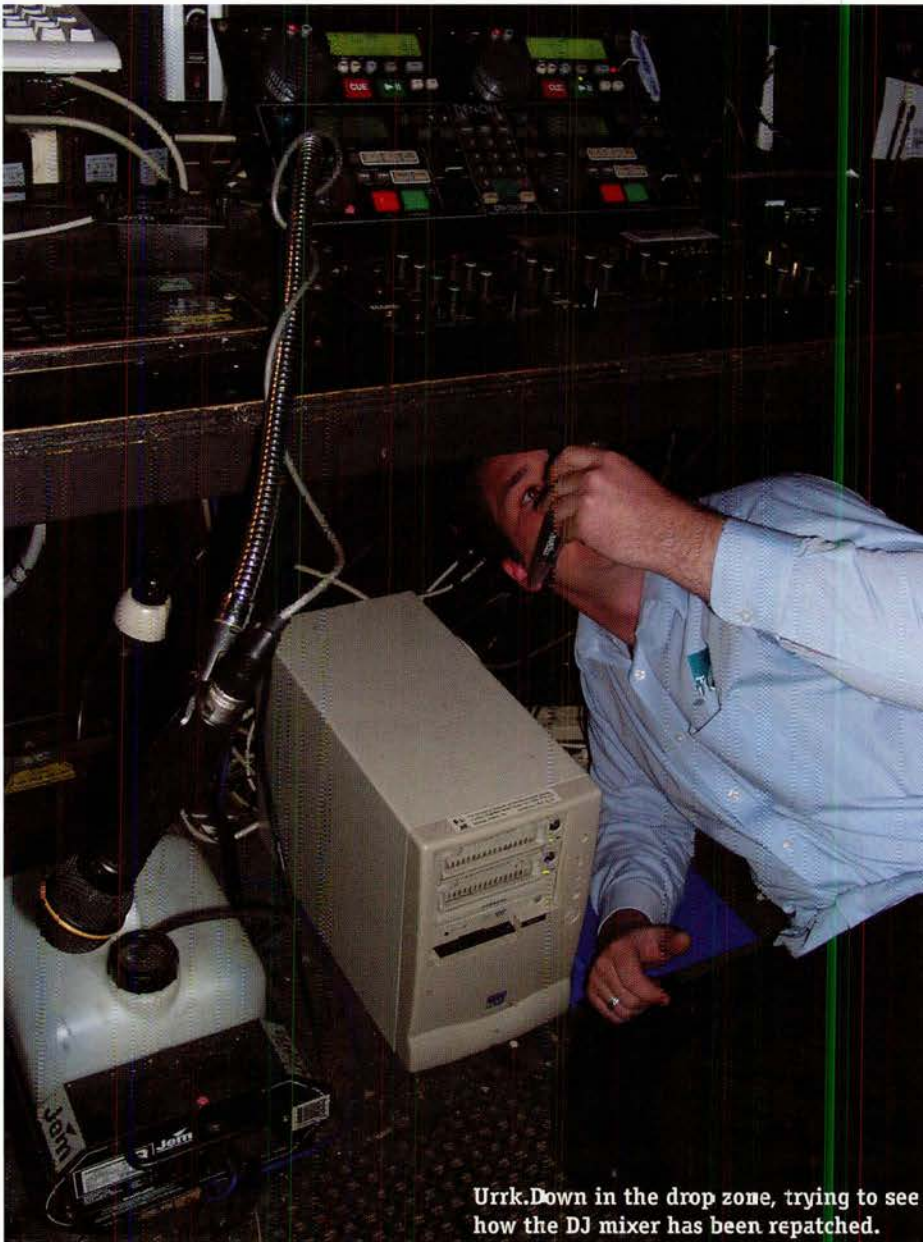
We Love DJ's!

Some tech's at TCP are quite amusing in their assessment of the DJ species, who appear to sometimes earn several hundred dollars an hour, "and are paid to get pissed and party", according to Andrew Brajbisz, another TCP specialist technician (*pic. below*).

Andrew recalls a magic phone call from a DJ. They have a monitor system in a club DJ booth, which is not loud enough, according to this DJ. He is up in arms about the inherent delay caused because, according to the DJ, the club system is a metre from the monitor system. So, having done his math, he (correctly) deduced there is a time delay offset between the monitors and the house system. It is 2 milliseconds, and damn it - he can hear it! Perception tests have most listeners just relating to a 30 millisecond delay, and expert listeners getting down to 20. "Get off the pills", laughs Andrew.

"Really, there's little technical knowledge about sound out there. These guys are driving a sound system worth more than a car - but there's no proficiency test. Look after the gear!"

(more->)



Urrk. Down in the drop zone, trying to see how the DJ mixer has been repatched.

equipment that is used for changeover across their installations. Brian Lawrence keeps tabs on it all with a bar code tracking system on his laptop. Ant has an 8 way helicopter in the van, ready to swap for the failed one.

Ant checks behind the subwoofers on the dancefloor, which are sitting there. With a venue jammed full of punters, these boxes sometimes get moved around, and the Speakon connector on the wall plate can get smashed. We find one - another repair needed.

Turn table adjustment is a common fixup. The headshell is out of alignment on the one we inspect. It should be screwed at a right angle to a line off the centre of the record when the arm is half way across the record. Another fixup.

Tone arm balance is a common problem. "Too many times you see a DJ with a 10c piece on the top of the styli. All that's doing is liquefying the vinyl, and dust sets into the groove".

The right setting is the tone arm should be parallel with the record, with just enough weight on to track without jumping. Likewise the anti-skate should be set so scratching backwards doesn't cause a jump. It is clearly a bit of an art form to set up a turntable.

The moving lights on the top floor get a good checking. Almost all TCP installations have Martin Light Jockey, a PC based lighting control programme. Ant puts it into manual control mode and makes sure all moving lights have movement in all dimensions.

"It's important to change the lamps so they are not over hours, otherwise they can explode." The timer is reset on the moving lights - in this case, T&S Pro Spect 250's - for each new HSD 250 lamp. "We had a hassle with them blowing fuses with the inrush current for a new batch of lamps", Ant reports. "So we changed the fuse up from 3.5 to 5 amps. That fixed it".

"It's important they be kept clean", he asserts. "The optical and magnetic sensing for positioning of the gobos and colour

FIXING THINGS THAT BREAK

Some of the war stories in the TCP despatch bunker are typical and have not changed across the ages. Like approaching a speaker cabinet and observing white acoustic foam through the grille, because the entire cone has shattered and shredded. "No matter how well you limit a system, if the DJ drives square waves into it, it will eventually fail", says Andrew. And imagine how that speaker would have sounded for some time prior! Bwock, bwock....

"Some DJs decide to retune the system, so the protective cover is ripped off", says Ant. "Or they just decide to change the limiter settings".

It's love and war when it comes to DJ's, because TCP was created by a couple! Tony Musico, and Richard Skarzinski saw the value in moving on from the turntables, and now have a progressive audio visual facility that installs and services equipment anywhere sound, light and vision are needed.



Styli out of alignment. The screws should bisect a line from the centre of the record when the arm is at middle. Like above.

wheels can't get dirty, or they misalign. If a wheel misaligns, it might sit between gobos or colour's and then not much light goes through, and heat builds up. They overheat and they go wrong. We have to be diligent.

The list of technologies a specialist like Ant may encounter is growing. TCP do vision installations, and in this club Nightlife supply a video DJ system.

After grovelling around on the beer soaked DJ booth floor, and climbing a ladder more than several times, Ant is off to the next club on

his list. Controller Brian is shuffling calls around as reports come back from club managers about extraordinary or unusual equipment failures. Brian is working alongside another fleet of TCP service



technicians who handle the corporate AV clients - there are around nine technicians in that division, managed by Louis Puglia (left). Louis and Brian both work in tandem with another company division, the project people. "I can get an electrician at short notice from them," Brian explains. It's a busy place!

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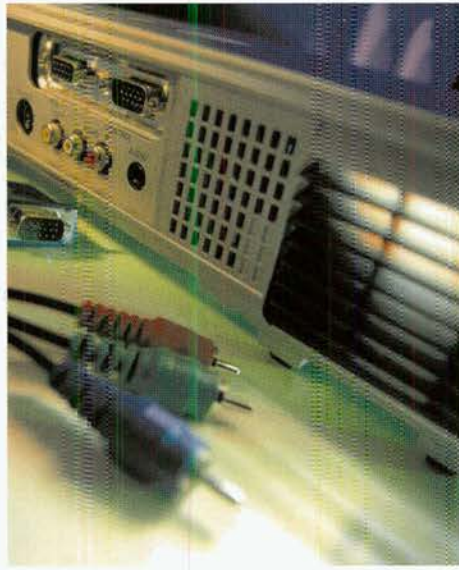
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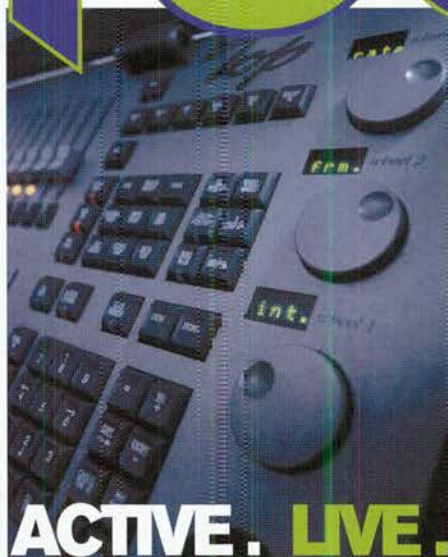
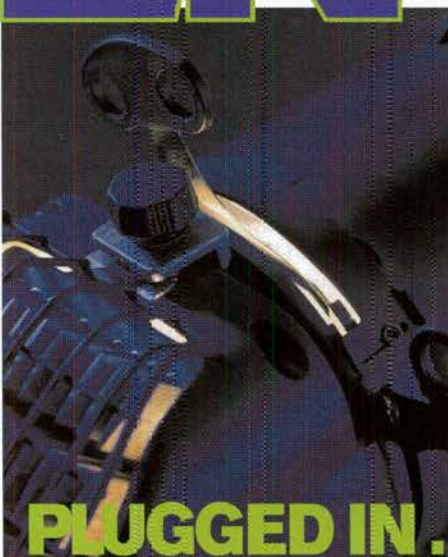
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Bankstown District Sports Club

The function rooms at The Bankstown District Sports Club in urban Sydney have recently undergone a comprehensive audiovisual upgrade by Total Concept Projects. The brief for the fit out was it had to be comprehensive and easy to use so that a client could walk straight in and with little audio visual knowledge start a presentation without having to worry about a technician and additional equipment hire.

The delivery was in two areas. Firstly the Function facilities on level 1 which consists of 4 function rooms and secondly, the facilities on level 2 which consists of 5 function rooms.

