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NOVEMBER 2001 A\$4.90 / NZ \$6.50

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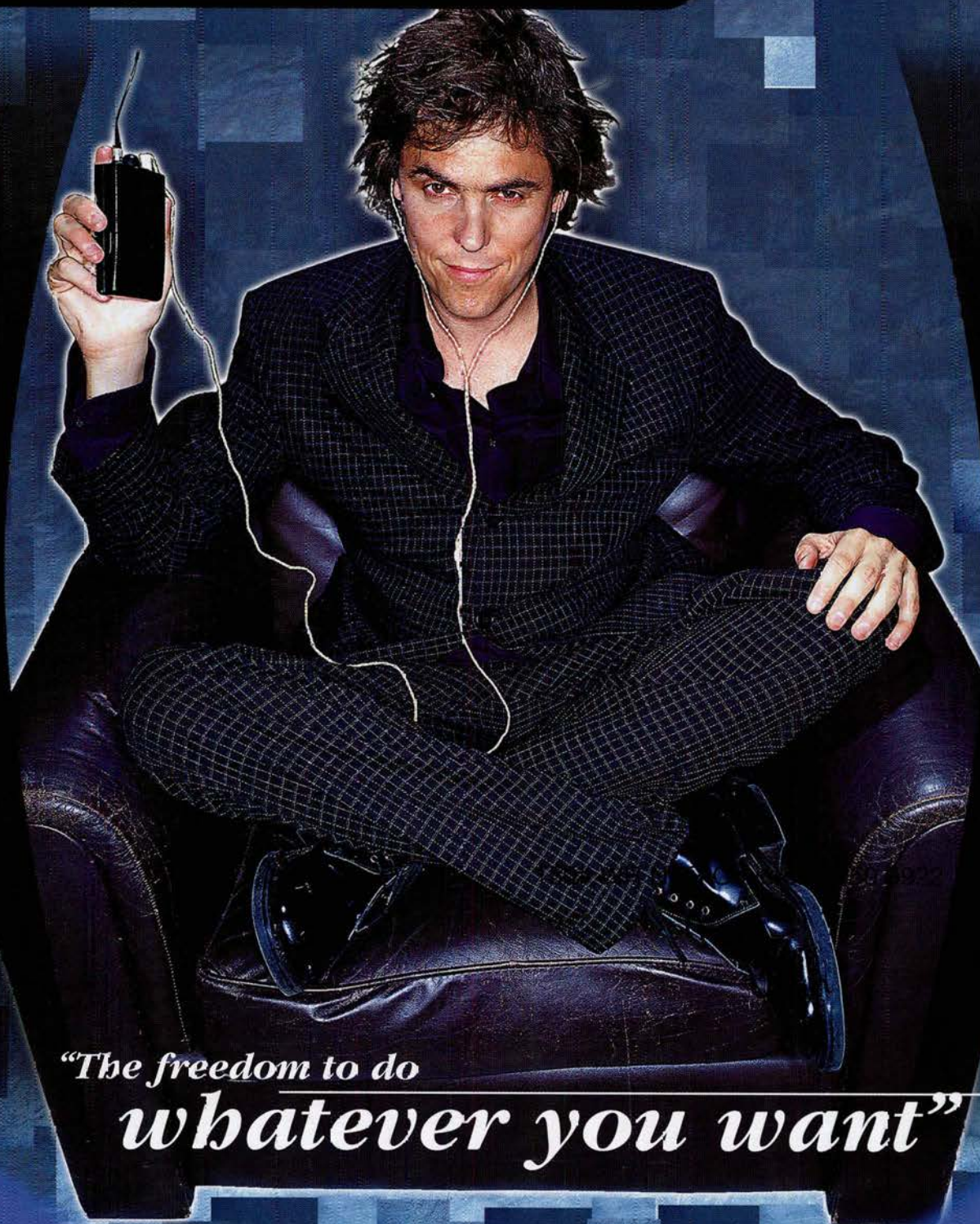
- POWDERFINGER TOUR NEW NEXO PA
- BOND LIVE IN EUROPE
- PHIL TRIPP -VS- MICHAEL CHUGG
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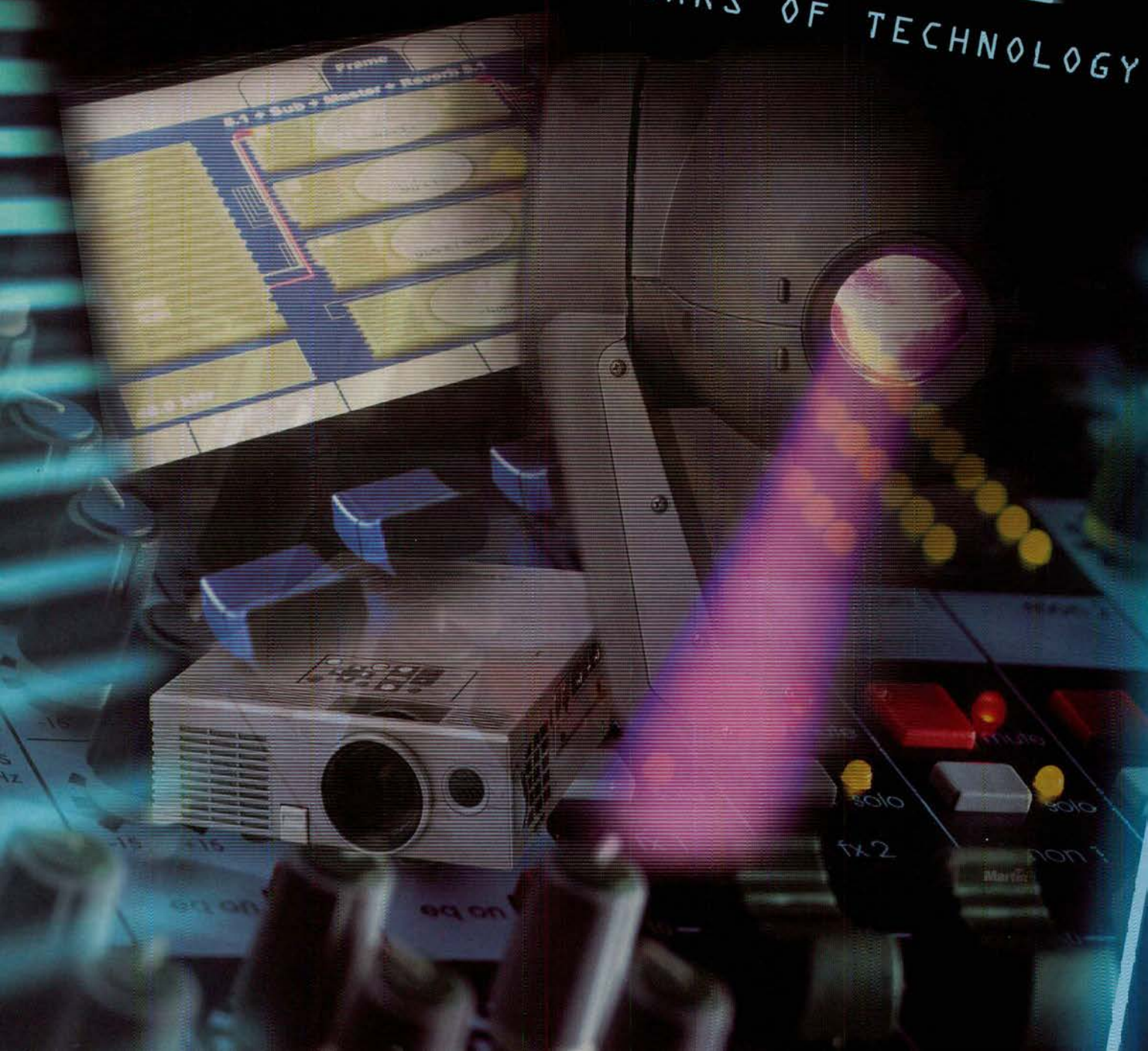
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**Bond...**  
On tour in Europe  
Page 26



**New life for the Myer Music Bowl**  
Page 38

## MARKETREPORTS



**Digital Automated Mixing Consoles**  
Page 40



**Lighting Control Desks**  
Page 45

## Features

<b>Dames Bond</b> Mike Mann reports on some Aussies touring the UK	<b>26</b>
<b>Powderfinger</b> Julius Grafton takes a look at the show touring with Nexo PA	<b>30</b>
<b>EAW Line Array</b> Debut outing for the latest line array system	<b>34</b>
<b>Myer Music Bowl</b> Reburishing the Melbourne Icon	<b>38</b>
<b>MARKET REPORT - Digital Automated Mixing Consoles</b>	<b>40</b>
<b>MARKET REPORT - Lighting Control Desks</b>	<b>45</b>

## News

Sony Music step up DVD manufacture.....	9
OH&S training requirement for new crew.....	9
Bytecraft reach 1000 moving lights.....	10
Music Association brings back old musicians.....	11
Workcover ready to prosecute over use of fire stairs....	11
Connections Moves - and expands into training.....	11
Retro Special for ENTECH 2002.....	12
Tripp -vs- Chugg.... Battle on the Music Week stage.....	14
Cerwin Vega Returns.....	14
X-Spot In Sydney.....	18

## New Products

CreamWare - A16 Ultra and Luna II .....	18
ELC - DAM 44.....	18
Cadac R-Type .....	18
Space Cannon - Cat 150.....	20
Theatrelight - Stagemaster.....	20
Martin - LightJockey 2.0.....	20
Stanton - SK2.....	20
JBL - ScreenArray.....	22
Allen & Heath - Xone: 2.....	22
Euphonics - FC727.....	24

## Forum

Tracking Guide.....	54
Letters and Email.....	57
Classifieds.....	58
Good Rigging with Tiny Good - <b>Structures - General</b> .....	59
My Gig - <b>Robert Satterlee - Stage Manager</b> .....	61
Comment by Graham Walne - <b>Sounding Off</b> .....	63
Subscriptions and Connections Bookshop.....	64
Deep Fry - <b>Turnpike Tinsel</b> .....	65

## info:

### UPCOMING REPORTS:

Dec - PA Systems,  
Live Multimedia  
Vision Mixers  
Feb - Digital Recorders,  
Dimmers

### NEXT ISSUE:

Onsale 12th Dec,  
subscribers earlier.

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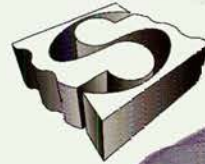
## On the Cover...

This month's cover shot is of the Computite Spark Top lighting desk.  
Photography by Dario Gardiman



## AUDIX

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12" Gooseneck Mic  
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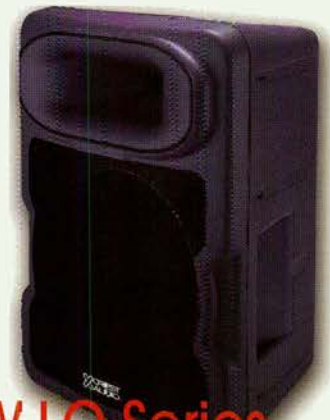
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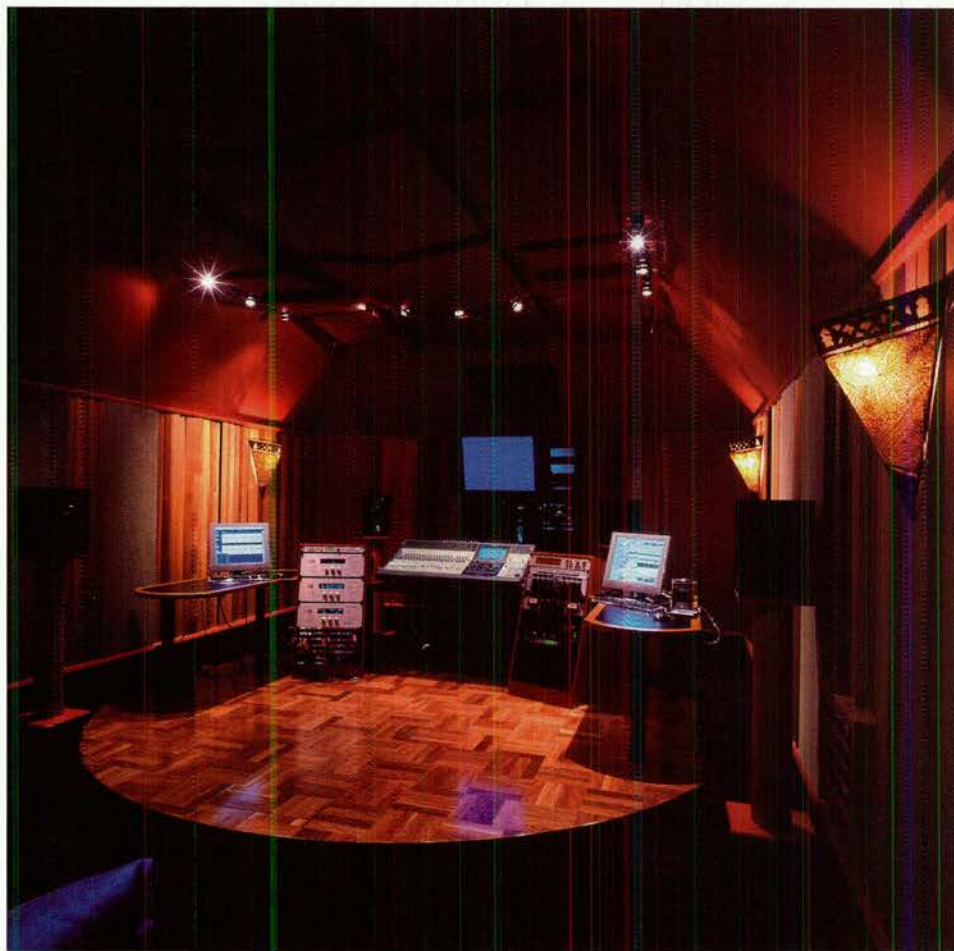
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# Connections

The Asia/Pacific Professional Audio and Visual Technology Monthly **NOVEMBER 2001**



## Sony Music step up DVD manufacture

*Stamp! Stamp! Stamp! That's the sound of DVD's birthing: one every 4.5 seconds - or 19,000 daily*

Sony Music Australia have invested heavily in local manufacture of DVD's. Their new DVD line runs alongside 8 CD lines at Huntingwood in Sydney's western wastelands. Sony have also just opened a new generation DVD authoring facility.

The studio (above) features Sonic Solutions DVE Creator, a Media 100 video production system, the new Sony DMX-R100 48-input digital audio console, Digidesign's Pro Tools and Sonic Solutions HD audio mastering. The new facility has the ability to create diverse high quality program material for Super Audio CD (SACD) and DVD optical disc formats.

Other key equipment includes the ZS series of digital processors, the Q6 6-channel

EC, the CL6 Mastering Dynamics Processor and the K6 Surround Processor (for highly effective reprocessing of Stereo to Surround into Surround Sound).

In addition the facilities feature the Lexicon 960L digital multichannel effects system, plus the Manley Massive Passive Stereo EQ and Variable Mu Limiter-Compressor (both tube-based devices).

Opening the generously equipped facility last month, Sony Music Chairman **Denis Handlin** said at the opening he felt there could soon be a renaissance of high fidelity.

The new room, very tastefully decorated at lit, boasts Genelec 1031A bi-amplified monitors and a 109-A active subwoofer, for THX and Dolby surround audio. •

## Safety Exam pass for new crew training

New Australian entry level crew training packages in Live Sound or Lighting announced last month carry a Safety pass/fail test and assessment for OHS. The equipment setup and technical operation courses, aimed at 'Certificate One' or entry level training of technicians, will each run for one full week or nine weeks part time.

The two initial separate courses, LIVE AUDIO; and LIGHTING are training packages created by **Julius Grafton**, publisher of Connections. Julius has structured the two courses around industry requirements.

"We hope employers will see the merit in all new crew meeting a minimum standard" says Julius. "The standard needs to approximate what is in our courses, which are intense, condensed, and hands-on. During my Workplace Training Certification I learned how to package a course, and during my 30 years in this industry I've sure learned how to cut through un-necessary detail."

"I don't plan to corner the market on this new kind of entry level training, but I think we all agree new crew need to be tested on safety - especially electrical."

"These are professional course packages, aimed at serious potential professionals.

The courses are the first new training packages to be delivered through Connections Magazine, with classes either as a five day block, or on a weeknight.

Course costs are to be held at A\$600 or under for a week. Sydney dates are scheduled for first quarter 2002, Melbourne to follow.

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

# Connections

9th year of publication!

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## Who is doing what?



High End Systems' distributor Cor Biviano, with Stephen Found in Sydney last month.

## Bytcraft reach 1000 moving lights

Newly split Bytcraft Entertainment moves premises, invests in more equipment

Stephen Found's Bytcraft Entertainment has completed the integration of Jands Production Services lighting assets, and moved into spacious new premises in Dandenong (Victoria) and Rosebery (NSW).

The new firm now boasts around 1000 moving lights, including the former Vari-Lite Australia inventory, acquired from Jands. "Every fixture was sold on the basis it would work going out the factory door, and if they didn't, they would fix them" stated Stephen, refuting industry buzz to the contrary.

"We are also continuing to buy and expand inventory" stated Stephen, "with 28 new High End System's X-Spot's and 50 racks of Bytcraft AFC Dimmers".

The firm is now separate from Bytcraft Automation, which is run by Ted Frezon. This 'other' Bytcraft also manufactures dimmers, and retains close links as Stephen is still a shareholder.

Jands sold their production lighting business to Bytcraft earlier this year in a deal rumoured to be worth A\$7 million or more. The acquisition made Bytcraft the largest production lighting firm in the southern hemisphere, boasting every major brand and type of moving light within inventory.

"We've done a lot of work on safety and standardising between Jands and us".

"Contrary to some myth, (Jands directors)



A rare picture of Jands Production Services chief, Eric Robinson

Eric (Robinson) and Paul (Mulholland) are a great double act. They are absolutely professional, and kept their end of the bargain. Plus, my respect for Vari-Lite has gone up immensely."

As to the current downturn in business that almost everyone is facing, Stephen is sanguine. "I'm the supreme optimist. I've made a major commitment, and I continue to buy equipment and expand."

"I just love lighting!"

- Julius Grafton

## Turbo Q-Light makes inroads

Since the Adelaide Convention Centre purchased 24 Powered Turbosound Q-Light Enclosures, the Turbo powered series has found more homes.

**Australian Concert Productions** have purchased 8 x TQ440SP Turbosound Powered Full Range Enclosures, with 2 x TQ425SP Turbosound Powered Sub Woofers.

**Integrated Vision** in Adelaide have purchased 8 x TQ440SP (powered), with 4 x TQ425SP (powered) subs for their corporate hire customers.

**AVI** in Perth have purchased 4 x TQ440 and 2 x TQ425 non-powered Turbosound Q-Light enclosures for their live band and corporate work.

More from: [www.audiotelx.com.au](http://www.audiotelx.com.au)

## Been A Long Time Since They Rock n' Rolled!

Music Association borrows a good idea from NAMM and brings old muso's back

Just because a musician hasn't played for a long time, that doesn't mean they aren't a musician anymore. Or that's the story behind Granddaddy Cool and the Stray Crocs, two of the newest bands on the Brisbane scene. But bands with a key difference.

The bands were formed through the Australian Music Association's new 'Weekend Warriors' program, which was developed to provide lapsed musicians with an opportunity to meet, practice and play together for fun. And joke about old road crew....!

The Weekend Warriors program has already been running successfully in the USA and Canada, and is the first of a range of initiatives spearheaded by the AMA to encourage music playing in Australia.

"Our research shows that there are many Australians who are keen to rekindle the interest in music playing that they developed at school. Until now, the opportunity for these people to play music socially has not existed," says Australian Music Association Executive Officer, **Ian Harvey**.

Participants enrol in the program at music retailers, and then an open house meeting is arranged where participants meet one another to form their bands. Participants with similar skill levels and music interests are matched up and the bands commence four weeks of rehearsals before playing a public concert, the proceeds of which are donated to a charity.

The program was piloted in Brisbane by two musical instrument retailers: Ellaways in Kedron and Carroll's Total Music Solutions in Southside.

According to Harvey, "The response to the first Weekend Warriors program has been phenomenal, and the quality and calibre of participants is well beyond anything we expected, and we are now organising the second round of programs in the Brisbane area, with a view to a national rollout early in 2002."

**Greg Dodge**, manager music retailer Ellaways, which runs one of the two Weekend Warriors pilots, claims that the program is not only proving to be the answer to many lapsed musician's prayers, but to those of the music industry as well.

"We just didn't realise there was this pent up demand from older musicians to get back to playing. They just didn't know how and that is the great beauty of Weekend Warriors - it shows them how to come back to music in a way that's easy and lots of fun."

"Our first concert featured five Weekend Warriors bands; UB50, the Rolling Bones, Stray Crocs, Started Late, and Grand Daddy Cool, and was a terrific success. We raised more than A\$1200 for the Smith Family through ticket sales, and the bands are already organising a concert reunion, and to continue meeting and playing together socially," says Dodge. •

## Connections expands into training; moves

Connections have move moved into large premises, ahead of commencement of technical training courses next year. The new pad is at North Parramatta, in the virtual centre of the greater Sydney area, and on the fringe of the wastelands.

New technical courses include entry level training for new sound or lighting technicians, and further workplace training at Certificate II and III level will be rolled out and announced at ENTECH.

Readers can more easily also swing past and buy training books, plus arrange subscriptions and advertising.

New address INCLUDING mail:

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## OHS LAWS BAN FIRE STAIRS FOR LOADING

Registered clubs are now breaching new laws by continuing to require technical crew load equipment up fire stairs.

SYDNEY'S Parramatta and Castle Hill Leagues Clubs were both caught out recently when crew loading for a show were told to use the external fire stairs rather than internal stairs or a lift to shift gear into the venue.

While this is actually in breach of laws enacted in 1983 relating to the potential blocking of emergency exits for the period the gear in on the steps, new workplace safety laws caused this practice to also breach the new legislation relating to good Occupational Health and Safety.

From 1 September 2001, important new workplace safety laws came into effect in New South Wales. The NSW Government introduced the Occupational Health and Safety Act 2000 and the Occupational Health and Safety Regulation 2001 to update and simplify laws relating to health and safety in all NSW workplaces.

The problem was that breaching the 'no obstruction to fire stairs' law then makes that practise 'unsafe' in terms of the OH&S legislation. Venues and equipment hirers should be making themselves aware of the fact that ordering employees (loaders or crew) to use emergency stairs can result in \$1500 on-the-spot fines to employers, or \$750,000 fines to corporations. Employees that use fire stairs after being instructed not to can suffer on-the-spot fines of \$200.

Comment from Workcover in NSW indicated that venues also have an OH&S responsibility to allow the use of internal lifts (if available) over internal stairs. By not doing so, it is possible they are open to potential litigation from any accident or injury that happens as a result.

Who is doing what?

## Retro Vibe Strikes Chord for ENTECH 2002

Exhibit of memorabilia and pictures to celebrate 30 years of Entertainment Technology next February 4 - 6 in Sydney



Random pictures from the exhibit. A 'guess who they are' competition will also be held.....! Send in your old & gear people pix!

Maybe it's true that in hard times, people retreat into the past. Whatever the case, ENTECH 2002 organisers tapped a vein with the 'Past, Present, Future' theme for the tradeshow next February.

Alongside the acres of exhibits of new equipment, much of it alive and working, will be a museum exhibit of old equipment, to celebrate 30 years of entertainment technology.

Detroit based Buck Freeman remembers the 1970's well, starting his touring days here after marrying a girl he met one night at Whiskey Au Go Go in Sydney's William Street. "I was on vacation after demobilising from 'Nam, and was turned on and tuned out for about two weeks. When I came down of the brown acid, I discovered I was married to Amanda - a very pleasant surprise!"

Buck spent the balance of the 1970's here, working with a variety of bands, before splitting with his wife and heading back to Detroit.

"I remember Healing Force had that song, 'Golden Miles', and all the protest songs. I spent \$6 to go to Sunbury where the motto was 'suck more piss', and your eyes were red from either dope or the smoke from the fires

on the hill!"

Buck's days saw legendary Australian bands like AC/DC, Skyhooks, Midnight Oil, Sherbet and Cold Chisel born out of the dance circuit and migrate to the beer barns.

"I remember driving an AVIS Ford D Series pantech, with a 6 cylinder petrol engine and a four speed box, to Melbourne overnight after a gig at Taren Point Youth Club with The Aztecs" says Buck. "We were motoring along the Hume Highway near Tarcutta at dawn, when we came across this broken down bus, an old Ansett Flexible Clipper I think they were called - with the giant air intake on the back roof. It was the ill-fated AC/DC touring machine, and the seedies were standing beside the thing looking seedier than usual while the roadie tried to rewire the electricals. Those days you could drive the Hume or the Pacific highways any hour of any day and see band trucks."

Thirty years is a long time when you are young, and many of today's technicians came from the era since 1972. It was the year that the modern era in audio and lighting started, with the transistor replacing the valve. Things got louder, brighter, and heavier - a trend that plateaued in the mid 1980's, when the cost of touring eight tonnes of production equipment drove many second level bands off the road.

While there have been displays of old equipment before, this is the first time the industry has mounted a retrospective.

The organisers have called for old pictures, equipment, and memento's to be loaned to the display, which will be produced by Colin Baldwin from Showcorp.

Contact Julius Grafton in the first instance, on +61 2 9876-3530, mail to 6D Villiers street North Parramatta 2151 or email [julius@conpub.com.au](mailto:julius@conpub.com.au).

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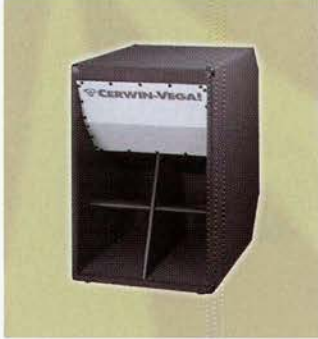
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**SONY**

## Who is doing what?

### Cerwin Vega is back

The big red returns to Australia. Cerwin Vega, the well regarded American brand of loudspeaker systems is now distributed by **Audio Products Australia**. Contact them on +61 2 9669-3477.



### Correction: DHA

On page 54 of our PLASA coverage last month, we incorrectly mentioned only Clearlight Shows as the distributor of DHA products. Rosco Australia Pty Ltd also distribute all of DHA's product range, including their gobos, in Australia. The DHA Moving Effects (like the Yoyo++ mentioned last month) are a shared agency between Rosco and Clearlight Shows. We apologise for the error.  
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### Correction: Milk Bar

On page 28, 'State of play at the Milkbar' last month, we stated **Sammy Kanis** and **Dave Sykes** own the facility. Dave Sykes says this is not the case, Sammy alone owns it. We apologise for the error.

## Tripp -vs- Chugg.... Battle spills over on Music Week stage

Australians in the music biz sure know Phil Tripp. Love him or leave him, Tripp is the voice of the industry anytime the media is looking for one. The naturalised Aussie animal lover is a PR guru, heading immedia - who also publish the bible of industry directories, the Australasian Music Industry Directory (AMID).

Equally well known and equally in the media limelight is Michael Chugg, pioneer booking agent, band manager, and concert promoter who recently forged out on his own with a new company after running Frontier Touring for years.

The two ageing goliaths, both equally loved and respected by this writer, appeared to polarise over the issue of music industry conferences. Tripp runs one that does quite well, while Chugg has struggled with his PMA concept for several years.

Matters came to a loud head before a startled crowd at the opening of Chugg's latest conference last month. Expecting an opening speech for Australian Music Week, the three hundred assorted industry types instead received a motivational speech about Phil Tripp - -- and his citizenship.

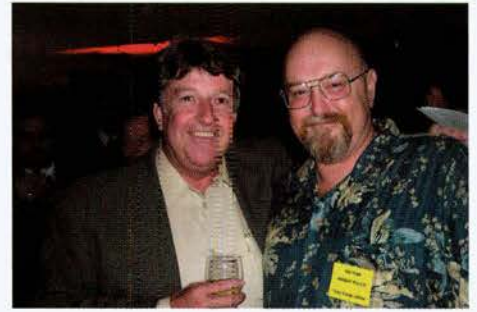
It was classic Chugg. And to repeat his words here would amount to chronic and severe libel. Lord knows we prefer not to spend any more time in the Supreme Court.

Anyway, our operative at the conference was astounded, and reports open mouthed incredulity, with scattered applause from four or five individuals at the end.

But we can report Tripp's retort.

"Regarding Michael Chugg's bellowing abuse of me at Thursday's opening of his event—though actionable and defamatory—is forgivable given the enormous pressure he is under as an event promoter.

"We all know Michael to be a colourful



Phil Tripp (right), pictured with Sony Music Chairman Denis Handlin.

character and an avid Australian music champion given to passionate performances from his stages. This was a doozy.

"As an Australian, I might be tempted to take immediate legal action over his remarks—as too many allegedly defamed individuals do at the enrichment of lawyers. But I'm satisfied the personal embarrassment of his performance in front of the music industry in the heat of the moment overrides any need to punish him monetarily or publicly for his imprudent actions. And I'm sure he's big enough and smart enough a man not to engage in such uncontrolled behaviour now that he's got it out of his system.

Chugg meanwhile wasn't in the mood for conciliation.

"Someone had to do it. It was good" he barked when we called.

Connections breathlessly awaits the next instalment!  
- **Julius Grafton**

### Late news

At presstime **Kosmic Sound & Lighting**, the leading Perth outlet, was severely damaged by arson. A fire was deliberately lit next door, and Police are seeking a person to assist with their enquiries. Owner **John Goldsmith** has adequate insurance. New temporary premises are at: 94 Hector street Osbourne Park. Ph 08 9242-3844. Commiserations to all staff and customers.



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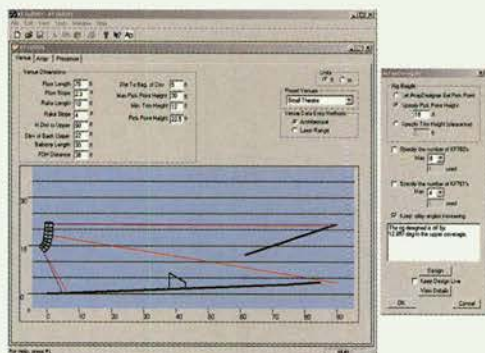
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- large theater
- amphitheater (shed)
- small arena (side arrays required)
- large arena (side arrays required)
- outdoor festival

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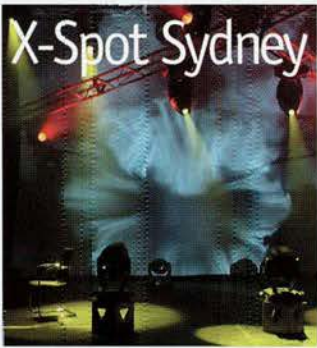
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What will you be using soon?



The X-Spot roadshow (Connections October p13) came to Sydney last month, to display the impressive range of talents that this new fixture now boasts.

The display consisted of a narrated run through of the X-Spot effects, followed by a moving light 'Son et Luminaire' (sound & light show) designed by Hugh Toronto.

The event certainly showed off the unit very well - actually better than the display at the PLASA trade show in the UK.

The event was also a launch for the new Bytecraft premises at Rosebery - much bigger premises for the company and they already seem to have filled it to capacity!

The High End X-Spot is distributed by ULA +61 7 5510 1333.



## Cadac R-Type

### Small desks with big features

Cadac's lightweight, innovative R-Type console takes the Cadac modular principle, and makes it available in a small, and more affordable frame. The R-Type was on display at this year's PLASA, and has already been used in a number of high profile shows in the UK.

Like all desks in the Cadac range, price depends entirely on how the desk is loaded, as each desk is built especially to the specifications of the required installation. For more information, contact the Australian distributor, System Sales +61 3 9529 2633.

## Lighting DMX for Audio Control



The ELC DAM44 bridges the gap between lighting control and audio control. With many smaller professional and amateur performance companies often employing one operator for the sound and lights on a show, more and more of these companies have been searching for the 'ideal' automation solution.

This 1RU box from ELC will take four audio inputs, and allow the user to send that audio to any of the four audio outputs. Adding this device to any installation could

be as simple as putting the final stage of audio through this device before it enters the amplifiers.

There are also four channels of contact closures, designed to be used for starting/stopping audio equipment. The box uses 20 channels of DMX, and is extremely simple to install.

The DAM 44 retails at \$3,025.

ELC is distributed in Australia by Clearlight Shows +61 3 9553 1688

## CreamWare A16 Ultra 24-bit / 96 kHz 16-channel converter



The A16 Ultra by CreamWare is a 16 channel AD/DA converter unit. Some features include High-quality 24-bit / 96 kHz AD/DA converters, 2x ADAT interfaces, S/Mux for ADAT conversion at 96 kHz (8-channels), 2x Z-Link interfaces (16 channels at 24-bit / 96 kHz), 16 VU meters for exact signal levelling - all in a very compact: single rack space 19" unit.

According to Creamware, various expansion options for the A16 Ultra are planned. These include add-in boards to extend S-Mux functionality to 16 channels and a USB2 option so that the converter serves as an I/O solution for any computer system with a USB2-compliant interface. The A16 Ultra is set to retail at \$2,695.

CreamWare have also release a software upgrade for their Luna II audio recording PCI card. The new Version 3.0 software package includes a collection of new DSP effects which are created in real time by the Luna card's three SHARC DSPs. The effects include

MasterVerb (a quality reverb effect), chorus, flanger, phaser, compressor, limiter, gate, EQ and various delay effects. All effects use the same 32-bit precision algorithms employed by the larger CreamWare DSP systems.

The new version also benefits from significant improvements to the user interface. The Luna Recording Mixer and the 5.1 Surround Mixer have also been revised.

Creamware are working on other future options, including ASIO driver with 64 channels, AC3 Dolby Surround digital output via S/PDIF and accelerated graphics. The current upgrade allows Luna II to be used under Windows 2000/XP.



Luna II is available at a suggested retail price of \$1,099 (software only upgrades are free)

Creamware is distributed in Australia by Major Music Wholesale, Sydney +61 2 9545 3540



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What will you be using soon?

## LightJockey 2.0

Martin have released LightJockey 2.0, an upgraded version of Martin's popular Windows based lighting controller. LightJockey 2 incorporates a host of useful upgrades including a new PCI card for increased PC interface capabilities (also USB and PCMCIA interface options). The software is Windows 2000 compatible.

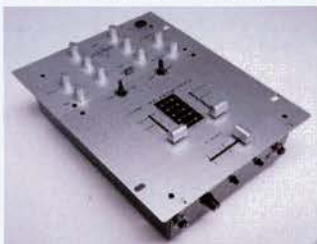
New features include a Solid Beam Virtual Visualiser, a high quality visualisation simulator capable of creating 3D beams. Visually accurate and easy to understand, the simulator allows the creation of virtual visualisations off-site.

For more flexible music capabilities, LightJockey 2.0 can interface with Winamp to play a multitude of digital audio files including MP3. LightJockey 2.0 includes audio CD ROM capability, and supports SMPTE and MIDI timecode with suitable interface. There is also a new show-saver backup feature.

LightJockey 2.0 Packages are PCMCIA I: 1024/512+512, optical isolated in/output, PCMCIA I+II: 2048/1536, optical isolated in/output, USB : 512, PCI512: 512+512, (replacement for ISA DJ), PCI2048: 2048/1536, optical isolated in/output (replacement for ISA Club). Existing users can download upgrade for free, no hardware modifications required.

The USB version is priced at \$2999, and is available from Show Technology: +61 2 9748 1122

## SCRATCH FOUR LESS!



Stanton have released the SK-Four two channel scratch mixer. The SK-Four includes a 2 band EQ per channel, master cue, photocoupler cross and channel faders, hamster switch, and balanced outputs.

The unit is set to retail at \$595, and is distributed by Jands Electronics Pty Ltd: +61 2 9582 0909

## CAT 150 - from Space Cannon



The CAT (Colour Advanced Technology) is a professional exterior and interior wash/spot fixture. Small, light, efficient and 'environmentally friendly' (without IR and UV rays output), Space

Cannon's CAT is designed to meet the specific needs of the architectural lighting professionals. Feature include high light output, colour mixing, variable photo metrics, and it is fully weather protected to IP66.

The CAT uses a tubular quartz dichroic system, providing smooth and saturated colour cross fades throughout the entire

colour spectrum as well as adding the possibility to obtain variable photo metrics from 3.5 to 80 degrees, both with symmetrical and asymmetrical beam.

The CAT 150 is an automated 150-watt fixture, utilizing a short-arc lamp with a life of 6,000hrs to 12,000hrs, depending on the lamp type. The CAT 150 can be controlled via DMX512 or using the external SPACE COMPOSER control system which includes a no-cable bi-directional infrared remote control. A built-in microprocessor board allows several units to work in STAND-ALONE mode, without any external controller.

It will be available in 10 different versions, one of these being a buried version. The Cat150 will be priced at \$6,418, and is distributed by Coemar De Sisti Australia +61 3 9467 8666

## Theatreight announce a comeback

New Theatreight Stagemaster increases the product range



Theatreight have found new representation since the demise of Lightmoves NSW. Like Selecon, the New Zealand based company has found distribution with a number of resellers across the country. The announcement coincides with the release of a new control desk from the company, the Stagemaster. The desk has 1024 channels, fully patchable to 1024 or 2048 dimmers, unique 100 key channel selector with trackball for fast plotting and editing and full moving light attribute patching and editing.

Also, any channel can designated as an Intensity Channel (HTP) for dimmer levels, or Position Channel (LTP), for mechanical position levels, and have a minimum, a maximum, or a fixed level set. There are 50 preset groups per page of moving light focus positions, colour/gobo selections, or commonly used channel selections and 20 submasters per page for scenes or chases playback with page overlay memory.

There are 10 pages each of 4 shows for playback through a dipless crossfader or Go button. Each cue of a show can store a text message, fade up, down, and delay times, and

can link in any of the 50 groups or 20 submasters for special effects on the current page.

The design of the desk allows for fast editing of stored cue levels, fade-times, and chase speeds, and insertion or deletion of cues, and each show playback controller gives single button auto-fade auto-effects cue operation simplifying complex shows. External control input for Audio-Visual applications or remote single button operation or by remote serial control of Show cue number playback.

The desk has a VGA display output as standard, as well as printer options, disk storage for backup and instant operation on startup.

Some of Theatreight's consoles are listed in the Market Report that starts on page 45 of this issue.

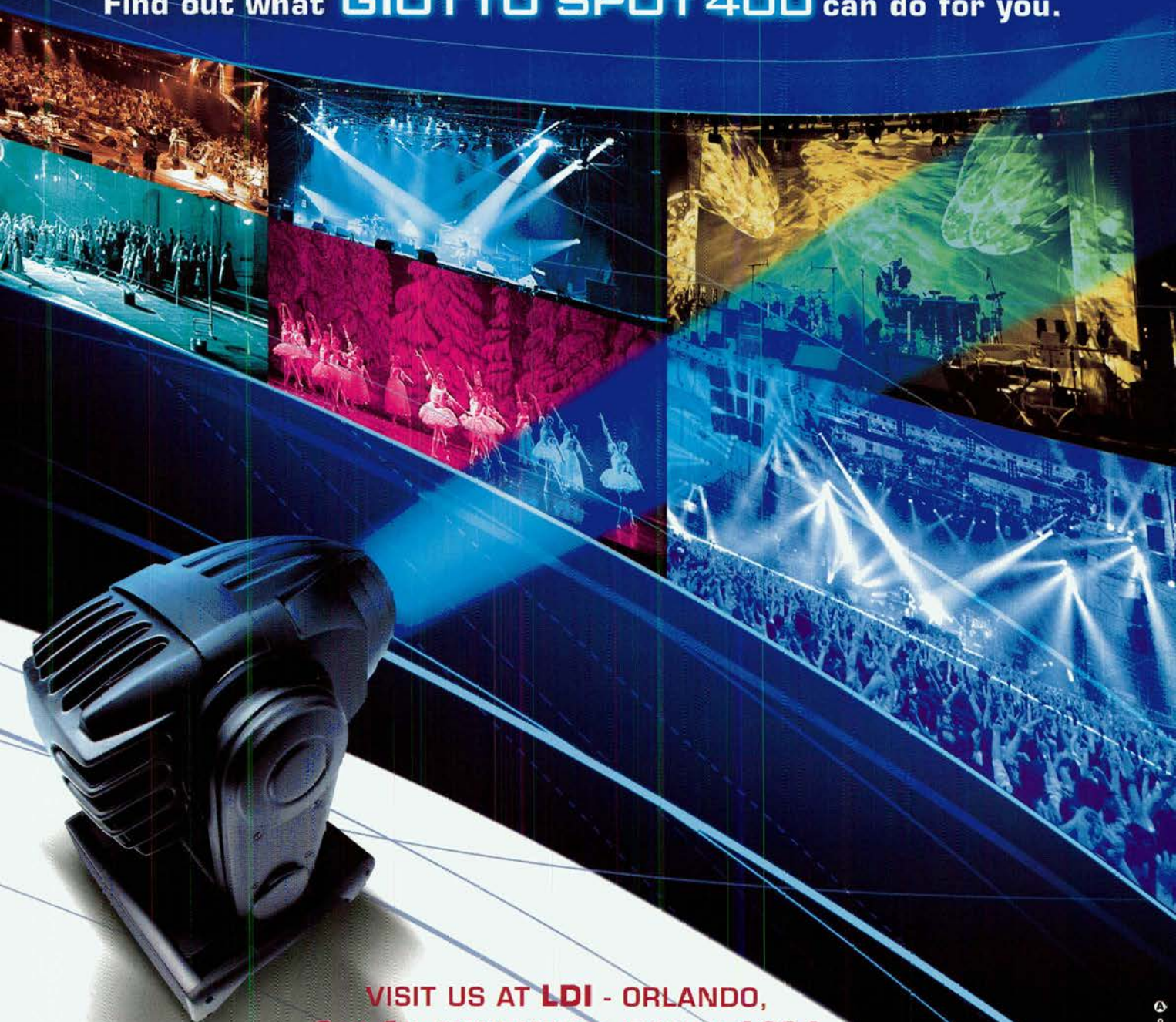
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What will you be using soon?

## ALLEN & HEATH IN THE 'BATTLE' XONE



PLASA 2001 marked Allen & Heath's entry to the scratch mixer arena with the launch of the Xone:02 stereo pro turntablist DJ 'battle' console. Although it looks like a two channel mixer, its pair of dual stereo channels and dual mic channel allows up to 4 stereo and 2 mono sources to be mixed simultaneously with independent gain.

Using 45mm dual-rail, gold contact, conductive plastic VCA faders throughout, all with contour control and reverse switching, the Xone:02 can be configured to operate the way DJ's prefer. Custom tooled for Allen & Heath each fader can be easily replaced by removing the steel faceplate. All outputs are VCA-controlled for premium audio quality with balanced XLR connectors on the main stereo mix outs.

The 2 dual stereo channels have a specially designed 3-band EQ section on low-profile sliders with a rapid-response 12dB per octave slope and asymmetric +6/-26dB of cut/boost. Each stereo channel also has VCA pan controls on sliders and special rotating transform switches which work up/down or left/right to match the DJ's style.

Xone:02 also features a set of effect loop on/off controls. Silent FET (field effect transistor) switches seamlessly cut external FX into the mix with no audible clicks.

A new, high quality preamp has been created for the dual mic input, boasting balanced XLR inputs, separate mic1 and mic2 gain controls, 3 band EQ tailored for vocal frequencies and effect switching.

Other features include a cue slider, high-powered headphone output and an independent booth feed that doubles as a link out for 'daisy-chaining' mixers, or even as a recording output.

Retail price of the Allen & Heath Xone:02 is \$1,995 and is distributed in Australia and New Zealand by Technical Audio Group +61 2 9810 5300 [www.tag.au.com](http://www.tag.au.com)

## TWO-WAY SCREENARRAY SPEAKER SYSTEMS



JBL Professional's ScreenArray cinema speaker systems now include a cheaper alternative - Two-Way ScreenArray speaker systems.

The new models include two passive systems, the 3622N and 4622N, and one biamplified system, the 4622. The new Two-Way ScreenArray Systems provide

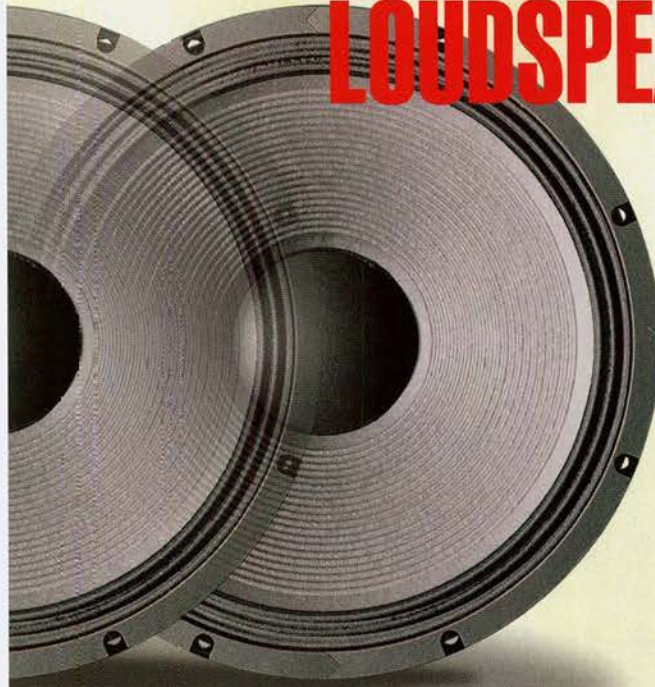
smooth and accurate reproduction of cinema soundtracks while being compact and very cost effective. Measuring less than 18" deep, these

speakers come fully assembled, making installation quick and easy.

All three models offer the low-distortion ScreenArray horn for clear, accurate reproduction of the mid and high frequencies. The horn design features JBL's Screen Spreading Compensation which compensates for high frequency spreading caused by perforated screens, greatly improving audience coverage. All ScreenArray products are shipped fully assembled, which greatly simplifies their installation.

JBL is distributed by Jands Electronics Pty Ltd. For further information, contact Jands on +61 2 9582 0909.

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# INSTALLATION HEADACHES?



## SET & FORGET

The MV800 is a low profile 8 input mixer that offers gating & 2 band Eq on every channel and a dedicated stereo input with ducker linked to inputs. With dual zone outputs and master compressor, the MV800 is ideal for installations designed for the minimum of user operation. It's even supplied with a security cover to keep untrained fingers away from input settings! With individual phantom power and both balanced and Euro-Block connections, the MV800 is perfect for practically any set-and-forget installation.



## FLEXIBLE FEATURES

The MV12/6 is a more traditional mixer, with a host of installation specific features. Linear faders, three band eq's, high quality internal effects and master GEQ ensure that sound quality is not sacrificed just because it's a rack mounted unit. The 6 buss and 3 aux design means that even highly complex multi-zone systems are easily controlled. With both balanced and Euro-Block connectors, the MV12/6 has been designed to meet both your audio and installation needs.

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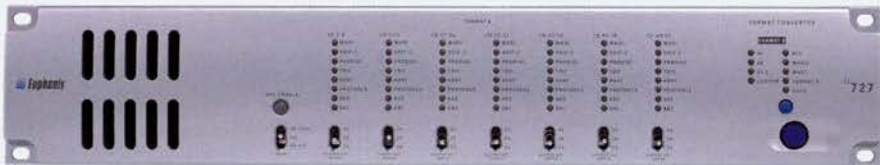
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What will you be using soon?



24Ch OF AUDIO...  
TO ANYTHING AND  
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Euphonix have released a multi-format converter to simplify the input and output from and to digital devices in any of the six common digital formats. Originally designed as an input/output component within a Euphonix System 5 installation, the FC727 is now available as a stand-alone unit. Providing 24 channels of anything to anything and back or 56 channels of anything to MADI and

back, the device is equally at home converting digital audio in any digital mixing system such as Pro Tools, Paris etc.

Working in banks of eight, with a front panel mounted column of LED's indicating the source format, the FC727 automatically senses whether the incoming digital format is AES/EBU, Pro Tools, ADAT Optical, TDIF-1 (Tascam DA-88, 98), ProDigi (Otari and Mitsubishi multitracks) or SDIF-2 (Sony 3324/48 multitracks). It then converts it to MADI, the processing format used for System 5, Pro Tools and Paris or between the formats as required taking care of differing sample rates along the way, either automatically or manually.

Also useable in reverse the FC727 can convert MADI to any of the recording formats or between formats, which again, it can automatically ascertain. A front panel switch allows 16, 20 or 24 bit depth to be selected with the 16 and 20 bit outputs dithered to the output device.

Not only can the FC727 convert bi-directionally and simultaneously between MADI and the above standards but, in banks of eight, it can convert to different standards. For example, it can simultaneously convert the outputs of two Tascam DA-88s, 16 tracks of Pro Tools and a 3324 for mixdown onto a 24-bit 96kHz System 5 console and take care of the sample rate conversion (SRC) at the same time.

Surprisingly compact the FC727 is housed in a rugged 2RU aluminium case with a comprehensive array of connectors on the rear panel, sufficient to handle all the optional formats.

A second unit, the FC726, which in appearance is identical to the FC727 offers all the same facilities except the Pro Tools interface.

Combined with Euphonix AM713, analogue to MADI and MA703, MADI to analogue converters an extremely high quality audio conversion system is available with 96kHz bandwidth throughout if desired.