To assist delegates/visitors to find their way to the appropriate function room, in both areas, a 52 inch plasma screens was installed in the foyer on each level. On level 1 outside each of the individual rooms a 15" monitor has also been installed.

It feeds back to the internal advertising channel in the Club Management area and enables the Club to brand the event with appropriate client information. This can include a company logo and/or specified text and images. Each room is designed to operate as a stand alone system or to combine 2, 3 or all rooms. These all open out to 1 large function area.

The audio visual equipment in each room is operated by an AMX control system, which is designed to make the presenter appear like an audio visual professional, with everything in the room available at the touch of a button. A fixed AMX control panel is located in each room on the front presentation wall of each individual function area. Depending on the configuration of the rooms, one fixed panel can control all audio visual in all rooms or just the audio visual of those rooms connected.

To cater for a high audio visual control requirement, on each level, there is a Master portable lectern complete with a touch screen AMX control panel, a visualiser which is contained in a drawer within the lectern and a goose neck microphone.

When the Master lectern is not in use, this equipment become available for other uses in the Club. A standard lectern is provided with visualiser and microphone. External electronic devices such as laptops can be connected into the system via the floor box. A combination of lapel, radio hand held and lectern microphones can be used in differing degrees depending on the room configuration.

Each level has an audio visual control room the racks consist of various source options. These include DVD, VCR, CD, and MATV system including free and Pay TV. This allows presentation material to be used in many formats and integrated with that available through the Bankstown District Sports Club.

The vision in the function rooms is provided via a motorised ceiling recessed projection screen. LCD data projectors are mounted on pantographs which also retract into the ceiling space, making these facilities undetectable when they are not required for a presentation.

A back ground music system is also available and can be used to welcome delegates before a presentation or create ambience background music during intermission.

Level 1 Function rooms include a number of DMX controllable moving head lights. These are pre programmed and controlled via the AMX system, giving these function rooms added versatility. •

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VW take on Sprinter

It always confused us to see large vans all over Europe when the largest all-in-one van here was Toyota Hi-Ace sized. Then Mercedes introduced the Sprinter, and Ford followed with the weirdly square and queer looking Transit. It bugged me because in Australia we needed to buy a 2 tonne cab-chassis and have an expensive allow body built onto the back.

In the audio visual biz we need cubic volume more often than weight carrying ability, but we also need to fit into tight places.

Now there's a new large van player, VW, with their LT Series. Their newie looks like it cuts the mustard, even though CX hasn't driven one yet.

LT 46 is the long wheelbase unit (right), with dual rear wheels and a 2.3 tonne payload. It has a 4.2 metre long cargo space which is 1855 high. The high roof LWB van is 2570mm tall and is 6535mm long.

The engine room offers a 2.5 litre diesel TDI four that promises 80kw - a shade under the Sprinter. But VW say a larger donk is coming.

Our philosophy at CX is that any engine is never

large enough when it comes to diesel engines. Give us a V8 or a V12!

The VW has a 5 speed box, and comes standard with air cond, CD and ABS. Power windows and door locks will be an option.

LWB costs A\$47,500 or \$50,400 with the high roof. Short wheelbase costs \$45,700.

Good: 22,500k service intervals. Air suspended seat. Standard CD.
Bad: Small motor (like Sprinter), non standard central locking.
•www.volkswagen.com.au



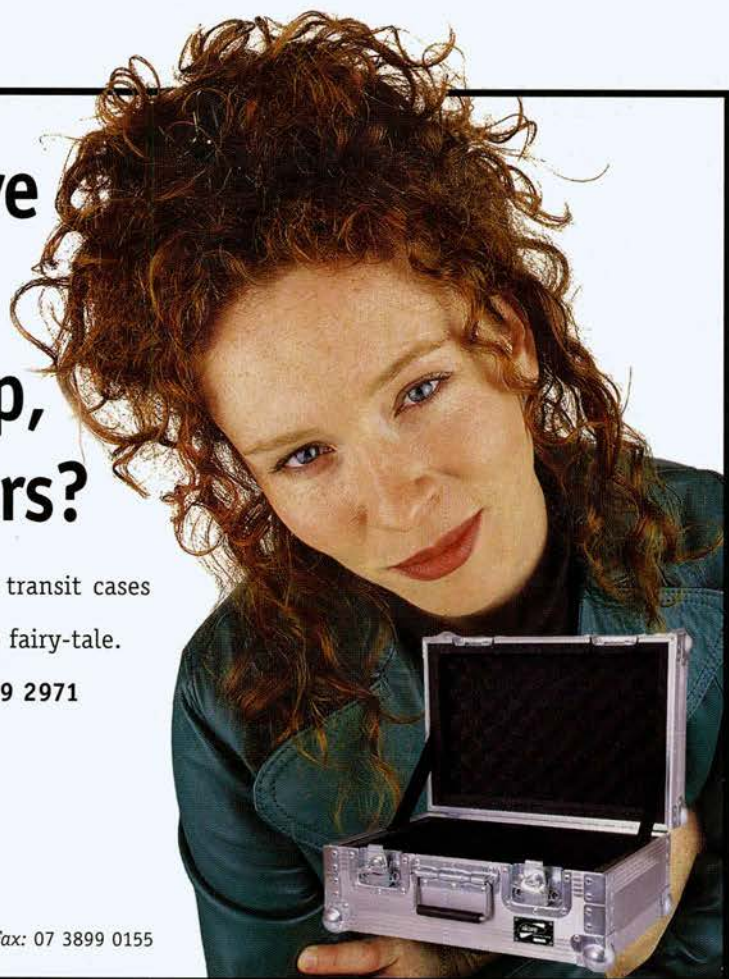
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HELP!

Marissa Jenson is a clinical psychologist, and HR head within an arts complex. Send your dilemma or request to: mail@juliusmedia.com. Marissa regrets personal correspondence cannot be entered into.

Touring Husband

Q: I married my guy in 1992 on the promise he would stop touring by 2000. I really missed him and found it really hard in every way when he was off. He kinda resisted taking a regular gig despite some coming along, and now I am so used to his absences and the seesaw life.

I have 2 lives, his home time and his away time. I have stopped complaining because now I think I like it. But he is starting to look for a regular gig so he can be home. I am torn up, what would you suggest?

- Part time widow.

A: It is a hard shift we make from adjusting to irregular hours and schedules with a partner. Social gatherings have to be maintained and family life with all its activities can be very hectic at the best of times.

When we gear ourselves up to becoming used to a part time spouse then we either have to stay angry at the constant

interruptions to our plans or as you did - maintain two separate lives to remain happy. In other words we have the life with, and the life without our mate. We can live quite comfortably in these two worlds.

I can understand your dilemma now in that you feel split and don't want your freedom and the life you have set up independently of your husband to be disrupted.

I think a compromise can be reached. Firstly you need to express your love for your husband but also your desire to keep the order that you have achieved and the happiness that you receive from your outside activities.

Instead of being afraid of things being different, embrace the opportunity to develop new joint interests and begin to know each other more fully after many years of absences.

Planning together can be enjoyable. I wish you well with your future. - MJ

Contract

Q: Recently I saw an employment advert for a position offering permanent part time work with a set number of hours per week. It was for a fixed term of six months. If I took a job like this, how much notice would be fair if I decided to leave early?

A: You have several key issues to deal with here. Firstly, there may be a notice period in your contract or terms of employment. This would reasonably be two to four weeks. Second, give the employer some consideration, because this is a small world. Third, you need to be totally clear about the job description before you take the job. Ask a lot of questions - people often question me!

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 **PHONIC**



One Pot Casserole

Hot winter vegetables with optional meat!

Simple stuff!

I cook my rice using the long grain Jasmine type. Use plenty of salty water. Boil fast, and stir for the first 30 seconds, then simmer and stir periodically to avoid clumping. Test after ten minutes. cook until done then quickly rinse in cold water and drain. You can put it aside in a bowl, cover it with plastic wrap, and quickly zap in the microwave.

I am often asked about simple fare, and being a film caterer I know a thing or two about this! Today's meal is the perfect feed for colder weather, because it is easy to reheat. Use which vegetables you like! Serve it with crusty warm bread for dipping. You'll be famous!

COMPONENTS:

You need these things for four people:

- 3 x medium peeled potatoes cut in 4cm chunks
- 1 x large or 2 x small carrots, diced
- Quarter pumpkin or sweet potato diced
- One handful each of Broccoli and Cauliflower chunks
- 1 litre of liquid beef stock (use veggie stock if you hate meat!)
- 1 brown onion, diced as small as possible
- 200mm tomato paste
- 2 Tablespoons flour
- 3 Tablespoons butter
- Worcestershire sauce OR Dijon Mustard
- Mixed Herbs, dried out of jar are fine
- Cracked pepper

TECHNIQUE

I use a large heavy bottom stainless steel saucepan on low heat. Melt 1 tablespoon butter, gently fry onion, sprinkle herbs. Melt balance of butter in mug in microwave, when melted stir in flour to form thick liquid.

Add beef stock to onion and herb mixture in large saucepan. Stir in half the butter and flour mix, adding more until liquid thickens slightly. Add tomato paste, and all vegetables. Season with cracked pepper, simmer very gently for half an hour until potato done. Add butter/flour mix if thickening needed.

Taste the sauce, this is where you add either Worcestershire Sauce or Dijon mustard for flavour. No salt is required due to stock.

Optional meat: chicken breast (pictured) or tender cubed beef, pre-sear in pan first, then add in to pot about 10 minutes before done.

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PROJECTION ARTICLE (1)

Your article in the most recent CX Magazine, "Projection from your PC! How?" has caused quite a stir – perhaps this was intended. However, attempting to compare the Catalyst system to a "do it yourself" assembly, demeans the product and insults the intelligence of the owners and operators of Catalyst systems.

Catalyst is hard to define, yet the sweeping and revolutionary change in performance video and lighting within Australia alone is striking. In comparing the described system to Catalyst, the writer clearly has no real conception of the capabilities or reasoning behind the Catalyst system being selected by so many of the leading productions.

Catalyst is not simply a DMX controlled visual effects generator, it is a system for controlling and processing digital media, integrating it fully with the lighting design and systems – both aesthetically and physically.

For example, Rohan Thornton, when he used Catalyst for the 2002 Logie Awards, commented that for the first time, that the "video was tuned" to the lighting for the first time – putting a subtle change in hue through the video using Catalyst made the video an integral part of the production design.

Catalyst is a turn-key system designed and developed for the most demanding live production environments, whether theatre, broadcast or touring. As a manufactured and supported system, Catalyst is continually under development with improvements and added functionality.

In terms of features and functionality, the list is extensive. Generate the source footage as you may – remember each of the productions mentioned in your article used specifically filmed materials for use on Catalyst. It is what you do with this video that is the power of Catalyst.

A fantastic video (70MB) demonstrating Catalyst's capabilities is available for download from the high end website (www.highend.com).