Retail price of the FC727 is \$64,995 and FC726 \$46,995. Euphonix is distributed in Australia by Technical Audio Group +61 2 9810 5300 [www.tag.au.com](http://www.tag.au.com)

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**LCR<sup>™</sup> Panning** / Available from channels and groups. Uses blend and pan controls to allow any signal positioning across the C and LR busses

**8x4 Matrix** / Fed from the groups, LR and C busses. With inserts and external input. Matrix has VU meter access

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# Dames Bond



**Australian-British string quartet Bond have taken UK audiences by storm this autumn – with a PA system that is as unconventional as their music...**

by Mike Mann

"...each is fitted with an Accusound flexible mini-mic, which, he says, offers the right balance between an 'open' sound and useable gain..."



Bond, comprising Aussies Hayle Ecker and Tania Davis (violin and viola), Welsh violinist Eos Chater and cellist Gay-Yee Westerhchff from England, was formed by manager Mel Bush in 1999, releasing their debut album, *Born*, last year. The band freely mixes classical, folk, dance and rock genres, combining conventional instruments and a full-on pop backing band on stage. Following a year of promotional work that saw the fiery foursome booted out of the UK classical charts for being 'too poppy' and engaged in a battle with record label Decca over a nude album cover-shot, Bond took to the road this autumn with a minimalist system from Britannia Row Productions.

"We really had little idea what it was going to be like," confessed front-of-house engineer Mike 'Bunny' Warren. "The girls had never done more than small-scale promo gigs and TV appearances – getting their sound right was very important, especially for a critical audience." Warren believes that the band's profile has attracted a high contingent of classical music lovers – who are not accustomed to rock'n'roll SPLs. "Some are a bit shocked by the levels – but it's not a loud show," he maintained – but even Warren was surprised at what was possible from his diminutive Turbosound PA rig. "I must admit that I was pretty unimpressed by the size of it when I first saw it," he commented of the Q-Light system, which was designed by Turbosound as a compact, mid-market product for serious installers and small-scale live work. "But when we ran it up in rehears-

als it really amazed me." The system, which has seen use in venues holding up to 3,500, consists of just fourteen self-powered TQ440SP self-powered hi-mids and six TQ425SP subs. A pair of hi-mid cabinets is flown for balcony coverage, and a further two cabinets are turned inwards to provide front fills. "I realised that Bond's audiences were likely to be put off by seeing a huge PA system, and I was blown away by what these little speakers could do," explained Britannia Row chief Bryan Grant, "their coverage and throw is excellent."

The four girls all play both acoustic and electric strings; Warren and the Britannia Row team were faced with the unusual challenge of routing the output of a violin radio pack (Shure 600 series UHF units) via an on-stage guitar effects pedal and back into the system without loss of quality. With audio fidelity in mind, Warren specified wired microphones for the acoustic violins, viola and cello – each is fitted with an Accusound flexible mini-mic, which, he says, offers the right balance between an 'open' sound and useable gain.

Bond's backing band, fresh from the UK leg of Kylie Minogue's hugely successful tour, is provided with the customary assortment of mics and active BSS DI's – capsules include Audix-Technica AT4050s on guitar amps, AT4041s on high-hats and ATM35 clip-on miniature mics. Mixing (via a Yamaha PM4000) is aided by a Smart Research C2 'SSL' compressor on violins, BSS DPR-402 on other instruments and the ubiquitous Drawmer gates on



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Monitor Engineer - Joe Campbell

the kit. Suitably classical reverb is provided by a Lexicon 480L (split to form two stereo units) and Yamaha SPX1000 and SPX990.

Bond's monitor man, Joe Campbell, joined the tour after the first few dates, and immediately set about converting the entire stage to in-ear systems. "The girls were already using them, but the backing band is a bit loud for this kind of show," explained Campbell, who specified a mixture of Shure PSM 700 UHF and hardwired units. "Two of the girls prefer to use their own Sony earpieces, but everyone else is using dual-driver E5s or E1 transducers," he pointed out.

Campbell uses a Midas Heritage 3000 board to generate a full 24 mixes, which include a couple of reverb feeds. Despite the desk's

respectable level of automation, Campbell prefers the human touch; "I don't use automation - I prefer to write down all my cues and remember where I have to be in each number - then all I need to do is press buttons and push faders!" The show is not heavily cued; the four girls are comparative newcomers to stage monitoring and, according to Campbell, are very relaxed about what they need to hear during the show. "The biggest challenge for me is running a stage completely without speakers," he said, "but I know that it makes such a difference out front - it's the only way to do it with an acoustic setup like this."

Lighting for the tour was designed by Liz Berry, who has wowed British audiences for the

last two years with monster designs for Robbie Williams. Stripped down to a basic two-truss rig, she still managed to provide enough movement to keep pace with Bond's energetic stagecraft. The system, which was supplied entirely by Varilite Europe, was based around VL6C spots and VL5 and VL5B washlights; the latter chosen according to lighting director Ewan McRob, for its theatrical colours. "We needed a mixture of lighting styles; the VL5 is great for intense, pop colour, but the 5B has a much subtler range of shades, which work perfectly for the acoustic numbers," he reported. Two dozen PARs and a quartet of Lycian Starklite followspots complete the rig, which is driven by McRob from an Avolites Pearl desk.

Mike Warren, who has to mix a live set that ranges across three centuries and takes in almost every possible style of music, claims that he spends nearly as much time watching the audience as the band; "They're a varied bunch and it helps to be able to read what they're likely to want. When their ears start bleeding you know you've gone too far!"

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## Powderfinger debut new NEXO PA

Julius Grafton reports on another new PA system



Mark McElligot, longtime Powderfinger live sound engineer

Bruce Johnston has a split personality as a sound guy. Like all live sound engineers he aspires to mix bigger and better bands. But unlike most, he also operates a fulsome production company.

Surviving several Oasis tours of the northworld as FOH engineer for the brattish band, he interrupted the latest to fly home to commission his newest PA system, used for the first time on the Secret Service Powderfinger tour. A jetlagged Bruce staggered out stage door at

Sydney's Hordern Pavilion, marveling at the large thing in the sky which is bright. The Sun is not a common sight in European sky's at this time, says Bruce.

Big Beat Productions is now equipped for three sound systems on the road at once, they boast an old Troy Balance MSL-3 system, a 24 box EV X-Array rig, and now a 24 pair Nexo Alpha system. Unlike most production companies, Big beat also package lights and trucking, offering an all in one solution.

The Nexo rig packs a punch.

24 pairs of top and bottom boxes, plus a dozen ultra low S2 subs, will comfortably handle second level venues like Festival Hall, and any theatre in the region. To do an arena show, another dozen pairs of boxes would be needed. But Bruce isn't interested in working at that level at this time. "My business plan isn't to fight a war," he states.

Managing a middle level production company, plus a wife and three year old child back in Melbourne from the far reaches of Europe isn't an enviable task, and Bruce admits to being slightly stretched at times. "At least when Oasis tour they usually work for five weeks and have a break, so I come home". Bruce has finessed the Qantas system as a Gold Frequent Flyer, and manages to upgrade his ticket on QF10 to Business Class. For anyone whose work has taken them to

Europe and back on a regular basis, this is understood to be essential practice. Economy class is not conducive to working anytime within 72 hours of making that journey.

"I've met a lot of people" Bruce states, "and learned a lot about large shows. Not too many people in Australia understand about proper stacking and flying of PA's. At least live arrays have taught people about that!"

The line array topic leads to an interesting fact.

Oasis were a V-Disc client, and now tour Nexo.

To find out why, I go the long route and ask Powderfinger sound engineer and self appointed psychological advisor Mark McElligot (pictured left) why he was using Bruce's new Nexo rig. "It's my favourite spec" he says. "I was using Turbosound Flashlight for years, and tried plenty of other (rigs). But I fell in love with this - it's t'high tech, configurable, new sounding yet with a classic sound. You put a guitar through and it has a 'rock' sound, something other Pas don't have".

The Nexo Alpha system is fairly straight forward on paper.

A very compact top box (M3) is loaded with 2 x 10" drivers, and 2 x 4" compression drivers on a manifold styled horn. This carpet covered box weighs 45kg or so, ultra light weight for a concert PA box. Its identically sized bass box mate, the B1, is loaded with an 18" woofer on a folded throat. These two boxes are joined by a dual 18" sub, the S2, which takes the system configuration to four ways, meaning that the system processor - the NX241 controller - has one input, and four outputs. Each amp rack has a controller in the top, as it takes a sense output from each amplifier in the traditional style of an old Meyer or Renkus Heinz system processor.

The sense function is a simple dBv monitoring exercise where the controller compares input gain with amplifier output and acts accordingly in the best interests of its client speaker boxes. This tends to minimize loudspeaker failure as the amp output can be attenuated at the input, since the amp is fed by the system controller.

Nexo have done a lot of science at their French HQ, and have configured the Alpha system to be optimized for use with Camco Vortex 6 amplifiers. These are brutally powerful, delivering a claimed 3000 watts per channel into 2 ohms, which is death and

Bruce Johnston from Big Beat Productions, proud owner of a new NEXO rig



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All level settings are stored in on-board, nonvolatile memory and may be changed either by direct PC connection or from the front panel. All settings can be saved and recalled from 16 memory presets. The front panel can be locked out to prevent access by unauthorised persons.

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...provides expanded Signal Processing: 10 third-octave graphic EQs, 10 five-band parametric EQs, 10 audio delay lines, 10 compressors, 0 gates, 10 crossover filters, 3-band swept EQ on each input, **Mixing:** True crosspoint mixing, 8x10 matrix mixing, 32 control groups to link any gain elements, 32 preset, 32 mixe groups, 10 logic inputs and outputs to trigger functions such as ducking, in priority schemes.

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The DX8 offers two RS232 ports for local programming and interface to standard control systems, as well as a proprietary three wire control bus for use with optional remote controls.



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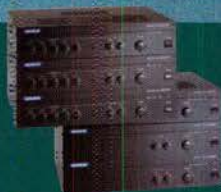
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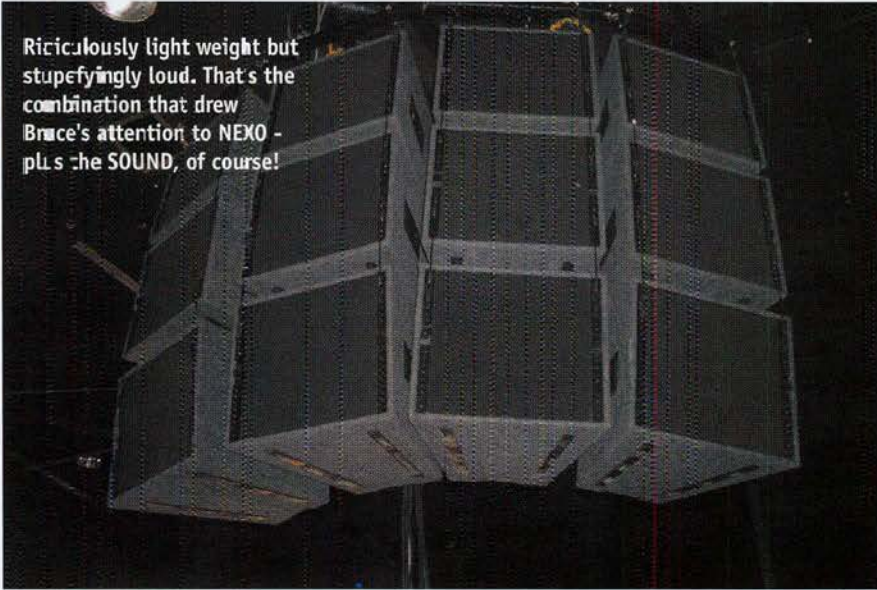
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# Australian Audio

S U P P L I E S

# INDUSTRIAL

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## LIGHTING

New Yorker Jason Boyd was a long way from home, having met the band in New York and forming a close association.

Vari-Lites dominate Jason's design, for the European club tour Powderfinger did earlier this year they carried just 9 units on Manfrotto stands - 5 VL6B and 4 VL4's. The band toured in a coach with 12 bunks. A trailer carried the stage gear and the nine Vari-Lites, plus the band's FOH effects rack.

The lighting rig was big on punch, with a lot of Mole Fay devices - 13 multiples and 5 duets. Buzz and sizzle came via 1C strobes criss, plus a bunch of rotating police beacons. Two X-Armys featured as gobo projectors, one on each of the two video screens, which themselves were revealed by a kabuki curtain which dropped after the third number.

To add some dimension, a pair of vertical floor standing trusses were positioned either side the lighting control area, each truss had three High End Techno Beams on each, with a strobe in the bottom pointing upwards.

20 VL5's were used around the rear truss and screen, 11 VL6B's scattered through the rig, and 17 High-End Studio Colors made for high intensity color punch.

Ten Leko's, ten Source Four's, 10 scrainers, and a Par 16 'Birdie' uplight on each member finished the rig, which was driven by a Whole Hog II with extender.

Eytecraft provided the gear.

destruction output levels. For someone raised on Jands J600 amplifiers from the 1970's, this is almost science fiction territory.

Bruce's rig has four Vortex 6 amps mated with a Nexo Controller in each rack, and each rack will drive 3 dual subs (S1), and 8 pairs of M1 and B1.

So back to V-Dosc and why Bruce took Oasis to Nexo.

The band do plenty of European festivals, each northern summer these are the feature of the touring scene there. This gave Bruce a lot of exposure to different systems, and he certainly enjoyed exposure to V-Dosc. But, as he says, "line arrays always have an issue with subwoofers. Talk to the diehard V-Dosc guys and they really miss the bottom end of a conventional PA, even if it is not so evenly distributed".

After mixing on some very large Nexo rigs, the attraction grew. "This has a good sound. It's no leap forward, but it fits".

The growth of Bruce's business has been interesting to observe. He made his first major expansionary foray by purchasing 20 Meyer MSL-3 cabinets and electronics from the saleout of Troy Balance Corporation. "Originally I wanted ten boxes - Peter (Troy) told me I was crazy, I needed 24 so I could pick up the work that they had on their books. I bought 20 and was always 4 short thereafter, because I often needed two stacks of 12 boxes!".

Bruce willingly says his business has only recently transitioned from what he calls 'back yard' status to that of an established company. To this end he has recently appointed Larry Porting as General Manager.

## BAND TALK

Powderfinger have become louder as they mature, growing in confidence as their stage size expands with the reach of the band. This

Australian group have almost redefined how to run a business plan, and are now almost ready to break on the world stage in a big way. At home they are rock demi-gods, evidenced by selling four nights at the Hordern Pavilion and at Festival Hall.

Mark McElligott ran 29 band channels into a Midas Heritage 3000 for this tour, a console chosen because it has 24 auxiliary and subgroups. Mark likes to group outputs for effects purposes, choosing to run compression on selected stereo pairs.

Mark was a drummer before becoming a recording engineer and meeting the band six years back before their breakthrough album. Now he applies his skills from those days into some clever techniques. Example: the drum mix goes to two subgroups, thence out to a pair of very desirable Empirical Labs Distressor limiters. These analogue (and back to analogue) devices redefine what a compressor can do, by emulating great compressors of yesteryear.

The drum left and right feeds from the Distressors are mixed back into two returns on the desk, allowing the hard limited (20:1) sound from the Distressors to be fed back into the mix as a kind of effect. "It is set for a all really hard limit, to crush the kit." The kick and snare pairs (each has two mics) are also grouped and limited, but using soft compression from dbx 903's.

The drum sound appears to be a fixation of Mark's, as it is with any engineer working with a loud live rock band. Being a drummer himself, Mark better understands the nuances of how the kit is set up. This tour the drummer has a white Ambassador skin - 'thin ply, thin and resonant' says Mark - on the beater side of his kick drum. This lends itself to mic'ing on the beater side for slap and midrange fill. Mark prefers the Beyer M88 as a kick mic, which happens to be your writer's personal favorite.

Then Mark has a bewildering combination of sends are sent to an arsenal of TC Electronics, Lexicon and Drawmer devices for limiting, gating, reverb and effects processing. The star device is an Avalon VT 737 valve mic preamp, which the lead vocal mic is fed directly into from the stage multicore. The output of the preamp is then fed into the line input of the Heritage 3000.

Mark describes the Brisbane based band as very level and organized. "They are smart, and they understand who it all works. They won't walk away from a fight, but they don't hold grudges."

As long time sound engineer, with a studio background, I asked him if it was hard to remain impartial as to the bands' studio sound. "It's the art of diplomacy, knowing when to shut up. 'I'm not in the studio with them, but I record demos with them and talk about how it's shaping up.'" •

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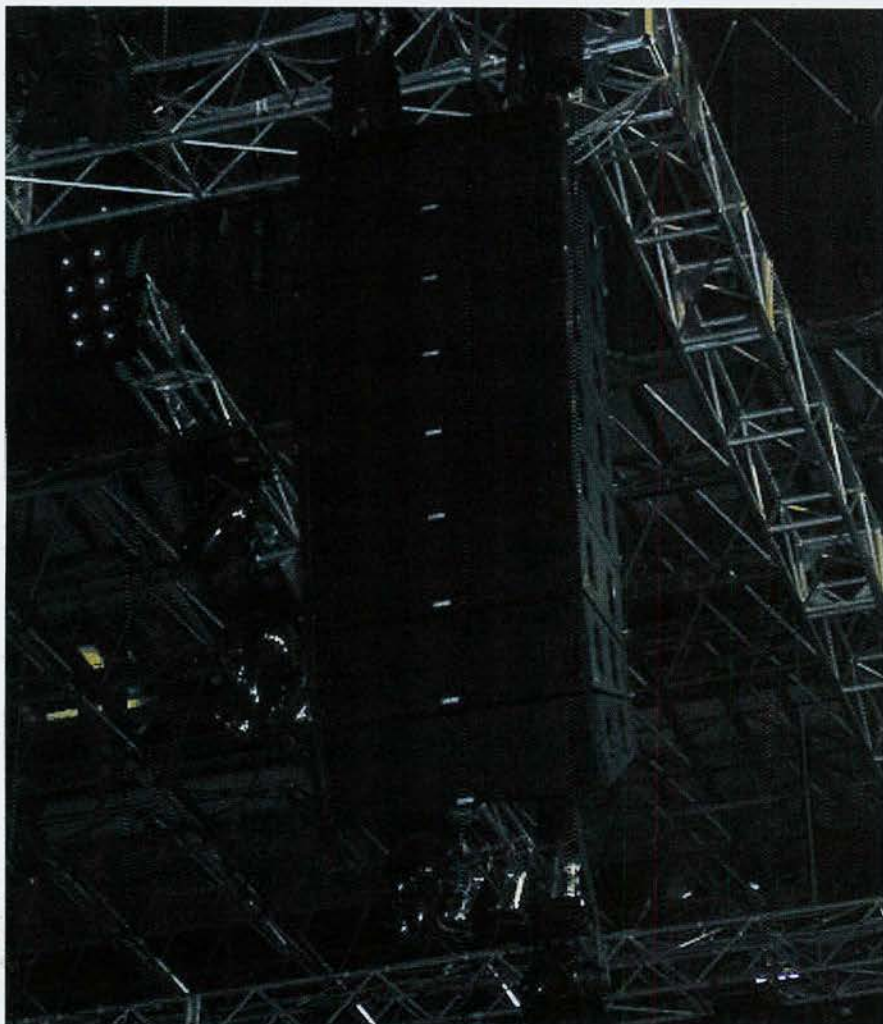
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## New EAW Line Array



### Used for the first time in Melbourne

Dave Rees is the proud owner of the first EAW KF760 Line Array system to arrive in Australia. Dave Rees, and his business partner Tony Shanahan, run Sound Solution Australia. The arrival of their new EAW boxes was well timed to coincide with the re-launching of their company as Deluxe Audio...

By Mandy Jones

"We've struggled for direction. In some respects, we've tried to do a bit of everything," explained Dave. "I've spent quite a lot of time in the last couple of years touring internationally, and when I came back I'd seen a lot of what we needed to do here. So in order to try to re-ignite our passions again after 13 years as *Sound Solutions*, I decided we would change the name of the company to Deluxe Audio. Our kick-start is the purchase of this new PA."

Dave explained that he deals with a lot of companies who run corporate events, who want a quality PA but don't necessarily want everything else that goes with it.

"We'll happily supply our PA boxes and amps, and then somebody else can run it and supply the control and whatever else. Hopefully it will be good for other audio companies too because it will save them having to run out and buy the boxes. I'm happy to supply the boxes to other companies, so that Deluxe Audio is unseen."

Dave's aim is to form a "coalition" of audio companies that want to work together in this way.

"One of the biggest problems I see in the business is that everyone's running out and buying a lot of gear – some companies have got to fall, and I don't want to see that happen. So if somebody buys a great console and somebody else buys a great PA you're halfway there. One person doesn't have to bear the load, and both parties profit. So it makes more sense. That's the idea of Deluxe Audio."

The KF760 system joins Deluxe Audio's existing inventory of EAW KF750s and Meyer MSL3 boxes. Dave explained paying upwards of \$200,000 for the 16 boxes including cabling, amps, road-cases etcetera, was actually a more cost-effective option than buying another traditional system.

"I can do 90% of the Rod Laver arena with 16 boxes in total. To do it with any other PA, I would have to use perhaps 20 boxes each side. I'd then have to power them, cable them and hang them, so even though a line array may appear expensive on the outset, if you actually add up the differential between buying 40 traditional boxes with their drive and buying 16 line arrays with hanging gear and all the rest of it, it works out better. Even logistics like truck space – it's miniscule. The PA takes up 8' x 8' and the amp racks only take up another 3', and that's it. It's a dream."

The KF760s debuted at the recent International Distribution Association conference held at the Rod Laver Arena over three days.

"We cut the cardboard off these boxes two days ago, we flew them yesterday and ran them up this morning and we've spent maybe two hours in total. And that's with a brand new PA so I'm pretty impressed. It makes me feel very comfortable after spending a lot of money to know that all the promises are real. And I don't mind telling you for the record that I'd never heard this PA before. I've been so impressed with the KF750 that I was willing to take the word of EAW that this PA was good enough, and they haven't let me down. I think they spent enough time and they know enough about what people like me are looking for that they do deliver the goods."

#### The system

Deluxe Audio supplied eight boxes aside for the IDA event – the top six boxes in each array were KF760s and the two boxes underneath were the KF761 short-throw or underhangs. The 760s have two 12" drivers, two 10" and two 2", and the 761s have two 12", two 8" and one 2" driver.

"The first thing you notice about the PA is its size," said Dave. "The whole rig weighs less than a tonne per side, so it can actually be flown off one chain motor which makes it more practical. It took half an hour to get it in the air, and to tune it's taken us an hour and a half, that's it. I've got Glenn Helmut here "Smart" analysing it. He's told me it's the easiest analysis he's ever had to do, so that's a good sign."

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## Live Sound

## Sho Management

Production management for the IDA gig was provided by Sho Management. Connections readers will remember the mystery surrounding this company when it commenced operations earlier this year. Managing Director of Show Management, **Bill Kneebone**, (pictured) was happy to set the record straight



"Connections wrote up about us back in February identifying that we had set up Sho Management. It's primarily four ex Staging Connections Melbourne people that have set up a production management business, so between the four of us we provide production management for corporate events."

The four core staff are: Bill Kneebone – Managing Director, **Ray Letch** – Project Manager, **Steve Hibbert** – Technical Director, and **Andrea Huber** – Office Manager. Other staff are brought in on a project basis as need be.

"We're a group of people that provide production management and creative management if need be. We then look at who can provide the best solution to our client's needs. We like to work with people that we know and trust, and people that understand the make-up of a corporate event - this thing can't be dictated to by the entertainment component. The speeches and recognitions are 80% of the event and the entertainment is only about 20%, so it requires a different approach.

"There are always some clients that require a little bit more than just production management so we get involved with the creative side. The IDA event is one of those sorts of events where we've gone beyond the production management role.

"This is [IDA's] major event for the year and in the past we have had in excess of 20,000 people in attendance. There's a lot of emphasis put into this weekend to bring people from all across Australia and because it's so intensive it needs to be broken up by little pieces of entertainment, so during the course of the weekend there are performances by James Reyne and Ross Wilson, Vanessa Amarossi, and some other small bands."

While comparisons are inevitably drawn between the EAW line array and V-Dosc, Dave stresses being totally horn loaded the KF760 is an entirely different animal.

"I suppose it's there to compete with V-Dosc but they have a different basic principle. V-Dosc has front loaded speakers so it's a different configuration and V-Dosc was built for a purpose - this was built for another purpose and it's much simpler. But apart from that it's been designed to hang in rooms like this. I don't believe V-Dosc was originally intended to be hung inside, it's more for big outdoor hangs and it's awesome. KF 760 will hang outside happily but a lot more attention has been paid to hanging it indoors where there's different parameters to deal with.

"The 760 boxes are nice and wide in their coverage. A lot of the line arrays that are around at the moment really suffer from not being able to get wide enough. This thing goes 'soft' to 100°. At full strength it goes up to 80°, and it drops off about 6db up to 100°. So it means in a room like Rod Laver we don't need a wing-fill for the side areas. From a monitor engineer's point of view they're unbelievable, it drops off a huge amount of db as soon as you get behind it. It's all going out the front so you're not wasting all your power going out the back.

"All of these boxes have their own captive rigging - you literally put one box on top of each other, pin them together, & off they go. Everybody's happy. Glenn's happy, he's actually smiling. People are amused because Glenn's smiling!"

Respected Systems Engineer Glenn Helmot described the KF760 Line Array as "seriously impressive" when he used it at the IDA event..

"It's seriously impressive in terms of its size and output. I think one of the major advantages of this system is that we can have it in and flown within half an hour or so, and that's all fine, but more importantly without any tuning whatsoever, the evenness of coverage and frequency response throughout the arena is already at a point which would have taken me, or anybody, several hours work with any other system. So the time-saving factor alone is great, you're straight away three or four hours ahead of time - you're 85% there straight up. And that's a huge thing because as we all know, with a lot of gigs time is not on your side."



(L to R) Graeme Stevenson, Dave Rees & Glenn Helmot

A self-confessed 'sound communist', Glenn says every audience member should get the same show regardless of where they sit in the venue.

"I'm really impressed by what you get up to the very top seats, particularly the intelligibility & mid-range clarity, and that remains fairly constant as you come down through the seating to the floor as well. From a FOH mix engineer's point of view you can be confident that what you're actually hearing at the console here is what the audience is hearing everywhere, which is a major plus from an engineer's point of view."

Glenn was similarly impressed with the beta version of the KF760 Wizard software which assists in configuring the system according to venue parameters.

"It allows you to enter the dimensions of the auditorium, including balconies and the rake of the seating and trim height of the system. The Wizard will work out how many boxes you'll require as well as splay angles to pin each box together to get the correct alignment, ideal trim heights, and audience coverage outcomes. In future versions it will also download system processing parameters directly from your laptop via RS232 or RS 485."

Glenn acknowledged there are limitations to the system & that it won't suit every application.

"In this sort of environment something like this is fairly ideal but it's obviously not going to suit everything 100%. For this sort of arena type concert it's perfect. The time factor, the space saving factor, all those things add up to savings - less crew, less time, and better sightlines so promoters are going to love it.

"The advantages of something like this are obvious - this sort of technology is pretty much here to stay. With the re-introduction of line arrays like the V-Dosc and the EAW 860 system, many people thought it would be a trend that would go away, and I can be correctly accused of thinking the same thing. Line arrays have come a long way since then and having used a few different systems now, it's not going to go away, it really is fantastic technology."

Production Audio Services General Manager Graeme Stevenson added:

"It should be remembered, this is second generation line array technology from EAW. The KF860 was out not long after V-Dosc and has been used in large corporate events.

Companies like Norwest used it very successfully over a number of years. EAW are actually the first guys to come out with their second generation of line array - everyone else is either still working on first generation or trying to improve on what V-Dosc started."

# PHONIC

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# The Myer Music Bowl gets a new lease on life



by Mandy Jones

**The Sidney Myer Music Bowl is a well-loved Melbourne landmark. For 42 years it has played host to some of Melbourne's most memorable events. With new life breathing into the venue, Connections went to take a look...**

Dennis Irving



In recent years problems developed with the Bowl's canopy so it was decided to renovate it, as well as generally upgrade the Bowl's facilities. Union interaction saw the renovations drawn out an extra year, but after four years and \$20 million, the Bowl has recently re-opened in time for the opening night of the 2001 Melbourne Festival.

Improvements were made to every aspect of the Bowl - the canopy, audience seating and FOH facilities, back of house facilities, technical systems and equipment.

Industry legend Denis Irving has had a long involvement with the Bowl. He was involved with it when it was built in 1959 and served as Theatre Consultant for the recent redevelopment.

"When it was first built it was only ever intended as a bandstand," explained Denis. "So it was never equipped or intended to be used for anything that needed anything technical. Of course over the years it's been used for lots of events. First of all Carols invaded it and then the rock and roll boys started to come in and then it just grew and grew. Then the opera and the ballet came in and it was getting harder to work in but everyone kept going".

Denis was given a brief which said "Item 1: replace canopy. Item 2: improve technical facilities".

One of the first issues Denis addressed was the suspension of equipment like speaker stacks and luminaires from the canopy. Previously the load was quite limited due to the stress already placed on the canopy in supporting itself, & decreased every year as the canopy was weakened by the elements.

"The problem is the canopy is virtually like a tent because it's made out of stretched wire - so of course it moves, therefore it can't have a lot of weight on it. So the first thing I stipulated, and had to fight for, was to get a free-standing structure inside the canopy. They use basically two big curved truss super-structures designed to take a full performance load without having to hang anything off the canopy itself. There are still a few things out front of house - the main house speaker system is hung off the canopy, but the big loads, up to 50 tonnes will be taken by the new structure."

Denis explained the original design for the truss structures was more theatrical than they finished up.

"When I first drew it we had theatre-type scenery winches and those two big curved trusses were in fact lighting bridges so you could go up and light from them and the angles were magic. But then the OH&S boys came in and said to



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*Venue Refurbishment*

make those trusses legally trafficable we had to bring them down so far that we couldn't use them as active lighting bridges anymore. It was a shame because they are in a beautiful position."

The best improvement to the Bowl is the fact that it is now fully technically fitted out. A new central control position with a bunker and access tunnel leading to the stage has made access a breeze during performances, and permanent wiring of power, audio, data and communications means that most hirers won't need to bring anything with them - a big change from the old days of enormous cable runs.

Audiences will also notice a big difference at the bowl. Re-grading of the grass area has improved sightlines, and the permanent installation of toilet and kiosk facilities will hopefully mean less queuing.

"It's more like a theatre than a bandstand now, so that was the main way we improved it, and obviously the canopy doesn't drip anymore."

**Audio**

Victorian Art Centre Head of Sound Darren Golding explained the key word for both audio and lighting upgrades was "infrastructure". Around \$3 million was spent on the combined technical fit-out of the Bowl.

"We only had so much to spend on audio, so we decided to put a lot more into infrastructure like

power, multicores and our basic shell system. When it comes to doing a performance here, the hardest and most expensive part of the job is actually getting sound into the shell - rigging the points and flying the PA. So we've decided to put in a basic PA that's pre-rigged and included in the hire."

The self powered Meyer system includes MSL-4s with PSW-2s, UPA-2s and CQ-1s acting as a downfill. The system is especially suited to smaller hires where audience is limited to the main seating area. Cost-wise we're saving hirers around \$2000 a day."

The design and specifying of the system was done between the VAC Sound Department, Meyer Sound Australia and Arup Acoustics. All the audio infrastructure and equipment was installed by Rutledge Engineering apart from the Yamaha M3000 console supplied by Soundcorp.

"There was no point spending \$200,000 on a console which may only get used 5 times a year. If the act is big enough they'll bring in their own console, and they usually do. But the M3000 is suited to orchestras and it always makes a good foldback desk."

The team decided against buying foldback speakers - again for practical reasons. Instead they concentrated on the cabling and patching to get the 72 mic lines from stage to a central point where foldback can be controlled from.

**Lighting**

Victorian Art Centre Lighting Supervisor **Darren Conway** explained the Bowl attracts 2 kinds of hirers.

"There are those that like the idea of the Bowl and will use it for any sort of function - even corporate dinners on stage - and they don't want to go and spend \$5000 on lighting equipment. So you've got to have a basic system for them - 100 par cans, dimmers and a desk is all they need. You can plug it in and get it running as a standard set-up for minimal cost. But you also want to be able to cater for the bigger shows that have a \$10,000 lighting budget. We've put in a lot of trussing, and all the looming goes back to a central dimmer.

"There are 216 2.4kw dimmer outlets and all of them are hard patched, so once you plug something into an outlet, it appears at the racks."

Rutledge Engineering supplied the distributed data system which runs three streams of DMX through the venue as well as Ethernet from six different locations.

LSC Epro dimmer racks, looms and cabling were supplied by Lightmoves in Melbourne.

Other contractors include Nilsens who put in the power, Showtech Rigging, CLS who supplied the truss and motors, and Bytecraft who supplied the Strand 300 series desk. Building works were by Hooker Cockram and the architect was Gregory Burgess Architects.

VAC staff (L to R): Darren Conway, Martin Olesk, Darren Golding, Nick Carroll and Peter Donaldson



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# DIGITAL AUTOMATED MIXING CONSOLES

This year's report shows the brakes are ON in this market sector. We haven't included NEVE or SSL here, since they are difficult to apply one price bracket to. The majority of desks on the market are for recording, live digital consoles are only just starting to make headway. The words here come from the manufacturers, so forgive the praise! Prices are estimates only.



Allen & Heath ICON

### Allen & Heath ICON

Digital Powered or Un-powered Mixer designed for small scale live applications. Incorporates 8 Mic/2 Stereo Line Inputs, Dual Digital Effects and Song Parameter Save/ Recall, 600w @ 4- Power Amplifier. 4 Band Parametric EQ, Four Aux, Midi/Foot Switch Control.

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System 5 is an extremely comprehensive and technically advanced high-speed digital audio mixing system comprising a control surface, digital mixer core, digital and analogue interfaces and a system management software program named eMix. Designed for the highest sound quality with full support for 24-bit I/O and internal processing at 40-bit floating point. 96kHz sample rate operation is available for professional music recording and mixing at the highest level. Expandable to accommodate virtually any film, studio, broadcast or live application.

• From \$450,000

### innovSON Compact Live

The Compact Live offers all of the features from the Essential, Grand & Digital, and adds some specific functions

which make this console an flexible, affordable and efficient tool for medium size applications. Features: 32 mic/line + 8 line inputs, fitting a digital patch bay; Stage-Box option for expanding to up to 72 physical inputs with digital transmission on coaxial cable; 32 input channels with digitally controlled preamps, lowcut filter (12 freq), gate/exp & comp/limiter, 4-full bandwidth PEQ ( $\pm 15\text{dB}$ /notch); 12 GrAux mixing buses with fast-routing facilities and pre/post pan, pre/post fader individual switches

• Trade Price From \$100,000

### innovSON Essential Live

The Essential Live configuration is compliant with any traditional equipment, fits the usual budget of a standard live console, while providing the full processing power on all inputs, the switching matrix facilities, all utilities and the snapshot automation. The Audio Rack comes with 40 mic/line inputs, 8 line inputs and 24 dry outputs, all analogue. The Stage Box is an extension providing 8 more mic level inputs. The touring reel of 150 metres of coaxial cables can then transmit up to 48 channels from stage to any mix position, and it's up to you to plug the input modules whether on stage or by the console.

• Trade Price From \$150,000



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What do Spice Girls, Disneyland, Slade, Kid Creole, The English National Opera, Radiohead, Singing In The Rain, Salisbury Cathedral, & "Who Wants To Be A Millionaire" have in common ?



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**Digital Automated Audio Mixing Consoles**



innovSON Grand Live

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• Trade Price From \$315,000

**innovSON Grand Live:**

With a total of 72 potential inputs the Grand Live configuration fits the needs of large events where the issues are efficiency, extended resources and smart automation. It matches with traditional equipment, by providing full analogue inputs/outputs resources with powerful digital processing over all input and mixing channels. The Stage Box and its touring coaxial reel are included and handle 56 mic/line level inputs, with the digital active splitter function. The Mix Box is set with the 16 other inputs (8mic, 8 line). The HyperDriver is included, as well as the Smart Time Automation, which runs with the "stretch time" fader on the console.

• Trade Price From \$175,000



Mackie Digital 8•Bus

**Mackie Digital 8•Bus**

When you sit down at a Digital 8•Bus, you'll feel as well as hear a difference. It is as intuitive and easy to use as an analogue console because the D8B is the only mid-sized digital console designed by large-console automation specialists. Its software was created by seasoned recording engineers with years of hands-on experience using every major automated console design. Now, with 3.0 software, 3rd-party plug-ins, and a matching hard disk recorder, the D8B has truly come into its own as the accepted pro audio industry production platform. Features include 56 inputs and 72 channels, EQ/Compression/Gates on every channel.

• \$22,995



Panasonic RAMSA WR-DA7

**Panasonic RAMSA WR-DA7**

32-bit internal processing combined with 24 bit ADDA converters, yield an incredible 110dB dynamic range, 32 inputs and 6 Auxiliary send/return, 8 Bus, moving faders, instantaneous recall of all settings, surround sound 5 + 1 and 3 + 1 modes. The EQ section offers 4 true parametric bands active on every channel, plus Left and Right. Also onboard: Gate/Compressor/Limiter or an expander on every channel; Optional 8ch Digital I/O cards, ADAT, TDIF, AES and ADDA as well as an optional Tandem and SMPTE card. Meter bridge is also available.

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Roland VM7200 Processor

**Roland VM3100Pro Compact V-Mixing Station**

The VM3100Pro is a 20 channel input 24bit digital mixer with a 3 band parametric EQ on all channels. 8 standard " " inputs. 2 XLR inputs with phantom power. 4 RCA inputs. SPDIF Optical and Coaxial I/O. Proprietary R-BUS 8 in/8 out 24bit plus word clock digital I/O for direct connection to XV5080, VS-2480, RPC-1 and all VM7000 se-



Sony DMXR100

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**Roland VMC7200/VM7200**

Roland's Modular V-Mixing System provides up to 94 channels of digital mixing with separate console/processor design. Features include: Motorized faders; Up to 16 stereo or 32 mono effects processors and up to 90 analogue inputs with a maximum of 86 analogue outputs; Up to 48 channels of ADAT/Tascam I/O recording and mixing; Total mixer recall. On-board dynamic automation. 4-band parametric channel EQ plus channel HPF. COSM Speaker Modeling and Mic Simulation. 5.1 Surround mixing. Realtime Spectrum Analyzer. 24 fader groups. 16 MIDI faders. 100 Scenes. 100 Locators. 9 Mute Groups. Options: 8 channel AD/DA; AES/EBU Interface; Edit Controller; 8 track 24 bit Hard Disk Recorder.

• \$14,195 (Includes VM7200 Processor, VMC7200 Console, MB24 Meter Bridge, VMSP71 Side Panel Kit)

**Roland VS-2480**

This Digital Studio Workstation includes a 64 channel fully automated digital mixer (with 17 motorized faders) and a 24bit/96kHz hard disk recorder. 48 channel dynamics processing with 4 band EQ and filter per channel. Up to 8 stereo or 16 mono effects processors. Drag-and-drop mouse-based editing on the LCD. 24 track simultaneous playback. 16 track simultaneous recording with 384 virtual tracks. Dual R-BUS ports for expandable I/O in TDIF, ADAT and AES/EBU digital formats. SPDIF coaxial and optical I/O. 8 XLR and 16 balanced TRS inputs. Burn audio and data backups with optional SCSI VS-CDRII.

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**Sony DMXR100**

The DMX-R100 Digital Mixing Console uses the latest digital technology to address the challenging and creative needs of modern audio production. It is a compact, 48 channel mixer featuring 25 motorised faders, sophisticated control panel with touch screen control, a fully integrated package of automation plus a digital routing matrix and machine control. The DMX-R100 delivers superb sonic performance via its state-of-the-art processing technology. The 5.1 surround capability enables multi channel audio for DVD mastering as well as for future applications for broadcast digital television. The DMX-R100 is designed to meet the needs of audio practitioners across music studios to post-production and audio pre-mastering.

• \$36,000 plus options.

**Soundtracs D4 Digital Production Console**

With over 400 digital consoles installed world-wide and a track record of after sales support Soundtracs believe the D4 Digital Production Console will satisfy the most demanding of applications. Features include: 160 up to 320 full audio channels with 124 busses; Permanently allocated DSP; 16 up to 96 conductive plastic motorised faders; Multi console cascade potential; 48kHz and 96kHz operation; Simultaneous stereo, LCRS, 5.1 and 7.1 with divergence; New ergonomically enhanced touch sensitive work surface; Full dynamic and snapshot automation; 106 segment tri-coloured LED metering. Soundtracs D4 applications include: Film and video post, Broadcast production, Music production, Theatre and auditorium sound.

• \$490,000 (Depending on configuration)

**Soundtracs DPC-II Digital Production Console**

The DPC-II is a 160 channel, 40 buss, all-digital multi-purpose production console with a user-definable buss architecture. This makes it uniquely suitable for post,

**Brands and Distributors represented in this report...**

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Panasonic RAMSA	Ramsa Audio	+61 2 9477 7377	
Roland	Roland	+ 61 2 9982-8266	www.roland.co.jp
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**Digital Automated Audio Mixing Consoles**



Soundtracs DS-3 Digital Input Production Console



Spirit Digital 328



Tascam DM-24



Yamaha O1V



Yamaha PM1D

music and film applications. An extensive number of system variations may be configured. Work Surface includes: 16-96 touch sensitive motorised faders; Touch screen colour LCD's; 8 character channel ID's. Master Section: Monitor Matrix; Control Groups; Group outputs; Transport control. Rack: All professional digital formats handled; 24-bit mic/line A/D and D/A. Clocking: Advanced internal NCO used; 96kHz operation; Video (also pull-up/pull-down); Word and AES sync. Options: 96kHz analogue conversion; AES sample rate conversion; Analogue patchbays; Mechanical master meters plus more.

- \$330,000 (Depending on configuration)

**Soundtracs DS-3 Digital Input Production Console**

The DS-3 is available as a single worksurface configuration providing 64 fully featured digital inputs controlled on 16 input faders. 8 additional faders are assignable between in-out and group control and mixing is at 48kHz with a 96kHz optional engine. Input channel features: Remote input gain; Input routing; Four band parametric Eq.; Switchable bell/shelf fitters; Compressor/de-esser; Gate/expander. Master Section Features: RS422 Machine control; 3 Control Room outputs; IPS, PFL and Solo; LED Timecode display; Graphical mix editing. Automation Features: Touch record, Trim, Auto Nulling; Automation of buss routing; Unlimited Snapshots; Block editor (for picture conforming); 99 Mix passes; Autosave and revert; Unlimited Cues/Locates.

- \$165,000 (Depending on configuration)

**Soundtracs Virtua Digital Console**

For seamless integration of complex and diverse audio and video equipment for a fast and high audio quality mix. Operational features: Rapid format configuration; Instand paramet recall; Dynamic and Snapshot automation; Off-line editing; 10s mix format changeover; Remote machine control (MMC and Sony 9-pin protocol); In-built Dynamics Processing with separate preset libraries for EQ, Compressor and Gate effects. 24 simultaneous tape sends to 40 destinations; Multi-Format mixing and Digital Formats include ADAT or optional T-DIF; AES/EBU inputs and outputs. Timecode: SMPTE and MTC are all frame rates. Generates, syncs and converts. Clocking: 32, 44.1, 48kHz digital sync, external and internal. Clocking via word clock, ADAT, AES/EBU.

- From \$43,900 (Depending on configuration)

**Spirit (by Soundcraft) Digital 324**

A Digital In-line recording console, the Digital 324 includes 16 mic / line inputs and 16 digital tape returns (or 32:8:2 with additional preamp inputs). E Strip encoders; Full 24 bit A-D, D-A with internal 56 bit summing buss. Two Lexicon processors and two dynamics processors are included. The Digital 324 also comes complete with 2 Tascam TDIF digital I/O, AES/EBU and SPDIF interfaces to allow integration of recording devices or extra external mic / line or AES/EBU interfaces in the digital domain. Snapshot and Dynamic Automation capable. Two consoles can be linked to provide up to 84 inputs at mixdown.

- \$12,995

**Spirit (by Soundcraft) Digital 328**

Digital In-line recording console. – 16 mic line inputs and 16 digital tape returns (or 32:8:2 with additional pre-amp inputs). E Strip encoders allow the console to be operated just like an analogue console, with the advantages of full digital recall. Full 24 bit A-D, D-A with internal 56 bit summing buss. Two Lexicon processors and two dynamics processors are included. Also comes complete with 2 Adat and 2 Tascam TDIF digital I/O, AES/EBU and SPDIF interfaces to allow integration of recording devices in the digital domain. Full machine control and synchronisation capabilities (9 pin, MMC, MTC, SMPTE, Wordclock). Snapshot and Dynamic Automation capable.

- \$12,995

**Tascam DM-24**

The Tascam DM-24 combines 24-bit, 96kHz audio quality with flexible routing, built-in automation and professional-quality effects and dynamics processing (a configurable Compressor and four band, parametric EQ on each channel). The DM-24 offers 16 analog inputs with XLR mic and TRS line inputs on each channel as well as 24 channels of TDIF interfacing plus eight channels of ADAT Optical I/O, two stereo AES/EBU and two stereo S/PDIF interfaces. Two option slots are also provided for additional 8-channel analog and digital interface modules. Can store up to eight mixes; 100mm touch-sensitive moving faders and two built-in name brand effects processors with reverb, spatial effects and mic/speaker modelling.

- \$7,000

**Yamaha O1V**

The O1V is ideally suited to both live production and studio based production duties. The desk features 12 mic/line level inputs and 2 stereo inputs and 4 analogue 'omni outputs' that can be software patched from any input or output as well as a single M-YGDAI card slot for further expansion. The O1V offers snapshot automation with moving faders and can be used in conjunction with sequencer software packages to provide full dynamic automation. Like all of Yamaha's 'O' series digital mixers, the O1V offers the ability to operate as a hardware controller for audio recording software via MIDI interfacing.

- \$4,445

**Yamaha O2R Version 2.**

This respected small format digital mixer is now available at an even lower price point! The O2R Version 2 offers an unparalleled level of features which has won it a raft of awards including the ENTEC best mixer (1998). Fully automated mixing with 21 moving faders ensure that creating complex mixes is easily accomplished even by single operators. The 4 YGDAI interface card slots allow for AES/EBU, TDIF, ADAT, mLAN or Y2 digital format I/O expansion allowing the O2R to integrate to practically any recording medium. Version 2 improvements include touch sense faders, 5.1 surround panning, protocols control template and much more.

- \$11,995

**Yamaha O3D**

Offering an unprecedented level of performance at the price point, the O3D is the perfect choice for studios in need of a fully automated digital mixer capable of 5.1 surround mixing. The O3D offers a single YGDAI card slot for digital format I/O expansion. As with all Yamaha's 'O' series mixers, the O3D offers 4 band parametric eq and dynamic processing on all channels and 2 on-board multi-effects processors. The compact footprint and advanced post-production facilities such as the ESAM audio-follow-video option make the O3D an ideal choice for edit houses.

- \$7,295

**Yamaha PM1D**

The PM1D is a premier live digital audio mixing system utilising 28 bit A/D and 27 bit D/A along with digital signal processing at up to 54 bits. The system comprises of CS1D control surface, DSP1D digital processing engine and analogue and digital I/O frames. System components can be remotely located (up to 200 metres). Maximum system configurations run up to 192 inputs with all systems offering 48 busses/auxes, 24 matrices, 8 stereo multi-effects processors, 24 on-board 31 band graphic equalisers + more. Full-time DSP architecture ensures that all system features are always available. Supplied at Disneyland, Carnegie Hall and Clair Brothers.

- Systems start at approx. \$200,000

# LIGHTING CONTROL

As you will see in this report, there are many, many ways to control lights. To help sort through the massive range of options, we have divided the report into three categories: Small Control Desks (under 100ch), Single DMX Universe Control and Multiple DMX Universe Control. All prices quoted are inclusive of GST. The actual words describing the products here were supplied by the distributors of that product - so take your "grain of salt" with you as you read on...

**Small Control Desks (under 100ch)**

**Abstract Club64 Controller**

16-head CE controller from Abstract is attractively packaged and completely user-friendly, offering a wide range of features. Backlit LCD display; Ergonomically designed tactile membrane control panel; Joystick for light beam positioning; Two sliders for control of other functions: chase speed, crossfade time, colour fading, rotation speed. Compact 4U 19" rackmount case, audio line in and internal microphone for sound triggering, Control socket (GPIB) allowing user-selectable action from footswitch control, MIDI input and thru/out. Individual or multiple control of up to 16 heads - 512 scenes (32 banks of 16); 384 user-programmable, 128 pre-programmed; 128 chases (8 banks of 16), maximum 64 steps; 64 user-programmable, 64 pre-programmed

• From \$2,155

**Abstract Club 32 Controller**

8-head Compact controller from Abstract is attractively packaged and completely user-friendly, offering a wide range of features. Ergonomically designed tactile membrane control panel; joystick for light beam positioning, two control knobs for control of other functions, strobe button for instant access. Compact 4U 19" rackmount case. Individual or multiple control of up to 8 heads - 256 scenes (32 banks of 8); 128 user-programmable, 128 pre-programmed; 64 chases (8 banks of 8), maximum 32 steps; 32 user-programmable, 32 pre-programmed; Manual or MIDI chase step Comprehensive 'automatic' light show function; 'Playback only' lock mode to protect programs

• From \$1,335

**Abstract Club 16 Controller**

The ClubShow controller from Abstract introduces a new "download" concept to Abstract's controller range. Containing 100 impressive pre-programs, plus Abstract's SupersoundTM automatic lightshow, the Clubshow gives you instant control of your rig. You can divide your rig up into 4 groups, and select different groups for the light show either automatically or manually, and you can add strobing and slow fading effects at the touch of a button. With the supplied PC software and link cable, a whole new world of lightshow is available. Create your own programs for the Clubshow on your PC screen - with the built-in simulator you don't even need the lights rigged.