While the ad-hoc system described in the article is certainly possible (and not a new idea), I would recommend to your readers that there are strong reasons that many of Australia's leading production companies, designers and artists specify Catalyst.

Justin Knox, ULA

PROJECTION ARTICLE (2)

I was just flicking through the second CX magazine and came across the article "Projection for LD's" – which was great as I like seeing articles on vision in CX.

Then however I turned the page to "Projection from your PC How?" and within moments I was reeling and had to put fingers to keys and respond.

There are two things about the article that I just can't swallow and they lead back to the same issue.

The first is the article jumps from talk of the holy Catalyst to Winamp. This is like saying you options for providing sound for a gig are a line array versus a ghetto blaster or you lighting options are 30 moving heads of intelligent lighting versus a cigarette lighter. (OK I'm exaggerating a little but you get the idea.)

There is a huge range of options for control of video material. There are probably a dozen software packages good enough to be of mention. Several would outshine the Catalyst if they had DMX control.

The second is the use of Winamp itself. Its mainly an issue of artistic integrity. Even within the VJ community (Video Jockey, think club culture video screens and artistic geeks with laptops and old vision gear), Winamp is looked down on as an uncreative tool. It was certainly a shock to see it mentioned and I wouldn't want any LD's being laughed at for projecting what the audience has been doing in their bedroom's for years or pitching it to a client as new and innovative.

What this all comes back to is the post-Catalyst opinion that the LD/lighting department can do it all. Goodbye vision operators and designers.

It just feels like this article is a bit of a slap in the mouth to the video design and content creation industry. Yes we do read your magazine

as live video design is inherently technical.

From my point of view live video is a specialist field from design to content to operation. If you can't afford the extra operator on tour then integrate the vision with the lighting desk but involve a professional vision person in the design and content.

I think good vision people especially those that think outside the rectangle can add a great deal to any project.

Justin Maynard, Tesseract Research Laboratories

PROJECTION ARTICLE (3)

Another great program to use for visualisation of an audio input is G-Force. It is a free program downloadable for PC or Mac from www.55ware.com.

G-Force runs as a standalone program (or as a plugin for winamp or similar) and allows full customisation of what appears – you can delete the effects, images and configs that you don't like. It also allows you to add your own text, pictures and even video files for playback.

Alan Wright

RESPONSE FROM AUTHOR:

• *You are absolutely right about there being a VAST range of vision options that the Lighting Designer has never thought of. Wincamp (yes it is a base level product) was used as an example of where to start.*

As a pair of articles aimed at lighting people, the intention was to encourage people to think outside the "box of tricks" LDs always use.

Winamp may be looked down on as an uncreative tool, but any tool is only as good as the designer that implements it. Saying winamp is uncreative is like saying gobos are uncreative.

Catalyst is an example of a lighting company trying to bridge the gap from video to lighting.

They did it well!

We have just previewed Catalyst version 3 in this issue. Go to page 70.

I'm glad we are all debating this!

-John Grimshaw

Read the article at CX web!
www.juliusmedia.com/cxweb/article.asp?ID321

Accident?

Being from Tassie we tend to hear a lot of rumours from touring techs. Heard one a while back that someone working on a fly floor tripped over their lead from the belt pack and hurt their back.

As I am trying to put a new system in the theatre here I have been considering a radio system using an OH&S as one of the reasons.

So I am trying to find out if this really happened or not. Do you have any info on the accident or can you point me in the right direction?

I have been subscribing to connections for many years and now CX is looking great. Keep up the excellent work.

**Malcolm Butters
Princess Theatre
Launceston Tas.**

Freak Journo. Us?

I have known Frank Madzin for 23 years since early school days and through working within the light and audio industry. Frank is an extremely professional operator and is well respected by his staff, clients and friends.

As for the young lass doing lines of coke on a Tweenies CD, well ladies and gents, I've seen and heard of worse, so have others. Nobody complained back then, why complain now?

As for the journalists covering this story and with all due respect to their work, this type of journalism is well suited to the "prostitute/junkie" type journalism. Perhaps they (you) should become one of those freaked out rock journos who interview freaks like Marilyn Manson.

Frank Nicolaci

EMAILS

Simmo says-

Congratulations on the new mag, it's looking good. I particularly enjoyed reading your thoughts about outdoor and indoor venues ('Hands off the Sydney Entertainment Centre', Loadin, CX May/June 2003). Spot on!

- Simmo

W Bin!

Not sure if you wrote this road test (no journalistic credits), but OUCH! - I doubt whether the manufacturers would be real impressed with the reference to the 218 Sub as "a big W bin kind of thing"....

The old "W" design, whilst very efficient, did not enjoy a good reputation for being a particularly clean sounding box. The 218 is actually closer in design to the old Cerwin Vega "Double D" boxes

I recently heard Norwest's Resolution 5 rig outdoors in Tamworth during January, and was VERY impressed with the punch, clarity and throw of the system - especially when the FOH graphics were FLAT!

The article also seems to suggest that removing the crossover point from critical vocal frequencies is an innovation of Funktion One's. Many manufacturers are now doing this (eg Martin W8) and as far as I am concerned, these systems sound much smoother.

Keep up the good work on a GREAT magazine

**Graeme Goodacre
Centauri Audio
Tamworth**

Nothing Nice!

I have been a reader of your magazines for the last ten years. I started reading them in my last year of high school and have been working in the industry since.

I can't say it was your magazine that got me into the industry but it did keep up my enthusiasm for the industry.

For the past eight years I have been working for Staging Connections as a crew member. I enjoy my time with the company and I don't want to go anywhere else.

I haven't yet seen anything nice

in any of your magazines about this company.

It is the largest AV company Australia wide, and employs a lot of people in the industry. I can't see why you would never write anything good about it.

Why do you feel you need to not write anything about it's shows or people and why do you feel it necessary to write nothing positive about it.

Is there any reason for this?

There are offices all around Australia and each State runs as its own entity. If your publications had any issues with a particular state don't forget that there are other states with other talented people.

I think it would be good if your new publication decided to bridge the gap, and put some healthy positive things into your new era of magazine.

Maybe you will see, like I do, that it is a great company and has many positive attributes.

Jamie White

• *Thanks, Jamie. We would be delighted to write about Staging Connections. Maybe next issue. - Ed*

MAD load - unsafe?

Love the new magazine and I feel the range of articles shows a lot of thought to the width and variations of our industry.

A note about a picture shown in the article about MAD (CX2, page 28) I know that it is just a demo picture but loads should not be slung from a fork lift unless using a lifting Jib or other device designed for the purpose. We have all done it at some stage but not recorded the fact.

Unofficially, a good back up is to use some means to retard the sling so it can not slide off the end of the forks, usually by tying or strapping the sling back to the head board, unofficially of course!

Secondly, don't you think they are a little close to the power lines in the right of the shot?

**Tiny Good
Showtech Australia**

• **MANY MORE LETTERS AND EMAILS ARE ON PAGE 76! >**

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The inside story on Ribbon Technology

Last month's article on the new MAD flat panel PA created a lot of interest. CX asked Tom Back, from new manufacturer Alcons Audio in the Netherlands, to detail just how his particular ribbon technology works.

Note he isn't talking on behalf of MAD - they are a different firm!

There is a growing interest in ribbon-related transducers for application in professional sound reinforcement. I specifically mean large format magnetostatic ribbons.

The reason for this is the growing demand for improved sound reproduction on higher sound pressure levels and the availability in further developed raw materials and production processes.

Almost all of today's loudspeaker designs for higher SPL sound reproduction are utilizing compression driver technology. The basics of this technology were already developed beginning of last century, when the silent movie went to "talkies".

In order to have maximum revenue (pressure) from the relative poor electrical amplifier power, simple horn technology was developed. Later, in order to increase revenue even further, the horn was squeezed by the throat, maximizing pressure levels even further. But, since there's no such thing as a free-lunch, this was done at the cost of increased distortion.

This can be compared with a garden hose with fixed water-pressure; if we want the water to be thrown further, the garden hose has to be squeezed, distorting the initial (natural) shape of the water.

Over the years, developments have made the compression drivers more powerful (magnet materials, dome/diaphragm materials) and also horn developments have contributed to the sole acceptance of compression driver technology.

Now, Digital Signal Processing is utilized to better control (or "camouflage") the characteristics of the compression driver: Time-smear, throat distortion, peaky initial response (main reason for the poor gain-before-feedback), etc.

With new digital media coming up in a rapid pace, new challenges have arrived for existing equipment; finest detail, full digital dynamics and enough power for even the highest SPL requirements.

Looking at the capabilities of today's MF/HF transducers, some manufacturers realize that they are not suitable for reproduction of what

digital sources have to offer. They re-started development of a different speaker principle; The ribbon.

With new materials available, there are current ribbon drivers (although very few!) that have become an excellent alternative for the 90-year old compression driver.

The working principle of electro-dynamic loudspeakers is based on a radiating surface (membrane, cone or diaphragm) driven by a coil which is placed in a permanent magnetic field ("voice-coil"). When an electric current goes through this coil, it will move the membrane, resulting in air movement, thus sound.

Although seen as "rocket-science" by many, ribbon technology has the same basic principles as any other electro-dynamic (cone/compression driver) loudspeaker. With a different lay-out of the three essential elements (cone, voice-coil, magnet), sound is made but with

different characteristics.

The biggest difference is the integration of the voice-coil into the radiating surface. Remember that the voice-coil has to "drive" the radiating surface; with this integration, the voice-coil can still be in front of the magnetic field (so not "in" the field, but "in front of"), but the *actual weight* of the moving mass (voice-coil assembly + cone/diaphragm) has been reduced substantially.

Therefore this type of driver can reach higher speeds, thus a higher frequency response (20,000Hz = 20,000 cycles per second).

With the low weight moving mass, the ribbon offers considerable advantages in response especially at frequencies of above 8kHz. In this "fidelity-area" of the sound spectrum, the ribbon doesn't suffer from "cone break-up" and the distortion resulting from that.

Another difference from compression drivers; this ribbon principle can also function without a horn, since it has a dispersion characteristic of its own. This also makes it more difficult to get the pattern under control (which is easier with a compression horn, where the sound is squeezed to get the flow under control, but at the cost of distortion, time smear, etc).



Currently there are many different "variations on the ribbon theme", with di-pole set-up, air-motion (folded diaphragm) ribbon, and all with as many different response areas, like full-range (from 160Hz), high-frequency only (from 5kHz.) or medium-range (from 1kHz. up). In the area of highest power pro-ribbons, the choice of ribbon-loaded systems is considerably smaller (around 3 manufacturers).

The sensitivity and power handling depends on – tuning of the driver (required freq.response), - applied materials, - magnet structure and also production tolerances. Ribbons are now being used in pro-audio products, ranging from studio-monitors, through cinema systems up to very large-scale sound reinforcement systems.