• From \$924.50

**Botex DC1224 Scene Setter**

A 12/24 Channel DMX controller the Scene Setter is ideal for theatrical and stage applications. Each of the 24 slides can be allocated scenes, chases or direct DMX channels. Features: 4 pages each/48 sets of programmes; up to 4,600 steps can be programmed; mixed chase ability (play more than one chase at once); audio/c chase speed, preset speed, or tap to the beat required; Built in MIC; manual speed mode, Master dimmer slider, double preset or single preset of scenes, standard MIDI interface. DMX output via three pin XLR audio input via in-built microphone or line input. Optional remote control for black out and full-on.

• \$849

**Botex DJ Mingle Basic DMX controller**

An affordable solution for basic intelligent lighting shows. Operating on DMX-512 protocol and MIDI interface, the DJ Mingle will control all intelligent lights. Up to 96 DMX channels can be allocated or patched into the 16 channels on board the DJ Mingle allowing the control of up to 16 intelligent fixtures. Up to 30 built in programmes and 30 programmable programmes can be stored allowing each programmes to have 99

steps that can be assigned to the sliders. Other features: manual/programme mode; audio activation; tap sync; manual step advance; MIDI control; DMX output via 3 pin XLR optional foot controller.

• \$499

**Jands Stage 12**

Simple preset style console with 12/24 control channels; 12 channel flash buttons with add and solo operation; chaser with level, rate, direction and cue/go functions; two independent grab faders for storing 'looks'; Audio trigger for chase function.

• \$1,145

**Jands Stage 24**

Simple preset style console with 24/48 control channels; 24 channel flash buttons with add and solo operation; chaser with level, rate, direction and cue/go functions; two independent grab faders for storing 'looks'; Audio trigger for chase function.

• \$1,755

**Lightronics TL-112**

Compact DMX lighting console with 12 channels of DMX control. 1 manual scene, 1 memory scene and 24 preset scenes. 12 chasers with rate and level control. Audio input via internal microphone. Flash buttons and Grand Master with DBO button. Has both 5 and 3 pin DMX connectors. Very simple to use console, all the instructions are screen printed on the bottom! (never lose the manual ever again). The chasers speed control is set via a BPM button, just press in time with the music and it sets the speed automatically. Only 25 x 22cm. Ideal for small bands and DJ's

• \$1176.80



Botex DC1224 Scene Setter



Jands Stage 12



Lightronics TL-112

**Brands and Distributors represented in this report...**

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Strand Lighting	Bytecraft Entertainment	+61 3 8710 2555	www.bytecraftentertainment.com
Sunlite	Lightsounds Wholesale	+61 3 9568 2100	www.lightsounds.com
Sweetlight	Coemar De Sisti Australia	+61 3 9467 8666	www.cdaust.com.au
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Vari*Lite	Jands	+61 2 9582 0909	www.jands.com.au
Zero88	Clearlight Shows	+61 3 95531688	www.clearlight.com.au

## Lighting Control Desks



LSC ATOM 12/24 & 24/48



Martin 2518



Strand Lighting MX 24 Manual Control desk



Theatrelight Nova 24

### Lightronics TL3216

The TL3216 offers 32 channels, 16 scenes, and 2 programmable chasers in a rugged compact case. Can be operated in 2x16ch twin preset mode, or 32 channel single preset wide mode. 23 steps per chase. DMX outputs via 3 + 5 pin XLR connectors. Split A/B crossfader, flash buttons and Grand Master with DBO button Simple operation and ample channel capacity combined in one versatile controller. Instructions are printed on the bottom of the console for easy reference. Perfect for schools, churches and small theatres. Only 39 x 22cm.

• \$1685.10

### Lite Puter CX12 96CH

This programmable dimming console employs DMX output to control up to 96 channels, with the first 24 also having a 0-10v output. Control is over 4 pages of 24 channels giving total flexibility for almost any event. Features include: 24 chaser programmes; External data transfer facilities; Two independent dipless crossfaders; Easily readable LCD display; 96 scenes; 64 steps per programme; Easy to follow ergonomic design - even a beginner can understand the functions. Output: DMX-512 via a 5 pin XLR socket and analogue output 24 channel via 25 pin.

• \$4,499

### LSC ATOM 12/24

An industry standard for small manual/memory lighting consoles. The Atom caters to three different operational modes; - manual mode with 24 channels 2 presets (using Grab master) with dipless crossfading and in and out Time faders; - memory mode with 24 channels 2 preset (using Grab master), 24 channel single preset with 9 pages of memories patched to 99 DMX channels; - playback mode using the 108 stored memories of scenes and chases and able to simultaneously playback up to 13 memories at any one time. Options include analog outputs, 3.5" disk drive & VGA video output.

• \$1,958

### LSC ATOM 24/48

An industry standard for sml manual/memory lighting consoles, the Atom caters to 3 different operational modes; - manual mode with 48ch/2 presets (using Grab master) with dipless crossfading and in and out Time faders; - memory mode with 48ch/2 preset (using Grab master), 48ch/single preset with 9 pages of memories patched to 99 DMX channels; - playback mode using the 216 stored memories of scenes and chases and able to simultaneously playback up to 25 memories at any one time. Options include analog outputs that can be run concurrently with the DMX, 3.5" disk drive and VGA video output.

• \$3,058

### Martin 2518

This controller offers what a good controller should - ease and speed. The 2518 is easy to program controller for DMX controlled fixtures - a dedicated DMX controller for smaller applications. The 2518 can be manually or automatically triggered or via a music-input circuit, for a dynamic and precise show. Additionally it is possible to call up pre-programmed sequences or certain scenes via MIDI to enable bands to control their lighting with their music or to create integrated show control applications. The 2518 is recommended for fixtures using up to 6 DMX channels, such as the Punisher, Destroyer, SynchroZap, Acrobat, MX series, CX series and the Switch Pack.

• \$1,099

### Martin MC Showtime

This user-friendly, plug and play show controller is for the Martin MX series of scanners. MC Showtime is a pre-programmed "ready to go" controller offering 30 ever-changing light shows. MC Showtime also supports Martin CX (color changers), the SynchroZap and Acrobat intelligent effects. Easy to set-up and operate, MC Showtime houses 10 slow, 10 intermediary and 10 hyper light shows. MC Showtime controls four or more MX-scanners (MX-1 or MX-4, depending on the MC-Showtime model) automatically, manually, or by triggering any of the 30 pre-programmed 6-scene sequences.

• \$399

### Martin MC-1


The MC-1 is a small remote controller for easy and fast operation of dedicated products. The MC-1 can, with no programming at all, coordinate all connected products for a perfect synchronisation of movement, color & gobo change. The control options provide fast, medium, slow and random shows via the built-in microphone. It is possible to strobe, blackout and freeze the fixtures at any time. The MC-1 is compatible with the MX scanners, CX color changers, MiniMACs and the Acrobat. The MC-1 can be built into a control desk. A 19-inch front plate is also available.

• \$399

### ShowMagic 64

This is the entry level version of the ShowMagic range. It enables smaller lighting and sound shows to be created in a refreshingly simple way. Now you can do it all at an amazing price. With all the power and flexibility of the larger versions (but on a smaller scale), show creation has never been easier. Create lighting cues and lighting chases in seconds, 24 'main' faders for up to 24 fixtures or banks, 376 cues, 192 sequences, 24 sound events per desk, Unique twin panel system; access any func-

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tions, any time 24 Action buttons; control multiple shows from one panel! 'HTP', 'LTP' or 'No Precedence' selectable at any time, Up to 64 DMX channel output using optional DMX512 PC card or DMX Dongle 'Real time' recording; drop in the events, hit record, and hit keys to set timings - it really is as simple as that.

• From \$2,500

### Strand Lighting 300 series 24/48ch Console

Manual/Memory Desks offer traditional preset fader operation plus memory; Two models of up to 48 or 96 manual faders with bump buttons; 24 fully overlapping submasters; Modular construction for fully flexible layout. Modules may be arranged to meet any control room layout or operator requirements; Unique folding design for easy storage; Backlit keypads; Powerful Pentium class processors provide performance and reliability; ShowNet Ethernet functionality optional on all models; Full support for automated lighting using Trackball mouse; Compatible with 500 series consoles; GeniusPro software includes: fixture libraries, preset focus groups and digitizer support. Single scene or two scene presets.

• From \$10,000

### Strand Lighting MX 24 Manual Control desk

Portable 24ch memory console with 96 memories (4 pages of 24), 2 presets of manual sliders (which can be used as scene masters), manual and timed playback controls and programmable effects. Complete with power supply. Ideal for smaller venues which require basic memory capabilities and special effects maximum 512 dimmers Lightweight and portable LCD menu and data screen Optional video terminal display Manual, timed and recorded timed crossfades Individual bump button per channel with master Two proportional channel/dimmer patches Software selectable multiplex dimmer protocols: DMX, AMX, D54 MIDI interface for automated effects and system expansion Optional memory storage card Printer output.

• From \$5,000

### Theatrelight Nova: 24 & 36ch consoles

The Theatrelight Nova is particularly suitable for smaller shows. It can be used as a simple dual-preset desk, and can also record memory scenes and chases, with timed dipless crossfading. There are sound-to-light capabilities via the built-in mic. Intended for theatres, schools, clubs and entertainment events. Features: 10 pages of 6 chase and 2 show masters (Nova 24); 4 pages of 16 chase and 4 show masters (Nova 36); Park Mode for dual-preset desk emulation; Timed dipless; crossfading between cue states; Single-button crossfading simplifies long shows Record & erase protection codes; Sound-to-Light chases with built-in mic. Remote step & external audio input.

• Nova 24: \$1095 - Nova 36: \$1315

### Theatrelight Scenemaster 3F: 12/24 & 24/48

The Scenemaster 3F is available as a 12ch dual preset/ 24ch single preset desk or as a 24ch dual preset/ 48ch single preset desk. With 4pgs of Scenemasters, multiple chase speeds, recordable Up/Down fade times and the ability to record a full show under a Scenemaster for single button operation. With DMX output, the desk also has scene editing facilities and a beat recording function for synchronising chase speeds to live music. Special features such as the ability to read chase speeds in either steps per second or beats per minute make it flexible enough for both Theatre and Rock & Roll lighting.

• 12/24: \$1,865 - 24/48 \$2,635

### Theatrelight Starlet 6 & 12

The Starlet 6 & 12 are the lowest priced entry-level consoles outputting DMX. The Starlet has a single preset with park store manual operation, flash buttons, split faders and comes with an outboard power supply. Ideal for Drama suites, convention and exhibition lighting control.

• Starlet 6 \$379 • Starlet 12 \$489.50

### Zero88 Frog

24/48 generic channels which may be manually or automatically patched to any of the 512 DMX channels. Memories can be recorded as scenes or chases with fade times and modifiers. 9 pages of 12 submasters; on board LCD menus; Monitor output; Disk drive; 400 memories' Size 607(w) x 570(d) x 110 (h)

• \$4,995

### Single DMX Universe Control

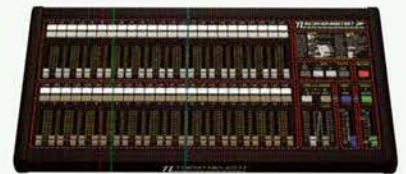
#### American DJ DMX OP DMX Operator

An affordable solution for controlling DMX products. Performance features: Control up to 192 DMX channels' 12 individual fixture channels - Control up to 12 separate intelligent lights with up to 16 DMX channels per fixture; Fixtures with less than 16 DMX channels may be combined on 1 Channel Fader; Record up to 6 programmable chases with fade times and different speeds; 8 individual faders provide easy programmability for Intelligent lighting or Dimmer Packs; MIDI controllable; DMX-512 3 pin XLR signal; Built-in Microphone Remote control: Blackout controlled by MIDI input signal. Power input: DC 9V-12V, 220 mA min. (power supply included)3U.

• \$559

#### American DJ Show Designer DMX 512 Controller

The Show Designer is designed to control a wide variety of DMX intelligent lighting fixtures, and ships with library of fixture settings. Performance: up to 512 channels; up to 16 large fixtures (of up to 32 channels each) or 16 groups of smaller



Theatrelight Scenemaster 3F 24/48



Complite Photon



Complite Rave

# ZERO<sup>®</sup>88

### Fat Frog

- 24/48 Control channels (48 in wide mode)
- The ability to control 12 moving lights
- An effects generator
- A fixture library
- 9 pages of 12 submasters
- Softpatch to 512 DMX channels
- Onboard LCD menus
- Floppy disk drive
- Up to 999 Memories
- Super user functions
- Twin isolated DMX Outlets
- Monitor output & keyboard input



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## Lighting Control Desks



Elektralite CP20



Futurelight CF-192



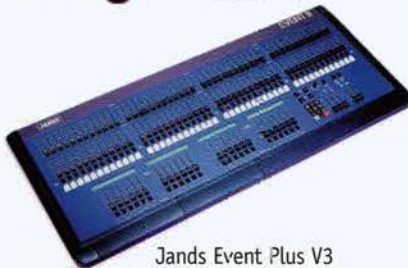
Futurelight CP-256



Jands ESP II



Jands Event V3  
(Ever t 48)



Jands Event Plus V3  
(Event 48)



LSC maXim-M

fixtures; up to 1024 scenes, 512 presets, 256 chases and 256 shows. In addition fixtures and memories are selectable from an array of 16 switches. Software updates (internet) load directly from any Windows PC using a standard PC serial laplink cable. Front: 8 faders for 32 channel fixtures. Rear: 3 pin XLR connector for DMX512 output with a polarity switch. 3RU.

• \$2,195

### Compulite Photon

Compact memory operation lighting console ideal for small theatre installations. Up to 260 control channels patch to 512 DMX outputs. DMX input, MIDI, SMPTE and 3.5" floppy drive. 20 controllers and 20 Soft Keys. Split A/B crossfader, Grand Master/DBO and full numeric keypad. Up to 999 memories and 10 simultaneous chasers. Advanced features include 999 macros, 99 Snapshots (recording of controller and playback assignments) and 99 Q lists for increased capacity. 8 part multi cues allow for complex show creation. Scroller patch system allows integrated control of scrollers and dimmers. PIN number to lock out unauthorised users.

• \$13,574

### Compulite Rave

Compact easy to use console for up to 40 moving lights, 100 dimmers, 100 scrollers and 20 specials (Smoke, strobe, etc). DMX, SMPTE, MIDI, Audio connections and 3.5" floppy drive. Internal LCD screen provides soft buttons and user feedback without the need for an external monitor. 20 playbacks, 20 soft keys and grand master/DBO. Full effects engine/creator and ability to create one button shows from existing scenes and chases. Desktop console or 19" rack mount options. Direct ethernet connection to WYSIWYG and CompuCAD software. A low cost console with almost all the power of the larger Compulite consoles. Ideal for nightclubs and smaller production companies. Includes Wizards to make setup much easier.

• \$9,995

### Compulite Rave PC

Includes all of the features of the (above) Rave console, but run from a PC. The Rave PC can be used as a Windows based off-line editor for the Rave console. Shows can be transferred between the PC and console via ethernet or floppy disc. With the addition of a Compulite E-Mix ethernet-DMX converter the Rave PC can be a self contained lighting console that runs on any computer. The software is FREE, making it ideal for hire companies, where the client can pre-programme the show on a PC, then hire the console for show days.

• Free (requires Compulite E-Mix ethernet/DMX hub to output DMX)

### Elektralite CP100

For small installations/rentals and large-scale projects; the CP-100 can control moving lights and dimmers channels for about half the cost of comparable boards. The features of the CP100 say it all, but more than that is the way the CP-100 programs. From the on-set the board's programming button pushes are simple and easy to learn. Simple, because if you want to store a cue or change a colour, the button sequence is nearly identical to a verbal command. The board can also learn short cut commands so one or two button pushes can execute a whole host of functions simultaneously.

• \$10,999

### Elektralite CP10xt

The CP10xt is capable of programming a variety of different manufacturers intelligent moving lights through the extensive onboard libraries. It will also control any device that utilises DMX protocol. CP10xt retains the ease of programming, which made the CP10 such a worldwide success, and it takes only seconds to learn how to enter a cue, create a chase, and construct a macro. Features include auto-masking, timed crossfade, and coarse/fine joystick control. The joystick can be set to absolute control or relative position control, providing accurate positioning of moving lights. A MIDI port allows control of the CP10xt remotely from another MIDI device, and also allows CP10xts to be linked to download or upload complete memory contents.

• \$2,599

### Elektralite CP20

The CP20 is a controller/console designed for club and live situ-

ations. Using a new software version (1.10) the unit can control all 512 DMX channels with up to 24 Fixtures, 24 Faders (8 submasters). Submasters can now record and playback a cue or a chase, Full softpatch, Audio input, 3 and 5 pin DMX512 output, Optional 3.5" disk drive, (internal hard drive CP20xt), Onboard fixture library and ability to make custom fixtures of the board's memory, 960 cues, 96 chases and 48 Macros, full cross fade ability, Hot keys for instant access to cues, chases and macros. Ability to have automatic playback of a Chase or Macro when the board is turned on.

• \$6,999

### FAL Easy-2 Intelligent Controller

Designed for an 'easy' way to control FAL scanners, the EASY-2 is pre-programmed (and not programmable) yet allows manual control of one or more projectors. Features: 12 pre-programmed sequences; automatic or music activation; splash proof front panel; variable program speed and music sensitivity; configurable for multiples of 4 or 6 scanners all with simple controls and front panel layout. The EASY-2 controller operates: FAL 2000, FAL 1000, ROULETTE 575, ROULETTE 1200, SCAN 575, SCAN 1200 and DMX Colour-Changer. Only one type may be connected at a time. 3RU. Standard DMX out.

• \$1,999

### Futurelight CP-192

19" Rack mount DMX controller for up to 12 moving lights with a maximum of 16 channels each. User defined templates for moving light control. Joystick for beam movements, plus direct access buttons for other parameters. 40 chasers of up to 99 steps each. Memory card for show save and export. Desklight, dual DMX outputs and internal PSU. Realtime control of Fade & Step times for chasers. Up to 4 concurrently running chasers. 3 LED displays for user feedback. Audio input via 6.5mm stereo jack 4RU height. 16 bit pan and tilt with fine adjustment via buttons and joystick. Ideal nightclub controller

• \$2,978

### Futurelight CP-256

19" rack mount DMX controller for up to 256 channels. Maximum of 16 moving lights with 16 channels each. 16 bit Pan/Tilt, comprehensive template library, 5 selectable languages. 16 programmes with up to 16 steps. 16 direct access scenes and macros. Joystick for Pan/Tilt control. LCD display with backlight. Sound control via inbuilt microphone. 99 programmable chasers, blackout function and Pan/Tilt invert. Security code for operation prevent unauthorised access and accidental erasing of programmes. Very easy to use, yet surprisingly powerful. Ideal for bands, DJ's and nightclubs

• \$1,854

### High End Systems Handshake

Now you can have a lighting controller in the palm of your hand. Designed to run on a Palm® Organizer™, Handshake™ is a tiny, simple lighting controller from High End Systems that programs and configures lights. Handshake's simple operating system and low cost make it ideal for everything from retail and architectural applications to corporate/industrial shows. With its real-time internal clock, the Handshake output module can run a show on its own, with or without the Palm Organizer attached. Handshake is also a handy tool for lighting technicians. Use it to remotely check lamp hours and other fixture information. In addition, Handshake analyzes and displays DMX data for troubleshooting purposes. With Handshake, a whole new realm of lighting design and control possibilities fits right in the palm of your hand.

• From \$2,700

### Jands ESP II

Dual preset style console available in 24, 48 and 60 channel versions; wide mode doubles number of control channels; 498 memories; up to 30 chases with 99 steps each; single step recording; three softpatch tables; XF (crossfade) section for timed dipless crossfades; FX (effects) section for up to 100 snap change cues; Live and Blind editing; 24 Scene Masters on ESP II 48 and 60 (12 on ESP II 24); 0-10V analogue output option. From \$4495.00 RRP

• From \$4,495

### Jands Event Plus V3

The Event Plus V3 range boasts comprehensive manual con-

trol; single step recording of memories; dipless crossfade chases and stacks; 50 pages containing memories and chases; timed crossfades in 0.1s increments; crossfade stacks; chases up to 99 steps each; 24 Assign Masters; user definable Files made up of any combination of memories, chases and stacks; three proportional softpatch tables; Wide and Superwide mode; Macro functions; available in two channel configurations: Event 60 Plus with 60, 120 or 252 control channels and Event 48 Plus with 48, 96 or 252 control channels.

• From \$7,995

**Jands Event V3**

The Event V3 range boasts comprehensive manual control; single step recording of memories; dipless crossfade chases and stacks; 50 pages containing memories and chases; timed crossfades in 0.1s increments; crossfade stacks; chases up to 99 steps each; 12 Assign Masters; user definable Files made up of any combination of memories, chases and stacks; three proportional softpatch tables; Wide and Superwide mode; available in three channel configurations: Event 24 (24, 48 or 120 control channels), Event 36 (36, 72 or 120 control channels), Event 48 (48, 96 or 120 control channels).

• \$4,995

**LSC maXim-M**

The new range of maXim control desks provide enormous processing power, yet retains an extremely easy to use interface. Structure provides 48 "live" faders in single preset softpatched to any DMX channels, 216 memories, dedicated stack master, 25 simultaneous playback's with 9 pages of memory and electronic labelling of any stored memory. Full proportional softpatch allows the connection of any or all of the 512 DMX channels to any one fader. Optional output module provides SVGA video out to display desk output status, memories and cue lists; plus a 3.5" disk drive for external memory storage.

• \$3,190

**LSC maXim-S**

The new range of maXim control desks provide enormous processing power, yet retains an extremely easy to use operator interface. Structure provides 24 "live" faders in single preset softpatched to 512 DMX output channels, 108 memories, dedicated stack master, 13 simultaneous playback's with 9 pages of memory and electronic labelling of any stored memory. Full proportional softpatch allows the connection of any or all of the 512 DMX channels to any one fader. An optional output module provides SVGA video output to display desk output status, memories and cue lists; plus a 3.5" disk drive for external

memory storage.

• \$2,090

**Martin 2510**

This powerful yet small playback controller handles all Martin lighting products. By combining individual scenes into sequences, the 2510 allows you to build a comprehensive Martin lightshow with a minimum of effort. A standard serial input enables you to download lighting programs from the Martin LightJockey or ProScenium controller. The 2510 offers fully automatic operation and steps through memory sequences with no other prompting other than the internal clock or an external music signal. Manual mode allows for easy operation and a blackout function provides for even more extensive control.

• \$1,399

**Martin Lightjockey**

LightJockey (ver 2.0) is a Windows-based controller. This newest version uses a new PCI card for increased PC interface capabilities (there are also USB and PCMCIA interface options). It is Windows 2000 compatible. Features include a Solid Beam Virtual Visualizer (simulator for creating realistic, solid, 3D beams) and the ability to interface with Winamp to play a multitude of digital audio files including MP3. LightJockey supports SMPTE and MIDI timecode with a suitable interface and has a backup feature. The software has a large fixture library, user friendly graphic functionality, advanced shape generator for fast and intuitive automated movement programming.

• \$2,999 (USB Version)

**Martin Proscenium DMX**

Martin ProScenium DMX (MPS) is a windows-based visual DMX lighting control package, ideal for any lighting control application. Effects may be triggered by the system's real-time clock, by a location on a DVD, CD Audio, a MIDI, SMPTE, AVI, WAV, or MPEG file. Control of the Windows mixer has been integrated into ProScenium so that all Windows multimedia devices can have sound faded IN/OUT in perfect synchronization with the light and images. Remote control is available via DMX-IN, serial commands, the 2532 controller or the MC-X controller. Cuelists can be triggered on any/each day, to the time of day, through the integrated sunset/sunrise information table, or using a unique mask function to make a cuelist trigger itself every 10 minutes, every other hour or whenever desired.

• \$3,799

**SGM Pilot 2000**

A universal DMX controller for 40 moving lights with a maximum of 36 channels each. There is a large back-lit LCD display,



Strand Lighting 300 series 125Ch Memory Console

SUNLITE 2000 USB to DMX Controller



# CHAMELEON TOURING SYSTEMS

L I G H T I N G P R O D U C T I O N & H I R E

- ▶ **LUMINAIRES** Strand, ETC, Altman, Selecon
- ▶ **CONTROL SYSTEMS** Jands, ETC, LSC, Strand
- ▶ **MOVING LIGHTS** Martin, Clay Paky, High End, Vari-Lite
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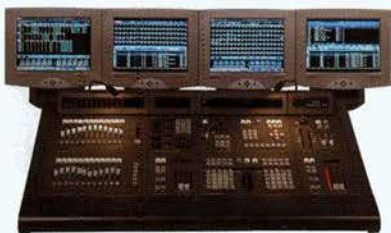
45 O'Connell Terrace, Bowen Hills QLD 4006  
Tel: 07 3854 1511 Fax: 07 3854 1563  
Email: brianoc@bigpond.com

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

## Lighting Control Desks



Theatreight Cuemaster 120Ch



ADB Vision 10/ST



Avolites Azure 2000



Avolites Pearl 2000



Avolites Sapphire 2000

and using the Scroll function, operators can control blocks of 6 channels at a time. Thanks to the (editable) internal libraries, it's possible to assign functions to the faders at will: physical and logic channels are independent. 40 chases - Programs - Presets - Psychos. The section dedicated to scanners and moving head fixtures has a twin co-ordinate system: absolute and relative. This ensures perfect fixture positioning. Pilot 2000 is 19" rackmount. DMX in/out connector, SMPTE socket for changing memories in sync, independent regulation of scene and pre-set crossfade times. Audio input and built-in microphone for music sync functions. MIDI in/thru/out connector. Data and memories can be downloaded to a PC.

- From \$3,250

### ShowMagic 512

ShowMagic SLX 512 is the 'heavyweight' member of the ShowMagic family. You can now create shows of any size and complexity in the refreshingly simple way that is unique to ShowMagic. With auto-scheduler and easy control of external RS232 and Midi devices the sky is the limit. You just won't believe how quick and easy show creation can be. Create lighting cues and lighting chases in seconds. Flexible auto scheduler - the complete light, sound and device control system that controls itself! 480 'main faders' for up to 480 fixtures or banks 2304 cues, 1536 sequences, 240 sound events per desk Unique twin panel system; access any functions, any time 240 Action buttons; control multiple shows from one panel! 'HTP', 'LTP' or 'No Precedence' selectable at any time Integrate videos, screen control etc easily via RS232 1024 or 2048 DMX channel versions also available

- From \$8,000

### ShowMagic AV

As if it wasn't enough to be able to control all your lighting, play all your audio, and control external RS232 and Midi devices from a single PC, quickly and easily, with ShowMagic AV and an MPEG video decoder card you can now have full screen, DVD quality video running off the same ShowMagic PC, and because the video is treated as a ShowMagic 'event' they can be activated within ShowMagic sequences, scheduled using the auto scheduler, triggered manually using any midi or RS232 device or controlled using faders on any old DMX lighting desk. MP3 audio file support - You can now store your music & sound effects in MP3 format to save disk storage space, and play them back as ShowMagic sound events. Midi Program Change Triggering - Action buttons can now be triggered using 'program change' midi commands, as commonly used by midi foot-switches. Perfect for live performers. DMX Input - With ShowMagic 'SLX' or 'AV' versions and a suitable DMX I/O interface (such as the SOUNDLIGHT '1512C' DMX I/O card or the SOUNDLIGHT PCMCIA DMX I/O device for laptops) you can now use any DMX lighting desk to control your lighting fixtures and record ShowMagic lighting cues - if you ever wanted a tactile interface for ShowMagic you've now got an UNLIMITED choice!

- From \$9,000

### Strand Lighting 300 series 125/250Ch Memory Console

Two models available with 125 channels/125 attributes or 250 channels/250 attributes; 24 fully overlapping submasters; Easily configured for single or two tier operation; Channel capacity upgrades available; Powerful Pentium class processors provide performance and reliability; Second video port option available; ShowNet Ethernet functionality standard on all models; Full support for automated lighting. Motion control is a standard feature of the 300 series and is fully implemented using our Intelligent Trackball/Mouse support.; GeniusPro software includes: fixture libraries, preset focus groups and digitizer support; Compatible with 500 series consoles; Wide range of accessories; Backlit keypads.

- From \$13,000 (300 series 400 Channel from \$26,000)

### SUNLITE 2000 USB to DMX Controller

Sunlite Suite includes a USB/DMX Interface and windows-based software. The device can be used without a computer connected to run up to 100 dynamic scenes Up to 10 devices can be connected simultaneously. The software has unlimited pages and scenes and can be used as a simple controller using the play button and the keyboard. Assignable user security levels. Stand alone memory optimization Loop option for each

scene. Add, Copy, Delete Paste, Wait time & fade time for each step. Import scenes from Sunlite NT4 or Sunlite 2000 software Programmed with MS Visual C++ Free source codes included.

- \$2,999

### Sweetlight 256

Stand alone lighting controller with 8 internal chases/scenes programmed via a Windows PC. Once programmed the PC is removed and the operator is left with 8 buttons to activate the programmes. 256 DMX channels and up to 32 steps per chase, all with individual fade times. The Sweetlight can also be used as a "real time" controller when the PC is connected. In stand alone mode the unit will remember the last selected programme when powered down and reactivate when turned back on. The Sweetlight is ideal for applications where no operator is available or where the users requires some level of control, but is not experienced in the operation of lighting controllers.

- \$2,526

### Sweetlight 512

An upgraded version of the (above) Sweetlight 256, this device has all of the above features. This device controls 512 DMX channels and up to 64 steps per chase, all with individual fade times. The Sweetlight 512 also includes voltage free inputs for remote control via AMX and other automation systems.

- \$3,348

### Theatreight Cuemaster 120 Channel

This console provides large cue capacity average of 1000 cues, with dedicated channel faders for fast plotting and hands on channel control. Dedicated Scenemasters for instant access. Up to 24 Scenemasters with 10 pages per scenemaster. Each Scenemaster can hold a Manual Scene, a Fade Scene, Chase or Show. Multiple Chase speeds allow up to 24 independent speeds simultaneously Dynamic display provides live monitoring of desk and on screen help. Single button auto-fade, auto-effects, cue operation simplifies complex shows. Parallel printer port allows for hard copy print out and memory card allows for full show back-up.

- \$5,054

### Theatreight Cuemaster 48

This console provides large cue capacity, with dedicated channel faders for fast plotting and hands on channel control. Dedicated Scenemasters for instant access. Up to 24 Scenemasters with 10 pages per scenemaster. Each Scenemaster can hold a Manual Scene, a Fade Scene, Chase or Show. Multiple Chase speeds allow up to 24 independent speeds simultaneously Dynamic display provides live monitoring of desk and on screen help. Single button auto-fade, auto-effects, cue operation simplifies complex shows. Parallel printer port allows for hard copy print out and memory card allows for full show back-up.

- \$3,044

### Theatreight Cuemaster 48 Plus & 120 Plus

The Cuemaster Plus feature all of the standard Cuemaster features but includes a DMX-Link panel with these features: 240-channel capacity with keypad access, DMX mixing of two separate DMX sources. Softpatching 240 channels to 512 dimmers, 4 independent patch lists. 100 backup scenes as 10 pages of 10 back-up master per page Dynamic display shows channel and dimmer levels on screen. Printer port for hard copy and memory card slot for full back up Independent power supply and independent electronics for maximum reliability.

- Cue 48 Plus:\$5494 • Cue120 Plus \$7254

### Zero88 Fat Frog

24/48 generic channels which may be manually or automatically patched to any of the 512 DMX channels. 12 Moving light control. Memories can be recorded as scenes or chases with fade times and modifiers. 9 pages of 12 submasters. Four palette types: group, colour, beam & position and 24 palettes for each type. Effects generator; FROG function (Fixture Random Output Generator); On board LCD menus; Fixture library; Monitor output; Disk drive; 999 memories; Twin isolated DMX outlets; Size 765(w) x 570(d) x110 (h).

- \$7,250

### Zero88 Leap Frog

24/48 generic channels which may be manually or automatically patched to any of the DMX 512 channels. 24 Moving light controls and memories can be recorded as scenes or chases

with fade times and modifiers. 9 pages of 12 submasters with Four palette types: group, colour, beam & position; 24 palettes for each type. Effects generator; FROG function (Fixture Random Output Generator); On board LCD menus; Fixture library; Monitor output; Disk drive; 999 memories and Twin isolated DMX outlets.

• \$9,790

### Multiple DMX Universe Control

#### ADB Vision 10/ST

A very powerful modular lighting desk for total control of light, colour and movement in Theatres and Television Studios. Up to 2048 DMX output channels with up to 1024 DMX input channels, fully proportionally patched. A total of 9999 lighting memories, 999 groups, 99 macros, 99 chases of 99 steps, 99 loops of memories, 99 banks of up to 48 submasters, 999 libraries for intelligent fixtures, 20 pre-programmed effect patterns; make the Vision one of the most comprehensive lighting desks on the market today. Output ports include 2 x SVGA, MIDI, RS232, alphanumeric keyboard, Ethernet, IR and HF hand held remotes and a link for a stand-alone back-up system.

• \$40,370

#### Avolites Pearl 2000 Touring

The Avolites Pearl is perfect for rental companies, nightclubs and theatrical applications, and is one of the leading consoles for touring worldwide. Features include 2,048 Channels; 120 intelligent fixtures; 240 Dimmer Control Channels Theatrical Plotting and Playback functions; Shape Generator and Fan Mode for instant creation of effects; 15 Playback Masters controlling 450 memories, chases or cue list; MIDI and Bass, Mid, Treble sound to light triggers; and Colour VGA output fitted as standard. The touring version comes complete with the award winning graphics tablet, riggers remote and roadcase.

• From \$28,000

#### Avolites Sapphire 2000 Touring

The Sapphire 2000 desk uses simple, intuitive programming. Some of the features include Text Legends; 2,048 Channels; Full Theatrical Control; Multiple Fixture Control; Pre-programmed Shapes; Palette, Shape and Group selects; All Channels and Masters with Add & Swap buttons. Highly popular in the rental market, Sapphire 2000 features electronic legends, dedicated theatre playback and comprehensive theatrical-style plotting and playback tools. Sapphire 2000 is optimised for live theatre as well as musicals with large moving light rigs. The console also offers many dedicated features for the individual needs of television, concert and industrial presentation lighting, as well as theatre applications. Sapphire Touring is supplied complete with graphics tablet and keyboard draws in a roadcase.

• From \$50,000

#### Avolites Azure 2000

The Azure 2000 is a stylish and powerful creation for nightclubs, discotheques, themed environments and time-coded industrial shows. The console has an awesome specification and a highly competitive price tag - the keys being a waterproof membrane which providing tactile feedback. Its phenomenal power and real time sequencing capabilities also make it ideal for concerts, environmental and architectural applications, theatre, television and any events requiring powerful moving and generic lighting control. Features include 2,048 DMX Channels • 500 Memories or Sequences • 200 Fixtures • 200 Dimmers. There are a variety of models with different surrounds - rack mounting, wooden sides, or "batman" surround.

• From \$13,500

#### Avolites Azure Shadow

The Azure Shadow features all the facilities offered by the Azure 2000 with the additional functionality of the 'Shadow' live playback buttons that have always been integral to Avolites' consoles. The Shadow is also available in a variety of surrounds or a Touring version with roadcase, graphics tablet and riggers remote.

• From \$18,000

#### Complite Micron/Ovation 4D

High spec Theatrical/TV lighting console. 4 DMX outs, DMX input, MIDI, SMPTE and ethernet. Up to 1536 dimmer, scrollers, specials/ 192 moving lights. Internal hard drive, 3.5" floppy and offline storage. Trackball, dimmer wheel and 4 parameter wheels

for moving light control. Up to 3 VGA monitors, 36 submasters, 2 split crossfaders and 50 Q keys. Internal touch screen for advanced feature control. Ability to create fixture templates on the console. Full effects creator/editor for moving and conventional lights. Leader function for 3D tracking of moving lights. Direct connection to WYSIWYG via ethernet port. Wireless remote control, optional touch screen and optional add on Macro wing, wireless remote controls and Submaster wing.

• from \$27,254

#### Complite Sabre

High spec Moving light console. 6 DMX outs, DMX input, MIDI, SMPTE and ethernet. Up to 252 moving lights, 1024 dimmers, scrollers and specials. Internal hard drive, 3.5" floppy and offline storage. Two trackballs, dedicated dimmer and iris wheels, plus 6 parameter wheels for easy control of all moving light parameters. Up to 3 VGA monitors. 24 submasters, 2 split crossfaders and 50 Q keys. Many unique functions for moving light control. Ability to create fixture templates on the console. Full effects creator/editor for moving and conventional lights. Leader function for 3D tracking of moving lights. Direct connection to WYSIWYG via ethernet port. Wireless remote control, optional touch screen and optional add on Macro wing, wireless remote controls and Submaster wing.

• from \$58,662

#### Complite Spark 4D

High spec ultra portable lighting console. 3 DMX outs with up to 192 moving lights/1024 conventionals. 20 Soft Keys and faders for easy access to channels, memories, moving lights, macros, snaps, effects, etc. Internal hard disc, 3.5" floppy and ethernet connection. DMX input, MIDI, SMPTE and Remote bus. Trackball and 3 parameter wheels for moving light control. Split A/B crossfader, 20 controllers and Grand Master. The Spark 4D includes full ethernet connectivity to enable the use of ethernet/DMX nodes, remote video, rigger controls and remote file servers. WYSIWYG is supported directly via ethernet. Small console measures only 58x36x11cm. Battery backed RAM in all Complite consoles to safeguard data.

• from \$24,114

#### Complite Spark 4D Top

All of the features of the (above) Spark 4D, the Spark 4D Top is constructed as a roadcase with clip on lid and built in handle, making it very easy to move around and between venues. An integrated LCD monitor hinges up to provide full display without the need for an external monitor. Direct connection to WYSIWYG and CompuCAD software via the built ethernet port. This console is used on many popular shows including "The Logies" and "The Weakest Link", due to the flexibility and quick editing of memories. The Complite Effects Creator allows real-time creation and editing of all effect parameters.

• \$31,408

#### ENNTEC EVO

The Evo is the evolution in lighting control built around ethernet and new technologies. 7 fully assignable motorised faders, large backlit LCD touch screen, 3 encoder wheels with switches. The EVO supports up to 4 DMX universes through ethernet. Programming via ICBF parameters with information displayed using spreadsheets and in plain english. eg: "Save current look as palette". It has a very powerful effects engine with user modifiable parameters. The EVO can store 100s of cues, sequences, macros, groups & palettes. It is also ready to work with any new control standard: ACN or Artnet. Shows can be saved on the inbuilt floppy or via ethernet onto a server. Available in 3 colours the EVO will ship late November.

• \$5,500

#### ETC Express

Perfect for smaller theatres, with comprehensive manual and programmable control. Features: 1024 DMX channels; 24/48, 48/96, 72/144, 125 and 250 configurations; 10 pages of 24 submasters; two scene preset or pre-programmed operation; 600 cues; 500 groups; 2000 macros; preset focus points, moving light features, LTP and HTP channels, spreadsheet editing; Ethernet for DMX, video and other signal distribution; full MIDI interface; supports ETCLink dimmer feedback.

• From \$12,170

#### ETC Expression 3

Next generation in a family of industry standard theatre con



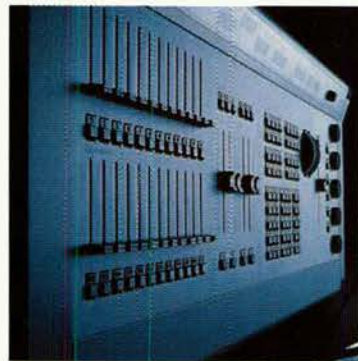
Complite Ovation 4D



Complite Sabre



Complite Spark 4D Top



ETC Expression 3



Flying Pig - Wholehog II (with wing board)

## Lighting Control Desks



Jands Event 408



Jands Event 416



Jands Hog 500



Jands Hog 1000



MA Lighting - grandMA

soles. Features: 1536 DMX channels; up to 1200 control channels; 100 focus points; 600 cues; 500 groups; 2000 macros; full moving light controls; LTP and HTP channels; spreadsheet editing; Ethernet for DMX, video and other signal distribution; optional full tracking backup.

- From \$34,950

### ETC Insight 3

A console designed for controlling large numbers of dimmers and moving lights with minimal programming, the most predominant feature is the 108 tactile submasters on the front panel! Features: 10 pages of 108 submasters; 1536 DMX channels; 512 control channels; 100 focus points; 600 cues; 500 groups; 2000 macros; moving light controls; LTP and HTP channels; spreadsheet editing; Ethernet for DMX, video and other signal distribution; optional full tracking backup; time clock event programming.

- From \$39,150

### ETC Obsession II

Most advanced, high capacity theatre console available. Features: 1536 - 8192 DMX channels; cues from .1 to 999.9; 999 groups; 999 effects, 2000 macros; X/Y trackpad; full tracking backup available; six pages of multi function encoders; 2 pages of 48 submasters; full moving light control with user definable fixture libraries; Designers Remote Console available; full USITT DMX-512 compatibility; interface for ETCNet, ETCLink, MIDI, MIDI Show Control, and SMPTE timecode

- SPOA

### Flying Pig WholeHogII

Pre-set fixture personalities automatically configure the WHOLEHOG II to your specifications. The console includes fixture personalities from all major lighting manufacturers. Programming is straightforward—you can select and group fixtures, set their parameters, and record them into cues. Two touch-sensitive screens give immediate access to any feature: fixtures, groups, positions or palettes. In addition to the two in-built touch-screens, two optional external displays offer more space to view numerous windows. Within a cue, every parameter of each fixture can have its own fade and delay times, split times, and cross-fade paths. And multiple cues can be run simultaneously within a cue list and then triggered manually or automatically—from Time Code or MIDI Show Control. The WHOLEHOG II can also communicate with other types of equipment—besides using the DMX input control to playback from another board, the console also features MIDI Notes, MIDI Show Control and Time Code. The DMX In port can take “snapshots” of cues from traditional consoles for storing on the WHOLEHOG II. It's also possible to connect a Stage Remote to edit cues or an Expansion Unit to increase the number of Playback Masters if needed.

- POA

### Flying Pig HogPC

Take your show on the road. Literally. With Flying Pig Systems' Hog PC - which transfers many of the Wholehog II lighting console's functions to a personal computer - your light show can travel with you. Hog PC offers powerful programming and playback tools in a portable system. Program your show on a Wholehog II console and play it back with Hog PC. Create cues or run a show from any remote location - even halfway around the world - be it on a home computer or a laptop. It's ideal as a backup solution. Born out of the company's existing Hog Edit software, Hog PC runs on any Windows 98ME or 2000 computer and includes a hardware device to output DMX. Control up to four DMX universes using multiple USB output widgets. Besides portability, Hog PC offers another advantage: an astronomical/real time clock, previously available only on the Hog Unit rack mount version. The astronomical clock allows Hog PC to operate as a permanent playback unit, helpful in architectural, retail and other applications where automation is necessary. Hog PC also interfaces directly with WYSIWYG and Martin Show Designer on the same computer.

- From \$6,500

### Jands Event 408

All the features of the Event V3 consoles plus powerful moving light controls, running software version 4.2: Multi-purpose 20 button palette to record and select fixtures, groups, positions, colours and beam parameters; an effects processor; fan func-

tions for intensity, position, colour and beam; Programmer section with 3 encoder wheels and contextual soft-buttons; 512 control channels/1024 DMX channels; 20 moving lights; 80 scrollers; 8 assign masters; 24/48 preset faders.

- \$8,995

### Jands Event 416

All the features of the Event V3 consoles plus powerful moving light controls, running software version 4.2: Multi-purpose 20 button palette to record and select fixtures, groups, positions, colours and beam parameters; an effects processor; fan functions for intensity, position, colour and beam; Programmer section with 3 encoder wheels and contextual soft-buttons; 1024 control channels/1024 DMX channels; 20 moving lights; 80 scrollers; 16 assign masters; 36/72 preset faders.

- \$13,495

### Jands Hog 1000

Based on the WholeHog II Operating System, the Hog 1000 is designed to handle any combination and any number of automated or conventional lighting fixtures quickly and efficiently. Features: 1024 control channels/1024 DMX channels; split fade times on any parameter; Automenus function; advanced fixture control; user definable fixture libraries; external VGA monitor output; 7 LCDs for operator feedback; 16 playback masters; full recording and editing functions; show data transferable between WholeHog II, Hog 500, Echelon 1k and JandsHog 250/500/600 consoles.

- \$27,995

### Jands Hog 500

Based on the WholeHog II Operating System, the Hog 500 is designed to handle any combination and any number of automated or conventional lighting fixtures quickly and efficiently. Features: 512 control channels/1024 DMX channels; split fade times on any parameter; Automenus function; advanced fixture control; user definable fixture libraries; external VGA monitor output; 2 LCDs for operator feedback; 8 playback masters; full recording and editing functions; show data transferable between WholeHog II, Hog 1000, Echelon 1k and JandsHog 250/500/600 consoles.

- \$18,995

### LSC maXim-L

The new range of maXim control desks provide enormous processing power, yet retains an extremely easy to use operator interface. Structure provides 72 “live” faders in single preset softpatched to 1024 DMX channels, 378 memories, dedicated stack master, 42 simultaneous playback's with 9 pages of memory and electronic labelling of any stored memory. The PATPAD moving light module allows full LTP control of up to 24 intelligent fixtures with effects generator and fixture library. A resistive touch screen provides a quick and intuitive method of plotting using virtual wheels and buttons with fixture allocation to faders. SVGA video port & 3.5" disk drive are standard.

- \$7,139

### LSC maXim-XL

The new range of maXim control desks provide enormous processing power, yet retains an extremely easy to use operator interface. Structure provides 96 “live” faders in single preset softpatched to 1024 DMX channels, 594 memories, dedicated stack master, 66 simultaneous playback's with 9 pages of memory and electronic labelling of any stored memory. The PATPAD moving light module allows full LTP control of up to 24 intelligent fixtures with effects generator and fixture library. A resistive touch screen provides a quick and intuitive method of plotting using virtual wheels and buttons with fixture allocation to faders. SVGA video port & 3.5" disk drive are standard.

- \$8,239

### LSC maXim-XXL

The new range of maXim control desks provide enormous processing power, yet retains an extremely easy to use operator interface. Structure provides 120 “live” faders in single preset softpatched to 1024 DMX channels, 810 memories, dedicated stack master, 90 simultaneous playback's with 9 pages of memory and electronic labelling of any stored memory. The PATPAD moving light module allows full LTP control of up to 24 intelligent fixtures with effects generator and fixture library.

A resistive touch screen provides a quick and intuitive method of plotting using virtual wheels and buttons with fixture allocation to faders. SVGA video port & 3.5" disk drive are standard.

- \$9,399

### MA Lighting - grandMA range

An exciting new range of consoles to be launched in the local market very soon, the grandMA range offer an simple control of extensive light shows with lots of channels and intelligent moving lights. 3 colour touch screen and up to 2 external monitors makes for an extremely comfortable programming environment. 20 motorized faders, built in keyboard, mouse and trackball along with 4 parameter encoders gives operators and programmers a luxurious programming and playback surface. Unlimited cue capacity, extensive Effects Generator, output to 4 DMX universes (with 4 additional ones via Ethernet), DMX in, SMPTE, MIDI, RS-232, audio input, switching analogue inputs, 15min UPS. MA users will feel quite familiar with the grandMA right from the start. - easy to understand but nevertheless unbelievably powerful.

- Price to be available soon

### Martin Case Controllers

Two versions – the Case PRO I (ideal for club installations and small to medium size productions), and the larger Case PRO II controller (II ideal for touring and show productions where direct control access is a must). Case control desks allow the lighting designer to view the fixture set-up graphically, on screen, for easy identification. The fixture library contains all well known lighting brands. In each cue, any parameters on each fixture can have their own delay and fade IN/OUT times. Multiple cues can be launched simultaneously and split cues are also possible. The cue-list can be manually triggered or can be synchronized with an internal timer, SMPTE time code, MIDI or time code from a standard audio CD. Wing board also available for extra fader playback capability.

- \$16,999 (Case PRO I)

### Martin Lightjockey

All of the features of the Lightjockey version mentioned in the "Single DMX Universe Control" category, except with two separate DMX universes.