ALCONS

Philip de Haan, head of the Alcons R&D team has more than 16 years experience in development of high-power ribbon transducers for professional application.

His recently introduced RBN601 (*pictured on previous page*) is currently the most efficient ribbon driver on the market. Newly designed magnet structure, improved diaphragm specifications and further optimised thermal management have raised the bar again in pro-ribbon technology; Long-term 103dB efficiency (1W/1m, log average 2kHz – 10kHz), with real 90 degrees dispersion.

The RBN601 is the only ribbon driver with this controlled dispersion up to 21kHz, which makes it, together with the natural cylindrical wavefront, the ideal building block for our coming line-array.

Comparable ribbons (one European, one American) have their 90-degree point at 8.5kHz. maximum. Much "juggling" is being done with the specifications; efficiency is sometimes specified in 1w/1m or 2,83V/1m. The last one gives a much higher efficiency when the driver has an impedance lower than 8 ohms (then a sensitivity of 103dB 2,83V/1m, suddenly becomes 101dB 1W/1m). Also power handling is in most cases not a real-life value. Difficult to test with dynamic music, but with pink-noise the durability of the diaphragm can be thoroughly tested.

As these ribbons are used in systems from 1kHz. onwards, it is difficult to compare the drivers with (i.e.) full-range used ribbons.

It can't be stressed enough that there are good ribbon designs and not-good ribbon designs.

The problem with these things, is the risk that people will be judging the suitability of

ribbons for pro applications, based upon these products. People are biased on ribbons as being "fragile", and with poor designs (that claim pro-audio durability) they will see their bias confirmed. Much to our regret, as we have to take distance from these products.

Looking at our long time experience of using ribbon as alternative driver for compression drivers, a full-range application doesn't seem to be a "real world" alternative for the Alcons applications. Mid and low frequencies can (much) better be reproduced by cone drivers, as we don't think that even a large number of ribbons can do better what some 15" (or even 18") can do (the large number of necessary drivers does not seem very practical).

Alcons' idea with application of ribbon for pro-audio applications is more a "hybrid" form, with cone-drivers for MF and MLF. If your idea is to make a usable PA system, it should not only sound great, but also have "enough balls" to be suitable for 80% of the jobs. Then comes in "reliability"- OK if it works, but will it constantly do that over a longer period of time? And at the end there's "market acceptance". Is it an "esoteric" design, or one that people can relate to and see as a logical next step from their current system?

Alcons Audio is using it's RBN601 ribbon driver in a range of sound systems, for applications such as performing-arts theatre, cinema, studio and the touring industry

Nowadays most engineers want "fresh HighFidelity" sound, in the frequency band 10kHz to 16kHz.; Usually these frequencies are boosted by 3dB. This means that the power is doubled (3dB) at twice the 8kHz. problem-"speed" of the compression driver membrane; at this frequency/speed the compression driver membrane starts to vibrate at random as the weight can't follow the speed. This is where the cone break-up of compression drivers occurs, the most common reason for burnt compression diaphragms.

The RBN601 doesn't suffer from these problems. This can be compared with the acceleration of a sports car (ribbon) vs. that of a truck (compr.driver).

Though the physical aspects may indicate otherwise (a heavy diaphragm feels more reliable, than a thin sheet of aluminium foil!), in the long-term experience in development of high-power ribbons, the ribbons have proven more reliable than compression drivers in practical applications!

As the market is demanding a better performance, new materials and developments have made the pro-ribbon technology an excellent alternative, for full reproduction of today's and future media.



Tom Back from Alcons Audio



Alcon's approach uses the new ribbon high frequency device, and traditional cone drivers for mid and low frequencies.

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Switchcraft



ELS Operations Manager Craig Derne with their new Catalyst

Catalyst Leaps Forward

If you thought 40+ DMX channels was a lot for one device, try 120+.....

By John Grimshaw

ELS open vision division with Catalyst and Panasonic

Gold Coast (Australia) based lighting production facility ELS have opened a vision projection arm with the addition of High End System's Catalyst and several Orbital heads. These will be used on an initial three Panasonic 9600 12,000 lumen projectors the firm has acquired.

"They'll be used for (vision) wallpaper, image projection - whether a whole back wall of a stage or a convention centre", said ELS founder Phil Stafford. "Then there's advertising on buildir.gs, at

(continues far right)

The software writers behind High End's Catalyst must have been working overtime since the original release version of the software was unleashed. It is about to leap from version 1.2 to version 3, and with that comes sweeping changes to the way this system will be used by designers around the world.

Catalyst version 1.2 was impressive when it was revealed to the industry some two years ago. It turned a projector into a moving light and opened the door to the lighting designer controlling the vision projected or displayed. Using up 40+ DMX channels to control every possible parameter they could think of at the time, there was a lot that this system could do. However, it was still more of a complex moving light than a serious vision control tool.

CX managed to get a sneak preview of the version 3 software thanks to the team at ULA (Dave Jackson and Luke Hal) and experienced Catalyst v1.2 user Hugh Taranto - Lighting Designer for the recent Silverchair

tour. The improvements are more than impressive. In the hands of a good designer, this system is set to become a very impressive piece of equipment.

The key difference for this new version of the software is that it is now more a vision mixer than a vision source. The new system will have the ability to mix vision from up to four sources two separate outputs. No longer confined to being a single system to drive a single video stream, it is now a fully fledged, real-time playback vision mixer.

How it works is a little complex to describe. The computer can hold any number of video clips on its hard drive (obviously to the limit of its capacity). There are four playback "Layers", and each of those four "Layers" is controlled by the DMX stream.

With the original software, you could use the lighting desk to select and load a video clip, fade in the "intensity" and the vision would fade in. Now in v3, with four "Layers" you could do the same, but now if you have an image playing out on Layer 1, and then

BIG CAT LEAPS FORWARD



This screen image of the Catalyst system shows the four source and two output control panels on the left, the four window "layer preview" screen, the source file list and the Qwerty hot key set L3 panel.

fade up Layer 2 with a different video clip, because this layer is "higher" than Layer 1, the image will crossfade to the new image.

Hugh describes this as much like the way Layers work in Adobe Photoshop – anything in a "higher" layer will be placed over images in a lower layer.

This is a big leap for the effectiveness of the software, because until now there was no way to fade the vision from one video track to the next. You either had to use external vision hardware to mix two Catalyst systems, or fade out the currently running clip, change it, and then fade in the next one.

They have also taken the vision effects inside Catalyst to a new level. To continue with the example used above, you can then run an effect on the image in Layer 2 – like wrapping the image on a sphere, the images still playing on Layer 1 become visible around the edges of the sphere.

Another effect we looked at was a rotating cube running in the fourth layer, with the surface of the cube running the vision that was playing back on the other three layers. For anyone that knows a little about video processing, this alone says a

great deal about Catalyst's ability to process some seriously complex vision effects.

At the demonstration, and using a G4 single processor laptop to run a demo of the software, the output was surprisingly smooth. Given that the system is required to run on a dual processor G4 desktop (and may even be released on the new dual G5 recently launched by Apple) it would appear that there is enough grunt to drive the very complex processing that must be happening. The test will be to see this system can run smoothly at a resolution of 1280x1024 – playing back DV quality/size vision.

Another option being explored is the ability to use live video sources instead of pre-captured vision. These are fed into the computer via the Firewire ports, and hopefully can be controlled just like the stored video files and images.

the Indy. It's an alternative to more expensive slide based solutions. It's so easy to manufacture a gobo – you just load it into the Mac!"

"We can overlay a picture on a building, do massive amounts of colour change, and have imagery going at the same time. This next software upgrade (V3) will take the Catalyst to the next level!"

You get the idea Phil is enthusiastic? You bet! "The animation we can create with the heads is amazing – do parting of images, butterflies, birds, make things fly around the room. The other fascinating thing is ariels. High End created this to simulate lasers. It's just out there."

"I've been in the industry a long time – and I'm going drop jawed!"

"Now we're a one stop shop, adding video. We've been having drinks on Friday night, pulling it out and going wow! We're getting close to 50 (in age) but this keeps you awake at night!" •

(As told to Julius Grafton)

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The introduction of the layers is the core of the change to Catalyst, but there have been other fundamental changes to the design of the program. Hugh said he was very impressed with the improvements to the GUI (Graphical User Interface for you non-computer people).

The software has introduced master control panels for each of the layers (to allow for precise white balance adjustment, effect selection etc), and special output master control panels, one for each of the two VGA outputs that each v3 Catalyst will be able to spit out.

Catalyst will also capture a DMX "snapshot", allowing the use of a desk to plot a show and the computer itself to be able to play back cues in a stand alone mode.

In order to keep down the number of DMX channels this device uses, there have been some design sacrifices. The whole way that v1.2 controlled and used gobos has been dumped in favour of making these controls generally applications to and video or still image (which is essentially all a gobo was in the Catalyst).

Some other vision effects have also been dumped, in favour of an entirely new way to add live effects to the vision – via a special "Colour effects" channels, that can drop in numerous effects over whatever vision is playing from a layer.

These effects include versions of enhanced saturated colour, some solarize effects, colour inversion, negative effects, numerous B/W options and so on. Again, you will recognise some of these if you are a serious Adobe Photoshop user.

As far as I could tell from the software options, up to twenty other Catalyst systems can be easily synced together in the one system – presumably by Ethernet.


There is a much more user friendly way to grab video files and still images for use, via the file library. Also, to add some speed to the setup of the system, up to four pages of "hot keys" can be preset on the standard qwerty keyboard – with the hot key setup user saveable, so you do not have to go through and set this up from scratch each time you use the system.

There are still a couple of things the developers are sorting out with v3, so the release version is likely to have some other enhancements, and we have thrown a couple of questions them developers to see what

these could be. Unfortunately, they have not had time to respond before press time, but if they do send us some more 'sneak preview' information, we will be sure to put their responses in a special supplementary news story on the website.

The final comment goes to Hugh Taranto... "I've only been playing with it for the last hour, and it has already blown me away."

• There is no word yet from High End Systems as to release date or expected cost, but there is some hope of availability in July.



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At a glance-

Prowash and Prospot also come in 150 and 575 models. The 250 watt units described here use a Philips MSD 250W lamp, with a life of 2000 hours.

ProSpot 250LX, A\$4,210

- Pan 530° - Tilt 284°
- Gobos: 6 indexable rotating interchangeable + open
- Dimmer mechanical, electronically controlled
- Prisms: 1 rotating at variable speed
- Strobe/chaser/black-out
- Focus motorised focusing lens, beam angle 15°

ProWash 250LX, A\$4,142

- Pan 530° - Tilt 284°
- Dimmer mechanical, electronically controlled
- Strobe/chaser/black-out
- CMY colour changing system
- 6 colour wheel + white
- Beam shaping device 180° shaping (par effect)
- Beam angle max. angle 45°

Which 250w mover?