- \$4,599 (1024ch Version)

### Martin Matrix Controller

The Martin Matrix controller is a Windows based controller system dedicated to controlling fixtures with one or multiple parameters, which are mounted in a matrix arrangement. The main advantage of this device is the ability to remote control it with a minimum of channels. The Matrix makes it very fast to program traditional matrix effects such as lines, snakes, circles and scrolling text, which can be assigned to any parameter. Up to four effects can run simultaneously. All these settings are stored as one cue that is called from stand-alone mode or slaved by a few DMX-channels. Intelligent features are included to quickly change the amount of your matrix without losing programming. All the preprogrammed effects are automatically resized when the matrix dimensions in X and Y are changed. The Martin Matrix comes with 2048 DMX outputs, and uses the same libraries as the Martin Case controllers.

- \$16,999

### ShowCAD

PC based DMX lighting controller with many advanced functions. 1024 DMX outputs, MIDI, RS232 and SMPTE inputs, plus audio. Optional DMX input and Digital input cards available. Unlimited number of scenes, chasers, cue lists and simultaneous playbacks running. Requires only a 386 PC with 2MB of RAM. Industry standard PC controller that is used on many permanent installations around the country. Ideal for turning an old obsolete computer into a very powerful moving light controller. The automatic chaser creator writes 100's of effects for your moving lights in less than 30 seconds, making it ideal for "one off" shows with minimal programming time.

- \$4,898

### ShowCAD Artist

Windows based update to ShowCAD. Up to 30,000 DMX channels via add on USB and PCI interface cards. Can interface and sync to any Windows device including CD, DVD, RS232, MIDI, Audio, Video, etc. Unlimited number of moving lights, dim-

mers, scenes, memories, chasers. Free demo software and off-line editor. The system uses Wizards to automate many of the mundane tasks, such as fixture patching, group creation, scene and chaser/effect creation. Instant access colour/gobo/beam libraries. Due to the scaling nature of the software there is no actual limit to the number of DMX channels. Full on-line help, LTP/HTP modes and gobo/colour/beam position hold. Requires Pentium II PC with 64MB RAM, X VGA monitor and ISA, PCI or USB ports.

- \$5,498

### Strand Lighting 520i Portable Memory Console

Compact ; Powerful integrated moving light capability; High capacity Console capability can be expanded by adding application software packages up to 6000 intensity channels and 2000 scroller or moving light attributes Intensity channels may be converted to additional attribute channels 2048 DMX outputs can be increased to 8192 (16 DMX universes) with Strand ShowNet Ethernet networks and SN series nodes; 6 pages of individually programmable submasters. Backlit graphic LCD displays ; Two VGA monitor outputs are standard and may be upgraded to four with optional dual VGA card Integral 3.5" 1.44 MB floppy disk drive and hard disk drive New 2.5 Software available from Strand Website (530i/550i High Capacity Console POA)

- From \$ 28,900

### Strand Lighting 300 series 600 Channel Memory Console

Available with 600 channels/400 attributes; Unique folding design with dual colour LCD displays standard on Memory versions; Powerful Pentium class processors provide performance and reliability; ShowNet Ethernet functionality standard on all models; Full support for automated lighting; Motion control is a standard feature of the 300 series and is fully implemented using our Intelligent Trackball/Mouse support.; Compatible with 500 series consoles; Wide range of accessories; Backlit keypads.

- From \$30,000

### Theatrelight Stagemaster

1024ch patchable to 1024 or 2048 dimmers; moving light attribute patching/editing; any channel can be Intensity Channel (HTP) for dimmer levels, or Position Channel (LTP), for mechanical position levels, and have a min, a max, or a fixed level set; 50 preset groups/page of moving light focus positions, colour/gobo selections, or commonly used channel selections; 20 submasters/page for scenes or chases playback with page overlay memory; 10pgs of 4 shows for playback through a dipless crossfader or Go button; Each cue of a show stores a text message, fade up, down, and delay times, and can link in any of the 50 groups or 20 submasters for special effects on the current page; Dedicated 32 bit embedded microprocessor for instant operation after power up, with 5 year memory retention during power off.

- \$POA

### Vari\*Lite Virtuoso DX

The Virtuoso DX provides fast and powerful tools for programming and control of VARI\*LITE luminaries, DMX automated lights and conventional fixtures.. In addition to Virtuoso™ communications protocol, the console includes eight integrated DMX universes and the ability to support up to 25 DMX universes. Features: Front panel with illuminated buttons and displays that can be read in any lighting condition and at any viewing angle, 2000 fixtures, 1000 presets, 1000 effects, 30 submasters, VARI\*LITE Colour system for matching gel colours across fixture types.

- \$POA

### Zero88 Bull Frog

48/96 generic channels which may be manually or automatically patched to any of the DMX 1024 channels. 24 Moving light controls. Memories can be recorded as scenes or chases with fade times and modifiers; 9 pages of 24 submasters. Four palette types: group, colour, beam & position; 48 palettes for each type; Effects generator; FROG function (Fixture Random Output Generator); On board LCD menus; Fixture library; Monitor output; Disk drive; 999 memories; Twin isolated DMX512 outlets offering 1024 channels. Size 1167(w) x 568(d) x 115 (t)

- \$13,795



Martin Case PRO I



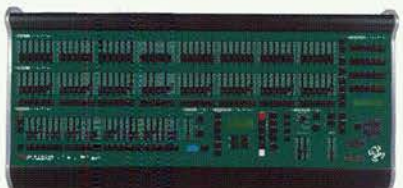
Strand Lighting 520i Portable Memory Console



Theatrelight Stagemaster



Vari\*Lite Virtuoso DX



Zero88 Bull Frog

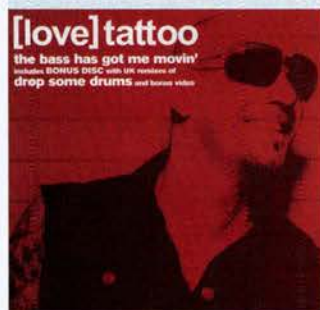
**C H A R T S**



**SONG TITLE:** Fall Down  
**ARTIST:** Jebediah  
**PRODUCER:** Magoo  
**STUDIO:** Mangrove Recording Studios  
**ASSISTANT:** Matt Lovell  
**MIXING:** Magoo @ Studios 301  
**MIX ASSISTANT:** Anton Hagop



**SONG TITLE:** Superstraight  
**ARTIST:** Regurgitator  
**PRODUCER:** Regurgitator  
**ADDITIONAL PROD:** Andy Gill  
**MIXING:** Andy Gill



**SONG TITLE:** The Bass has got me Movin'  
**ARTIST:** Love Tattoo  
**PRODUCER:** Stephen Allkirs & Justin Shave  
**ENGINEER:** Evan McHugh  
**PROGRAMMING:** Justin Shave  
**STUDIO:** Festival Studios  
**MIXING:** Justin Shave

**New South Wales**

ARTIST	PRODUCER	ENGINEER	SESSION
<b>Aphek Studio</b> Greg Dixon +61 9876 8170 24tk digital/soundcraft ghost console			
Aramaic	Band	Greg Dixon	EP
Dave Porter	Dave Porter	Greg Dixon	Demo
Shane Elsmore	Shane Elsmore	Greg Dixon	EP
<b>A#Sharp</b> Jeff Cripps +61 2 9153 9988 24tk Analogue/32tk digital			
Bushranger	Jeff Cripps	Jeff Cripps	ADD
The Atlantics	Jeff Cripps	Jeff Cripps	CD
St Josephs College	Jeff Cripps	Jeff Cripps	CD
Silvernines	Jeff Cripps	Jeff Cripps	CD
<b>Boulder Bay</b> Rob Godwin +61 2 4984 2008 16tk Hard Disk, Neumann Akg Rode, Shure Audio Technia Mikes			
Baby Genius		R Godwin	Pre-productions for EP
<b>Bush Tracks Pty Ltd</b> Ruth Miller +61 2 6689 1290 Air conditioned digital multitrack studio			
Durga Babies	M Tonkin/T Turner	Dave Hight	Album
<b>Damien Gerard Sound Studio</b> Marshall Cullen & Di Dofel +61 2 9555 1710 2" 24 tk Analong/Pro Tools Digital			
Music NSW Whichaway	Russell Pilling	R Pilling	Compilation Album
Big Smack	Russell Pilling	Russell Pilling	Album
Pete Wells	Pete Wells	Russell Pilling	Album
Satellite Wish	Satellite Wish	Russell Pilling	Album
Erratic	Erratic	Russell Pilling	Album
<b>Gangstar Studios</b> Dave Dwyer Rebecca Dwyer +61 2 4739 0451 48 tk digital studio			
ESenSE(E Napolitano/S Charlwood)	Dave Dwyer/Rebecca Dwyer	Dave Dwyer	Demo/Album
Glister	Dave Dwyer	Dave Dwyer	Album
Andre Eikmeier	Dave Dwyer	Dave Dwyer	Demo
Krystal Keler	Dave Dwyer	Dave Dwyer	Album
Bernie Segedin	Dave Dwyer	Dave Dwyer	Album
<b>Hindsong Studio</b> David & Lyn Hinds +61 2 6582 7070			
Balance	David & Lyn Hinds	David & Lyn Hinds	Album tracks
Boatland Marine	David & Lyn Hinds	David & Lyn Hinds	TVC Soundtrack
Great Lakes Tourism	David & Lyn Hinds	David & Lyn Hinds	Doco Soundtrack
<b>Nu-Town</b> Greg Hopping +61 2 9516 3306 Recording & Pre/Post Production			
UТОF	Greg Hopping	Mark Worrall/Sophie Loizou	Single
Crosson	Greg Hopping	Mark Worrall/Sophie Loizou	Album
DOM	Greg Hopping	Mark Worrall	Album
Music NSW	Greg Hopping	Mark Worrall/Sophie Loizou	Demos
Carmel	Sofie Loizou	Mark Worrall	Single
<b>Rockinghorse</b> Anthony Lycenko +61 2 6688 4005 48 chan neve vseries Console studer A820 24tk Prottools mix24 with 4x888			
The ZooBombs	Magoo	Magoo	Album
Pete Murray	Anthony Lycenko	Anthony Lycenko	Single Mixing
Allegro Gone Troppo	Artist	Michael Worthington	Album Tracking
<b>Skylab</b> Dave Russell +61 2 93104774 24tk analog 32tk digital			
Marsala	Gino Pengue	Dave Russell	Album
Waikiki	Band	Dave Russell	Mushroom Demos
Coin	Band	Josh McLeod	Album
Lonnie Lee	Lonnie	Dave Russell	Album
Eureka Vibe	John Simmons Spaceman		Album
<b>Sound Level</b> John Soang +61 2 9552 3200 24tk Tape & Hard Disk			
Which Way Prod		JordenBrebach	Demo
Grinspoon	Grinspoon	Jordon Brebach	Demo
Steve Edmonds	Steve Edmonds	Jorden Brebach	Tracking
Paul Stanway		Jorden Brebach	Demo
Jack Morton Ent		Jorden Brebach(E)	Voice Overs
<b>Soundwarp</b> Meredith Brooks +61 2 9905 7144 Mastering			
Tanglefoot	Richard	Meredith Brooks	Album
Plastix	Phil/Andrew	Meredith Brooks	Album
Human Torch	Bones	Meredith Brooks	EP
Rod Heard	Dave	Meredith Brooks	Album
Sydney Allstars Big Band	Ralph Pyl	Meredith Brooks	Album
<b>Studios 301</b> Steve DeFina +61 2 9698 5888 Recording studios			
Silverchair	David Bottrill	Anton Hagop/David Botrill	Orchestral sessions for album
The Superjesus	Steve James	Steve James/Tony Wall	DVD mix, live @
The Basement - Richard Clapton	Steve James	Steve James/Tony Wall	Mixing
Ash	Paul Pilsneriks	Paul Pilsneniks	Guitar & vocal overdub
Christine Anu	Anton Hagop	Anton Hagop	Vocal recording

<b>Studios 301 Mastering</b> Jacqui Espie +61 2 9211 7301 Mastering Facility			
The Superjesus Live @ The Basement	Steve James	David Macquarie	Bonus disc
Richard Clapton	Steve James	Don Bartley	Live Album
Neil Finn	Neil Finn	Steve Smart	Film Soundtrack
Bardot	Various	Oscar Gaona	New Album
Trentwood (Phil Ceberano)	Phil Ceberano	Don Bartley	Debut Album

<b>Studio Nuvo</b> Sid Shukla +61 2 9699 6203 ProTools system, MegaMidi, Outboard, Gomersall's MixBay, 1"tk			
Major	J Murphy/N O'Connell	N O'Connell	Album
Colab	J Murphy/N O'Connell	N O'Connell	Writing, Tracking
Grace-Polyphony Ent	Joe Fidow	Des O'Neill	New Artist Single
Robertson Brothers	Paul Gomersall		Single Mix
Bardot	Michael D'Arcy	Paul Gomersall	Album Mixes

<b>Trackdown Digital</b> Mike Duffy +61 2 9550 6890 64tk digital audio post			
Moulin Rouge	Bazmark Inq	S. Leadley/T. Ryan	DVD Music & commentary
Tabaluga 2	Yoram Gross/EMTV	T Lista/D Candusso/S Ryan/A Wong	TV-all Post Audio
Flipper 2	Yoram Gross/EMTV	T Lista/D Candusso/S Ryan/J Hemming	TV all Post Audio
Old Tom	Yoram Gross/EMTV	T Lista/D Candusso/S Ryan/J Mion	TV-all Post Audio
Charlotte Gray	POD-CG P/L	Simon Leadley	Music Editing/Feature Film

<b>Velvet Sound Recordings</b> Dave McCunn +61 2 9267 2915 Pro Analogue & Digital recording, mixing & editing			
Granger	Harry Vander	Daniel Vander	EF tracking
Submerged	Dallas	Daniel Clinch	EP track & Mix
Let's Get Skase	Craig McLachlan	Tony Wall	Soundtrack Singles
Kasey Chambers	EMI Music	Daniel Clinch	Interview series editing
Powderfinger	Universal Music	Daniel Clinch	Internet Music Editing

## Queensland

<b>Coral Sea Studios/ Select Sound</b> Jan Sarchfield +61 7 4059 2888 Digital Recording Studio			
Steve Gilbert & Peter Ella	S Gilbert/J Blair	Josh Blair(E)	Tk lay, record & mix - CD
Ashley Dargan & Oscar Serrallach	Dargan/Serrallach	N. Pegrum/J. Blair	Tk lay, record & mix - CD
Rita Mills "Mata Nice" Tribute Concert	Ken Skimming/Josh Blair		Live Concert Cairns album & doco

<b>Domenic Sound</b> Shane Domenic +61 7 3216 5187 Tascam M-5000 56 chan mixer/24tk adat//24tk ProTools			
Rightlane	Kenny/Brad	Shane Domenic	CD Mastering
Eric Ludwick	Eric Ludwick	Shane Domenic	Demos
DME Radio	Shane Domenic	Shane Domenic	Jingles
Caesar	Shane Domenic	Shane Domenic	Album
Inverell	Shane Domenic	Shane Domenic	Promo Jingle

<b>OPM Studios</b> Daniel Seymour +61 7 3374 0066 Adats & Logic Audio			
Hekawis	Band	Daniel Seymour	Album
Hiromi Tutkaluk	Glen Tutkaluk	Daniel Seymour	Album
Ardoyne	Daniel Seymour	Daniel Seymour	EP
New Settlement Rogue	Band	Daniel Seymour	EP
Slow Club	Daniel Seymour	Daniel Seymour	Demo

<b>Stargate Music Productions</b> Dash Mclvor +61 7 3260 6294 Paris Protools Adats Logic New & Vintage			
Outboard			
Kerry Kennedy	Dash Mclvor	Dash Mclvor	EP
Brett Goldwin	DashMclvor/Brendan Radford	Dash Mclvor	Tracking
Calin Professional Health Group	Dash Mclvor/Lyn Hand	Dash Mclvor	Program CD
Masis	Dash Mclvor	Dash Mclvor	Single
Ian Muir	Dash Mclvor	Dash Mclvor	Album

## Victoria

<b>Audrey Studios</b> Craig Pilkington +61 3 9415 8599 Analogue Digital Harddisk Studio-recording, sequencing & arranging			
Prayer Babies	David Badrick	David Badrick	Album
Mick Thomas	Mick Thomas	C Pilkington	Live audioediting
The Killjoys	C Pilkington	C Pilkington/D Badrich	Single & B sides

<b>Backbeach Recording/Elevation</b> Mark Rachelle +61 3 5988 6948 Studio 24tk Auto Mixing Protools Mix 3 & Digital Mix			
Andy Van	Andy Van	Mark Rachelle	Mixing
Skydiver	Mark Rachelle	Mark Rachelle	Mixing
Whiteboy Overbite	Denny/Rachelle	Denny/Rachelle	Tracking
Electraphonic	Oakes/Denny/Rachelle	Oakes/Denny/Rachelle	Editing/mixing
Renee Prue	Rachelle	Rachelle	Tracking

<b>Crystal Mastering</b> Joe Carra +61 3 9326 2318 Mastering Suite			
Ross Wilson	Ross Wilson	John Ruberto	Mastering album
Webster	Band	Joe Carra	Mastering album
The Seekers	Michael Christian	Joe Carra	Mastering singles
Frankenbok	Band	John Ruberto	Mastering live tracks
Oscarlima	Band	John Ruberto	Mastering singles

**NSW TRACKING GUIDE**  
**PROUDLY PRESENTED BY**  
**Sound On Stage**  
**42 Belmore Street,**  
**Surry Hills, NSW, 2121**  
**Ph +61 2 9281 0077**  
**www.soundonstage.com.au**



## CHARTS



SONG TITLE: That Day  
 ARTIST: Natalie Imbruglia  
 PRODUCER: Ian Stanley  
 ENGINEER: Ian Stanley  
 MIXING: Ian Stanley & Dave Bascombe  
 MASTERING: Dick Beetham @ 360 Mastering, London



SONG TITLE: Frenzy  
 ARTIST: Deni Hines  
 PRODUCER: Craig Portails  
 ENGINEER: Craig Portails  
 STUDIO: Studios 301  
 MIXING: Craig Portails

## Tracking Guide

## CHARTS



SONG TITLE: Soul Mate #9  
 ARTIST: Tina Arena  
 PRODUCER: Nile Rodgers  
 ENGINEER: Richard Hilton  
 MIXING: Richard Hilton  
 ADDITIONAL PROD (edit): Nathan G  
 MASTERING (edit): Don Bartley  
 @Studio 301



SONG TITLE: Radio  
 ARTIST: The Avalanches  
 PRODUCER: Bobbydazzler  
 MIXING: Bobbydazzler



SONG TITLE: The Sound of  
 Breaking Up  
 ARTIST: paulmac  
 PRODUCER: paulmac  
 STUDIO: Fibromajestic  
 MIXING: David Hemming @Tiger  
 Studios  
 MASTERING (remix): Kathy  
 Naunton @ dB Mastering

## listings!

email your Tracking Guide submission  
 by the 15th of the month. Don't  
 worry about layout, just include the  
 info. Email to: [mail@conpub.com.au](mailto:mail@conpub.com.au)  
 or use the form on the website:  
[www.conpub.com.au](http://www.conpub.com.au)

ARTIST	PRODUCER	ENGINEER	SESSION
<b>Dex Mastering</b> Adam Dempsey, Ken Shulman, Dean Collett +61 3 9372 2266		Mastering & restoration. Sonic solutions	8Sadie 24.96
The Union	Band	Adam Dempsey	Album
Couchblip	Melinda Taylor	Ken Shulman	Compilation
Tony Serrano & Joe Chindamo	Tony Serrano	Adam Dempsey	Album
Nick Charles	Nick Charles	Adam Dempsey	Album
Hermannsburg Women's Choir	CAAMA Music	Ken Shulman	EP
<b>Edensound Mastering</b> Martin & Robbie +61 2 9682 9066 Focusrite		Blue Mastering Suite	
Paul Hester	Paul Hester/Mark Ingram	Martin Pullan	Album
Jimmy Barnes "Raw"	Drew Thompson/MarkOpitz	Martin Pullan	Live Album
The Seekers "Morningtown Ride to Christmas"	Michael Cristian	Martin Pullan	Album
Emma Wall	Band/Siiri Metsar	Martin Pullan	Album
Toby Mak	Toby Mak	Martin Pullan	Album
<b>Honeyface</b> Mark Hilton +61 3 9507 2967 32tk digital & analogue recording, mixing & mastering			
Tom Griss	Mark Hilton	Mark Hilton	Album
Dom Jurcec	Mark Hilton	Mark Hilton	Album
Sycamore	Mark Hilton	Mark Hilton	Album
<b>Studio 52</b> Paul Higgins +61 3 9417 7707 3 Major Music Production Studios			
"Kool Skools"	Paul Higgins	M. Keny/J. Scott	National Project 50 Albums
RMIT		T. Carter/J. Scott	Spoken Word Program
Airspace	Ed Nimmervoll	Trevor Carter	Radio Interviews
Peak	The Band	Mitch Kenny	Album
Nancy Dagostino	Trevor Carter	Trevor Carter	Album
<b>Wombat Rd Rec Studio</b> Barrie Clissold +61 3 5145 4204 24tk digital & 16tk analogue			
Anon	Band/Barrie Clissold	Barrie Clissold	Demo CD
A Frog is Born	Band/Barrie Clissold		Demo CD
Phat White Lie	Band/Barrie Clissold	Barrie Clissold	Demo CD
BCMC	G Bantock	Barrie Clissold	CD Album
BATS Orchestra	R Woodhouse	Barrie Clissold	Live CD
<b>South Australia</b>			
<b>Earsight</b> Steve Fieldhouse +61 8 8370 3869 PT's 5.2 TDM MixPlus environment for		Mixing, Editing, Remixing & Recording	5.1 s/tracks
Found Objects	Steve Fieldhouse/Chris Lambert	S. Fieldhouse/C. Lambert	CD Album Mixes
The Mourful Congregation	DamonGoode/Steve Fieldhouse	S. Fieldhouse/D. Goode	Double CD Mix/Master
<b>Mixmasters Productions</b> Mick Wordley +61 8 8278 8506 Protocols			
Tracker/Archie Roach	Rolf de Heer	Mick Wordley	Film Soundtrack
Lessie Does	Phil McKeller	Phil McKeller	Mix
Symphony Orchestra	Julian Barnett	Jed Palmer	Album
Youth Arts	Pete Arthur	Jed Palmer	Album
Bergerac	Jed Palmer	Jed Palmer	Album
<b>Western Australia</b>			
<b>Poonshead</b> Rob & Sam +61 8 9339 4791 Audio Recording Production & Mastering			
Juno	Rob Grant/Juno	Rob Grant	Album
Zeta Theory	Zeta Theory	Rob Grant	EP
Stingray	Nathan Winterflood	Rob Grant	Album
Paradoxx	Rob Grant	Rob Grant	Single
Whatever	Chis Giles	Rob Grant	Demo
<b>Satellite Recording Studio</b> Darren Halifax +61 8 9470 4003 Protocols mix plus 64tk			
Desmond Jack	Desmond Jack	Darren Halifax	EP
Floating Widget	Band/Darren Halifax	Darren Halifax	Sound for Picture
Rampage	Band/Darren Halifax	Darren Halifax	Demo
Airs Technology	Brad Coombe	Darren Halifax	Training CD Rom
Dallas C Hill Jnr	Dallas C Hill Jr	Darren Halifax	CD
<b>Sonic Lab</b> Mark Whitehouse +61 8 9375 3902 Sonic Solutions Mastering & DUD			
Moedown	Band	Mark Whitehouse	CD Mastering
GreenRoom	Band/BenGlatzer	Mark Whitehouse/Liam Collins	Enhanced CD
Trinity	Robert Braham	Mark Whitehouse	CD Mastering
Sam Menzies	Band	Mark Whitehouse	CD Mastering
V-Line		Liam Collins	Enhanced CD
<b>Witzend</b> Alan Dawson +61 8 9336 1888 16tk Analogue & 8tk Digital			
Kirsty Nicholson	Kirsty Nicholson	Alan Dawson	Demo
Richie Payledos	Richie Payledos/Alan Dawson	Alan Dawson	Album
Mardi Picasso	Martin Gamble	Alan Dawson	Album
Colin Nicole	Colin Nicole	Alan Dawson	Editing

## Fire in the Red Centre


**Couple lucky to flee shed blaze**


Our home, business and 'toys' worth over 750K, burnt for five hours [in a recent fire that gutted the premises]. The only survivors apart from us, were some Australian Monitor amps, two QMX cabinets and two F300 wedges.

All that remained of a 32ch Soundcraft desk was a metal sheet with the holes for the controls. The shed was fully insulated and sound proofed (for recording and dance parties) so it kept the heat in and burnt like a furnace.

The lessons learnt:

- KEEP COPIES OF DATA OFF SITE (all

business records lost) email your accounting data file to someone periodically.

- CO2 fire extinguishers are pretty useless (used two up trying to fight the fire when it first started).
- Sprinkler system would have been handy.
- Don't trust those large square incense candles to go out when finished.
- Don't keep all your 'eggs' in one basket.
- Did I mention: KEEP COPIES OF DATA OFF SITE (all business records lost) email your accounting data file to someone periodically.

Robert Brackenbury and Jennifer Joiner  
Alice Springs Party Hire

### House AV "Unfriendly" Contracts

The spectre of the in-house AV company "owning the client" has reared its ugly head again.

We at Small Systems have had two occasions in the last week where the House AV company has insisted with coercion of that the client - our client - to utilise their services.

\* In a Major NSW Govt public institution, we were booked to provide production for a small event. On arrival, the dock would not let us load in. We were referred to the house AV company who advised that the only people allowed to work in the venue were themselves. The client ended up with our bill and the bill from the house company I believe the client was not happy with the result. No: very fair?

\* In a 5 star function centre overlooking Darling Harbour, the House company insists that you pay "premium rates" (our clients words) for one of their staff to be on duty whilst [we] are doing a small production. This means our client would have had

to pay two invoices and handle dealing with two organisations. The client ended up cancelling us so the house company would stop bitching.

Do you feel that this is legal? I thought that this sort of behaviour died out ages ago when our industry "grew up".

Penny for your thoughts

Chris Clough  
Small Systems, Sydney

*Ed - There are laws designed to protect against price fixing and predatory pricing, however in the context of contracted AV suppliers, the legal aspects quickly become muddy.*

*We are interested to hear from anyone else with a similar complaint, because sometime soon we will be asking the ACCC for some comments on this page. Confidentiality is guaranteed - we will not pass on complaint details to the ACCC unless you give us permission to do so.*

*And Chris - don't forget to send the penny!*

### Which Tent?

I recently drove 1000Km to see Cirque Du Soleil, [what a great show]. While standing outside the tent a comment was passed on the size of the structure. It was stated that the performance area of the tent that Grease was travelling with would fit three times inside the performance area of the tent area that Cirque De Soleil was using. I disagreed, so we had a bet, now how to settle the bet. Of course the readers of Connections would know. Can some one please settle this.

Dale Kennedy

kahs@mackay.net.au

### Mortified at ALIA criticism

I'm one of the silent majority who supports any initiative where I don't need to do anything personally. So I am mortified at your strident criticism of ALIA, the proposed new Lighting Association.

I know, as I suspect do you, that an association as ambitious as ALIA cannot work as a commercial entity in Australia. They need a quarter of a million dollars in sponsorships, they say. But they cannot possibly raise even a fraction of this in the current climate.

So why didn't you just lie low and let the whole thing die a natural death?

- Alan Greenway, Mt Gambier

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# YAMAHA

by *Tiny Good*

## Structures - General

This month, we deal with general specifications and regulations regarding structures used for entertainment purposes. Many scaffold and other steel structures widely used for concerts are covered by Australian building guidelines and controlled by state and local building inspectors.

### Stages

The Australian standard for a stage platform is a structure capable of supporting a load of 7.5 Kpa, which is roughly 750 Kg./M<sup>2</sup>. This weight loading is for any structure intended to be used as a stage, and can only be overruled if the builder has documentation to ensure a lesser load, and posts the load rating on the stage.

A standard steel "Kwikform" style scaffold has a capacity of 234Kg/M<sup>2</sup> for an 8' X 4' bay system, and 40 Kg/M<sup>2</sup> for an 8' X 8' bay system. The scaffold standards state that a light duty (8'X8') bay must be able to support a 1Kn point load, or a 100kg person in easy terms, which is not up to the Australian standard for either bay size.

There are many other systems that are engineered to give the higher loads but advise should be sought to see if the system you are hiring can handle the load you want to put on it.

A small thing to note, a group of ballet school kids will put much more load on your stage system than a symphony orchestra!

Handrails must be fitted on any stage higher than 999mm and you should consult your stage builder as to whether you should have some barrier on the front as well to stop persons on stage not used to a stage environment from being injured. This is especially true for stages involving children and community groups.

Stairs and ramps also have a building code. This code specifies minimum and maximum rise and tread dimensions, and grade (angle) for the ramps.

### Scaffolds

Scaffolds can only be built by ticketed scaffolders if they are more than 2.4 M high OR they are used for any other purpose than person access. This means that any scaffold used for speakers, front of house, scenic items, etc., should be designed and built by scaffolders.

A scaffold that is used out doors and has any item such as speakers, banner, scrims, or other wind catching items must be designed by an engineer and built by a Scaffolder.

The wind effect on a structure out doors is misunderstood by most people and it is a fact that

All structures, scaffolds, stages, roofs, marquees, seating stands, should be designed and built for the job they are to do. The calculations and regulations that limit the use of these structures are there to protect you and your audience from death and injury, you can push these limits, play the odds and "get away with it", but mother nature and lady luck have a way of getting those who don't respect them, and when they do, you may literally "not know what hit you".

most wind will increase in the mid to late afternoon which is usually when the scaffold has the most punters to land on!

### Roofs and Marquees

These structures must be designed and checked by a structural engineer, must come with an occupancy permit, and must be built by a person experienced in temporary structures.

Wind and water are 2 of Mother Nature's most powerful forces, and both impacts on roofs, marquees, and other outdoor structures.

Many roof systems have conditions placed on them with regard to wind speeds, such as lowering the structure or removing wall sheets when the wind gets too strong. This does impact on your show but so does the structure landing on your audience so be aware of the limitations and plan for the eventuality.

Marquees are not designed to support large loads suspended from them as they are designed as a shelter not a stage roof so check with the marquee builder as to how much you can hang from the structure.

### Seating stands

A seating stand is any structure meant for the general public to sit on and has a capacity of more than 24 seats. The regulations on seating stands are quite complex but the short version is any seating stand must have:

- Handrails that are more than 1000mm above any adjacent horizontal surface, and have vertical rails or mesh that resist climbing and an arrangement that will not allow a 125mm sphere to pass through.
- Steps that are even in rise and tread, with a rise 190mm to 250mm and a tread 225mm to 350mm
- Aisle widths and numbers as per the ration of persons to total aisle width as per the Australian egress code
- Aisle lights with power redundancy to allow for emergency evacuation
- Exit lights with power redundancy to clearly identify exits and exit methods

This seems like a lot but when you consider the implications of a failure or the tendency of the public to file insurance claims it can be understood.

The rigging information contained here is the opinion of Tiny Good based on industrial training as a rigger, and job experience. No liability is accepted for use or misuse of this information.



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SOUND LIGHTING AV

by Mandy Jones

## A Day in the Life of Robert Satterlee - Stage Manager

Robert Satterlee has been a stage manager with Chicago's acclaimed Steppenwolf Theatre Company for seven years, working on the Tony award nominated production of *One Flew Over the Cuckoo's Nest*, and the Tony award winning *Side Man*. Robert's theatre beginnings were at the University of South Florida where he was educated as an actor. After being roped into stage managing a number of shows during college, Robert became hooked, and has worked as an SM since. In his 21 year career he has worked for a diverse range of companies throughout the US as a stage manager and director and has toured with several international productions.

**Morning:** Today was wonderful because I'm partially on holiday so I got to sleep in until 8.30am, then I went to the health club in the hotel. After that I got to go out and see some of the wonderful city of Melbourne. We went down to St Kilda and went down to the water, had some lunch and visited some of those wonderful cake shops, then I went back to the hotel for a while before arriving early at the theatre.

A day in the states is a little different to that. I live in the suburbs outside the city of Chicago so I usually leave the house about 8.00 in the morning and get to work about 9.30am and rehearsal usually starts about 11.00 or 12.00. Depending on the show we rehearse for six or eight hours, and we do that six days a week.

On a rehearsal day in the states we're allowed to work five hours without having a break, so we'll rehearse five hours, then take an hour or an hour and a half break, and then come back and rehearse for another three hours. It's a minimum 12 hour day for stage management - we have prep work to do, paperwork, schedules, and all that has to happen either before or after rehearsals.

In tech week we do five hours, have a two hour break and then come back and do another five hours. Of course that two hour break quickly turns into a 15 minute break to grab something to eat and then getting back into it. People think that all we do is turn up for three or four hours a night for the show and that's it, but it works out at about a 50 hour week.

**5.30pm:** Call time today is 6.30 but I'm here early because I like to be the first one here - I like to beat the crew and the actors here. We come in and make sure the crew sets the stage, we make sure the dimmer check happens and that the lights are all working and in focus, then we do a sound-

check to make sure all the cues are there, then we check that wardrobe and props are set. The actors come in at 'half-hour' so we generally chat to them and try to pump them up a bit to do the show.

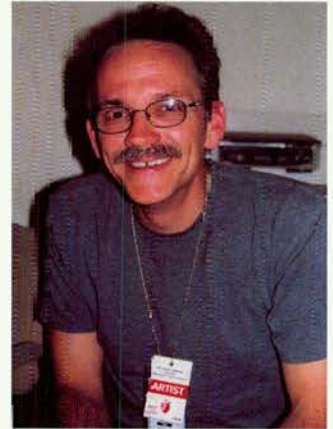
**8.00pm:** This show isn't that complex for me anymore because this is the fourth time I've done it, including when I directed it, so it's inside of me now - it just flows. It's a simple show but there's a lot going on, so you don't have time to let your head drift too far away. There's between 250 and 300 cues so it's not constant go go go, but it is busy.

I'm not strict about chatter on headsets, that would only make it boring. The only rule is pretty much when you say 'standby' nobody talks, and nobody says 'no' or 'go'. Talking on headsets is part of the joy of the job, and it's usually one of the first things I ask local crews "you guys do chatter on headsets, don't you?". It's always "hell yes". I get bored of some shows I do, but not this show for some reason. Whether it's because the season has been so spread out, or because I'm so enamoured of the material and the company, but I'm amazed by it every single night. That's the joy of working in theatre, that you can see a show for the 300th time and it still touches you.

I enjoy the excitement if something goes wrong and the audience never knows about it. Last night we had something minor go wrong and the audience did know about it so I didn't enjoy that. But if there's a big train wreck and we've done a great job to cover it up and no-one knows about it, then that gets the blood going and it's great fun.

**10.00pm:** This show is two hours long so at 10pm we come down, we give the actors and crew any notes and we're generally out of here by 10.30pm. We don't have a sit-down notes session every night, but there are usually notes from every show.

**10.30pm:** After a show I'm usually pretty jazzed up. Sometimes at the end of a week after eight shows you just want to go back to your room and have a glass of wine and watch TV. But in a festival it's a different animal all together because by the time you get out there's a thousand people out there that do what we do and there's another thousand that love what we do. Festivals are party atmospheres so you don't get a lot of sleep. It's different at home because it's your job so you go home. Festivals are like going back to college theatre where you do the show then you go and play. And I've never enjoyed my job and my career more than I do right now.



**Name:**

**Robert H Satterlee**

**Age:**

**46**

**Occupation:**

**Production Stage Manager**

**Company:**

**Steppenwolf Theatre Co.**

**Location:**

**Chicago**

**Current Project:**

**Touring production of Side Man, in Australia as part of the Melbourne Festival**

## SOUNDING OFF

Sound pollution is intruding more & more into our everyday lives, what is this doing to our response to theatre sound?

Some years ago I wrote a review of the Bose Acoustic Modeler program which is designed to identify the preferred configuration and location of Bose products when placed in a CAD of the client's venue. The launch focussed on restaurant sound partially because Bose was also introducing their smaller loudspeaker range. Whilst welcoming the advent and availability of the technology I incurred Bose's wrath by commenting that "now I'll never find that quiet table". Help is at hand. Recently TIME magazine published an article which announced that US food critics had begun grading restaurants in terms of their noise level with the result that some had hired acousticians to lower the ambient. In most restaurants today hard surfaces proliferate, they're easier to clean and more egalitarian than the traditional carpet and linen. But a meal is a social occasion as well as a gastronomic one and the science of Muzak, in its original and not the later much maligned form, indicates that people will spend more if they are relaxed and ambient sound has a big role to play in this respect. I recently walked out of a restaurant in Perth because I could only read the menu by torchlight and could only converse with those next to me by shouting in their ear. In these circumstances I don't care how good the food is.

Another noise intrusion into our lives is the growing proximity of our neighbours. The concept of the block size worked well until the pressure of infill meant distances to the next house had halved and noise interference levels suddenly quadrupled. Sound systems in cars also mean there is no escape from others' choice of music, I comfort myself with the mean thought that it's their hearing they're damaging - not mine.

These responses are perhaps more likely from those of us with grey hair as our hearing loses the ability to distinguish the upper register and to pick out one sound from another. Consequently it becomes difficult for us wrinklies to tell what people say and some circumstances are worse than others.

For example, originally film (and television) drama used to be studio based where it was easy to control the sound and with only an occasional location shot, now perhaps almost the reverse is the norm. When this is coupled with younger generations of actors who are either not trained to both articulate and project, or who consciously opt for a less formal style then clearly the sound person has a problem. But this isn't restricted to film and TV. It is ten years since wandering around backstage at London's (then) National Theatre (where one might have expected some measure of

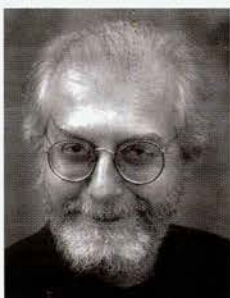
classically trained actors) I spotted discrete mics hidden in the scenery - and this was in the smallest theatre. Voice reinforcement has also been employed in opera for many years and in my experiences at Boston Opera, the sound designer, in this case the redoubtable Garry Harris, was so controversial a figure that he was hidden away in a box and received no programme credit for many years. In common with many of his kind Garry was obliged to steal into the theatre in the dark of night and conceal his magic devices - in reality it was the quiet he wanted not the secrecy - but it didn't hurt.

For film and TV people especially compression is at hand, lifting the quieter parts of the actors' speech into a more audible range. However until we arrive at very sophisticated digital equipment, we have produced generations of film and TV drama in which the compression not only lifts the actors' voices but also all other background sounds so that laying the dinner table sounds like a shipyard, a walk in the park sounds like a tropical storm, and a stroll down the street sounds like the Grand Prix. At these times my wife attempts to calm me by saying - they're not saying anything important - it doesn't matter - but as a writer I have a problem with the very concept that people can't hear words someone has laboured over.

Another aspect of the sound debate is the responsibility for generating sound levels above a statutory minimum. For example some years ago I was asked to design a system with an average Sound Pressure Level of 120 dB - I insisted that my contract included a clause absolving me of responsibility for damage to either the building or its inhabitants if the system was run at that level - in fact it was so clear it was run at significantly less. By contrast, working recently on a club system the owner insisted the loudspeakers face away from the bar so as to minimise liability from staff under noise regulations.

It is not a new statement but still a valid one that the quality of domestic sound equipment has a relationship to what the theatre patron expects to hear. Does this however mean that we now have 1000 'experts' in the stalls? Are operators being exposed to more comments? Interestingly I think theatre sound is getting better. Years ago many equipment suppliers were ignorant of acoustics and simply sold hardware. I also think more suppliers and operators are aiming for clarity and not loudness. More designers are concentrating on the sound and not on the kudos of assembling a sexy system. Budgets are more and more realistic. So as a customer it's more likely an evening at the theatre would be accompanied by good sound than bad. I just wish that would happen in my local restaurant.

"...the quality of domestic sound equipment has a relationship to what the theatre patron expects to hear..."



## CORRECTION FROM LAST MONTH

Last Month, an incorrect draft of Graham Walne's article "Size Does Matter" was published. Here now is the correct ending:

Although research indicates that more people are attending an art gallery on Saturday afternoon than watching football, theatre audiences are not rising. But help could be on the way because audiences should rise with the increase in population - although this also relates to the previous experience of theatre-going of the immigrants and

therefore influences what cultural experience they expect, and receive, when settled here. Some communities can expect significant increases in population.

I think theatre design remains an exciting area because, whilst the basic form hasn't changed for literally thousands of years, every building is different and seeks to capture the almost magical relationship between actor and audience that makes the experience memorable. In future the very act of us coming together to watch a live event might itself be a novelty and how we do this will continue to test our ingenuity.

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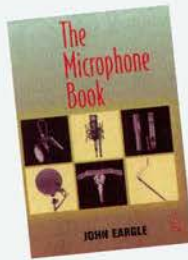
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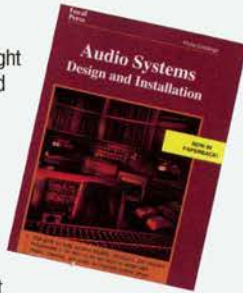
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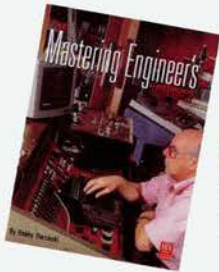
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by Duncan Fry

## Turnpike Tinsel

Song Sung Brown

When you can buy a blank cassette for \$5.95, and a blank CD with infinitely better audio reproduction than a cassette for under \$1, I think it's safe to say that the cassette era is over as far as in-car entertainment goes.

Of course if you must have that elusive cassette sound, you can always record on a cassette then dub it onto a CD. Then you can re-record over the cassette and repeat the process as necessary. But sadly the 'cassette sound' doesn't seem to be as sought after an effect as the valve/tube sound or an early Neve EQ channel.

But as the cassette era ends, then so does my long-term research project reach its final phase.

During the late 70's and most of the 80's, I drove beaten up trucks around the backblocks of Victoria and NSW, ferrying a large PA system for a succession of unknown bands going to pubs and clubs where no-one in particular wanted to listen to them. There had to be some way to pass the time on these trips, so I started to collect some souvenirs from the side of the road.

I'm referring to Road Ribbon, Turnpike Tinsel, Free-way Flotsam, whatever you like to call it, you'll know it when you see it. Kilometres of brown recording tape fluttering in the breeze alongside our highways, usually heaved out of the window in a fit of 'tape rage'.

I'm sure it must have happened to all of us - first the Ballroom Blitz starts running slower and slower, then gets more muffled and distorted. "Jeez what's going on with this bloody tape?" someone says. You hit the eject button and the ejected cassette falls on to the floor into the hamburger wrappings and soft drink cans, spewing loop after loop of its ribbon thin entrails out over everything. "Useless fuckin' thing," says the stage guy, and whizz - cut the window it goes!

Anyway, everytime I saw some tape a-blowin' in the wind, I'd wonder what people were listening to that made them spit the dummy and eject the tape from their lives permanently. I'd stop the truck (time and traffic permitting), cut a chunk of it off the barbed wire and stick it in my log book so I'd know what piece of road it came from.

At home I set up a gutted cassette tape shell that I could quickly splice the tape remnant into, along with a cassette deck chassis where every aspect of tape handling and playback could be quickly modified as necessary. That way, if I had spliced the tape into the shell upside down, all I had to do was move the playback head up or down to catch the music going the other way. Side 1 would be Side 2 and vice versa.

Sounds complicated when you write it down, but it was actually very simple. More importantly - it worked.

You only really needed to hear a few words or notes of most pieces of tape to work out what music was on it. Some pieces were too far gone to hear anything; sun, wind, rain and sheep piss had conspired to reduce most of the oxide to just a memory, but in most cases there was something recognisable there.

It was also interesting to see that in some locations there were more than one type of tape caught up in the bushes. Quite often these were immediately after a particularly bumpy stretch of road; a spot between Narrandera and Leeton on the way to Griffith yielded four separate samples within a kilometre of each other!

Not all of them required much detective work as the cassette shells were still attached, and the trend to direct printing onto the shell rather than onto stick-on paper labels which soon washed away was a great help. But most of them were just tape pieces, their attachment to any shell long since lost.

So what was on these tapes, I hear you ask.

Well, as you might expect, there was a lot of country. But out of the 67 samples I collected, nine of them were the one person; indeed, the one album.

Yes, number one cassette tape for being hurled out of the window in a fit of tape rage was that mainstay of 70's parties - Neil Diamond's *Hot August Night!*

This was probably more to do with the shit quality of the Astor label cassette tapes than any reflection on Neil's songwriting. These things would stuff up the second time anyone played them at home, let alone in a car filled with dust and vibration (although multiple renditions of *She Got The Way To Move Me* Cherry can move things faster than a double dose of Laxettes).

You'd think that based on Neil Diamond's position that No. 2 on the list would be *Frampton Comes Alive*, but that only rated one instance, found between Ouyen & Mildura.

Next on the list was country - various artist compilations especially, with Charlie Pride, Loretta Lyn and Tammy Wynette featuring heavily. Real crying in your beer stuff that reinforces the popular image of truckies barrelling down the highway with tears in their eyes and speed in their veins! No Dolly Parton from her country years, but one instance of *Islands In The Stream*, a disposable (obviously!) pop duet with her and Kenny Rogers.

Various rock artists figured occasionally. The usual suspects, AC DC (twice), Black Sabbath, Sherbet (twice), Billy Joel, Deep Purple, but in the main the K-Tel type compilations like *Summer Hits* (*Summer Not?*), *Rippa*, that type of thing were very popular. I classed an instance as a compilation if the tape had a different artist going one way than the other.

The third highest genre turned out to be not music at all, but what I would call 'self-help tapes'. Six instances of sales training/ motivational stuff (*Make that sale today... You can make it happen... Every rejection is a plea for more information... and other waffle*), one instance of *Anger Management - How to Control Your Rage* (not very successfully as it had been thrown a good thirty feet!) and one instance of *Finding Inner Peace* by an unknown guru.

Only two instances of comedy, though (if you don't count the preceding category!) - an early Rodney Rude, and Richard Pryor, still with cassette shell attached (and very funny).

So, my work is done. I gave up country touring around 1986, so my research ended there, except for one memorable instance.

Whilst depositing a gutful of toxic waste into the bushes alongside the 605 freeway in Los Angeles a couple of years ago, I noticed some tape fluttering nearby. I souvenired a chunk and ran it up when I got back home, but it was sadly just some black rap. So if that's the future, include me out.

The trouble with rap is that someone left the C off the front of it.

Email me:  
dunk@dunkworld.com  
- if you have any suggestions for a name for this tape phenomenon



## Trade Show Calendar

**SMPTE 143rd Technical Conference & Exhibition**  
Nov 4 to 7, 2001 - New York  
(www.smpete.org)

**AES 111th**  
Nov 30 to Dec 3, 2001 - Javits Centre  
New York (www.aes.org)

**Pro Production 2002 - The Live Event Marketplace**  
Jan 11 to 13, 2002 - San Diego CA  
(www.plsn.com)

**NAMM International Music Market**  
Jan 17 to 20, 2002 - Anaheim Conventions Centre CA (www.namm.org)

**SIEL**  
Feb 3 to 6 Feb, 2002 - (www.siel.com)

**ENTECH - Australia's Professional Entertainment Technology Show**  
Feb 4 to 6, 2002 - Darling Harbour, Sydney (www.conpub.com.au)

**USITT Conference & Stage Expo**  
Feb 13 to 16, 2002

**MusikMesse / Pro Light & Sound**  
Mar 13 to 17, 2002 - Frankfurt am Main (www.messefrankfurt.com)

**NAB The Convergence Marketplace**  
Apr 6 to 11, 2002 - Las Vegas (www.nab.org)

**PLASA Shanghai**  
Apr 16 to 18, 2002 - Shanghai (www.plasa.org)

**NSCA Expo "Reach the Summit"**  
Apr 25 to 27, 2002 - Colorado Convention Centre, Denver (www.nsca.org)

**I-focomm China**  
May 8 to 10, 2002 (www.infocomm.org)

**AES 112th**  
May 11 to 14, 2002 (www.aes.org)

**CEDIA**  
May 15 to 19, 2002 - Australia (www.cedia.com)

**Lightfair International**  
Jun 3 to 5, 2002 - Moscone Centre, San Francisco (www.lightfair.com)

**Pro Audio & Light Asia/ Total Events Asia**  
Jul 10 to 12, 2002 - Hong Kong

**NAMM International Music Market**  
July 19 to 21, 2002 - Nashville TN (www.namm.org)

**P.A.S.A**  
Sep 8 to 11, 2002 - Earls Court, London (www.plasa.org.uk)

**Infocomm Europe/Photokina**  
Sep 25 to 30, 2002 (www.infocomm.org)

**Cedia Expo 2002**  
Sep 25 to 29, 2002 - Minneapolis, MN (www.cedia.com)

**World Lighting Fair**  
Oct 3 to 5, 2002 - Tokyo

**Musica China**  
Oct 16 to 19, 2002 - Shanghai (www.messefrankfurt.com)

**LDS**  
Oct 18 to 20, 2002 - Las Vegas Conventions Centre (www.lldshow.com)

**SMPTE 144th Technical Conference & Exhibition**  
Oct 23 to 26, 2002 - Pasadena Convention Centre (www.smpete.org)

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