Spare a thought for Bill Millard – the tech at Burwood RSL in Sydney's inner west. Like other successful clubs, this establishment hosts a smorgasboard of entertainment in its nice 500+ seat auditorium. Clubs like these reflect their community, so Burwood has multicultural concerts, singles nights, disco and cabaret. Bill does all the tech stuff there - the lot!

He needed some new lights, and ended up buying 16 moving heads – 8 wash, and 8 profiles. The chosen type were Coemar ProSpot and ProWash250's.

"The process started in my mind and ran over three year period, just looking around and seeing what was happening. The main thing was that there was choice of lights – and so I avoided suppliers I didn't like my experience with."

"My criteria was light output mostly – I wanted to be able to colour mix wash and get plenty of effect for my money out of the spots. I wanted the spots to be used as

profiles, plus as backlights. I really wanted an indexing gobo."

Some moving profiles spin the gobos around and just can't remember where they stop. If you use a repetitious pattern, it's not much good if they are all out of time next time you call the fixtures up.

"As an end user, the price (of the Coemars) was more attractive. I spent a lot of time reading and looking." At the end of the day, Bill went with the recommendations of a regular supplier, Anything Audio

"I've got a good history with them. The guys are always a pleasure to deal with, I can stuff them around and they don't seem to mind! Walter is so friendly, and understanding of a customer's needs. You expect common courtesy, if you get it, you'll definitely go back."

Walter Gearin at Anything Audio has a long history in the biz, including with Lighting. He decided to represent Coemar after looking long at different options. •



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(more) EMAILS 2 us

HIGH POWER AMPS (1)

I work as a bench component level technician. I have always thought that any magazine devoted to accurate and forward thinking media representation should have a responsibility to research to the level of the reader and should be examined by an educated proof reader for content.

Here is the article to which I am concerned as being of no value to the reader.

When an amplifier is in use power from a source is converted to a DC voltage and then recreated in some form to which a speaker can transduce a faithful image of sound waves, if the power out is near that of which is drawn in it is said to be efficient.

Any person who has studied high school physics should know the formula $\text{power} = \text{voltage} \times \text{current}$.

When amps are in use the "loss" between input power and output is generated as heat from heatsinks. Amps must absorb heat and regenerate it as power and in some by 300% or more.

Maybe the person doing the review was a fool and did not have any electrical ideas even to high school level.

Maybe in the future you may consider a review of products by a man who repairs them for a living rather than just write nonsense.

Laurance Kubel

BJS Sound and Lighting

HIGH POWER AMPS (2)

I gazed over the "numbers that matter table" and feel you got the caption wrong. It should have been "Numbers that would matter if they were 50% truthful"

Lets take a look at a few numbers in order.

Camco Vortex 6: 12 Amps from the mains: apparently while it's delivering 2,100 Watts per channel with both channels driven. Now let's think about this a minute. That's a total output power of 4,200 watts right ... like 2,100 from the Left + 2,100 from the Right = 4,200 Watts.

Now let's look at the stated draw from the mains socket: 12 Amps.

Power, using Ohm's Law, can be calculated by multiplying the cur-

rent draw by the Voltage. That's $P = E \times I$ or ... 12×240 . That's 2,880 Watts.

Now we have here an amplifier that is delivering 4,200 Watts to the load while only consuming 2,880 Watts from the mains.

Can I please buy a dozen or so ... I figure I can sell the extra power these things create back into the grid for a tidy profit.

May I suggest it could be worth your while to re read the amplifier specs because I suspect that all the mains draw figures, except the Crest, are for one channel driven. You will have to double all the other amplifier current draw figures or halve the Crest figure to make a fair comparison.

Or reun your tests with an AC ammeter connected in the line to the amplifiers.

There are some other points of interest.

You will doubtless find that some have an analogue output stage. The maximum efficiency of an analogue output stage is around 63% for a class B or A-B circuit.

Physics won't allow any more. For a digital output stage, like the Powersoft probably has, the maximum efficiency is around 95% That means you can't get out any more than 95% of what you put in. That's a class D amp I think you will find.

All in all I'm afraid I must report you've been had, old mate!

Peter Patrick

Scientific Acoustics

HIGH POWER AMPS (3)

A little grizzle about your comments in regards the AC consumption of the amplifiers. To quote the misleading mains current consumption figures from the suppliers has possibly resulted in passing inaccurate info to prospective purchasers of the products.

Law of physics: You can't get more power out of an amplifier than you stick in from the mains.

All these amplifiers will pull one "helloworld" mains current if run on the bench with sine waves at full output.

With music waveforms ridiculous high input currents don't really happen. When the amp is verging on clipping with a music signal the

input current consumption will probably be only about that required to produce one third of the amps rated sine wave output power.

Some of the manufactures explain this quite clearly in their product documentation, Lab Gruppen for example which is very admirable. They even declare the approximate efficiency of their amplifiers which really is one of the important parameters when trying to define "amplifier numbers that matter".

Well designed amps with power factor corrected switchmode power supply front ends and class H outputs will probably have efficiencies approaching 80%. With the class D powersoft, efficiency may be approaching 90%?

The most important parameter that effects the input current of these sort of pieces of electronics is whether they have power factor correction in their inputs circuits or not, expect they all would at this end of the market.

If they don't, the VA (volts x amps) input would be a lot higher than the input power which means more amps (amperes), and more harmonics in the AC supply, not nice.

Assuming power factor correction to give approx unity input power factor, would think that the best estimate of the mains current of the amplifiers would be: Output watts divided by three and then divided by the overall efficiency then divided by the mains voltage at the time.

With switchmode power supplies you need to remember that they are essentially constant power loads against variations in mains voltage. As the mains volts goes down the input current goes up, the mains current limit function is certainly important, not only to prevent blowing supply fuses but also to prevent the amps power supply from blowing up!

Whilst you certainly did not have to get into this sort of stuff in your article, you did miss a golden opportunity to provide some really useful info to your readers. When you did the low frequency comparison would have been real nice to actually measure the AC current consumption of the different amps so people could understand what

sort of AC supply really is necessary to run em!

Alan Cooling

HIGH POWER AMPS (4)

Enjoyed your article in latest CX on BIG PA amps, and noted your comments regarding early stigma of switchmode power supply amplifiers. (And your admission of fuelling the flames!)

Some time back, I had the opportunity to compare a QSC Powerlight 4.0 with a QSC MX3000 power amp (conventional heavyweight), and the results sparked considerable conversation between myself, Max Twartz from TAG, and QSC in the U.S.

My testing involved running the amplifiers to clip with a different loads and frequencies.

Although the Powerlight 4.0 was a more powerful amplifier, at a continuous 20Hz tone it clipped earlier than the MX3000, indicating the power supply was not able to keep up with the demand.

On this basis, I recommended to my colleague that the MX may be better for subs. Disregarding this advice, he went out and bought a Martin Wavefront W8 system (first one sold in Australia) powered by all Powerlight amplifiers, including the 4.0 on subs.

I had the opportunity to drive this system on many occasions and the bottom end was NEVER a problem, being always very clean and punchy.

The conclusion to all this is that although there was a problem for the lightweight power supply to supply continuous current for continuous 20Hz output, this is NOT a real world scenario. For the intermittent peaky nature of these frequencies in music, the generous banks of filter capacitors in all amplifiers should always keep the power supply at full capacity resulting in no deterioration of power levels.

To anyone considering buying a lightweight amplifier, my advice is if you can afford the convenience, then go for it - you will not notice any degradation in performance.

Graeme Goodacre
Centauri Audio, Tamworth

• See editor's response, right.

AMPS: RESPONSE FROM THE AUTHOR:

• Any of these excellent letter writers could have contributed specific specialist knowledge to the amplifier comparison that I do not possess. However, as I said in the story, I know enough about amplifiers to lose a million dollars building them, when I started the Australian Monitor company in 1986. I've bought, used, hired, installed, lugged, plugged, trashed, made, and sold more amplifiers in 30 years than most people.

I stand by the amplifier comparison story.

Letters 1, 2 and 3 deal with the power consumption chart. Yes, we could have bench tested the amps, but that was not the point of the story. The article correctly

opens the readers eyes to the need for enough mains supply to drive ultra high powered amplifiers.

If manufacturers offer misleading specifications, it is to their eventual undoing. I have no specific information that any of the quoted mains consumption figures were wrong, and it is just not a crucial issue.

What matters is that we demolished the myth that lightweight amplifiers don't deliver as much bottom end as traditionally powered amplifiers.

-Julius Grafton

Read the Amplifier article at CX web!
www.juliusmedia.com/cxweb/article.asp?ID320

Snow and Fire!

The manager of an alpine resort was going through his in-house PA gear recently and discovered a Yamaha EMX 200 powered mixer!

After plugging it in he discovered that dust had collected and the faders were crackly.

This particular resort manager knew just what to do. He gave the mixer and an aerosol can of contact cleaner to one of his employees and sent him down to the basement to have a clean up.

The employee went to town with the spray can. Not content with just spraying down the groove of each slider, he opened up the case and liberally sprayed out the insides of the desk too.

It was at this stage that the poor guys world went up in flames!

No, he hadn't left the desk plugged in and turned on and No, he wasn't smoking anything.

In the corner of this poorly ventilated basement was a gas hot water heater with a lit pilot flame.

If the employee had not been wearing a beanie he would have lost a lot more hair than just his eyebrows in the resulting flash/explosion. The cleaner fluid that had not yet evaporated off the circuit boards also caught fire, causing some damage to the delay/reverb board inside the mixer and slightly melting parts of the plastic casing.

Feeling a bit dis-orientated after the explosion the young guy panicked a bit and managed to knock the burning mixer on to the floor, causing fractures in the power amplifier circuit board and the voltage rectifier department before he found a dry powder extinguisher which he used to fill the mixers' case up with flame retardant and hence, put out the flames. When he was able to walk steadily again, the poor eye-brow-less fellow reported his near miss with third degree burns.

The EMX 200 came to rest in our work shop. After repairing the cracks in the circuit boards, replacing all the slider pots and a couple of singed capacitors in the reverb section, a test revealed the mixer and power amp sections to work perfectly!

Rod Phillips, Albury

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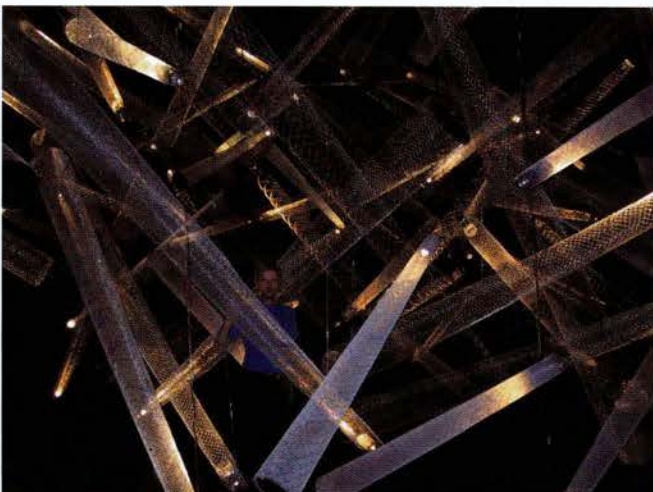
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Combining lighting with sculptural installations

Until recently Phillip Lethlean has been predominantly known for his theatrical lighting designs.

By Mandy Jones



Phil's designs have been behind some of the most visually stunning productions seen in this country, including *The Hobbit*, Philip Genty's *Stowaways*, the *Yeperenyé* and *Peoplescape* events during the Centenary of Federation Celebrations, and this year's smash-hit Australian touring production of *The Lion, The Witch and The Wardrobe*.

Throughout his extensive career he has worked with an impressive range of theatre companies on local and international productions - *Handspan*, *Polyglot*, *Terrapin*, *MTC*, *The Keene/Taylor Project* and *Playbox* to name a few.

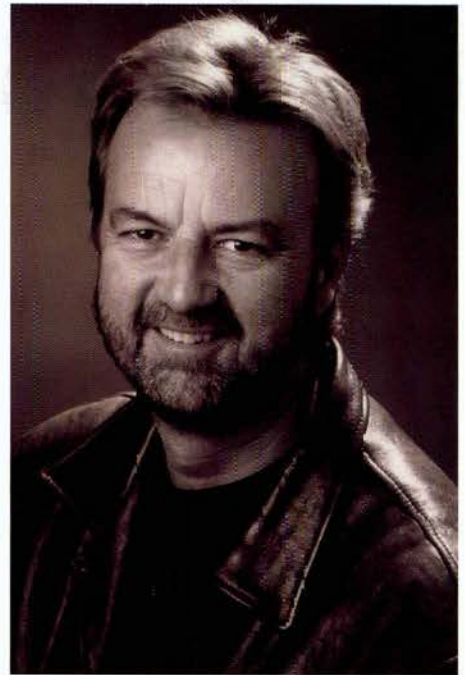
In recent times Phil has begun to branch into exciting new areas of lighting such as installations and architectural commissions. In 2001 Phil applied for an Australia Council Fellowship - a grant which would enable him to explore a new realm to him, the concept of light sculptures.

He was awarded a fellowship in 2002, and launched headlong into a two year program of creative exploration. As the first recipient in a technical field, Phil described the fellowship as a great honour, and a fantastic opportunity to explore concepts in lighting that he would not normally be able to pursue.

"One of the things I said I wanted to experiment with was meshes and scrims, and the other thing I wanted to do was some sculptural work. I've been working in theatre for a long time now and as much as I love it, the problem with theatre is that it is so bloody ephemeral. You work your guts out, you collaborate, you come up with amazing things, then it bumps in, it opens

and happens and then six weeks later it may as well never have happened. So I liked the idea of combining lighting with sculptural installations."

The first project to emerge from his fellowship is a light sculpture titled *Explanandum*. In collaboration



with prominent Melbourne artist and longtime friend Ashe Bilu, Phil set about to create a sculpture out of simple materials in which lighting played a key role in the interpretation of the work.

Built as an installation at Theatreworks in Melbourne, *Explanandum* consisted of 92 suspended cones made from wire mesh of varying gauges. The cones ranged in size from 7 metres to 2 metres in length, and each cone contained a light source at one end and a mirror at the other.

"I used par 16's with a bit of extra mesh around them to bury and disguise them a little bit, and the mirrors were pieces of flat black Colourbond with Mylar stuck on the other side. I really didn't expect the wire mesh to contain the light as well as it did. We were really just running on intuition but it all worked."

Based on such a simple idea, the finished work evoked intense reactions from the 400 guests invited to view the work.

"Everyone who saw it said 'Wow!'. They walked into a completely black space and then with the touch of one fader suddenly there was a cone hanging in the void. And then suddenly the entire space was full of them. We ran it with the lighting desk on the floor so people could come in and have a play with it. People were so engaged with it - some of them stayed for hours walking amongst the cones and experiencing it from every angle; others came back several times over the four days of the viewing."

Buoyed by local and international interest in *Explanandum*, Phil will have the best of both worlds by continuing to pursue his interest in light sculpture through new projects funded by the fellowship grant, in between his ongoing design commitments to theatrical productions and corporate theatre gigs.

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*During July & August we're giving all PA dealers a once only opportunity to get a free VF60 demic mic when you buy two or more at our normal stockist price.

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When too much glamour is not enough

By Guntis Sics

I came over all hot and flushed the other night and I'm blaming it on an overdose of glamour. I asked Freddy to drop me off at my local but the limo was so long it got wedged trying to negotiate a corner so I hoofed it for the last twenty meters while I made a mental note to throw a major tantrum at the council about these skinny back lanes. People around here were just going to have to give up some of their backyards to let a little traffic through.

The bar was quiet that evening, a couple of White Wines huddled around the fireplace, a lone Whiskey on Ice slumped across the bar and a Vodka Gibson gazing into space near the pinball machine. Wrong part of town buddy.

Over in the corner the Oscars were playing on a crappy black and white TV. I couldn't even be bothered glancing over quite frankly. Been there, done that. In my game strolling the red carpet is just something you have to put up with, like the ridiculously over-inflated salaries we're paid. It comes with the territory.

Yet another actor was droning on about how fantastic everyone was, drawing special attention to the sound crew and how without us the movie wouldn't be possible. Call me cynical, but I'm sick of everyone in the industry focusing on how important the sound is and showering us with accolades and awards.

I asked the barman to switch it off and put the footy on, but he was terrified of offending the film buffs who frequent the joint. It's a pretty rough bar, my local.

I needed some time out of the spotlight, there was no doubt about it.

Don't believe everything they say about not believing everything you read in the gossip magazines.

The film industry really is as incredibly glamorous, diamond encrusted, flamboyant, outrageous and sex-ridden as even the most exaggeration-prone columnists make it out to be, present company excepted. It's no lie to state that drugs and sex are part of the everyday experience in the film workplace, in fact I quite often sprinkle a little pick-me-up on my cornflakes in the morning to help me through the day. If I haven't bonked a couple of starlets by lunchtime I get depressed. However, the rumours about me and the duck in

I quite often sprinkle a little pick-me-up on my cornflakes in the morning to help me through the day. If I haven't bonked a couple of starlets by lunchtime I get depressed. However, the rumours about me and the duck in Babe are based on jealousy.



Babe are based on jealousy. Besides, the duck was a robot and all I can say is, if it looks like a duck and it quacks like a duck, it isn't necessarily a duck.

It takes years of experience to deal with the jetsetting lifestyle and a mere mortal can hardly be expected to remain sane in the face of the overwhelming advantages that travel, money and fame can bring. Just look at (Dear Ed: insert any actor's name here who won't sue).

I was on a major melancholic roll and a Pint of Guinness strolled over to keep my thoughts company.

'You know what the problem is?' I said.

I'd caught him with a mouthful of foam so he could only shake his head at me. Of course you don't you poor innocent fool, I thought.

'Of course you don't you poor, innocent fool' I said. How could you possibly have any idea what I have to go through in this crazy industry?

He was still struggling with the foam and making choking noises but a Tumbler of Whiskey ventured a question from across the room

"Given that you have a successful career in one of the most dynamic industries in the world, also that you are paid stratospheric amounts of money, add to that the exotic travelling you do and mention too that you party in the company of movie stars and starlets; Let's not forget that you have enormous job satisfaction reinforced by awards and accolades that would make Joseph Stalin blush, what, pray tell, is exactly missing from your life?"

Salty tears welled in my eyes as I licked the last droplets of Tequila from my lips. I made a mental note to carry a lime with me from now on.

I surveyed the room and wondered if I would ever be able to explain anything to these people. Explain

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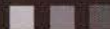
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how I yearned for normality, to be part of the crowd, invisible, anonymous. I wanted an average job with an average income, an average wife with average kids, an average car in an average garage, an average body in average health. Did I have to spell it out?

Even as the paramedic attending to the Schooner of Guinness gave me the thumbs down I knew there was no point in starting down the slippery slope of meeting other people's expectations. They would never let me be one of them. I could never just melt into the crowd and become another nobody. I had to face facts. I was in the film industry for better or for worse and I'd just have to put up with it.

I thought of all the films I'd worked on, all the famous people I'd met, all the fabulous locations I'd spent time in, all the great sound I'd recorded and not a single anecdote sprang to mind. I was a shell of a man, I was hollow, I was empty. I had nothing to say about nothing and damned if I was going to apologise for using a double negative. At that moment I could have landed the lead role in a zombie movie or even an Australian television series.

If people were going to rely on me bringing colour and interest into their lives they were going to have to cut me some slack.

Suddenly I was angry, really angry. I clambered off my stool, stepped over the corpse and headed for the door. Who the hell did these losers think they were toying with? If I wanted to slum it down at their level who the hell were they to tell me I couldn't? Dammit, I was just an ordinary guy like them and I was going to prove it. Theatrical exit coming right up.

I was almost at the front door when the Vodka Gibson stepped into my path with a menacing look in his eye. I felt like ripping his sunglasses off and challenging him to an aerial kickboxing contest, but something told me to hold that idea.

"Haven't you forgotten something Sir?" he hissed.

"I'm sure I don't know what you're talking about." I retorted, "unless you're a bookie...."

"No, no. I'm not a bookie."

He paused.

"What then?"

"It's just that you haven't mentioned a single thing

about sound and this is, after all, a column about sound."

"Who sent you?" I demanded, grabbing him by the throat and lifting him into the air. "Was it the editor? Tell me, tell me now or I'll kill you!"

I was turning red and he was turning blue, we were a cinematographers dream, but

I could see he was prepared to die for the cause, such was his loyalty to the magazine.

I was cornered.

"Alright." I whispered loosening my grip, "If I give you something will you get the hell out of my column?"

"Of course sir." He slumped and melted through the nearest wall.

I turned to the gathered crowd and summoned my final ounces of willpower. You poor, pathetic souls I thought. What could I possibly tell you that would make a difference to your measly, scavenging lives? I took a deep breath.

"Always record an atmosphere track at the end of every scene."

The silence was deafening, which incidentally, is a good time to record an atmosphere track. It's also a good idea to keep the average levels that the scene was recorded at and use the same microphone. But now I'd given them what they wanted and it was time to go. It was Casablanca all over again but I forgot what the line was anyway so I just stepped out into the cold night air feeling cheapened by the whole experience.

The limo was there with some minor alterations and Freddy had a black eye or two, but it was the graffiti on the back door that still resonates with me today. It was like that scene in Priscilla where the boys discover the bus has been written on but now there was a new, sinister twist.

'Sound Recordists out now!' it read in big red letters.

The backlash had begun. As I slipped into the limo and poured myself a stiff 200 year old scotch a chilling thought struck me. Maybe, just maybe, one day I would have to work for a living. Icy cold terror chilled my heart as the limo glided silently past the rubble and Dante-esque landscape.

I thought I spotted Bad Boy Bubby.

A lone wolf howled.

To be continued.



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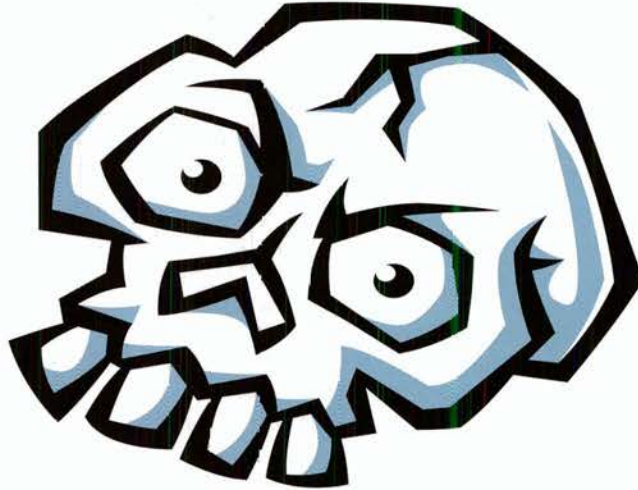
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Time gentlemen please

Bad boys brawling in band room blowup
By **Duncan Fry** of course. Who else?

Whenever you combine loud music plus people shaken and stirred together with copious amounts of alcohol, you're bound to get a degree of violence. People with diminished inhibitions and social skills pushing their way into the personal space of others in the same condition. Trouble brewing, you might say.

It's part and parcel of working in live music. A few connoisseurs of fine music slugging it out on the dance floor are part of the whole experience. Even more fun is a catfight in the girls' dunny, the combatants spilling out into the main room clutching at each others hair, the screams of "You bitch" cutting through the sound of the megawatt PA system without any trouble at all.



However, this is what I would term 'punter-to-punter' aggression, and by and large it doesn't affect band members at all. Rarely seen is 'punter-to-band' aggro, unless the band has gone out of their way to antagonise the crowd, in which case you, as the person mixing, are seen to be the nearest member of the band to pick on. A wise career move would be to resolve to never work with that band again! Stuck out there in the crowd right in the middle of it, you are a lone liferaft adrift in a sea of drunks, the multicore your only lifeline to sanity.

Still, despite doing more gigs than I've had hot dinners (...wait a minute, that's a lot of hot dinners!) I've never had quite the same experience as happened to a friend of mine the other night. Let's call him Biffa - not his real name, but close enough for rock 'n' roll.

He popped into the factory to return a piece of gear he had been beta testing for us, and over a heartwarming cup of infamous ARX coffee, he told Col and I the following story.

He had a booking for a gig at an inner suburban club that had a non-negotiable curfew of 11pm, which means both the headline and support bands have very definite start and finish times which must be adhered to.

So, the support band is playing away on stage, and Biffa looks at his watch and sees it's 2 minutes to the end of their set. He goes over to the side of the stage and gets the lead singer's attention

"One more song" he says, indicating his watch.

The singer looks away and says to the audience "OK folks, we've got 2 more songs to play before we go..."

"Make that half a song," says Biffa.

"Hey, this guys wants us to stop playing," yells the lead singer, pointing at Biffa "What an asshole, eh?"

Biffa shrugs his shoulders and walks off to let the headliners know the news, figuring it's a lose-lose situation and not worth the brain damage.

The headline band comes on eventually, and after checking everything on stage, Biffa walks down to the Front of House console.

Just as the band starts, there's a commotion behind him, and it's the support band and their cronies yelling abuse at him. Then the girlfriend of the singer starts up too.

Biffa turns around, puts his hands up in the air and says "Hey - that's enough, alright!" then turns his back on them. The rest of the audience turns to the support band and yells at them to shut the f**k up. Since there are many more in the audience than in the support band, they reluctantly accept this helpful advice and slink off to the bar.

The band goes down really well with the crowd, and after the set Biffa joins them in the band room for a PGR (post-gig rap).

The support band is also in there, greasing up to the

continued over page>

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ASHTON WIRELESS

Ashton is a relatively new Australian brand of affordable PA equipment designed in Australia and made in Places Inexpensive. The guy behind the brand is Peter Hayward who runs Australis Music, one of the big 5 musical equipment import firms. They've been around a l-o-n-g time and know the ropes. He reasoned a while back that he could establish a new brand, and spent a lot of time and travel doing just that.

Nowdays Ashton is sold all around the planet, and Australis has a handy niche.

We had a look at a typical offering from Ashton, the AMW 100 UHF wireless mic system.

It is a fully featured diversity system, with a handheld mic that has a colour coded frequency. You choose one of eight frequencies. The receiver has a dual battery charger - a nice idea.

The kicker is the price - it retails at \$399.00. Get more info at: www.ashtonmusic.com.au

MARTIN IMAGER

The new 250 watt Imager from Martin Architectural is a high quality image projector (pictured at right) with dynamic movement capability designed for high-resolution projection of patterns, images, logos and messages.

Well suited to promotional applications such as retail, exhibitions, museums, clubs, restaurants,

bars or any low-maintenance installation, the Imager is available as either a single image projector or in a four-image version. www.martin-architectural.com

Turbosound TXD

Turbosound, the British-based manufacturer of live performance and installed-sound speaker systems, has released its new TXD series of passive loudspeaker systems.

Principally aimed at the live music, DJ and club markets, the very cost-effective TXD series are designed as easily portable systems for the live music, club and DJ sectors and represent high performance and exceptional value for money in what is a very competitive market. The TXD enclosures (pictured, right) feature built-in rigging points and are therefore also intended for use by sound contractors in many types of fixed installations.

The range includes two compact full range 2-way enclosures, using 12" and 15" LF drivers and a new 1" HF compression driver, plus sub-bass cabinets with either single or double high power 15" bass drivers, single 18" bass drivers, as well as



the symmetrical TXD-12M compact wedge monitor.

Info at: www.audotelex.com.au

BOSE'S EVENT SOLUTION

The Focus on Learning Conference ran at The Dome in Sydney's RAS Showground - a hemispherical-shaped building with very challenging acoustic properties.

Audio was further complicated by the requirements of the event. Two stage areas were utilised with performers moving between stages, dance and theatrical requirements needing loud music, a fifty-strong choir and orchestra, as well as whispered to hard-hitting voice presentations.

In addition, one of the key messages of the conference was to show delegates that high quality audio was both accessible to schools and made a significant dif-



ference. Therefore, for the event, Kirby Productions wanted to use a system made up of audio equipment elements that were simply scaled-up versions of what could be achieved in the school environment.

Sound in The Dome, like in any hemispherical building, will bounce from the walls and roof structure and re-converge into the centre. When Bose designed the original public address system for The Dome the objective was to achieve the best possible voice intelligibility. They optimised the sound quality by minimising low frequency energy reverberation.

However, with the Focus on Learning conference, energy is ex-

VIOLENCE

(continued from previous page)

headliners in an attempt to score more gigs with them. As Biffa walks in, the singer, who was half in the bag before but is now as pissed as a newt, calls out.

"Hey, here's that f**kin' arsehole who tried to stop us playing!" and proceeds to call Biffa every name under the sun, liberally sprinkled with more expletives that have no place in a family magazine such as this.

Biffa grabs a can of vitamin VB and wanders over to him.

"Look," he says patiently, "You finish your set late, forcing us to cut short our set, you and your mates give me a hard time down at the console, and now this. Just what is your problem?"

The support band singer glares at Biffa while his brain slowly takes in all these words, and then he snaps.

With a scream of "Yaaaaaargh!" he sends a drunken punch straight towards Biffa's head. Biffa ducks to avoid it, and responds

with a monster haymaker punch, still holding his can of VB. His fist and can collide with the singer's face, a king-hit that promptly lays him out flat on the floor. As the cacking commentators used to say "Aa, the boy's suddenly lost interest."

The room goes quiet, then the support band collectively make a bolt for the door, dragging their singer with them, blood pouring from his now broken nose.

Biffa picks up a new can of beer, takes a long swig, and goes over to the drummer of

the headline band.

"Look, I'm sorry about that" he says. "I shouldn't have lost it the way I did."

The drummer looks at him with newfound admiration.

"Mate, that was AWESOME! Just fantastic! You de man, Biffa"

As Biffa told us the story, I said to him "Well, you're assured of keeping that gig, aren't you."

Col chimes in "Yes, and you can charge them more now - for mixing and for personal security!"

actly what was required to inspire the 4 000 teachers attending the conference. Brian Kirby of Kirby Productions had won the public tender to produce the event, by developing a song "With One Voice", which was developed into twelve different mixes from a dance track to ambient versions.

A traditional distributed system would simply excite too much space in The Dome and create a cacophony of sound. Kirby Productions approached design con-

sultant, Scott Willsallen and Bose to work jointly on a solution developing two unique line arrays each featuring twelve Bose 802's (pictured, left) with four Bose MA12's mounted from the dome structure at either side of the main stage.

"The vertical driver displacement created a frequency dependent cylindrical wave front in which sound propagates further with less attenuation. This creates greater levels at longer distances so the far-field sounds near," said Scott

Willsallen. "The column effect concentrates the energy within the coverage pattern while minimising energy that in this case would excite excess space within The Dome. The audience seating area was carefully targeted and nowhere else."

"This was only achievable by employing the Lake Contour loudspeaker processor to tidy up the cross over point between the MA12's and the 802's to ensure they were not reproducing the

same frequencies (up to 180 dB cross over filters) eliminating interference between the two elements, the Lake Contour was also used for time alignment" said Mr Willsallen.

"The Bose 802 and MA-12 combination was highly effective providing depth and quality that was loud enough, yet clean and clear in what is an extraordinarily difficult environment," said Brian Kirby of Kirby Productions.

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PACIFIC DOWSERS PUNCH

The recent New Zealand premiere of "Boris Godunov" from The NBR New Zealand Opera came complete with a star from Moscow's Bolshoi Theatre in the title role.

Selecon supplied lighting designer, Tony Rabbit with 26 Pacific MSR's fitted with Dowers and Pacific 1200W 80V units which he used to achieve some of the most stunning lighting effects seen in the production.

The Dowser is a modular accessory which slots into the front of the Pacific lamp house with the desired lens system mounted onto the Dowser.

The visually even fade is achieved by graduated photo etched glass blades which are driven across the light beam by stepper motors.

Director and International Opera Lighting Designer Matthew Richardson declared:

"I am very impressed with the output of the Pacific MSR and the smoothness of the dowser dimming action."

www.seleconlight.com

BALLARAT CANS DEGREE

The University of Ballarat has decided to terminate its Bachelor of Arts (Theatre Production) degree.

This regional course is one of only two Theatre Production degree courses in Victoria, the other based in Melbourne at the Victorian College of the Arts, with only a handful of equivalent courses available interstate.

In 2001, the University of Ballarat in conjunction with State and Federal Government and local community, funded the development of the new state of the art Arts Academy in the heart of Ballarat. Due to the latest closure of the Theatre Production course, Performing Arts students and staff have now lost one third of their entire course structure, which they all contributed to developing.

During the Performing Arts School's transition of name and location to the Arts Academy, the University reduced the involvement of Performing Arts staff in the publicity of their courses.

No proactive approach was discussed regarding the marketing of courses under the new Arts Academy title. This resulted in a reduction of VCE students among the first year intake in 2003. The University reasons that demand from incoming students is too low.

rescueproddies@hotmail.com

TOMMY FIRE- QUESTIONS

The theatre industry was looking closely - with commercial interest - at the *Out Of The Blue* production of Tommy, which was scheduled to open Wednesday 11 June at the Evan Theatre in Panther's World Of Entertainment at Penrith.

A theatre fire forced postponement of the show until July - but now it has been cancelled without reason. Producer David Hollywood is extremely disappointed, and unable to face his young cast.

Panthers had rescheduled the

show, to open July 17.

Juliusmedia spoke to a patron who had been called by Panthers after the fire, and advised the opening would be rescheduled. They were then called again by Panther's ticketing dept, and advised the show had been cancelled outright.

The fire started on Monday when production crew were programming lights. The main curtains caught fire, and the sprinkler system saturated the stage, causing extensive damage to equipment.

Juliusmedia has been told by an insider, that the production was in rehearsal on Sunday June 8 when it became known that the Evan Theatre was required for use as a disco that night. Some equipment, mainly audio wedges and shot-guns, were moved behind the curtain line.

The next morning some crew arrived for lighting plotting. It is alleged that a Molefay (dual 650w audience 'blinder') on each side of stage were disturbed by the opening of the curtains. Each light became entangled somehow underneath the curtains on each side.

It is asserted that these fixtures were somewhat distant from their normal locations, and that they had been moved by persons unknown - possibly in association with the Club's use of the venue the previous night.

For reasons unclear, these Molefay fixtures were on at the time, or were turned on, and remained energised. They very quickly set the drapes on fire. All stage lighting equipment is viewed as potentially combustible.

Juliusmedia attempted to talk to Panthers entertainment director about the fire, and the cancellation, but were cut off.

We wanted to ask why the curtains caught fire, as theatre curtains and drapes are supposed to be treated with fire retardant chemicals on a regular basis.

DAILY TEST AND TAG

The new Draft Standard on Test and Tag, which did propose that every time any equipment is hired, it must be tested and tagged first, has been postponed.

The proposal would have pushed show and shoot costs through the roof as gaffers, lighting, audio and vision technicians struggled to turn equipment around. Now there is an extension to the period for the new Standard to be formulated.

Two representatives from industry associations fronted the Committee in charge of the Standard, and explained the reservations held in the sound, lighting and staging industry about the proposed Standard.

Tony Davies from the Entertainment Technical Association, and Andy Ciddor from ALIA, were there. They were invited to join the committee. Each association has one vote on the committee.

They were warmly welcomed by the committee, which included a representative of the Hire Association, who represent plant and equipment hire firms, predominantly in the building trade.

"It will be changed" stated Tony Davies after the meeting. "The Standard wasn't intended as it appeared. Some of the wording and definitions will be changed".

INSURANCE CRISIS HITS

Insurance issues have hit our industry on multiple fronts.

- Firms involved in rigging equipment are becoming uninsurable as policies fall due.
- Bogus insurance policies are being sold for all kinds of cover - General and Third Party.
- Musicians now need Third Party Insurance before they can play.

The insurance industry is claiming entertainment public liability cover will not be available. A Melbourne based rigging company Showtech Australia has had cover refused because the underwriter has chosen not to insure ANYONE in the entertainment industry.

Showtech assert that their safety history, OHS and Risk management procedures, and services are well above the industry standards.

"I have been told that the underwriters feel that due to the amount of public that attend entertainment events this poses a higher risk to the insurers" says Robyn Good, "therefore they feel, for some unknown reason, that the incident for claims may be higher. Even though there has not been any major claims resulting from the entertainment industry."

For insurance news as it unfolds, and a list of legitimate insurers, go to www.juliusmedia.com and search 'Insurance'.



Showtech Australia boss Tiny Good in happier times

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~ Tribute to Swampy ~

Australia's foremost production and tour manager, Wane "Swampy" Jarvis was buried on Tuesday June 17. The funeral attracted over 500 people from all walks of life, mostly from the music industry.

"I want everyone to know Wane felt no pain", His widow Kerrie (pictured below with Wane) told the gathering at St. Mary's Church in North Sydney. "He had just come in from his garden, he was very happy with it. We were talking, and suddenly it was like the light went out of his eyes and he pitched over." Wane suffered a massive heart attack at the age of 57.

Best mate Mick Cox recounted their days as the first profes-

sional road crew in Australia. They left their homes on the North Coast of NSW and headed to Melbourne, where the bands were emerging. After their first gig, they were paid with 50 tickets to Bertie's.

They worked with The Zoot, and countless other bands.

"Wane bought a kangaroo skin coat. We were partying down near Luna Park, and decided to climb in. The Police came, so Wane threw his stash over the fence. Then he decided to get it back, climbed over, and fell in the harbour. The coat took four days to dry, and when it did it was as stiff as a board. Wane loved that coat!"

Mick ruffled and cried through his eulogy.

"I don't know if they have a band in heaven, but if they do, they've got the best production manager. And if they're short of a drummer, I can think of several I can despatch straight away".

It was that kind of day. Tears and laughter.

That night an era came to an end, as the first roadie was honoured by the industry at a party at Sydney Entertainment Centre.

Swampy was literally the first roadie.

He quickly made such a name for himself that he was snapped up by Status Quo in 1974, and became the trail blazer for many Australians who toured the world.

He was a modest mentor. A proud man who had an enormous work ethic. And an outstanding husband, father, and provider.



Pictures thanks to Bob King, custodian of memories.

(continues over page)

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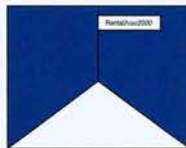


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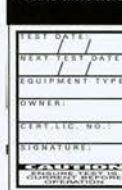
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TRIBUTE TO
SWAMPY



Swampy worked for the who's who of the world of rock and roll.

His passing closes an era in Australian music, where the bands worked the highways and the byways, where one or two blokes in a Transit van were The Road Crew.

He traversed the growth of the industry, and is spoken of as an inspiration to people like Eric Robinson, Steve White, and Peter Rooney.

Over the past decade Swampy was regarded as the best tour manager, the best promoters rep in Australia. He ran tours back to back for Frontier, and without him that firm would not have been as successful as it was.

The party at the Entertainment Centre was a generous gesture by an industry who grieved a generous man. It was also in part a wake for the era that made Swampy, the halcyon touring days of the crazy 70's and manic '80's. There's a feeling that this event was a closure, of kinds.

At 7.30, MC Trevor Smith introduced one of the first bands Swampy worked for, The La De Da's. Kevin Borich was joined by Harry Bruce, and Mark Kennedy for two numbers - the hits 'Gonna See My Baby Tonight' and 'Morning, Good Morning'.

Then came legendary Australian pop group Sherbet, with the original lineup including Clive Shakespeare on guitar. They performed 'Cassandra' and 'Summer Love'. There was word they will reform and tour next year.

More bands came and went slides and imagery and video clips played. Tributes flowed, as did beer.

Swampy is survived by wife Kerrie, and daughters Nichole and Tamara.

Wane was 57 years young.

A collection has been taken up, and donations are sought for Kerrie Jarvis. Possibly because of a long history of heart disease, Swampy had no life insurance.

Donations can be mailed to:

Kerrie Jarvis
1/2 Rocklards Road
Wollstencraft NSW 2065

OR DIRECTY DEPOSITED:

Ms Kerrie A Jarvis
ANZ Bank
218 Military Road
Neutral Bay NSW
BSB number: 012 352
Account number: 5742 76276

Tributes. Next page >



Swampy at work (top left). Glenn A Baker (top) and Trevor Smith (above) pay homage at the wake, held at the Sydney Entertainment Centre. Bands reform: The La De Da's (bottom left), and Sherbet with their original lineup, bottom right.

Pictures by Bob King.



TRIBUTE TO SWAMPY



cut in the t shirt, the smile, the good companionship, the willingness to teach and to show. The great laugh, the fun times in a truck barreling down the highway. The ease that he handled all situations good or bad.

A good friend, a gentleman and extremely good at his job. May he always be remembered for all that he accomplished and the precedents that he set.

Kerrie, Nichole and Tamara I am sorry for your loss.

Russell Kidner

• I was just shocked to receive the news of Swampy. I remember very clearly driving around the backwaters of Musslebrook trying to get to our first Stars gig with Swampy in their Ford 350 just after he had arrived back from the UK to restart his life in Oz. It must have been around '78 or '79 I think.

Fat Cat had broken his leg in Melbourne or somewhere and there was Swampy coming to the rescue, and since then can remember spending many amazing days & nights with that man.

I'm in the US with Beck and will be going out to tell some stories and have a beer in his honor he was truly a gentleman of our industry.

Both mine & Jane's hearts go out to Kerry & her family today. Life's all too short isn't it?

Jon Lemon

More at: <http://www.juliusmedia.com/cxweb/article.asp?ID=312>

• We remember Swampy. I speak for all of the Oz crew here in England this summer, Chris Pyne, Andy Greenhall, myself, Tony Szabo, and I'm sure all the others who are out touring the pound, when I say how sad we are for Kerrie and the girls.

We remember the breath of Big World Touring that he brought to the Australian touring scene. He'll be much missed.

I worked last week in Le Mans for the 24Hr race, a 20,000 punter freebie, and the only sadness was the news of his death, and it affected English crew as well, John (Mad)Maxwell, Sel, Darragh and Fraggie from the Jamiroqai crew, Rick Pope, Duncan, Dave Poynter and all of us from Brit Row. We were all dimmed by the news.

I hope that the fund for Kerrie fills fast.

Robert (Jock) Bain

• Yep...it's Noddy. Been in the U.S. for almost 14 years. I hope you're well.

Glad you're covering Swampy's passing. Major tragedy. Thanks for keeping his spirit alive. He deserves it! He was (and still is) one of the most special people ever in the industry. Keep talking about him (he'd hate that!).

Mark "Noddy" O'Donnell

• The web article on swamp was great. Who would believe that accolades would fall on to the great shoulders of just a roadie?

Swampy, thanks for the memories. The v

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